



Faculty of Computer Science and Information Technology

PERTEKMA ACTIVITY MONITORING

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ABSTRACT

PERTEKMA Activity Monitoring is a management system that will be used by the PERTEKMA's Advisors and Committee Members. This system will help the committee members in term of managing their activity's record. Currently, PERTEKMA manually keep and does not have an appropriate tool to manage their activity's record. The downside of this are a higher chance of data loss and hard for the PERTEKMA's advisors to follow up their activity executions and task performance. By purposing this system, it can help the committee members of PERTEKMA to manage the activity's record and handle the data more efficiently with the help of this system. The methodology that was used to develop the proposed system is a Rapid Application Development (RAD) and the data requirement technique that was used is by interviewing the advisor Dr Suhaila, and Mr. Muhaimin, the president of PERTEKMA.

ABSTRAK

Pemantauan Aktiviti PERTEKMA adalah sebuah sistem pengurusan yang akan digunakan oleh Ahli Penasihat dan Ahli Jawatankuasa PERTEKMA. Sistem ini akan membantu setiap ahli jawatankuasa dalam menguruskan rekod aktiviti mereka. Pada masa ini, PERTEKMA menyimpan secara manual dan tidak mempunyai alat yang sesuai untuk menguruskan rekod aktiviti mereka. Kelemahan ini memberi peluang kehilangan data yang lebih tinggi dan sukar bagi penasihat PERTEKMA untuk memantau pelaksanaan aktiviti dan prestasi tugas mereka. Dengan menumpukan kepada sistem ini, ia dapat membantu ahli-ahli jawatankuasa PERTEKMA untuk menguruskan rekod aktiviti dan mengendalikan data dengan lebih cekap dengan bantuan sistem ini. Metodologi yang digunakan untuk membangunkan sistem yang dicadangkan adalah Pembangunan Aplikasi Rapid (RAD) dan teknik keperluan data yang digunakan adalah dengan menemubual penasihat Dr Suhaila dan Muhaimin, presiden PERTEKMA.

CHAPTER 1

INTRODUCTION

1.1 Background

The Persatuan Teknologi Maklumat or better known as PERTEKMA is an organization in Faculty of Computer Science and Technology (FCSIT), UNIMAS. PERTEKMA acts to represent students in all respects and expresses the hearts and the views of students to the Institution. PERTEKMA is responsible for helping produce excellent students in skills, sports, and so on in order to carry out any other activities as determined by the Student Affairs Unit (HEPA), faculty and lecturer's extra request from time to time.

Basically, the current situation of PERTEKMA in handling their activities, they do not have an appropriate tool to manage and keeping their activity records. Therefore, it is hard for the advisor to follow up in real time their activity executions and performance. Thus, the solution is to propose a quality management system named PERTEKMA Activity Monitoring. A quality management system consists of the organizational structure, responsibilities, procedures, and resources to ensure products, processes or services satisfy stated or implicit needs (ISO 8402). In conclusion, PERTEKMA Activity Monitoring beneficial in improving the current traditional way of monitoring student's activity. This system provides efficiency in managing their activity record.

1.2 Problem Statement

- i) PERTEKMA committee has improper documentation for every activity execution due to unclear workflow. In order to conduct the activities, the job scope is required to perform a role that goes their personal values and compatible with their job scope demand
- ii) Unorganized record in managing the task allocation and activity execution. PERTEKMA need to have a clear way of recording status and stage of their activity execution so that they can work effectively and the advisor easy to monitor them

1.3 Objectives

The objectives of the system are:

- i) To propose a workflow of the activity execution of PERTEKMA's exco in managing their activities
- ii) To design and develop a monitoring system for managing PERTEKMA's records
- iii) To display the statistical data of PERTEKMA Activities monthly or yearly

1.4 Brief Methodology

In this project, the structured design methodology used is Rapid Application Development (RAD). All functions are modularized, so it is easy to work with. The development time can be reduced and reusability of components help to speed up development. RAD-based development cycles have resulted in a lower level of rejection when the application is placed into production, but this success most often comes at the expense of dramatic overruns in project costs and schedule. Figure 3.1 shows the process of Rapid Application Development (RAD).

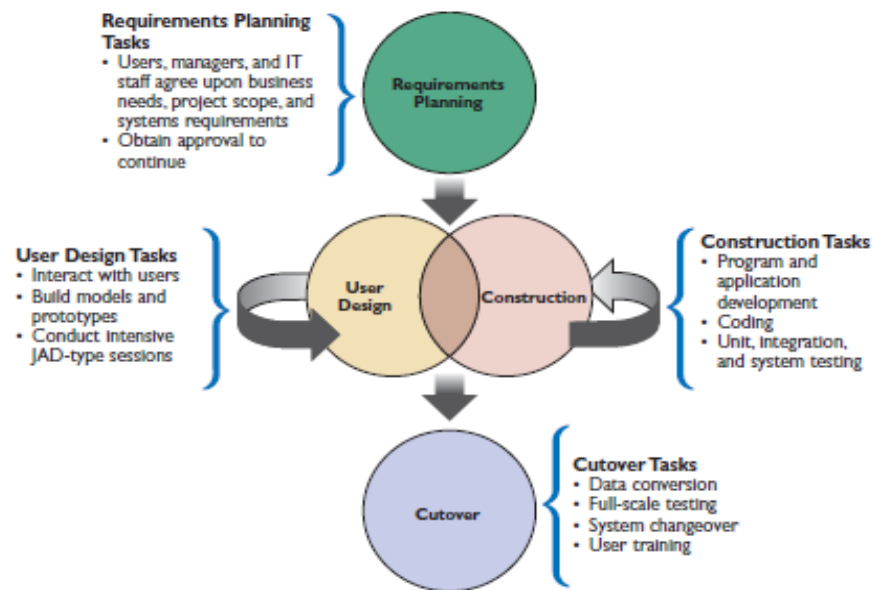


Figure 1.1 – The four phases of RAD Model (System Analysis and Design 9th Edition, 2012)

1.4.1 Requirements Planning Tasks

Before starting the project, research and review for the proposed system were needed. At this stage, it involves researching the current problem faced by PERTEKMA and then defining their requirements to be added to the project. Interview session with the President of PERTEKMA was held to understand the current situation. According to the McNamara (1999), interviews are particularly useful for getting the story behind a participant's experiences and the interviewer can pursue in-depth information on the topic. Finally, all the requirements being finalized with the approval of PERTEKMA's President and their advisor.

1.4.2 User Design Tasks

During this phase, the developments of database, models, and prototypes that represent all system processes, inputs and outputs. In the design phase, all the required function and detailed specification of all system elements for this project are determined and explain. Other than that, exploring the existing student monitoring system is needed as a guide to make sure this system fulfils the user requirements and enhanced the user experiences.

1.4.3 Construction Tasks

In this phase, the prototypes are taken from the design phase and convert them into the working model. Web-based programming skills are required during this phase to develop the system as well. The system would come out as an online management system if possible for better access at anytime and anywhere. After that, the development of the database, prototype, user interface, features and functionalities of the system. Once the development is done, the system could be accessed by internet connection using any device such as pc, laptops or gadgets.

1.4.4 Cutover Tasks

This is the implementation phase where the finished system goes to launch. It includes testing new components and all the interface. After finishing the system, system integration and system testing are needed to determine if the proposed design meets the initial set of project goals. Testing is important to ensure this project meets all the user requirements including key-in the test data into the system. If there are any errors and unfulfilled requirement detected, improvement is needed and problem fixing in order to develop a quality system with great performance. Testing against the requirement is the best way to make sure the system is actually solving the problem.

1.5 Project Scope

The scope of this project is for advisor and committee member of PERTEKMA. In this project, the system will be used by both advisor and committee member with three different level of user login.

- i) **Superadmin:** PERTEKMA's advisors are able to monitor the activity, analyse the records, generate report and manage admin or the user of the system
- ii) **Admin:** The high Council of PERTEKMA consist of President, Secretary and Treasurer. They are able to manage the activity proposal and exco's workflow and record the activity
- iii) **User:** Main ExcOs of PERTEKMA. They are able to manage and update only their job scope and make activity's report

1.6 Significance of Project

The significance of this project is the transition of manual keeping record to a computerized system as well. Since the workflow is linked to a database, it keeps a record of what occurs in the system. In summary, it makes an organization become more efficient by helping to save time, remove wastage, cut out unnecessary work, better use of human resources, which overall saves money and will help an organization to grow and improve. Besides that, the statistical view will provide visual information regarding PERTEKMAs' activity, thus allowing for a quick and easy classification based on activity records by monthly or yearly. Furthermore, instructors can use complementary qualitative monitoring reports, issued by the excos themselves, to anticipate potential problems such as complaints and possible conflicts inside the groups during the activity. Therefore, the advisor can take operational and tactical decisions to handle them. As a result, the system provides functionality that makes the record more effective and efficient to the advisor and committee member of PERTEKMA.

1.7 Project Schedule

Project schedule consists of Gantt Chart for FYP 1 and FYP 2. Refer to Appendix A of FYP 1 and FYP 2 Gantt Chart.

1.8 Expected Outcome

The expected outcome from this project is a PERTEKMA Activity Monitoring system for committee member and advisor of PERTEKMA. The purpose is for proper documentation of workflow for activity execution. Besides that, the system properly manages and organize the records of PERTEKMAs' activity, sponsorship memos, and complaints. The system also would come out with report generate, activity dashboards and statistical view of PERTEKMAs' activity monthly and yearly.

1.9 Thesis Outline

There are six chapters cover in this project which consists of:

Chapter 1: Introduction. This chapter describes the idea briefly about the purpose of developing the project, objectives, and goals of this project.

Chapter 2: Literature Review. This chapter study the background of the project. The main sources for this study are from journals, articles, e-book, and websites that related to the project. At the end of this chapter, the statement for the requirements of the problem clearly identifies and study should be clear why it is worthy to work for. The review and analysis that had obtained should be relevant to the proposed system.

Chapter 3: Requirement Analysis and Design. This chapter discusses the detailed requirements and specification of the project. The requirement of the project that has been obtained will be analysed, solve and should meet with the project. The design of the proposed project should meet with the requirements and the objectives.

Chapter 4: Implementation and Testing. In this chapter, the implementation of the project will be conduct and relate to the framework design. During this stage, the prototype of the project will develop. After the prototype has successfully developed, testing the project is needed in order to know this project meet the user requirement.

Chapter 5: Result. In this section, results are the findings of the research and the methodology used in this project. It focuses on the outcome of the project that reaches the objective and this is the signs that lead to the successfulness of the project.

Chapter 6: Conclusion. In this section, it refers to the functionality of the PERTEKMA Activity Monitoring system that meets all the objectives and the user requirements.

CHAPTER 2

LITERATURE REVIEW

2.1 Background

Chapter 2 primarily focusing on reviewing the existing system by extracting the features of the existing system, tools and it's technologies that have been used. This chapter discusses in detail about the comparison between the existing system and the proposed system to ensure the proposed system reach the standard level of the system's features. Other than that, it is compulsory to define the tools and technology that has been used in the existing system in order to compare the tools and technology that will be used in the proposed.

2.2 Review of Existing System

In this section, there are five existing systems that are quite similar to the proposed system. Each of them has their own features and functionality as well. In order to develop the proposed system, there are some similarity and standard features for each of the existing system that should be identified. The existing systems are:

a) Features of the System

This section introduces some of the online Faculty Activities Database's primary and advanced features, which can greatly expedite the process of entering the activities (Faculty Activities Database (FAD), 2018). Below is the list of the features:

- Online Faculty Activity Database Marquette University
- Project Tracking System Florida Department of Education (PTSFDOE)

- MonSys - Monitoring System for Students and Tutors of Postgraduate Courses of UNASUS/UFMA in Distance mode using Moodle
- Faculty Activity System (FAS)
- HOSA Activity Tracking System

2.2.1 Online Faculty Activity Database Marquette University

Faculty Activities Database (FAD) developed by Digital Measures, which allows the faculty to track their accomplishments and professional activities and generate report. The activities including accreditation, identifying opportunities for scholarly collaboration, recruiting graduate and undergraduate students and creating periodic reports of faculty scholarly work (Faculty Activities Database (FAD), 2018).

- Logging in to the system
- Manage activities page
- Rapid Report (generating report)
- PasteBoard (the advanced feature)

Below is the detailed explanation for each of the features.

i) Logging in to the system:

Figure 2.1 – Login page for Faculty Activity Database Marquette University

Figure 2.1 shows the login form needs to be filled in by the user in order to access the online faculty activities database. Simply enter Marquette email address in (1) then, enter CheckMarq/emarq password in (2). Click the login button after user entering their email and password as in (3).

ii) Manage activities page:

(1) Activities Reports

Search All Activities... (2)

[Review a guide to manage your activities.](#)

▼ General Information → (3)

- Personal and Contact Information
- Administrative Data - Permanent Data | Yearly Data | **Report Permissions**
- Academic, Government, Military and Professional Positions
- Administrative Assignments
- Awards and Honors
- Consulting

▼ Teaching → (4)

- Academic Advising

Figure 2.2 – Manage Activities page

Based on Figure 2.2 above, once the user logged in to the system, it will be automatically directed to the Manage Your Activities page. The Manage Your Activities page contains four highly-customized categories used to report faculty activities, which are (1) is Currently in Activities Page and (2) is a search function to search all the activities in the system. (3) is a category that contains personal and contact information, permanent and yearly data, education, awards and honors, professional memberships, licensures and certifications, and other sections that do not fit into any of the three subsequent categories. (4) is a category that contains information related to teachings, such as scheduled teaching, academic advising, non-credit instruction, and directed

student learning (i.e. thesis, dissertations).

iii) Rapid Report (generating report):

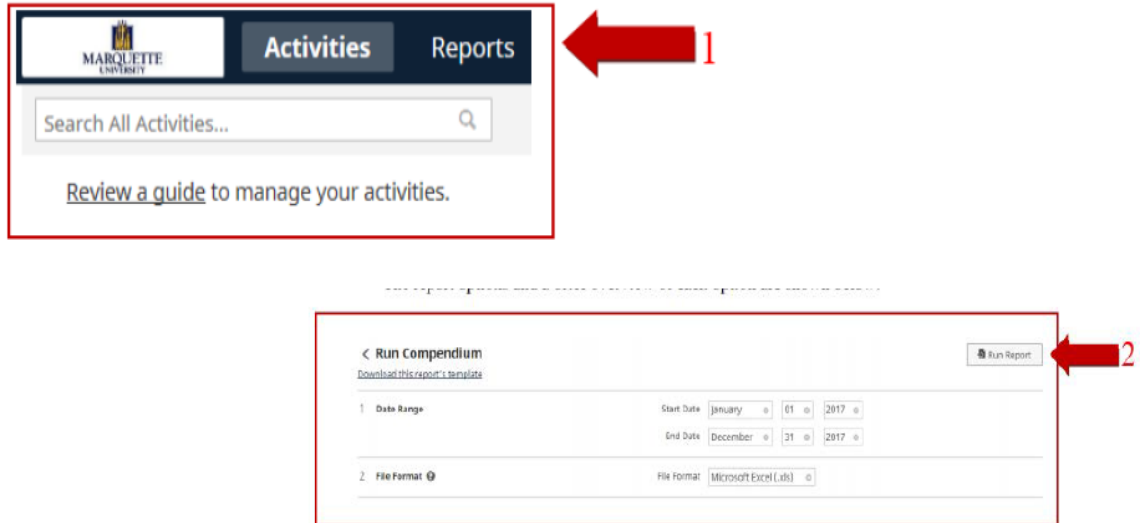


Figure 2.3 – Enter the data in Activities page

Based on figured 2.3 generating a report by click the Reports link on the navigation menu as in (1). Then, by clicking Run Report button as in (2) at the top of the page to generate the report in Microsoft Word, PDF, or HTML (and other formats, for some reports) for a variety of uses.

iv) PasteBoard (the advanced feature):

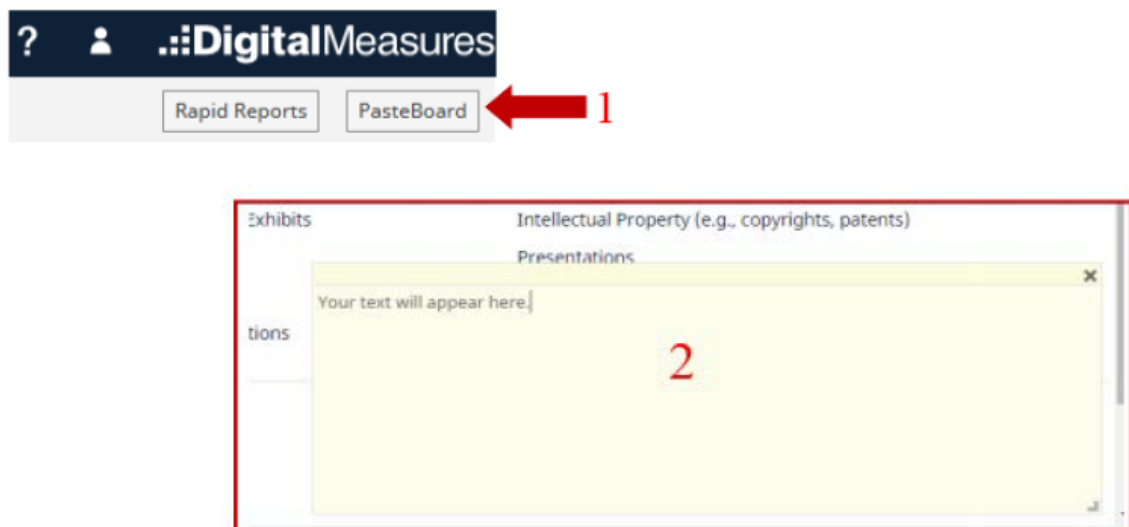


Figure 2.4 – The PasteBoard

Based on Figure 2.4 above, the PasteBoard button (1) provides a handy place to deposit and organize “working” content as the user’s entering activities. Simply select the portion of the text user’s like to enter into the desired activity screen in the online system as in (2), then click and drag it on top of the appropriate field in the database.

b) Limitation of the System

Below is the list of advantages and disadvantages of the system:

Advantages:

- This system helps faculty members to record and manage their faculty activities in a good manner. Features for add, edit and delete activities are provided by the system
- The pasteboard feature provided by this system effectively can greatly reduce the amount of time user spend entering the activities.
- Search function reduced the time spend to search the desired recorded activities
- The system can generate report and rapid report features

Disadvantages:

- No information view page
- No progress monitoring in term of student’s activities either monthly or yearly
- No activity evaluation to determine the degree of achievement of the objectives

2.2.2 Project Tracking System Florida Department of Education (PTSFDOE)

The Project Tracking System (PTS) is a secure online data system used by Florida Department of Education (FDOE), Bureau of Exceptional Education and Student Services (BEESS) (Florida Department of Education, 2017). The purpose of this project is:

- To capture and store descriptive, status and performance information related to the project’s deliverables

- To provide unduplicated data for the purpose of evaluating the effectiveness of technical assistance
- To provide relevant data for reports requested by the FDOE, BEESS discretionary projects, and other constituents
- To provide documentation to the FDOE Bureau of the Comptroller and the Florida Department of Financial Services for payment of deliverables. The deliverables include product, training and service delivery

a) Features of the System

This section discusses in detail the main features of the PTS System. Listed below are the main features of the system:

- Login Page
- Home Page
- Project Summary Page
- Implementation Pages

Below is the brief explanation for each of the features.

i) Login Page:

Project Tracking System
Bureau of Exceptional Education and Student Services
Florida Department of Education

Welcome to the Project Tracking System
Please enter your email and password to log in.

User Email 1

Password 2

Log In 3 [Forgot your password?](#)

This system is funded by the Bureau of Exceptional Education and Student Services, Florida Department of Education. It is maintained by the Personnel Development Support Project at the Florida Center for Interactive Media at Florida State University.
© Florida Department of Education 2008

Figure 2.5 – Login Page Project Tracking System

Figure 2.5 shows the login page needs to be filled in by the user in order to access the online faculty activity database. The User ID is required to be filled in as in (1) and user password as in (2). (3) is the login button to access into the system.

ii) **Home Page:**

The screenshot shows the 'Project Tracking System' home page for the 'Bureau of Exceptional Education and Student Services' and 'Florida Department of Education'. The page title is 'Wabi Test Project 2016-17'. The main navigation bar includes links for 'Select Another Role' (1), 'About PTS' (2), and 'Logout' (2). Below this, there are links for 'Select Another Project', 'Collaboration Matrix', 'State Tuition Support', and 'View Deliverables' (3). The 'Project Information' section (4) displays details for the 'Wabi Test Project 2016-17', including the fiscal agent (BEES-FCIM), project number (17C00), TAPS number (170001), project period (4/1/2016 - 6/30/2017), and budget amount (\$260,000.00). It also lists contact information for the Office of Grants Management Liaison, DOE Project Liaison, and Project Manager. At the bottom, the 'Schedule of Deliverables/Quarterly Review Report' section (5) includes a 'Reports' dropdown menu (5) and a 'Generate Report' button (6). A note at the bottom right states 'Report opens in a new window.'

Figure 2.6 – Home Page Project Tracking System

Based on Figure 2.6, in order to access technical support and the PTS User Guide user can click (1). By clicking (2) to log out from the system and (3) is to proceed to the Project Summary page, which contains a list of the project deliverables. (4) is project information including the project name, fiscal agent, TAPS number, project award period, budget amount and contact information for both the project manager and the BEESS project liaison. The user also can download reports including quarterly activity reports, year-to-date activity reports and export evaluation questions by clicking (5). Button (6) is to Generate Report then the report will open in a new window.

iii) **Project Summary Page:**

Project Summary

[Add Deliverable](#) 1

[Hide Activity Descriptions](#) : Sort Activities by Number ▼

Product E = evaluation questions data; P = progress monitoring data

Analytical

P1 [Test](#) 2 [Add Implementation](#)

Description: Test

Implementations: [4/1/2015](#), [6/1/2015](#), [6/3/2015](#), [6/3/2015](#), [6/10/2015](#), [6/10/2015](#)

Figure 2.7 – Project Summary Page

In the Project Summary page, the user can review the deliverables imported from the user's online grant application. Refer Figure 2.7, button (1) is to add new deliverable and (2) is a button for new implementation data can be added, or existing implementation data can be viewed for each activity from this page.

iv) **Activity Pages:**

Test P1

* Required

Do you have specific recipient details? ☒ Yes ☐ No

Status Update

1

Date Product(s) Completed* 2

Total Number of Products Completed* 3

Evaluation Questions

Do you have evaluation questions data? * ☒ Yes ☐ No

Status: [Enter Data](#)

Progress Monitoring

Do you have progress monitoring data? * ☒ Yes ☐ No

Type of Strategy *
- Select -

Intended Audience* ? 4

- ☐ Adult with Disabilities
- ☐ Business/Community/Advocate
- ☐ Child (birth - PreK)
- ☐ Child (K - 12)
- ☐ Discretionary Project Personnel
- ☐ District Staff
- ☐ Faculty/Staff (College/University)
- ☐ Instructional Personnel
- ☐ Non-Instructional Personnel
- ☐ Parent/Guardian/Family Member
- ☐ School Administrators
- ☐ State/Agency Personnel
- ☐ Student (College/University)
- ☐ Teacher

Figure 2.8 – Activity Page

Figure 2.8 shows the Activity Page for Product deliverable. (1) is for review or update the activity name. Add description as in (2) and drop-down menu in (3) is to add BEESS Strategic Plan. (4) are the set of indicators.

v) **Implementation Page:**

The screenshot shows a form titled "Product" with a green header. It contains several fields with red numbers 1 through 4 indicating specific parts: 1 points to the "Product Name" text input field containing "Test"; 2 points to the "Description" text area containing "Test"; 3 points to the "Addressed in the BEESS Strategic Plan" dropdown menu showing "Dispute Resolution and Monitoring"; and 4 points to the "Indicator(s)" section, which includes a row of checkboxes from 1 to 14, with checkboxes 3 and 4 being checked, and an "N/A" checkbox at the bottom.

Figure 2.9 – Product Implementation Page

In the Implementation pages, the user can add a status update and/or specific product, training, or service delivery data and specific audience details. The content on these pages will vary depending on the type of deliverable (product, training or service delivery). Based on Figure 2.9, status update for Product is in (1). There are three types of products: analytical, informational and instructional and (2) is the start date. The number of completed (3) and the checkbox for Intended Audience involved as stated in (4).

vi) **Progress Monitoring:**

The image shows two side-by-side screenshots of the "Progress Monitoring" page, which has a blue header. The left screenshot shows the question "Do you have progress monitoring data?" with "No" selected (labeled 1), and "What is the reason for not collecting this data?" with "District collects" selected (labeled 2). The right screenshot shows the same question with "Yes" selected (labeled 3), and the "Type of Strategy" dropdown menu set to "- Select -" (labeled 4).

Figure 2.10 – Product Monitoring Page

BEES requires projects to indicate the progress monitoring strategies and measures they use for each deliverable (if applicable). Based on Figure 2.10 above, if the user did not collect progress monitoring data and select No as in (1). Then, the user needs to give the reason for not collecting the data (e.g., "district collects it," "not applicable to the deliverable," or "other") as in (2). If user collects progress monitoring data and select Yes as stated in (3) and strategy from the drop-down list is chosen as in (4) (e.g., Checklist, Coaching, Follow-up Visit, Interview, Journal/Log, Lesson Study, Observation, Peer Discussion/Activity or Product).

b) Limitation of the System

Below is the list of advantages and disadvantages of the system:

Advantages:

- This system provide proper documentation of the project deliverable for FDOE
- The system provides good project deliverable where progress (before, current and after) of the project are recorded
- This system has report generate and search function

Disadvantages:

- No project or activity evaluation to determine the degree of achievement of the objectives

2.2.3 MonSys – Monitoring System for Students and Tutors of Postgraduate Courses of UNASUS / UFMA in Distance mode using Moodle

The MonSys is designed to monitor the performance of tutors and student activities in Moodle (Learning Management System). It is in accordance with the guidelines established by the UNASUS/UFMA- (Open University of SUS of Federal University of Maranhao)

Monitoring Coordination. Monitoring activity includes the number of accesses of tutors and students, students' grades, activities that were not evaluated by the tutors and activities not posted by the students. The MonSys has only one type of user which is the technicians who track and monitor students and tutors in Moodle (Heraklion, 2012).

a) Features of the System

This section introduces some of the MonSys features, below is the list of the features:

- Login Page
- Home Page
- Summary Activity Page

Below is the brief explanation for each of the features.

i) Login Page:



Figure 2.11 – MonSys's User login screen

Based on Figure 2.11 above, the user simply enters their username as in (1) and password as shown in field (2) in order to access into the system.

ii) Home Page:



Figure 2.12 – MonSys’s initial screen

After the user logs, the user can see the initial screen of the system as in Figure 2.12 above. In the Courses Module (1), this area is designed to manage the information about the courses and their respective disciplines.

iii) Summary Activity Page:



Figure 2.13 – Courses Module - view summary information of a course or discipline in a virtual classroom of Moodle

As can be seen in Figure 2.13 above in (2), the Courses Module lists registered rooms presents a summary of information such as the start date, number of students, number

of ratings, average number of accesses since the room was opened. In tab (1) shows the summary information about this course students' grades in all course or discipline activities.

b) Limitation of the System

Below is the list of advantages and disadvantages of the system:

Advantages:

- Alerts Module: area to configure the alerts to students and/or tutors who do not access into the system for a certain period of days.
- The system help in measuring the productivity of the Monitoring team by timing, which is determining the amount of time through chronometric surveys.

Disadvantages:

- No search function and report generating
- No activity deliverable to record the activity progress
- No activity evaluation to determine the degree of achievement of the objectives

2.2.4 Faculty Activity System (FAS)

Digital Measures Activity Insight (hereafter referred to as Faculty Activity System or FAS) is an online information management system designed to organize and report on your users' teaching, research, creative and service activities.

a) Features of the System

This section discussed in detail the main features of the Faculty Activity System (FAS).

Listed below are the main features of the system:

- Login Page
- Home Page

- Activity Page

Below is the brief explanation for each of the features.

i) Login Page:

Figure 2.14 – Login Page of FAS

Figure 2.2.14 shows the login page needs to be filled in by the user in order to access the online faculty activity system. Username is required to be filled in as in (1) and user password as in (2). (3) is login button to access into the system.

ii) Home Page:



Figure 2.15 – Navigation bar in Home Page of FAS

Based on Figure 2.15, the Navigator Bar is on all FAS screens contains the basic navigation links. The main buttons will provide different functionality. Activities as in (1) provide options Manage Activities and Manage Data. Run customized reports based on the information entered as in (2). Help button in (3), send a question or provide feedback directly to the University Administrator for FAS. Notifications bar, when the user has a message a red dot will appear on the bell as in (4).

iii) Activity Page:



Figure 2.16 – Manage Activity Utilities Page

Based on Figure 2.2.16, The Manage Activities (1) utility enables users to keep track of their own teaching, research, creative, service activities and select items to populate a web profile. There are four possible actions in managing activities which are adding a new item, import items, delete record and duplicate existing record.

b) Limitation of the System

Below is the list of advantages and disadvantages of the system:

Advantages:

- The Rapid Reports feature provides a way for you to run custom reports quickly and easily on the data in FAS
- The PasteBoard enables the user to copy up to 4K (4,000 bytes) of text from another document, such as your vita in Microsoft Word, and paste it into the PasteBoard
- FAS gives administrators an efficient, centralized, easy-to-navigate source for generating reports on the data. With FAS, admin is more aware of users' activities and better positioned to publicize their accomplishments because of this awareness.

Disadvantages:

- No activity evaluation to determine the degree of achievement of the objectives

2.2.5 HOSA Activity Tracking System

The Health Occupations Students of America (HOSA) Service Project involves the sponsorship of a health organization by local HOSA chapters (HOSA Service Project, 2018).

Chapters document their involvement and submission of the documentation are via the online HOSA Activity Tracking System by the state deadline to be eligible for state recognition and by May 15 to be eligible for national recognition.

a) Features of the System

This section discussed in detail the main features of the HOSA Activity Tracking System.

Listed below are the main features of the system:

- Login Page
- Add Activities or Review Activities
- View Approved and Declined Entries

Below is the brief explanation for each of the features.

i) Login Page:

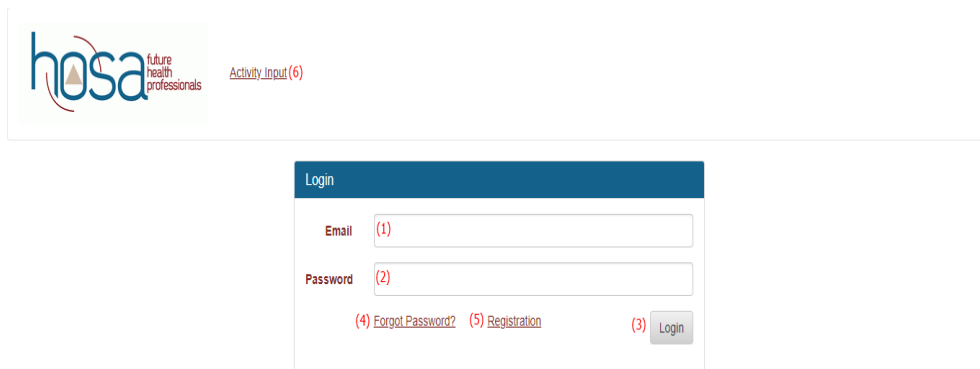


Figure 2.17 – HOSA Activity Tracking Login Page

Based on Figure 2.2.17, the user must officially affiliate with the local chapter before proceeding with user login. User must fill in a valid email address "on-file" in the system before can create an account. Before start user need to register into the system as in (5). Then the user can log in into the system by key-in the email address provided as in (1) and temporary password given in (2), then click login as in (3). User then can go to Activity Input in (5) to add the activities.

ii) Add Activities or Review Activities:

(1)

Activity Input

Date:

Activity:

Activity Code:

Hours:

Save

(2)

| Date | Activity Code | Hours | Dollars (\$) | |
|---|---------------|-------|--------------|----------|
| 08/09/2014 | NS | 2.00 | \$50.00 | Delete |
| test data for Sept 9th - NSP | | | | |
| 08/09/2014 | NS | 1.00 | \$35.00 | Delete |
| second test of NSP on Sept 9th | | | | |
| 08/05/2014 | MV | 3.00 | \$0.00 | Approved |
| test for MHC - Bergen logged in under account | | | | |
| 08/03/2014 | NS | 0.00 | \$100.00 | Declined |
| test for NSP | | | | |
| 07/17/2014 | NS | 0.00 | \$250.00 | Approved |
| another test for July | | | | |

Figure 2.18 – HOSA Add and Reviews Activity Page

Based on Figure 2.2.18 above, once the user logged in, all the activities the user have entered appeared at the bottom of the screen as seen in (2). The user also can add new activity in the Activity Input in (1).

iii) View Approved and Declined Entries:

| Date | Activity Code | Hours | Dollars (\$) | |
|-------------------------------|---------------|-------|--------------|--------|
| 08/09/2014 | BU | 3.00 | \$0.00 | Delete |
| another test entry for system | | | | |
| Total Pending | | 18.5 | \$85.00 | |
| Total Declined | | 0 | \$101.00 | |
| Total Approved | | 40 | \$250.00 | |

Figure 2.19 – HOSA View Approved and Decline Page

The user also can see the total number of hours that are pending, declined, and approved at the very bottom of the screen for each of the recognition events.

b) Limitation of the System

Below is the list of advantages and disadvantages of the system:

Advantages:

- Provide simplicity in user input

Disadvantages:

- No Search function and report generate are provide in the system
- No progress monitoring for every activity that has been done and evaluation for every activity

2.2.6 Comparison of The Features in The Reviewed Existing Systems

Given in Table 2.1 below are the comparison of the features in each of the reviewed existing system. The (*) symbol denotes that an application satisfies the feature against which it is evaluated. The (X) symbol signifies that an application does not possess the particular feature against which it is evaluated.

a) Summary of The Features in The Reviewed Existing Systems

Login Page: Based on Table 2.1, it shows that all existing system had this kind of feature. The login feature is necessary for security purpose of the system. This is important to ensure that only authorized users are allowed to access into the system.

Manage Activity Form: Manage Activity Form is a field provided in the system that allows the user to add their activities entries, edit or even delete the entries. Based on the reviewed that has been done, all the existing system had these futures in their system.

Report Generating: It should be noted that these are an essential part of project/ programme monitoring. Only three out of five from the reviewed existing system had this future.

Search Function: Providing a search function to the user in the system is a design strategy that offers user a way to find content. Based on the reviewed existing system that has been done, only MonSys and HOSA Activity Tracking System that provide this functionality.

Progress Monitoring: Monitoring is the collection and analysis of information about a project or programme, undertaken while the project/programme is ongoing (A step by step

guide to Monitoring and Evaluation, 2014). Based on the reviewed of five existing system only Project Tracking System (PTS-FDOE) does not provide this functionality.

Activity Evaluation: Evaluation can be defined as a process which determines as system-atically and as objectively as possible the relevance, effectiveness, efficiency, sustainability and impact of activities in the light of a project/ programme performance (A step by step guide to Monitoring and Evaluation, 2014). It is focusing on the analysis of the progress made towards the achievement of the stated objectives ongoing. Based on the reviewed on the existing system. All the system does not provide this functionality to evaluate their project/activity performance.

Table 2.1 – Comparison of The Features in The Reviewed Existing Systems

| Systems Features | | Existing System | | | | |
|---------------------|--|---------------------------------|------------------------------------|--------|-------------------------------|-------------------------------|
| | | Faculty Activity Database (FAD) | Project Tracking System (PTS-FDOE) | MonSys | Faculty Activity System (FAS) | HOSA Activity Tracking System |
| 1 | Login Page | * | * | * | * | * |
| 2 | Manage Activity Form (Add, Edit, Delete) | * | * | * | * | * |
| 4 | Report Generating | * | * | X | * | X |
| 5 | Search Function | * | * | X | * | X |
| 6 | Progress Monitoring | X | * | X | X | X |
| 7 | Activity Evaluation | X | X | X | X | X |

2.3 Technology and tools used to develop the proposed system

Given Table 2.2 below are the comparison of the features in each of the reviewed existing system. The (X) symbol denotes that the technology used in the application were undefined. Table 2.2 below shows the summary of the tools and technology used in the reviewed system.

Table 2.2 – Comparison of Tools and Technology Used in The Reviewed Existing Systems

| Systems Technology Used | | Existing System | | | | |
|--------------------------------|----------------------|--|------------------------------------|------------|-------------------------------|-------------------------------|
| | | Faculty Activity Database (FAD) | Project Tracking System (PTS-FDOE) | MonSys | Faculty Activity System (FAS) | HOSA Activity Tracking System |
| 1 | Database | STAR Database | X | PHP, MySQL | X | X |
| 2 | Programming Language | X | X | X | X | X |
| 3 | Internet Connection | Accessible from any computer with an Internet Connection | X | X | X | X |
| 4 | Hardware | X | X | X | X | X |

2.4 A direction of Proposed System

This section discussed the standard features that have been select from the evaluation of the reviewed existing system to be implemented in the PERTEKMA Activity Monitoring. These features will define the functionality of the purposed system and some new features will be added into this system. The features that have been select from the reviewed existing system are login, manage activity page, report generating, search function, progress monitoring and

activity evaluation. In addition, the additional feature will be added into the system is the statistical view. The statistical view is able to represent the data into data visualization.

2.5 Summary

In this chapter, there are five existing system that has been reviewed for the functionality of their features. This chapter also studied the tools and technology used in the reviewed of the existing system. All the information that has been identified are allowed for a better development of the proposed system as well. All the information gathering about the existing system are required and crucial to be applied in the proposed system.

CHAPTER 3

REQUIREMENT ANALYSIS AND DESIGN

3.1 Methodology

This section describes the methodology used to build the proposed system. Rapid Application Development (RAD) is the methodology used as incremental development approach to build the proposed system. RAD methodology can be defined as the process which accelerates the cycle of the development phase of an application development (Naz & Khan, 2015). Rapid Application Development enables quality products to be developed faster and saving valuable resources. The development of PERTEKMA Activity Monitoring generally follows a cyclical process of RAD that includes four basic phases consist of Requirements Planning, User Design, Construction and Cutover. In this chapter, only two phases of RAD are being covered and focus which are Requirements Planning and User Design.

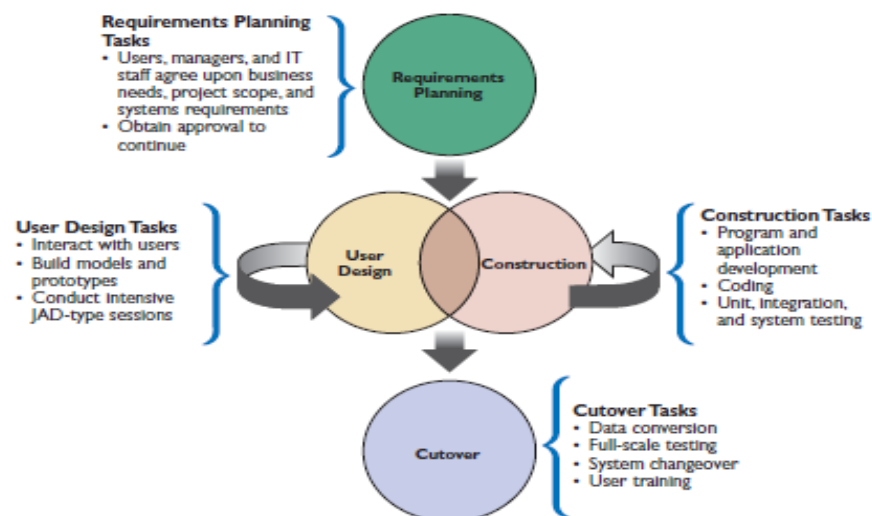


Figure 3.1 – Rapid Application Development (RAD) Model (Ghahrai, 2018)

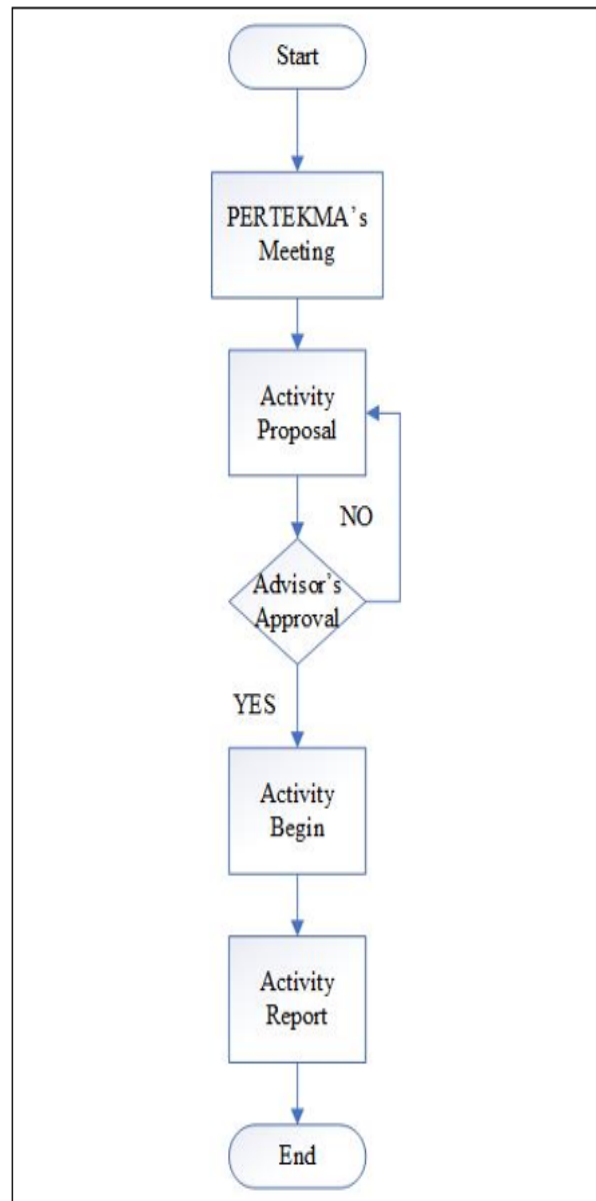
3.1.1 Requirement Planning Task

In the requirement planning phase, this phase defines the functions of PERTKEMA Activity Monitoring and data subject areas that the system will support and determine the system's scope. In order to gather this information, it is required to have an effective way of technique survey for requirement gathering. The technique survey that has been used in this phase is the interviewing session.

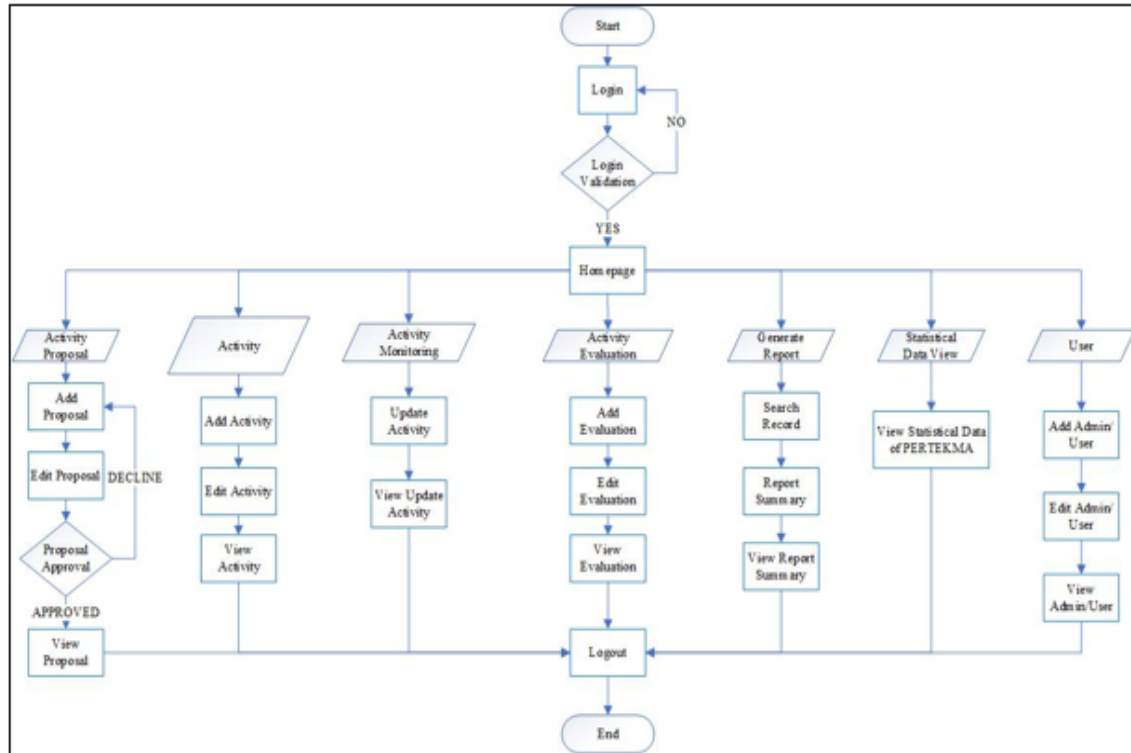
a) Technique Survey

There are numerous survey research methods, including in-person and telephone interviews, mailed and online questionnaires. Interviewing can be defined as a tool in the repertoire of the qualitative researcher, and yet the intricate relationship between the "how's" and the "whys" of the interview process (Kvale, S., 1994). In this section, the approach that has been used is an in-person interview session with one of the advisors, Dr. Suhaila Sae and Mr. Muhaimin, the president of PERTEKMA. The type of interview used is semi-structured interviews where it begins with focused questions and move to open-ended discussion. The data and information gain through interviews session that related to PERTEKMA are recorded using voice recording and note down.

b) Flowchart of the Manual System



a) Flowchart of Manual Procedure



b) Flowchart of Proposed System

Figure 3.2 – Comparison of the flowchart between a) Manual Procedure and b) Proposed System

Figure 3.2 above shows the comparison of the flowchart between the manual procedure that currently happen in PERTEKMA and the proposed system. The workflow of the proposed system discussed in detail in section **3.6.2 Activity Diagram**.

3.1.2 User Design Task

a) Proposed System Functionality

A use case diagrams are important for visualizing, specifying and documenting the behaviour of an element. According to (Sengupta & Bhattacharya, 2006), they are applied to capture the intended behaviour of the system being developed without specifying how the behaviour is implemented. Refer to Figure 3.3 for Use Case Diagram of the Proposed System.

3.2 Software Requirement

Software requirement are the list of the software tools and programs that will be used for the development of PERTEKMA Activity Monitoring. Table 3.1 below are the list of software requirement that are needed for the development of the system.

Table 3.1 – Software Requirement

| No. | Software and Operating System | Requirement |
|-----|---|--|
| 1 | Operating System (OS) | Windows 7 and above |
| 2 | Web Development Tools | Notepad++ Adobe Dreamweaver CC 2017 |
| 3 | Graphical User Interface (GUI) Design Tools | Balsamiq Mockup 3 PhotoScape |
| 4 | Programming Language | HTML, PHP, CSS, MySQL |
| 5 | Database | XAMPP |
| 6 | Documentation | Microsoft Office 2016 |
| 7 | Diagram | Microsoft Visio Professional 2016 Visual Paradigm |
| 8 | Web Browser | Google Chrome |

3.3 Hardware Requirement

Hardware requirement and their specification are the hardware needed to implement and deploy in the PERTEKMA Activity Monitoring system. By having the suitable fulfilment of the hardware requirement are crucial as it is lead to the success of implementation and deployment of the system. The maximum and minimum hardware requirement specification provided is based on the compatibility of the software and operating system used. Table 3.2 shows the list of the hardware requirement that are needed to develop the system.

Table 3.2 – Hardware Requirement

| No. | Hardware Requirement | Minimum | Maximum |
|-----|-------------------------------|---|--|
| 1 | Central Processing Unit (CPU) | Intel® Core™ i5-7200U 2.5GHz Processor | Intel® Core™ i5-7200U 2.5GHz Processor or better |
| 2 | Memorry (RAM) | 2048 MB / 2 GB | 2048 MB / 2 GB or more |
| 3 | Hard Disk Space (HDD) | 1024 MB / 1 GB or more | 1024 MB / 1 GB or more |
| 4 | Display Monitor | SVGA color monitor, 800x600 screen resolution, 256 colors | 1024x768 or higher screen resolution, high color 16 bits |

3.4 Functional Requirement

A functional requirement defines the capabilities of the system or the system's components reacts with particular inputs. Below are the list of the system performance that will be developed in the PERTEKMA Activity Monitoring. This depends on the software used:

i) Superadmin is the advisors of PERTEKMA which are able to:

- log in/log out from the system
- add/edit/delete/view admin and user in the system
- add/edit/delete/view PERTEKMA's activity in the system
- add/edit/delete/view activity job scope and role in the system
- add/edit/delete/view PERTEKMA's sub-activity in the system
- update/edit/delete/view activity monitoring
- generate activity proposal in the system
- view the statistical data in the system

ii) Admin is the high Council of PERTEKMA which are able to:

- log in/log out from the system
- add/edit/delete/view PERTEKMA's activity proposal
- add/edit/delete/view PERTEKMA's activity in the system

- add/edit/delete/view activity job scope and role in the system
 - add/edit/delete/view PERTEKMA's sub-activity in the system
 - update/edit/delete/view activity monitoring
- iii) The user is the main excos of PERTEKMA which are able to:
- log in/log out from the system
 - update/edit/delete/view activity monitoring

3.5 Non-Functional Requirement

Non-functional requirement describes any requirements which specifies how the system perform a certain function. In other words, a non-functional requirement will describe how a system should behave and what limits there are on its functionality. Below are the non-functionality requirement of the proposed system:

- The log in timing will take no longer than 5 seconds
- The system will record all input from the system in the database
- The system will have a database to store all information
- The system will retrieve report when requested
- The system will provide security to access into the system to avoid an interruption from the third party like outsiders. Therefore, only an authorized user of the system that has been registered only can access into the system.

3.6 System Design

During this phase, the user will experience the working prototype and starts to give feedback on new requirements if there are any changes to the prototype. This involves the creation of the project scope. The system interface model is designed by using mock-ups and

start to develop by following the timeline of the Gantt chart to ensure a smooth development progress. A flowchart is also created to see a clear view of the system flow. As for the mock-ups design, Balsamiq Mockups 3 is used to create this system mock-ups.

In this phase, the UML Diagram is used to illustrate the flow of the system in detailed. According to (Lange, Chaudron, & Muskens, 2006) in most projects, UML models are the first document to systematically represent a software architecture design. They're subsequently modified and refined in the development process. Their importance has increased with the advent of the model-driven architecture methodology. There are four diagrams used to visualize how the actor interacts with the system. The list of diagrams is:

- Use Case Diagram
- Activity Diagram
- Class Diagram
- Data Dictionary

3.6.1 Use Case Diagram

A use case diagrams are important for visualizing, specifying and documenting the behaviour of an element. According to (Sengupta & Bhattacharya, 2006), they are applied to capture the intended behaviour of the system being developed without specifying how the behaviour is implemented.



Figure 3.3 – Use Case Diagram of the Proposed System

Below are the use cases scenario for the main function of the Proposed System based on Figure 3.3 above.

Table 3.3 – The Use Case Scenario for Login

| | |
|------------------|---|
| Use Case: | Login |
| Actors: | Superadmin, Admin, User |
| Pre-Conditions: | The Superadmin, Admin and User has been issued a login ID and password to login into the system |
| Basic Flow: | 1. Login into the system 2. Access module in the system 3. Logout from the system |
| Post-Conditions: | Superadmin, Admin and User accessed into the system |

Table 3.4 – The Use Case Scenario for Add Activity Proposal

| | |
|------------------|--|
| Use Case: | Add Activity Proposal |
| Actors: | Superadmin, Admin, User |
| Pre-Conditions: | Create a proposal for an upcoming activity |
| Basic Flow: | <ol style="list-style-type: none"> 1. Login into the system 2. Add the name of an event 3. Add the name of the promoter 4. Add dates and time of the application 5. Add the location of an event 6. Add the introduction of the application 7. Add synopsis of the event 8. Add objective of the event 9. Add the main activities of the event 10. Add the tentative of the program 11. Add the list of official invitation 12. Add the job scope of the event 13. Add the list of the equipment of the event 14. Add budget outlines 15. Add sponsorships or partners 16. Save the added record 17. Logout from the system |
| Post-Conditions: | The activity proposal has been created and waiting for the approval from the advisor |

Table 3.5 – The Use Case Scenario for Add Activity

| | |
|------------------|---|
| Use Case: | Add Activity |
| Actors: | Superadmin, Admin, User |
| Pre-Conditions: | Create activity |
| Basic Flow: | <ol style="list-style-type: none"> 1. Login into the system 2. Select Activity Page 3. Add a name of an activity 4. Add location of an event 5. Add date of an event 6. Add time of an event 7. Add synopsis of the event 8. Save the added record 9. Logout from the system |
| Post-Conditions: | The activity has been created after the activity proposal has been approved by PERTEKMA's advisor |

Table 3.6 – The Use Case Scenario for Add Sub Activity

| | |
|------------------|---|
| Use Case: | Add Sub-Activity |
| Actors: | Superadmin and Admin |
| Pre-Conditions: | Create sub-activity |
| Basic Flow: | <ol style="list-style-type: none"> 1. Login into the system 2. Select created activity 3. Add activity's job scope and role 4. Add sub-activity 5. Add date of an event 6. Add time of an event 7. Add synopsis of the event 8. Add location of the event 9. Save the added record 10. Logout from the system |
| Post-Conditions: | The sub-activity has been created after created the activity |

Table 3.7 – The Use Case Scenario for Activity Monitoring

| | |
|------------------|---|
| Use Case: | Add Activity Monitoring |
| Actors: | Superadmin, Admin and User |
| Pre-Conditions: | Create Activity Monitoring |
| Basic Flow: | <ol style="list-style-type: none"> 1. Login into the system 2. Select Activity Monitoring Page 3. Add activity's job scope and role 4. Fill Reflection Form before activity 5. Add date of an event 6. Add time of an event 7. Add llocation of the event 8. Update activity progress 9. Save the added record 10. Logout from the system |
| Post-Conditions: | The activity progress has been created. Supseradmin are able to monitor the progress of the exco along the activity |

Table 3.8 – The Use Case Scenario for Activity Evaluation

| | |
|------------------|--|
| Use Case: | Activity Evaluation |
| Actors: | Superadmin, Admin and User |
| Pre-Conditions: | Create Activity Evaluation |
| Basic Flow: | <ol style="list-style-type: none"> 1. Login into the system 2. Select Activity Evaluation Page 3. Fill Reflection Form before activity 4. Logout from the system |
| Post-Conditions: | The activity evaluation is created after the activity successfully done. |

Table 3.9 – The Use Case Scenario for Generate Report

| | |
|------------------|---|
| Use Case: | Generate Report |
| Actors: | Superadmin |
| Pre-Conditions: | Superadmin select and generate the report |
| Basic Flow: | <ol style="list-style-type: none"> 1. Login into the system 2. Access the system 3. Select report 4. Generate a report 5. Logout from the system |
| Post-Conditions: | View Report |

Table 3.10 – The Use Case Scenario for Statistical Data View

| | |
|------------------|---|
| Use Case: | Statistical Data View |
| Actors: | Superadmin |
| Pre-Conditions: | Superadmin select and generate a statistical data view |
| Basic Flow: | <ol style="list-style-type: none"> 1. Login into the system 2. Select activity record yearly 3. Select statistical date 5. Logout from the system |
| Post-Conditions: | View Statistical date |

3.6.2 Activity Diagram

Activity diagram is used to communicate an operational step-by-step workflow of components in the system. It represents the occurring sequence of activities, objects involving the activity, including control flows, message flows and signal flows (Wang et al., 2004). The flow of the proposed system is represented using the activity diagram. Each actor specified a role played by the user that interacts with the subject. Below is the activity diagram for PERTEKMA Activity Monitoring.

a) Activity Diagram for Superadmin

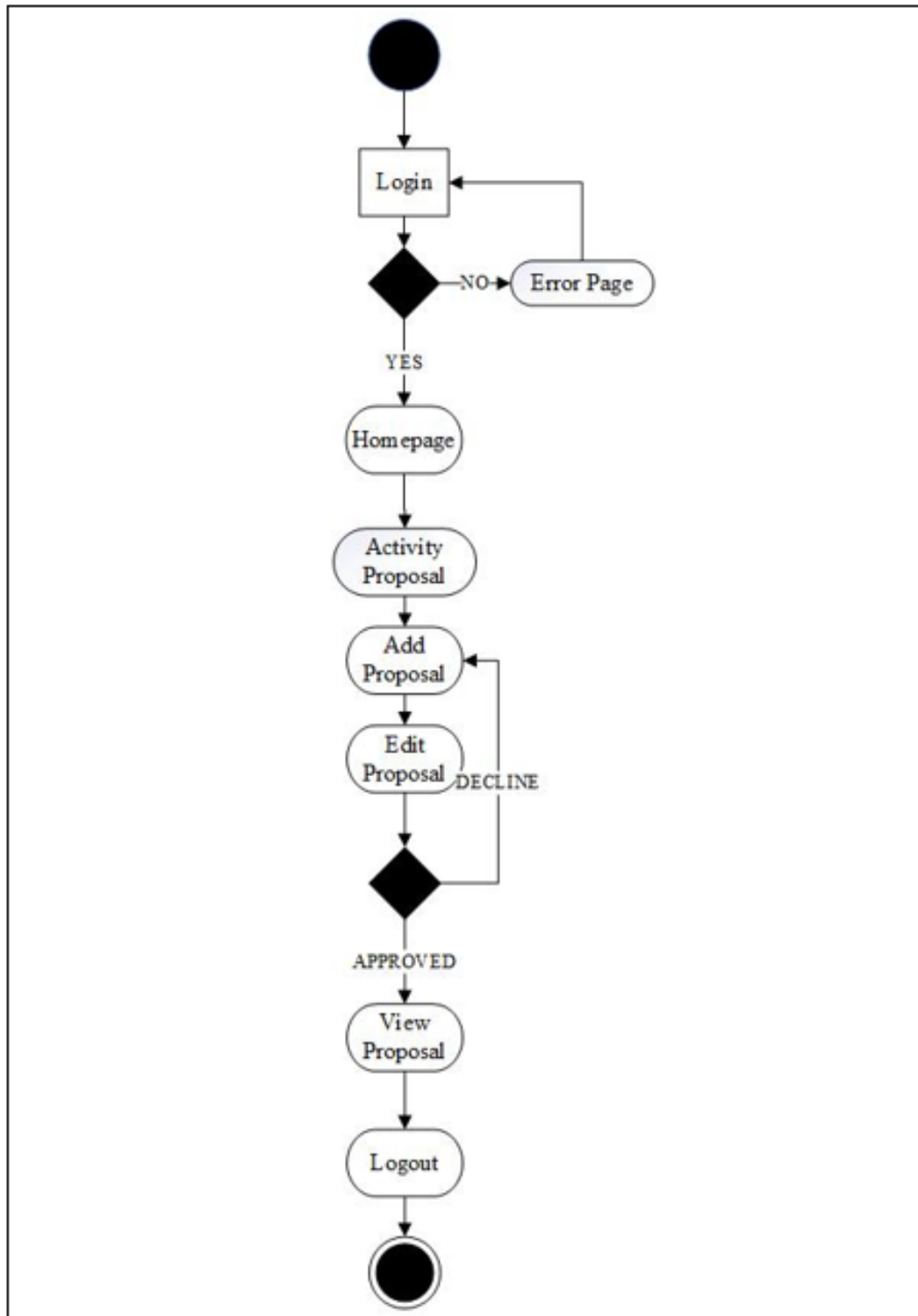


Figure 3.4 – Activity Diagram for activity proposal in PERTEKMA Activity Monitoring

Figure 3.4 above shows Activity Diagram of Superadmin for PERTEKMA Activity Monitoring. In the homepage, superadmin is able to view the proposal created by the admin in the system. The superadmin then can do the action either to approve or decline the activity proposal.

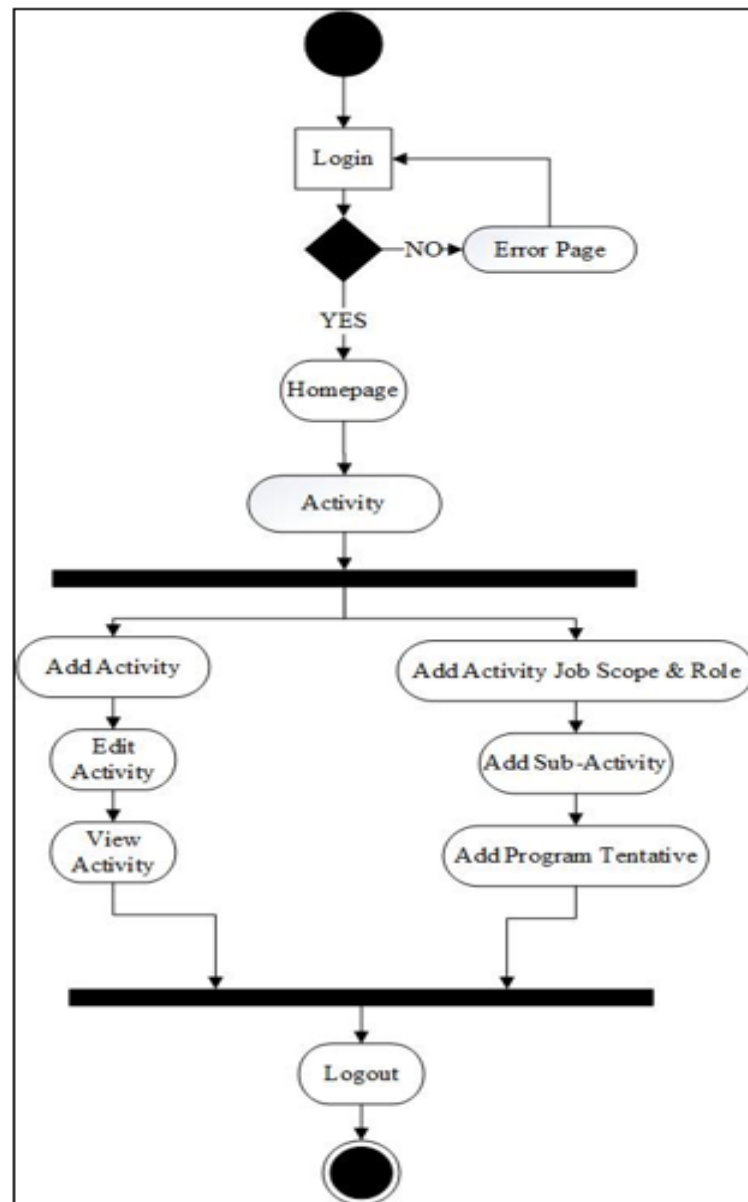


Figure 3.5 – Activity Diagram for Activity Page in PERTEKMA Activity Monitoring

Figure 3.5 above shows activity diagram for Activity Page. In this section, super-admin and admin are able to do this. After proposal has been created, new activity is created based on the approved proposal. The Superadmin or Admin then can start to add

the job scope and exco's role for this activity. This job scope define the role allocation of the activity for an example Job Scope for IT Week. After that, program tentative can be created. The details of the activity clearly shows in this part. In this section, the activity page also able to create the new activity without adding any activity proposal. This action is applicable for the activity that is not demanding any activity proposal to start the activity. The activity listed then could be sorts the records by their activity ID. The records could be sorted in descending order where the arrangement of the records is bottom up (latest activity is on the top of the list followed by the past activity). Next, in every activity created, the activity job scope and exco's role are crucial and should be clearly determined. Filters allow to view on specific data of this records. Then, the list of sub-activity in the activity could be create. In each sub-activity, the records will show the date, time, location and task in each of the sub-activity.

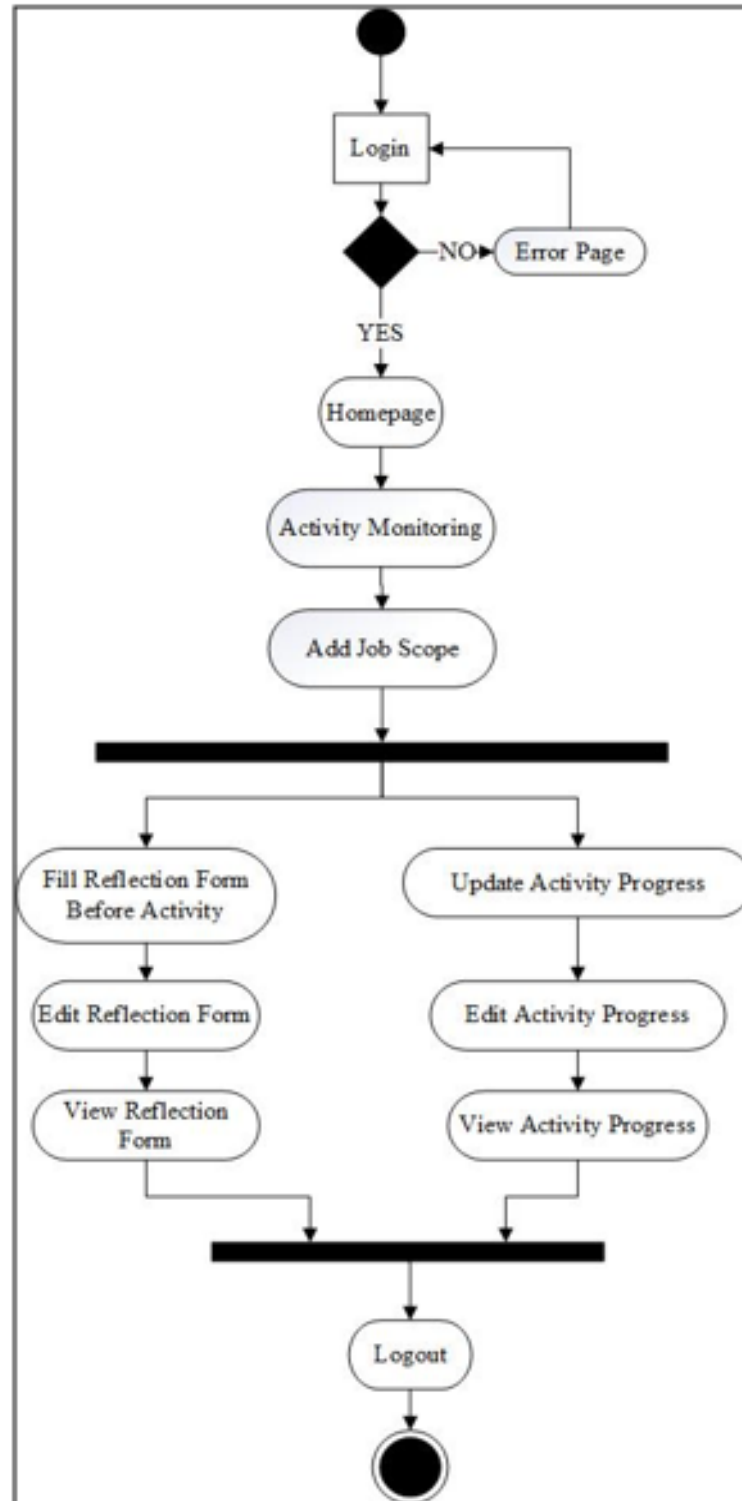


Figure 3.6 – Activity Diagram for Activity Monitoring in PERTEKMA Activity Monitoring

Figure 3.6 above shows the activity diagram for activity monitoring. In this page the superadmin is able to monitor the activity progress conducted by the excos based on their job scope in the activity. This job scope define the role allocation of the activity.

In this page, admin or user will add their job scope in the particular activity. After that, they are required to proceed with the reflection form before starting of the activity. Once the activity start, the excos then will update their progress along the activity they are conducted that related with their job scope only.

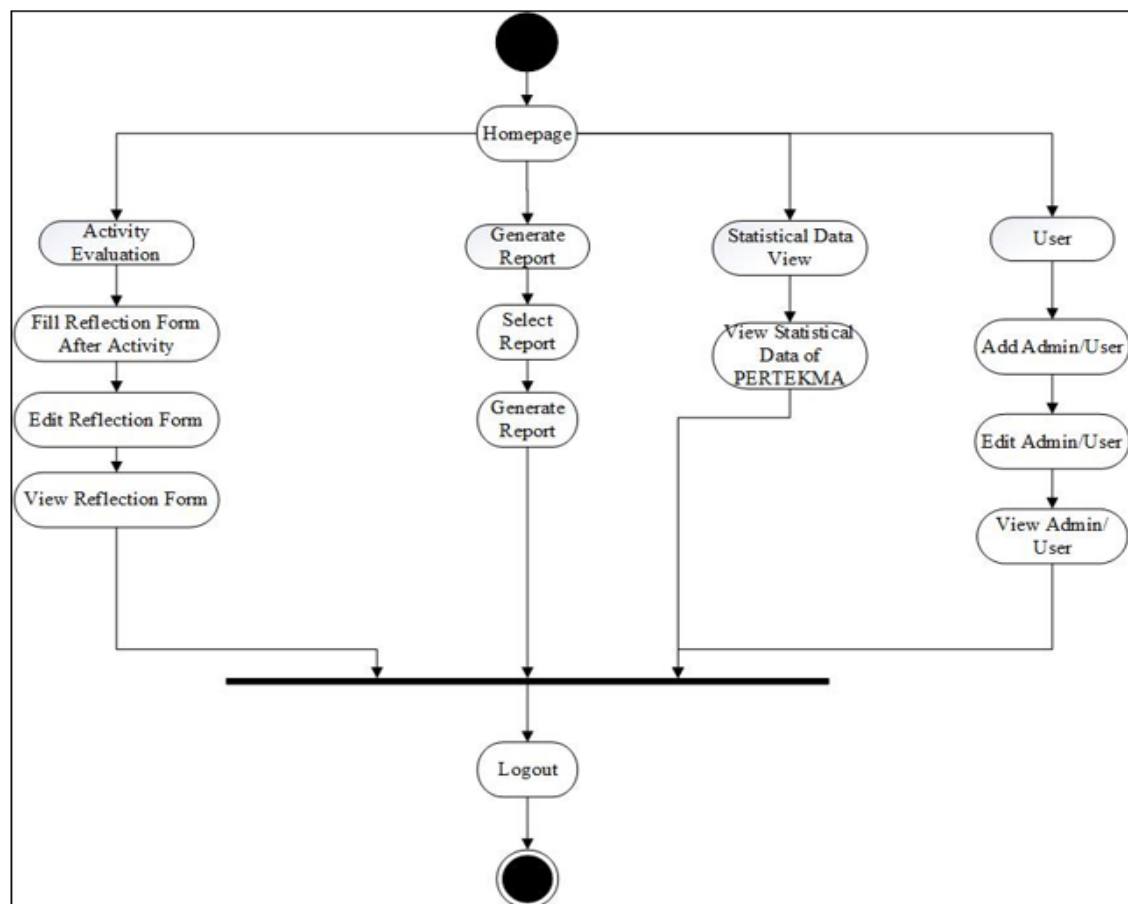


Figure 3.7 – Activity Diagram for Activity Evaluation, Generate Report, Statistical Data View and Add User in PERTEKMA Activity Monitoring

Figure 3.7 above shows the activity diagram for the Activity Evaluation, Generate Report, Statistical Data View and Add User. Basically, in Activity Evaluation page, admin and user will fill in the reflection form after activity. The record for this form could be able to be viewed by superadmin for evaluation purposes. Besides that, superadmin is able to generate the activity report by selecting the report and run it. Statistical data view will show the activity records in the form of data visualisation by monthly or yearly. This

is to ensure for better understanding of the data. Lastly, superadmin would be able to add/edit or even delete the admin of the system and the user which is the main exco of the PERTEKMA in the particular activity.

b) Activity Diagram for Admin

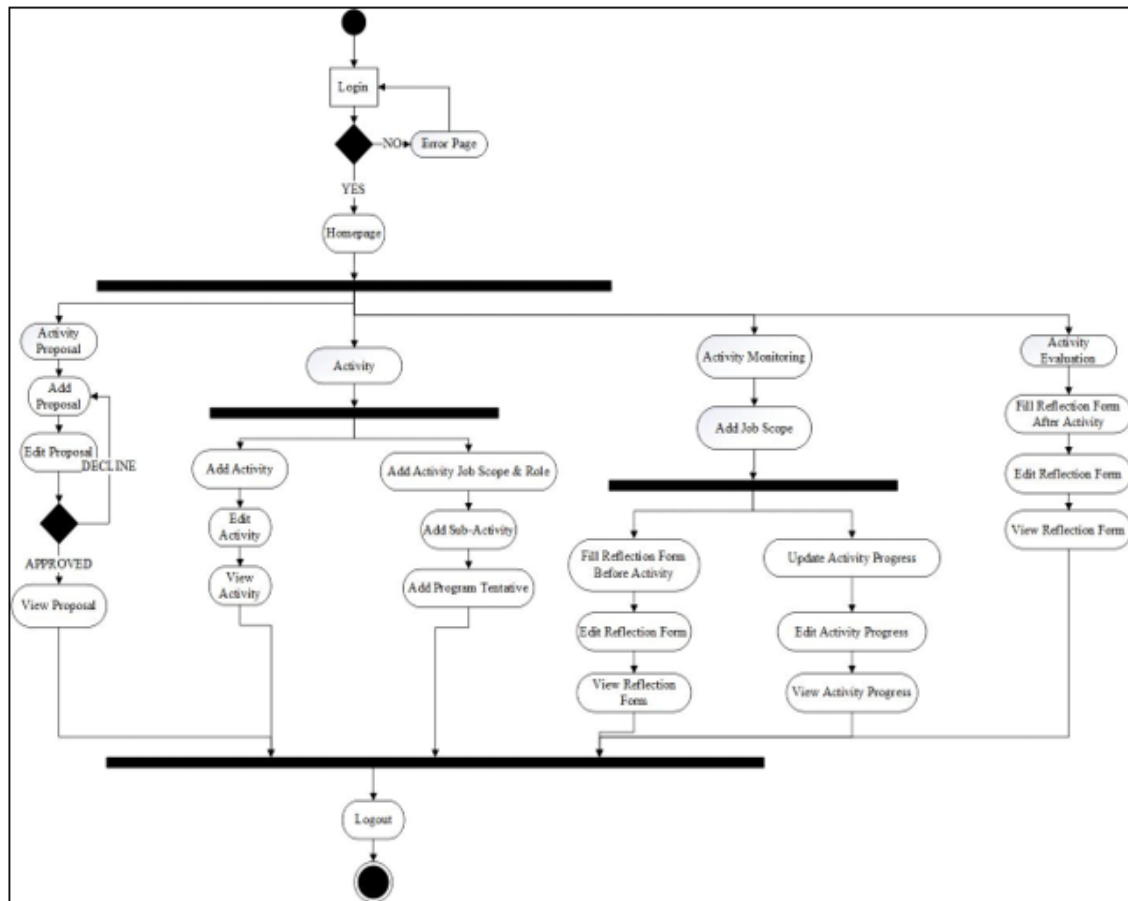


Figure 3.8 – Activity Diagram of Admin for PERTEKMA Activity Monitoring

Figure 3.8 above shows clearly Activity Diagram of Admin after Login into PERTEKMA Activity Monitoring. Admin need to have an account to access module in the system. Therefore, in order to have the account, Superadmin need to assign the admin for the system. Basically, in the Admin site, the admin are able to access the Activity Proposal Page, Activity and Sub-Activity Page, Activity Monitoring Page and Activity Evaluation Page. The operational step-by-step workflow of each components in the system explained in detailed in section 3.6.2. a). Refer to this section for further

explanation.

c) Activity Diagram for User

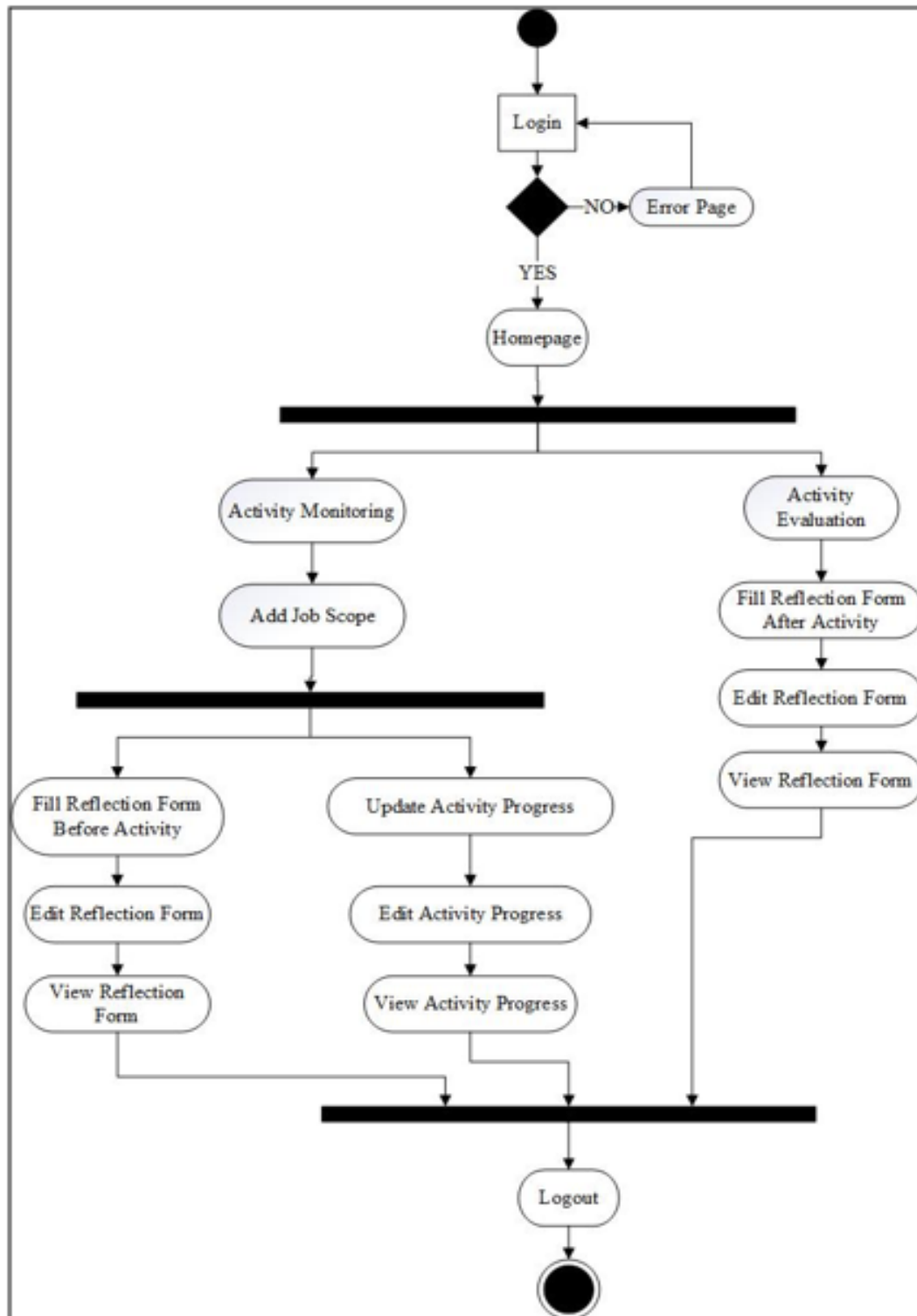


Figure 3.9 – Activity Diagram of User for PERTEKMA Activity Monitoring

Figure 3.9 above shows Activity Diagram of User who access into PERTEKMA

Activity Monitoring. User basically can access into the system once the Superadmin added and assign an account for them to access into the system. In the User site, the User are able to access the Activity Monitoring Page and Activity Evaluation Page only. Refer to section **3.6.2.a)** for operational step-by-step workflow of each components in the system for further explanation.

3.7 Database Design

This phase discusses in detail the fundamental design of a database as the component of the system. In the UML Diagram, the design involved Class Diagram and Data Dictionary. The class diagram shows how the entities relate to each other and its relations in the system while data dictionary explains the contents, format, and structure of the database. Below is the explanation for each of the component.

3.7.1 Class Diagram

The class diagram will illustration of the relationships and source code dependencies among classes. The class diagrams are used to describe the static view of the application of the main constituents are classes and their relationships (Purchase, Colpoys, Carrington, & McGill, 2003). In this context, a class defines the methods and variables in an object, which is a specific entity in a program or the unit of code representing that entity.

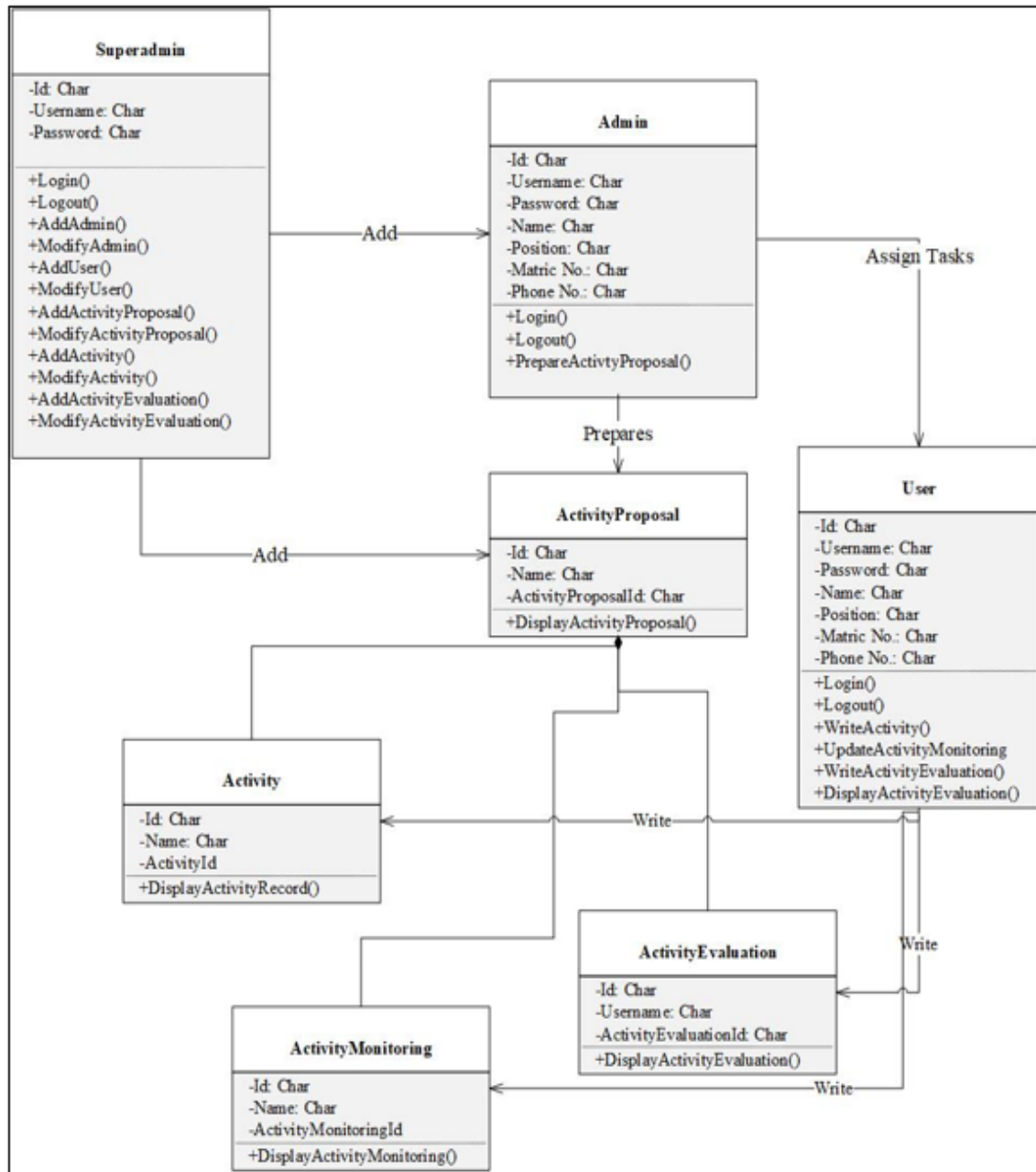


Figure 3.10 – Class Diagram of PERTEKMA Activity Monitoring

The Class Diagram of PERTEKMA Activity Monitoring is shown in Figure 3.10 above, Superadmin, Admin, User, ActivityProposal, Activity, ActivityMonitoring and ActivityEvaluation are identified as the Classes of the system.

3.7.2 Data Dictionary

A data dictionary is a collection of descriptions of the data objects or items in a data model for the benefit of programmers and others who need to refer to them. The expected Data Dictionary of PERTEKMA Activity Monitoring is shown in Table 3.7 below. The data dictionary stated below is not static and will change based on the requirements of the system development later on. The changes will be update in the FYP 2 report.

Table 3.11 – Data Dictionary for table academicsession

| Data Store ID | Data Store Name | Data Store Description | Data Store Element | | | |
|---------------|-----------------|---|------------------------|---|--------------|---------------|
| | | | Name | Description | Type of Data | Default Value |
| D1 | academicsession | Stored PERTEKMA Batch based on academic session | acaSessionId (Primary) | PERTEKMA Batch | Integer | 11 |
| | | | idUser | Id user | Integer | 11 |
| | | | pertekma | Title of PERTEKMA Batch | VarChar | 255 |
| | | | acaSession | Year batch | VarChar | 255 |
| | | | totalProposal | Count for number of proposals handled by PERTEKMA Batch | Integer | 11 |

Table 3.12 – Data Dictionary for table acadetail

| Data Store ID | Data Store Name | Data Store Description | Data Store Element | | | |
|---------------|-----------------|--|-----------------------|------------------------|--------------|---------------|
| | | | Name | Description | Type of Data | Default Value |
| D2 | acadetail | Stored all details about PERTEKMA Committee Member | idacaDetail (Primary) | Id acaDetail | Integer | 11 |
| | | | idacaSession | Id acaSession | Integer | 11 |
| | | | acaName | Committee Members name | VarChar | 255 |
| | | | acaJawatan | Positions | VarChar | 255 |
| | | | acaNoMatric | Matric Number | Integer | 11 |
| | | | acanoTel | Phone Number | Integer | 11 |

Table 3.13 – Data Dictionary for table activity

| Data Store ID | Data Store Name | Data Store Description | Data Store Element | | | |
|---------------|-----------------|--|----------------------|--|--------------|---------------|
| | | | Name | Description | Type of Data | Default Value |
| D3 | activity | Stored program or activity details for “Perincian Program” | activityId (Primary) | Id Activity | Integer | 11 |
| | | | proposalsId | Id Proposal | Integer | 11 |
| | | | idUser | Id user | Integer | 11 |
| | | | activityTitle | Year batch | VarChar | 255 |
| | | | date1 | Start date | VarChar | 255 |
| | | | date2 | End date | VarChar | 255 |
| | | | time1 | Start time | VarChar | 255 |
| | | | time2 | End time | VarChar | 255 |
| | | | activityLocation | Location of the activity being held | VarChar | 255 |
| | | | objective | Objective of the activity | VarChar | 255 |
| | | | ketuaUnit | Person who’s in charge of the activity | VarChar | 255 |

Table 3.14 – Data Dictionary for table activitymonitoring

| Data Store ID | Data Store Name | Data Store Description | Data Store Element | | | |
|---------------|--------------------|------------------------------------|---------------------------------|-------------------------------|--------------|---------------|
| | | | Name | Description | Type of Data | Default Value |
| D4 | activitymonitoring | Stored exco's activity log details | id_activitymonitoring (Primary) | Id Activity | Integer | 11 |
| | | | Id_proposal | Id Proposal | Integer | 11 |
| | | | username | Id user | VarChar | 255 |
| | | | date | Date of the activity | VarChar | 255 |
| | | | logdetail | Activity updates by the excos | VarChar | 255 |
| | | | advisor_comment | Comment from advisor if any | VarChar | 255 |

Table 3.15 – Data Dictionary for table b_income

| Data Store ID | Data Store Name | Data Store Description | Data Store Element | | | |
|---------------|-----------------|---|----------------------|-----------------------|--------------|---------------|
| | | | Name | Description | Type of Data | Default Value |
| D5 | b_income | Stored expected income of the activity proposal | income~_Id (Primary) | Id Income | Integer | 11 |
| | | | Iproposald | Id Proposal | Integer | 11 |
| | | | perkara | Details | VarChar | 255 |
| | | | hargaSeunit | Price per quantity | VarChar | 255 |
| | | | kuantiti | Quantity | VarChar | 255 |
| | | | jumlah | Total expected income | Integer | 11 |

Table 3.16 – Data Dictionary for table b_outcome

| Data Store ID | Data Store Name | Data Store Description | Data Store Element | | | |
|---------------|-----------------|--|-----------------------|-----------------------|--------------|---------------|
| | | | Name | Description | Type of Data | Default Value |
| D6 | b_outcome | Stored expected outcome of the activity proposal | outcome¬_Id (Primary) | Id Outcome | Integer | 11 |
| | | | Oproposald | Id Proposal | Integer | 11 |
| | | | perkara | Details | VarChar | 255 |
| | | | hargaSeunit | Price per quantity | VarChar | 255 |
| | | | kuantiti | Quantity | VarChar | 255 |
| | | | jumlah | Total expected income | Integer | 11 |

Table 3.17 – Data Dictionary for table equipment

| Data Store ID | Data Store Name | Data Store Description | Data Store Element | | | |
|---------------|-----------------|------------------------|-----------------------|------------------|--------------|---------------|
| | | | Name | Description | Type of Data | Default Value |
| D7 | equipment | Stored equipment title | idequipment (Primary) | Id Equipment | Integer | 11 |
| | | | IDproposal | Id Proposal | Integer | 11 |
| | | | bahagian | Unit or Bahagian | VarChar | 255 |

Table 3.18 – Data Dictionary for table equipmentsetail

| Data Store ID | Data Store Name | Data Store Description | Data Store Element | | | |
|---------------|-----------------|--------------------------|-----------------------------|----------------------------|--------------|---------------|
| | | | Name | Description | Type of Data | Default Value |
| D8 | equipmentdetail | Stored equipment details | idequipmentdetail (Primary) | Id Equipment Detail | Integer | 11 |
| | | | idequipment | Id Equipment | Integer | 11 |
| | | | keperluan | Needs | VarChar | 255 |
| | | | kuantiti | Quantity for every need | VarChar | 255 |
| | | | unit | Four division of units | VarChar | 255 |
| | | | catatan | Brief description of needs | VarChar | 255 |

Table 3.19 – Data Dictionary for table job_scope

| Data Store ID | Data Store Name | Data Store Description | Data Store Element | | | |
|---------------|-----------------|---|-----------------------|----------------------------|--------------|---------------|
| | | | Name | Description | Type of Data | Default Value |
| D9 | job_scope | Stored jobscope of the Jawatankuasa Pelaksana | Jobscope_id (Primary) | Id Equipment Detail | Integer | 11 |
| | | | id_orgDetail | Id Equipment | Integer | 11 |
| | | | jobScope | Needs | VarChar | 255 |
| | | | job_status | Quantity for every need | VarChar | 255 |
| | | | unit | Four division of units | VarChar | 255 |
| | | | catatan | Brief description of needs | VarChar | 255 |

Table 3.20 – Data Dictionary for table org_detail

| Data Store ID | Data Store Name | Data Store Description | Data Store Element | | | |
|---------------|-----------------|--|------------------------|----------------------------------|--------------|---------------|
| | | | Name | Description | Type of Data | Default Value |
| D10 | org_detail | Stored details for names of Jawatankuasa Pelaksana and their positions | idOrg_detail (Primary) | Id Org Detail | Integer | 11 |
| | | | id_proposal | Id Proposal | Integer | 11 |
| | | | nama | Names for Jawatankuasa Pelaksana | VarChar | 255 |
| | | | ja_watan | Positions | VarChar | 255 |
| | | | password | Login Password | Integer | 11 |

Table 3.21 – Data Dictionary for table org_name

| Data Store ID | Data Store Name | Data Store Description | Data Store Element | | | |
|---------------|-----------------|--|----------------------|----------------------------------|--------------|---------------|
| | | | Name | Description | Type of Data | Default Value |
| D11 | org_name | Only stored the name list for Jawatankuasa Pelaksana | idorg_name (Primary) | Id Org Name | Integer | 11 |
| | | | nama | Names for Jawatankuasa Pelaksana | VarChar | 255 |

Table 3.22 – Data Dictionary for table program

| Data Store ID | Data Store Name | Data Store Description | Data Store Element | | | |
|---------------|-----------------|-----------------------------------|---------------------|----------------------------|--------------|---------------|
| | | | Name | Description | Type of Data | Default Value |
| D12 | program | Stored date for program tentative | programId (Primary) | Id Program | Integer | 11 |
| | | | proposalId | Id Proposal | Integer | 11 |
| | | | date | Date for Program Tentative | VarChar | 255 |

Table 3.23 – Data Dictionary for table programDetail

| Data Store ID | Data Store Name | Data Store Description | Data Store Element | | | |
|---------------|-----------------|--------------------------------------|---------------------------|-----------------------|--------------|---------------|
| | | | Name | Description | Type of Data | Default Value |
| D13 | programDetail | Stored details for program tentative | IdprogramDetail (Primary) | Id Program Detail | Integer | 11 |
| | | | programid | Id Program | Integer | 11 |
| | | | time1 | Start time | VarChar | 255 |
| | | | time2 | End time | VarChar | 255 |
| | | | acara | Details of the event | VarChar | 255 |
| | | | programLocation | Location of the event | VarChar | 255 |

Table 3.24 – Data Dictionary for table proposal

| Data Store ID | Data Store Name | Data Store Description | Data Store Element | | | |
|---------------|-----------------|-----------------------------|---------------------|--|--------------|---------------|
| | | | Name | Description | Type of Data | Default Value |
| D14 | proposal | Stored details for proposal | proposald (Primary) | Id Proposal | Integer | 11 |
| | | | iduser | Id User | Integer | 11 |
| | | | proposalTitle | Title of the proposal | VarChar | 255 |
| | | | date1 | Start date | VarChar | 255 |
| | | | date2 | End date | VarChar | 255 |
| | | | time_1 | Start time | VarChar | 255 |
| | | | time_2 | End time | VarChar | 255 |
| | | | location | Location of the event | VarChar | 255 |
| | | | tujuan | Purpose of the proposal | VarChar | 255 |
| | | | pendahuluan | Introduction | VarChar | 255 |
| | | | objektif | Objective of the proposal | VarChar | 255 |
| | | | penganjur | FCSIT | VarChar | 255 |
| | | | sasaran | Target of the event | VarChar | 255 |
| | | | jemputanLuar | Guest outside from UNIMAS | VarChar | 255 |
| | | | jemputanDalam | Guest within UNIMAS | VarChar | 255 |
| | | | kolaborasi | Collaboration | VarChar | 255 |
| | | | penutup | Conclusion of the proposal | VarChar | 255 |
| | | | activityPostmortem | Objective achievement after the activity | VarChar | 255 |
| | | | dekan_comment | Dean comment for proposal | VarChar | 255 |
| | | | td_comment | Deputy Dean comment for proposal | VarChar | 255 |
| | | | proposalStatus | Status of the Proposal by Dean | VarChar | 255 |

Table 3.25 – Data Dictionary for table proposal (continued)

| Data Store ID | Data Store Name | Data Store Description | Data Store Element | | | |
|---------------|-----------------|-----------------------------|--------------------|---|--------------|---------------|
| | | | Name | Description | Type of Data | Default Value |
| D14 | proposal | Stored details for proposal | proposalStatus2 | Status of the Proposal Supported by Deputy Dean | VarChar | 255 |
| | | | AcaSession | Proposal manage by PERTEKMA Batch | VarChar | 255 |
| | | | calPro | Calculate column Program | VarChar | 255 |
| | | | calAct | Calculate column Activity | VarChar | 255 |
| | | | calInc | Calculate column Income | VarChar | 255 |
| | | | calOut | Calculate column Outcome | VarChar | 255 |
| | | | calEqu | Calculate column Equipment | VarChar | 255 |
| | | | calProg | Calculate column Program | VarChar | 255 |
| | | | cal_ap | Calculate column Jobscope | VarChar | 255 |

Table 3.26 – Data Dictionary for table user

| Data Store ID | Data Store Name | Data Store Description | Data Store Element | | | |
|---------------|-----------------|---------------------------|--------------------|--|--------------|---------------|
| | | | Name | Description | Type of Data | Default Value |
| D15 | user | Stored user login details | iduser (Primary) | Id User | Integer | 11 |
| | | | username | Position in “Jawatankuasa Pelaksana” as username | VarChar | 255 |
| | | | password | Password to login | VarChar | 255 |
| | | | status | Status of login | VarChar | 255 |
| | | | ID_proposal | Id Proposal | VarChar | 255 |

3.8 Interface Design

Mock-up is a design that applies prototyping concept in web applications. Mock-up refers to a running, navigable, partial or full-sized model of a web application, used for requirements elicitation, validation and finalization (Zhang, Chang, & Chung, 2003). Below is the mock-up design for PERTEKMA Activity Monitoring:

- Login Page
- Home Page
- Add Activity Proposal Page
- Edit/Delete Activity Proposal Page
- Add Activity Page
- Edit/Delete Activity Page
- Add Sub Activity Page
- Edit/Delete Sub Activity Page
- Update Activity Monitoring Page
- Add Evaluation Page

- Edit/Delete Evaluation Page
- Generate Report Page
- Statistical Data View Page
- Add/Edit/Delete User Page

3.8.1 Login Page

PERTEKMA Activity Monitoring

http://pam/index.php

Username:

Password:

[Need help?](#)

Developed and maintained by PERTEKMA, UNIMAS

Figure 3.11 – Login Page Mock-up

Figure 3.11 above shows the login mock-up for Superadmin, Admin and User of PERTEKMA Activity Monitoring. In order to access the system, username and password are required before signing in into the system.

3.8.2 Home Page

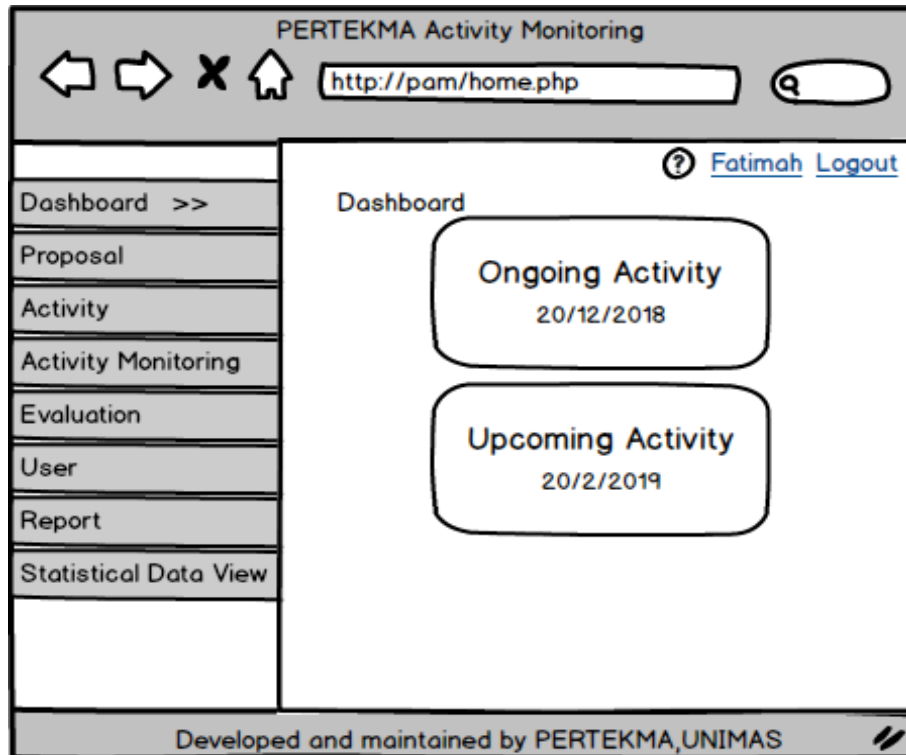


Figure 3.12 – Home Page Mock-up

Figure 3.12 above shows the Home Page mock-up for Superadmin of PERTEKMA Activity Monitoring. The dashboard basically shows the current activity or upcoming activity will be held by PERTEKMA as a reminder to the Advisors who will access into the system as well.

3.8.3 Add Activity Proposal Page

The mock-up shows a web browser window titled "PERTEKMA Activity Monitoring". The address bar displays "http://pam/addproposal.php". The browser's navigation bar includes back, forward, stop, and home buttons. On the left side, there is a vertical menu with the following items: Dashboard, Proposal >>, Activity, Activity Monitoring, Evaluation, User, Report, and Statistical Data View. The "Proposal >>" item is highlighted. The main content area is titled "Proposal" and contains the following form fields: Event Name, Location, Date of Application, Synopsis, Main Activities, Budgets Outlines, and Sponsorship/Partners. Each field is represented by a rectangular input box. At the bottom of the form, there is a "< back" link and a "Save" button. In the top right corner of the main content area, there is a user profile section showing a question mark icon, the name "Fatimah", and a "Logout" link. The footer of the page states "Developed and maintained by PERTEKMA, UNIMAS" with a small logo to the right.

Figure 3.13 – Add Activity Proposal Page Mock-up

Based on Figure 3.13 above shows the form for activity proposal. This form is a fundamental part before assigning any activities and needs an approval from the Advisor.

3.8.4 Edit/Delete Activity Proposal Page

The mock-up shows a web browser window titled "PERTEKMA Activity Monitoring". The address bar contains "http://pam/editproposal.php". The browser's navigation buttons (back, forward, stop, home) are visible. On the right side of the browser window, there is a user profile section with a question mark icon, the name "Fatimah", and a "Logout" link. A sidebar menu on the left lists the following options: Dashboard, Proposal >>, Activity, Activity Monitoring, Evaluation, User, Report, and Statistical Data View. The main content area displays the details of a proposal:

- Proposal
- Event Name: Hari Bersama PERTEKMA
- Location: FIT,UNIMAS
- Date of Application: 12/12/2018
- Synopsis:
- Main Activities:
- Budgets Outlines:
- Sponsorship/Partners:

At the bottom of the main content area, there are four buttons: "< back", "Edit", "Delete", and "Add". The footer of the page states "Developed and maintained by PERTEKMA,UNIMAS" with a small icon to the right.

Figure 3.14 – Add Activity Proposal Page Mock-up

Based on Figure 3.14 above shows the record of the activity proposal. This page provides an edit button to do any changes in the activity proposal or even add a new proposal by clicking the add button. Delete button use to delete the current record of activity proposal. Back button uses to go back to the previous page.

3.8.5 Add Activity Page

PERTEKMA Activity Monitoring

Navigation icons: back, forward, close, home

URL: <http://pam/addactivity.php>

Search icon

Dashboard

Proposal

Activity >>

Activity Monitoring

Evaluation

User

Report

Statistical Data View

Activity Record

Event Name:

Location:

Start and End Date:

Time:

Synopsis:

Activities:

Task Allocation:

[? Fatimah Logout](#)

[back](#)

Developed and maintained by PERTEKMA, UNIMAS

Figure 3.15 – Add Activity Page Mock-up

Based on Figure 3.15 above shows the form for add activity. The user needs to fill in the form for activity record as provided and submitting it by clicking the save button.

3.8.6 Edit/Delete Activity Page

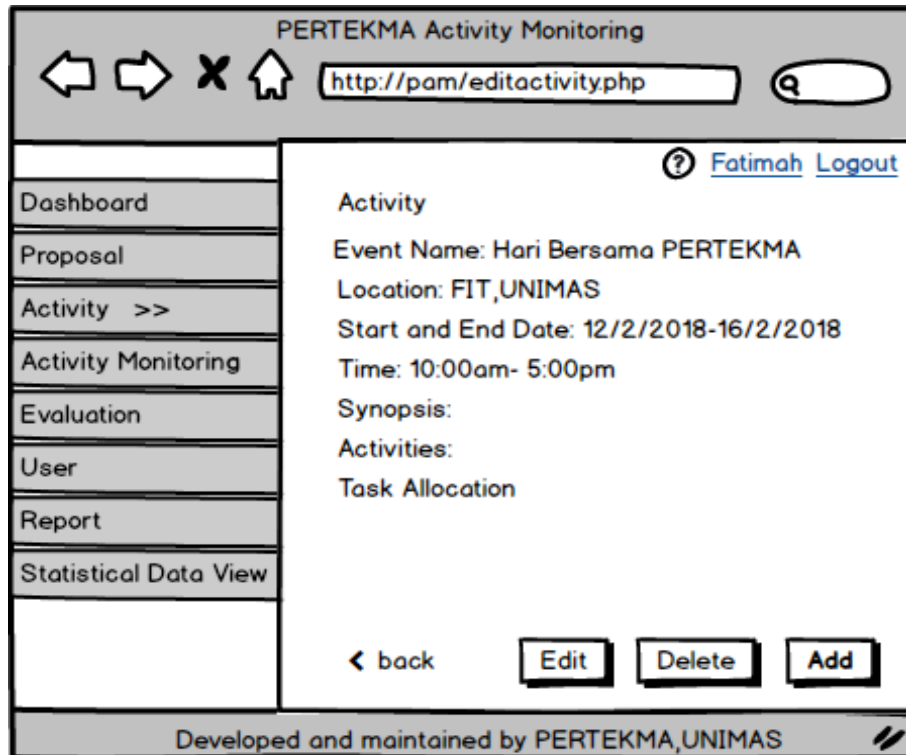
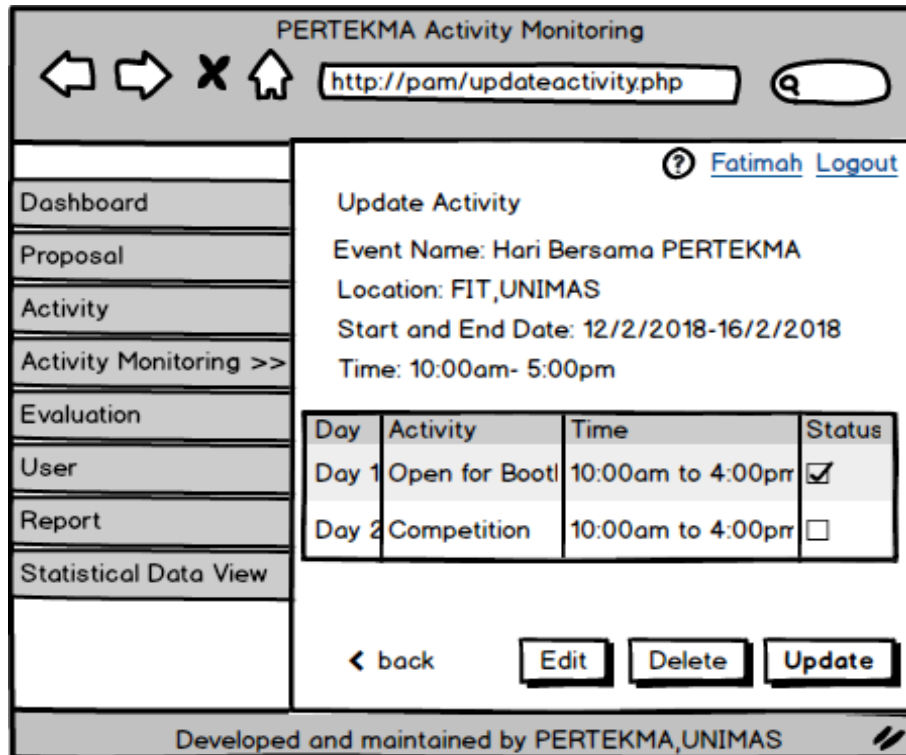


Figure 3.16 – Edit/Delete Activity Page Mock-up

Figure 3.16 above shows the record of activity. This page provides an edit button to do any changes in the activity or even add a new activity record by clicking the add button. Delete button use to delete the current record. Back button uses to go back to the previous page.

3.8.7 Activity Monitoring



The mock-up shows a web browser window titled "PERTEKMA Activity Monitoring". The address bar contains "http://pam/updateactivity.php". The page has a sidebar menu with options: Dashboard, Proposal, Activity, Activity Monitoring >>, Evaluation, User, Report, and Statistical Data View. The main content area is titled "Update Activity" and displays the following information: Event Name: Hari Bersama PERTEKMA, Location: FIT, UNIMAS, Start and End Date: 12/2/2018-16/2/2018, and Time: 10:00am- 5:00pm. Below this is a table with columns: Day, Activity, Time, and Status. The table contains two rows: Day 1 (Open for Boot) with a checked status, and Day 2 (Competition) with an unchecked status. At the bottom of the main content area are buttons for "< back", "Edit", "Delete", and "Update". The footer of the page states "Developed and maintained by PERTEKMA, UNIMAS".

| Day | Activity | Time | Status |
|-------|---------------|-------------------|-------------------------------------|
| Day 1 | Open for Boot | 10:00am to 4:00pm | <input checked="" type="checkbox"/> |
| Day 2 | Competition | 10:00am to 4:00pm | <input type="checkbox"/> |

Figure 3.17 – Activity Monitoring Page Mock-up

Figure 3.17 above shows Activity monitoring page where user are able to update their current activity status. Check button indicate that the activity on that day is successfully done.

3.8.8 Add Evaluation

PERTEKMA Activity Monitoring

Navigation icons: back, forward, close, home

URL: <http://pam/evaluation.php>

User: [Fatimah](#) [Logout](#)

Evaluation

Event Name: Hari Bersama PERTEKMA

Location: FIT,UNIMAS

Start and End Date: 12/2/2018-16/2/2018

Time: 10:00am- 5:00pm

Report:

[< back](#) [Save](#)

Developed and maintained by PERTEKMA,UNIMAS

Figure 3.18 – Add Activity Evaluation Page Mock-up

Based on Figure 3.18 above, figures show the form for activity evaluation. Activity evaluation basically is known as an evaluation for the degree of success to achieve the objective of the activity. The user is required to fill in the form for activity evaluation as provided and submitting it by clicking the save button.

3.8.9 Edit/Delete Evaluation

PERTEKMA Activity Monitoring

Navigation icons: back, forward, close, home

URL: <http://pam/editevaluation.php>

Search icon

Dashboard

Proposal

Activity

Activity Monitoring

Evaluation >>

User

Report

Statistical Data View

Evaluation

Event Name: Hari Bersama PERTEKMA

Location: FIT, UNIMAS

Start and End Date: 12/2/2018-16/2/2018

Time: 10:00am- 5:00pm

Report: The activity going well.

< back

Edit Delete Save

Developed and maintained by PERTEKMA, UNIMAS

Figure 3.19 – Edit/Delete Activity Evaluation Page Mock-up

Based on Figure 3.19 above, the user can edit and save for the new changes in activity evaluation pages if any or even delete the activity evaluation.

3.8.10 Edit/Delete Evaluation

PERTEKMA Activity Monitoring

http://pam/report.php

Dashboard
Proposal
Activity
Activity Monitoring
Evaluation
User
Report >>
Statistical Data View

Report

search

| Activity (job title) | Location |
|----------------------|----------|
| Hari PERTEKMA | FIT |

< back

Save Print

Developed and maintained by PERTEKMA, UNIMAS

Figure 3.20 – Report Generate Page Mock-up

Based on Figure 3.20, superadmin can generate the report by searching a particular data by keying a keyword. The system then will show all the information that related to the query. The alternative to keeping the records is either in softcopy or hardcopy by clicking the Print button.

3.8.11 Statistical Data View

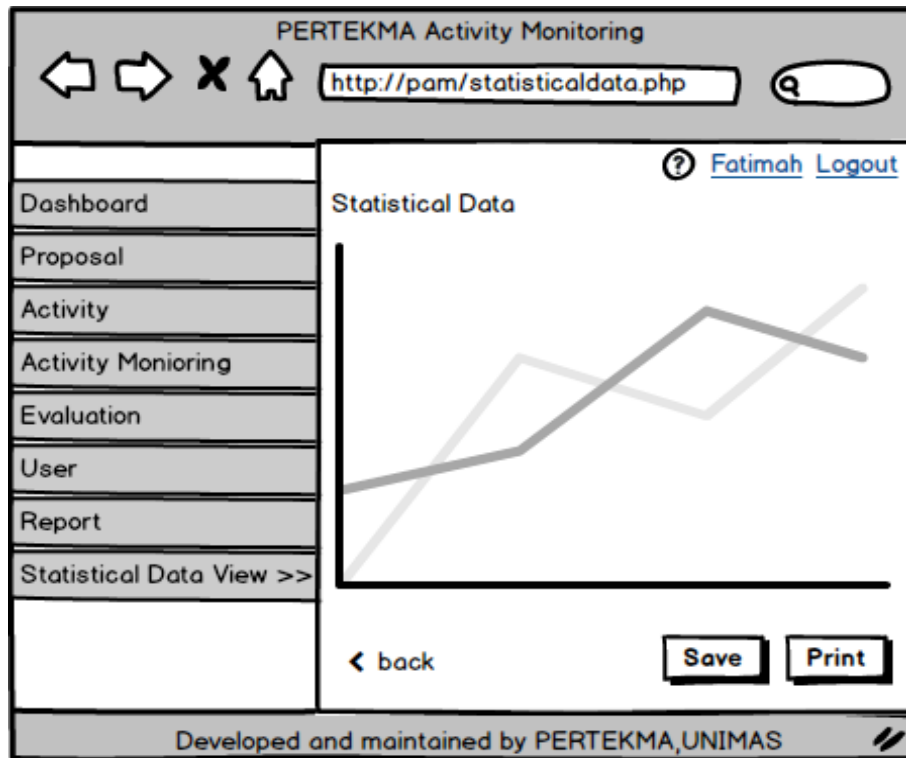


Figure 3.21 – Statistical Data View Page Mock-up

Figure 3.21 shows the statistical data view page for superadmin, this page visualizes the data in the form of data visualization.

3.9 Summary

In summary, this chapter focused on the methodology used to develop the proposed system. The methodology used is Rapid Application Development (RAD). This chapter covered two phases out of four phases in RAD which is requirement planning phase and user design phase. In the requirement planning phase, the technique survey used has been identified to collect information about the user requirements. In the system design, UML Diagram is used to illustrate the interaction and flow of the system in detailed. There are four UML Diagrams covered in this chapter which is consist of a Use Case Diagram, Activity Diagram, Class Diagram and Data Dictionary.

CHAPTER 4

SYSTEM IMPLEMENTATION

4.1 Introduction

This chapter focuses on the development of PERTEKMA Activity Monitoring which includes the explanation of software requirements in developing the prototype and database preparation of the proposed system. Database preparation is about to store the data, information and record of PERTEKMA's activity. The prototype implementation stage is about to implement PERTEKMA Activity Monitoring for PERTEKMA Committee members.

4.2 Software Requirement

The list of software requirement used during the development process stated as below:

- i) Adobe Dreamweaver CC 2017: A web design and development application that uses both Live View surface and standard features of code editor. Dreamweaver is a versatile web design and development tool that enables visualization of web content while coding.
- ii) XAMPP Control Panel v3.2.2: An application that used for Apache distribution to create a local web server for testing and deployment purposes. Everything needed to set up a web server which includes a server application (Apache), database (MariaDB) and scripting language (PHP).
- iii) Google Chrome: A web browser used to run the system locally.

4.3 Development of PERTEKMA Activity Monitoring

This section describes in detail for every feature in the PERTEKMA Activity Monitoring. Primary features include the system's functionalities and these features provide greater reliability, usability and efficiency. PERTEKMA Activity Monitoring can be divided into three different role of user login which consist of superadmin, admin and user. A single login page of the system used to access their roles and each of it differ in terms of the features.

4.3.1 Single Login Page-Superadmin, Admin and User

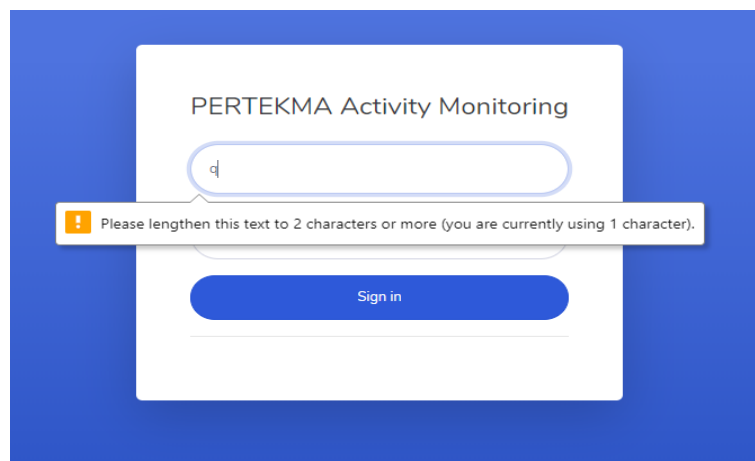


Figure 4.1 – Single Login Page for different roles

Based on Figure 4.1 shows that the interface for login page into the system for different user roles. In this single login page, the committee members can access into the system based on their roles. The validation form for this login page will not allow the users to enter username less than two characters, restriction for login when entering the wrong password or username and clicked the Sign in button without fill in the related fields.

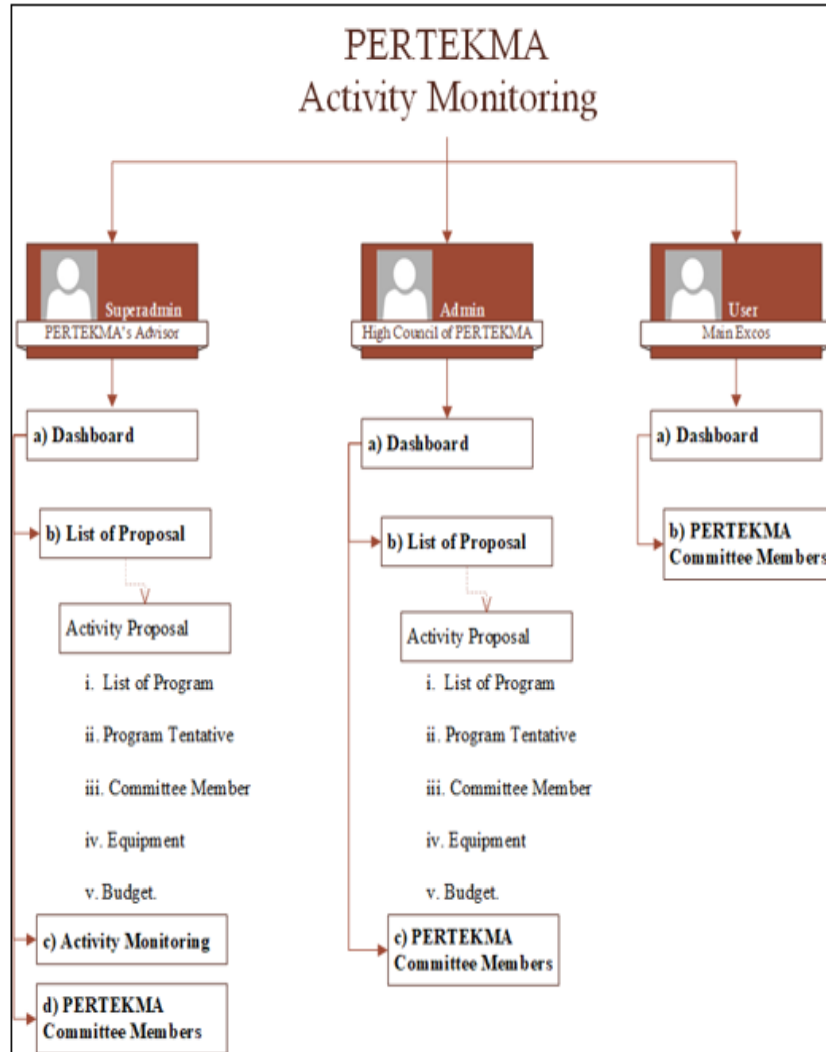


Figure 4.2 – Access Module in the Prototype based on Roles

Based on Figure 4.2, the capabilities to access each module in the system restricted based on roles of login. Each of the access module in the superadmin, admin and user will be explained in detail.

4.3.2 Access Module for Superadmin

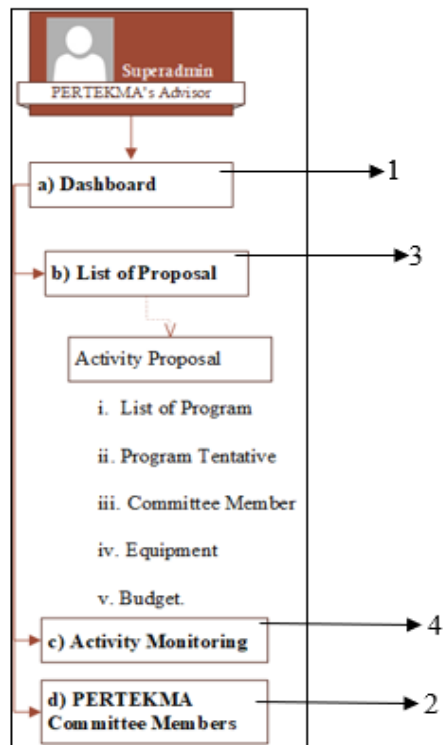


Figure 4.3 – Access Module for Superadmin

Based on Figure 4.3 above, the numbering shown a sequence for superadmin to follow up once he/she login into the system. The sequences consist of Dashboard (1), followed by PERTEKMA Committee Members (2), List of Proposal (3) then Activity Monitoring (4). Superadmin have to follow the sequence correctly in order to understand the flow of the system as well. This is due to the data in each module are related and connected to each other.

a) Dashboard

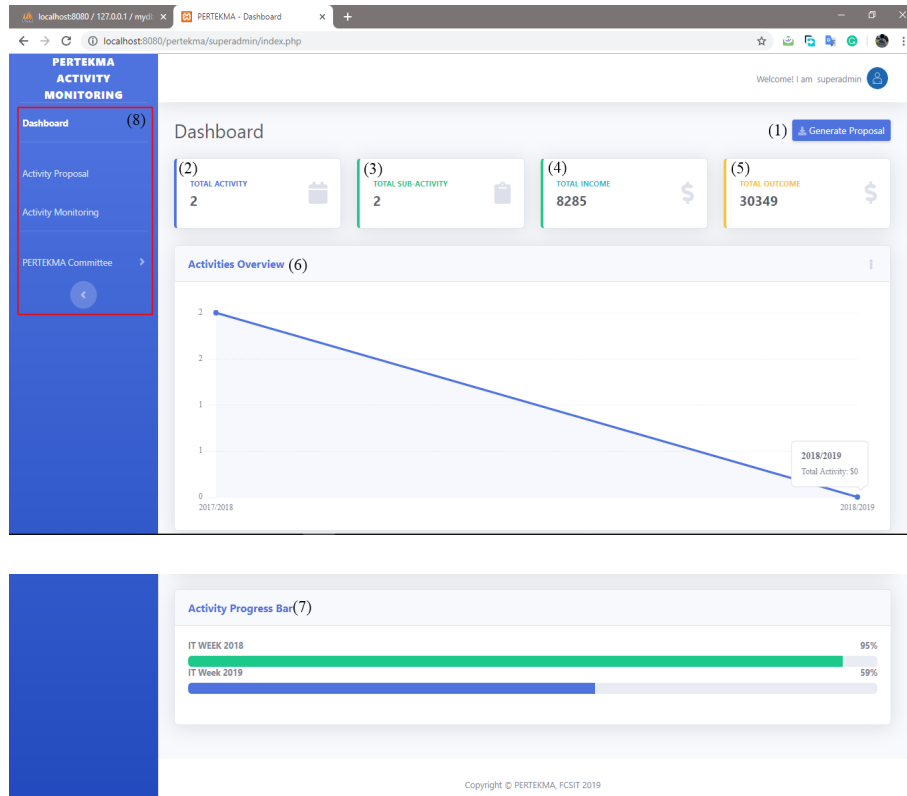


Figure 4.4 – Superadmin Dashboard

Figure 4.4 shows the dashboard for the Superadmin once login into the system. In the Dashboard, it will count and summarize all the related information to the Superadmin. It include:

- a) button for generate proposal (print proposal)-(1)
- b) the total number of activities that has been done yearly-(2)
- c) total number of sub-activities throughout monthly-(3)
- d) total income (“Anggaran Pendapatan”) for all Activity Proposal-(4)
- e) total outcome (“Anggaran Perbelanjaan”) for all Activity Proposal-(5)
- f) Statistical Data View of Activities Overview to show number of Activity Proposal that being handled by PERTEKMA Batch-(6)
- g) Activity Progress Bar shows percentage of updates in the Activity Proposal form-(7)

h) navigation items that consist of Dashboard, Activity Proposal, Activity Monitoring and PERTEKMA Committee-(8)

b) List of Proposal

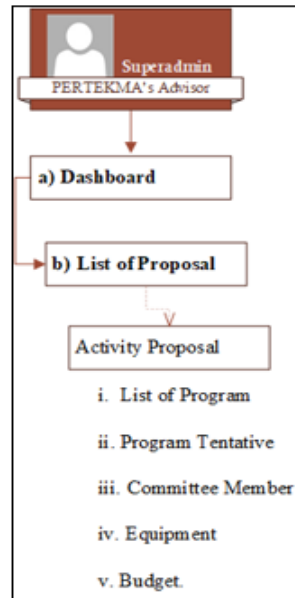


Figure 4.5 – Access Module in the List of Proposal

This section will discuss the access module in the List of Proposal and its sub-module is the Activity Proposal. The dependency of the sub-module in the Activity Proposal is define based on the proposal Id. The flow of this access module are illustrated based on Figure 4.5 above.

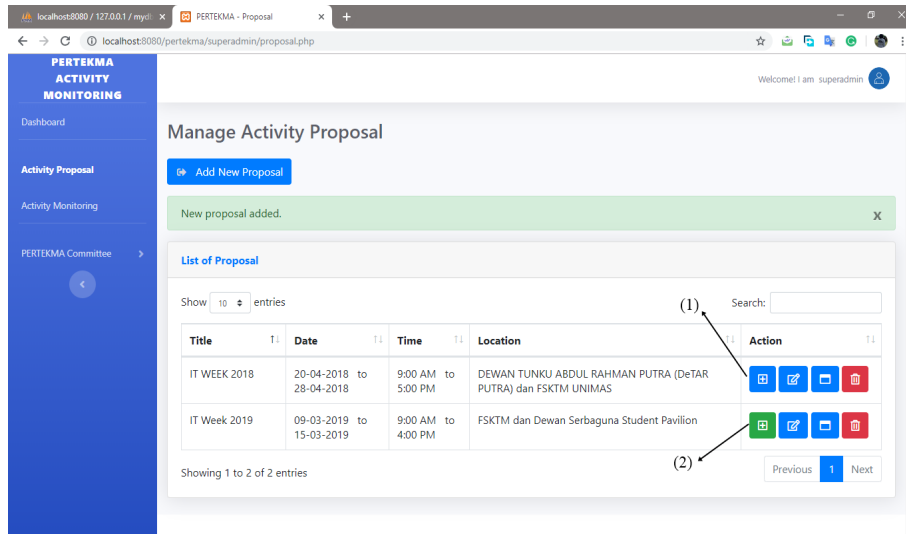


Figure 4.6 – Manage Activity Proposal

Figure 4.6 shows that the list of the Activity Proposal, blue button (1) indicates that the admin not update any details yet in the Activity Proposal while the green button (2) define as the admin is already update the details of the Activity Proposal. In this section, the Activity Proposal is basically being manage by the Admin but Superadmin also have the authorities to update proposal's details, edit the details of proposal, view the full proposal or even delete the entire proposal with the action button provided in the action field listed in the data table. Before proceeds to the Activity Proposal, Admin should update the information of the PERTEKMA committee members every time the new batch is assign in order to able the drop list of members name. This section will discuss in detail in the section of PERTEKMA Committee Member in the Activity Proposal.

Below are the explanation for each module in the Activity Proposal.

i) Update proposal details (Activity Proposal Form)

The screenshot displays the 'New Activity Proposal' form in the PERTEKMA Activity Monitoring system. The form is titled 'Activity Proposal Form' and contains the following sections:

- 1.0 Tujuan:** Kertas kerja ini dikemukakan adalah untuk memohon pertimbangan yang sewajarnya daripada pihak Universiti Malaysia Sarawak (UNIMAS) agar meluluskan aktiviti serta keperluan bagi program ini.
- 2.0 Pendahuluan:** Persatuan Teknologi Maklumat (PERTEKMA) merupakan persatuan di Fakulti Sains Komputer dan Teknologi Maklumat (FSKTM). Persatuan ini ditubuhkan dan berdaftar di bawah Pusat Kemajuan Pelajar UNIMAS pada 1 November 1997. Pelajar di fakulti ini akan menjadi ahli PERTEKMA secara automatik dan diuruskan di bawah pentadbiran fakulti. Objektif utama penubuhan PERTEKMA adalah untuk membina satu saluran yang berkesan yang berfungsi sebagai pengantara komunikasi di antara pihak fakulti dan juga para pelajar.
- 3.0 Objektif:**
 - i) Memberi pendedahan dalam bidang sains komputer dan teknologi maklumat kepada warga UNIMAS.
 - ii) Menggalakkan warga UNIMAS khususnya para pelajar untuk menjadi lebih proaktif dalam bidang sains komputer.
 - iii) Mengembangkan bakat dan potensi warga UNIMAS terutamanya dalam bidang sains komputer dan teknologi maklumat.
 - iv) Mengeratkan hubungan silaturahim di antara warga UNIMAS dan komuniti luar.

Figure 4.7 – Update Activity Proposal Form

Figure 4.7 shows the Activity Proposal Form. Details in this section has already filled by the Admin to be monitor by the Superadmin. In this section, Superadmin are able to update any information in this form.

ii) Manage Program or Activity Details (List of Program)

The screenshot displays the 'Manage Program or Activity Details' page in the PERTEKMA Activity Monitoring system. The page shows a table with the following data:










| Title | Objective | Action |
|------------------------|--|---|
| 7.1 Booth Set-up | Aktiviti ini bertujuan untuk para penaja, peserta expo dan penganjur untuk memasang dan menyiapkan booth masing-masing serta memastikan segala peralatan dan perancangan expo diperiksa, disemak dan diuji. Rehearsal program akan diadakan pada waktu ini untuk memastikan kelancaran program pada minggu berikutnya. |    |
| 7.2 PC Fair | Aktiviti ini bertujuan untuk memberi peluang kepada warga UNIMAS, komuniti sekitar Samarahan/Kuching dan pelajar sekolah untuk mendapatkan perkakasan komputer yang diperlukan. Pelajar dapat membandingkan peralatan komputer dari segi harga dan jenama. Pendedahan ini dilakukan untuk menaikkan kadar celik IT di kalangan warga UNIMAS. |    |
| 7.3 E-Games Tournament | Aktiviti ini dilakukan secara berkumpulan dan bertujuan untuk menaikkan semangat berpasukan dan kerjasama antara ahli dalam kumpulan. Program ini juga bertujuan untuk memupuk semangat E-Games dan memberi latihan serta pengalaman kepada kumpulan supaya mereka dapat memenangi pertandingan di peringkat yang lebih tinggi sedemikian pada masa depan. |    |

Figure 4.8 – Manage Program or Activity Details in the Program Section

Based on Figure 4.8, Superadmin are able to manage the activity and program

by add the new activity, edit details of the activity listed, view it and delete the activity/program in the data table.

iii) Manage Program Tentative (Program Tentative)

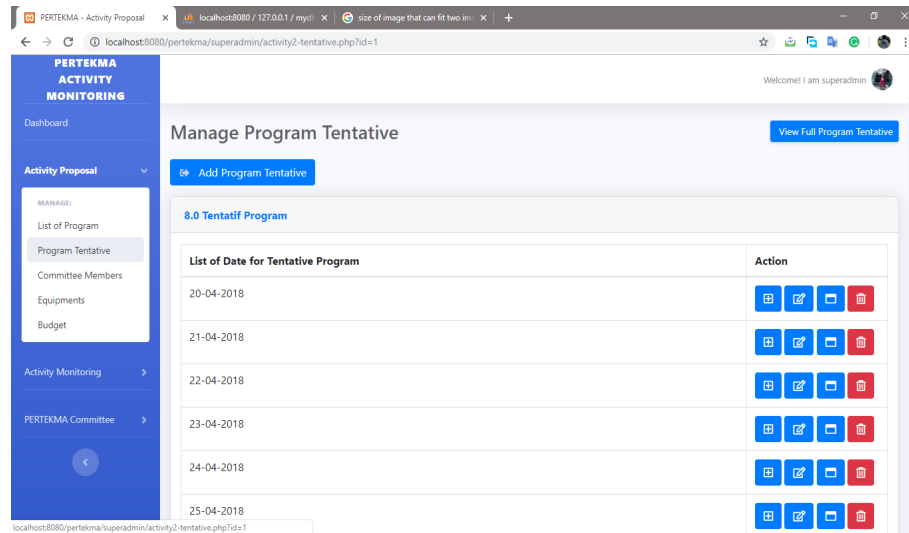


Figure 4.9 – Manage Program Tentative

Figure 4.9 shows that the list of date for Program Tentative. In this page, Superadmin are able to View Full Program Tentative which is the page will show the details of the tentative or even add new date of Program Tentative by clicking the Add Program Tentative. In the data list table above, Superadmin also able to add details, edit it, view program tentative and delete it for specific date of the program tentative.

iv) Manage Guest

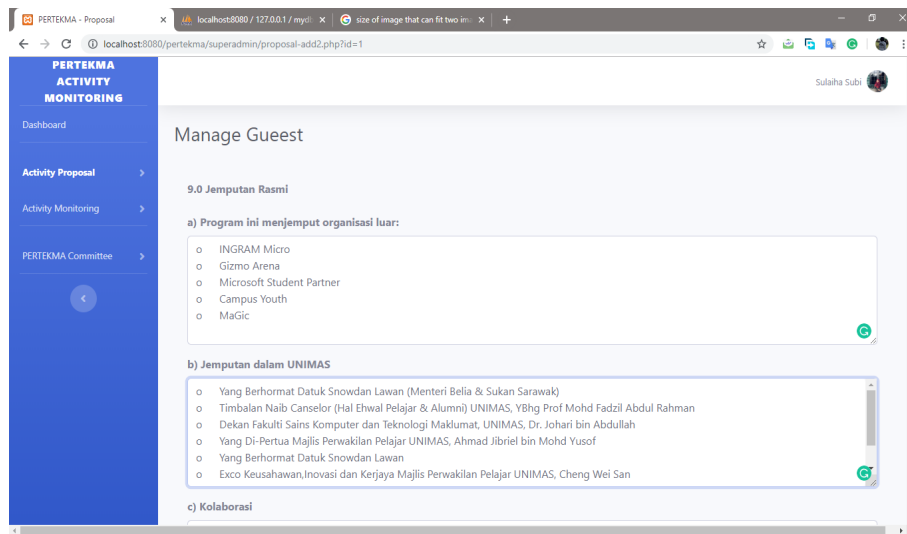


Figure 4.10 – Manage Guest

Based on Figure 4.10 above shows the update page for managing the guest in the activity proposal. In this section, it basically show the list of “Jemputan Rasmi” who are inviting in the Activity Proposal.

v) Manage Committee Members

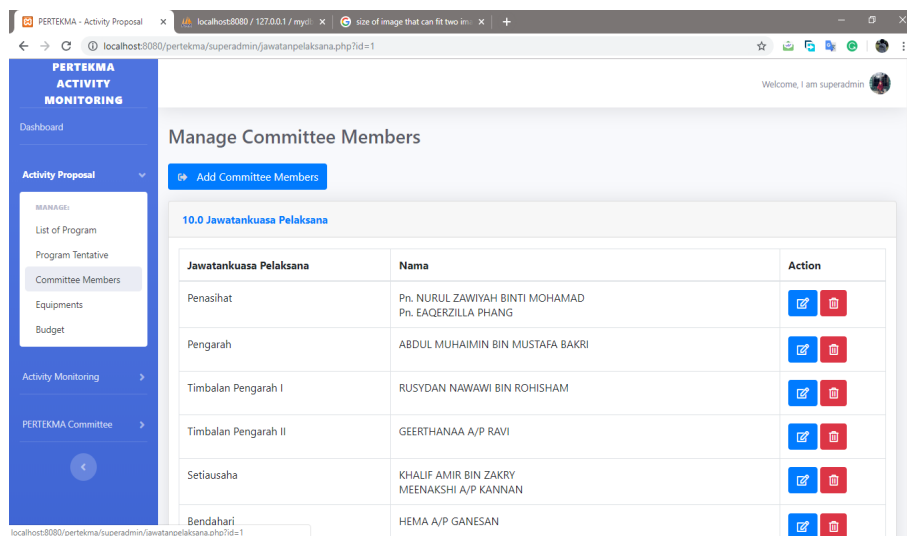


Figure 4.11 – Manage Committee Members

Based on Figure 4.11 above shows the update page for managing the guest in the activity proposal. In this section, it basically show the list of “Jemputan Rasmi”

who are inviting in the Activity Proposal.

vi) Manage Equipment and Needs (Equipments)

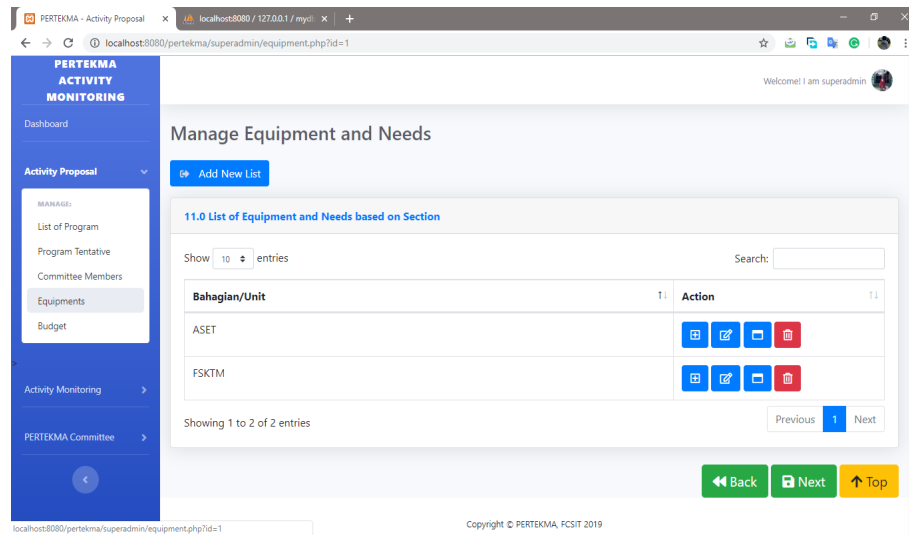


Figure 4.12 – The list of the equipment and needs

Based on Figure 4.12, the list of the equipment and needs or Senarai Keperluan/Peralatan are already being added by the admin. Superadmin are able to add a new list, edit the details or even delete it.

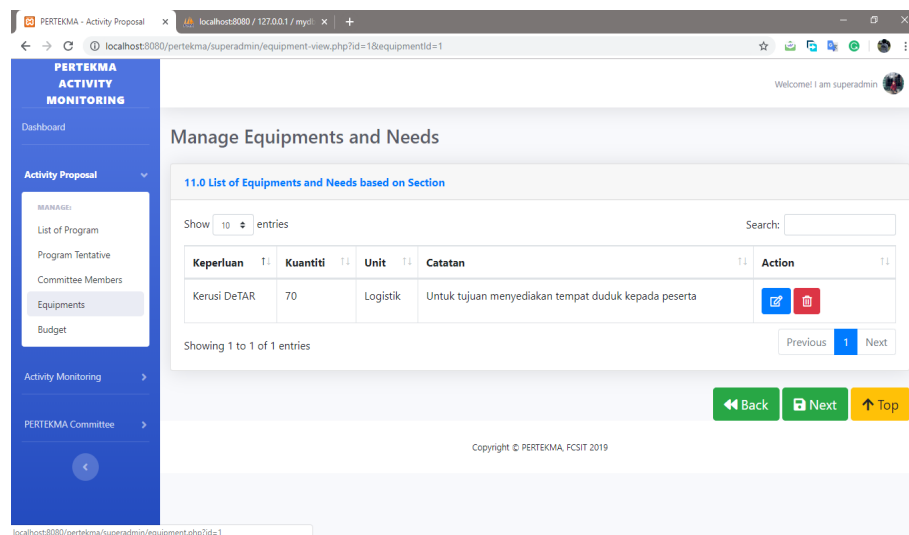


Figure 4.13 – View details for list of the equipment and needs

Based on Figure 4.13 shows that the list of the equipment and its details. In this page the Superadmin are able to edit its details and delete it.

vii) Manage Budget

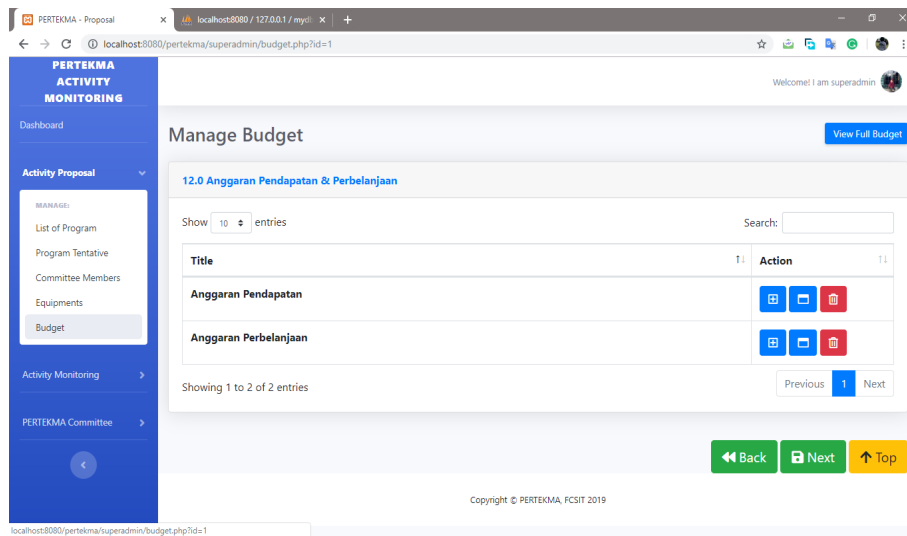


Figure 4.14 – Manage Budget

Based on Figure 4.14, View Full Budget button on the top right corner is to run the full report for “Anggaran Pendapatan” and “Anggaran Perbelanjaan”. In the data table, the edit, view and delete button are provided in the Action column to manage its details.

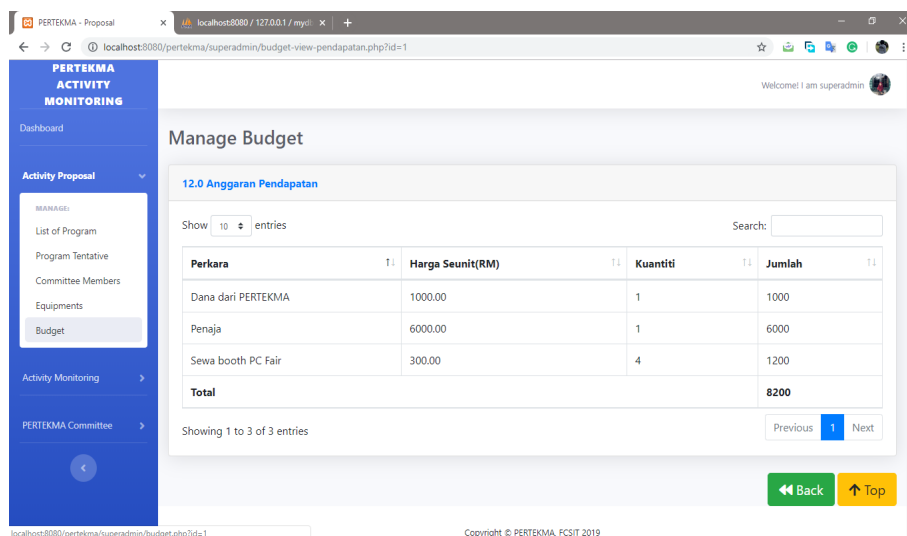


Figure 4.15 – View for Anggaran Pendapatan Page

Figure 4.15 shows the details of “Anggaran Pendapatan” once Superadmin click the view button. In the view page “Anggaran Perbelanjaan”, Superadmin will repeat the same thing to view it.

viii) End Section of the Activity Proposal

PERTEKMA - Proposal

localhost:8080 / 127.0.0.1 / myip

localhost:8080/pertekma/superadmin/proposal-add4.php?id=1

Welcome! I am superadmin

PERTEKMA ACTIVITY MONITORING

Dashboard

Activity Proposal

MANAGE:

- List of Program
- Program Tentative
- Committee Members
- Equipments
- Budget

Activity Monitoring

PERTEKMA Committee

13.0 Penutup

Jawatankuasa pelaksana program ini berharap agar program ini mendapat sokongan dan kebenaran dari pihak UNIMAS agar dapat dilaksanakan dengan jayanya berikutan program ini mempunyai objektifnya yang tersendiri dalam usaha untuk merakamkan mahasiswa UNIMAS di samping mewujudkan peluang untuk berbakti kepada komuniti luar. Sehubungan itu, kerjasama dan bantuan daripada semua pihak adalah amat dialu-alukan demi menjayakan program ini. Segala kerjasama dan perhatian daripada pihak UNIMAS amatlah dihargai dan didahului dengan jutaan terima kasih. Sekian, terima kasih.

Disediakan oleh,

Nama:

Jawatan:

No Tel:

Disemak oleh,

Figure 4.16 – End Section of the Activity Proposal Form

Figure 4.16 shows the end section of the activity proposal form that must be filled by the Admin as well. The next stage for the complete proposal is to proceed based on PERTEKMA's advisor.

ix) Manage Job Scope for "Jawatankuasa Pelaksana"

PERTEKMA - Job Scope

localhost:8080 / 127.0.0.1 / myip

localhost:8080/pertekma/superadmin/jawatanpelaksana-jobscope.php?id=7

Welcome, I am superadmin

PERTEKMA ACTIVITY MONITORING

Dashboard

Activity Proposal

Activity Monitoring

Activity Post-Mortem

PERTEKMA Committee

Manage Job Scope

Job Scope Jawatankuasa Pelaksana















| Struktur Organisasi Pelaksana | Nama | Action |
|----------------------------------|--|---|
| Penasihat | Dr. Suhaila bt Saee En. Mohamad Johan bin Ahmad Khiri |   |
| Pengarah | MUHAMMED ULAL BIN SABARUDIN |   |
| Timbalan Pengarah I | RAFIQAH NABIHAH BINTI ROSSAZALI |   |
| Timbalan Pengarah II | CHEW CHA CHE |   |
| Setiausaha | SITI NURHAMIZAH BINTI RAIM |   |
| Bendahari | WAN NUR SYAZA BINTI WAN MOHAMAD NOROLA'ASIKIN SHARON EUGENA ANAK SAMBAU |   |
| Ketua Unit Teknikal dan Logistik | UWARAJAN A/L MURUGEN |   |

Figure 4.17 – Manage Job Scope for List of "Jawatankuasa Pelaksana"

Figure 4.64 shows the list of "Jawatankuasa Pelaksana" and to manage the job scope of the "Jawatankuasa Pelaksana", Superadmin must clicked the add button to

add the details of their job scope and clicked View Button to view in details of the job scope for each of them.

Figure 4.18 – Add Job Scope for List of "Jawatankuasa Pelaksana"

Figure 4.65 shows the dynamic form to add the details of the Job Scope of the "Jawatankuasa Pelaksana". Superadmin can add the details of their job scope as many as he/she want.

| Job Scope | Action |
|---|--------|
| Membantu pengarah memastikan kelancaran program yang telah dirancang. | |
| Memantau tugas-tugas exco yang berkaitan. | |
| Menggantikan tugas-tugas semasa ketiadaan pengarah. | |

Figure 4.19 – View Job Scope for List of "Jawatankuasa Pelaksana"

Figure 4.66 above shows the details of the Job Scope of the "Jawatankuasa Pelaksana". Once Superadmin clicked view specific Job Scope of "Jawatankuasa Pelaksana", the page will shown the list of their job scope as added previously.

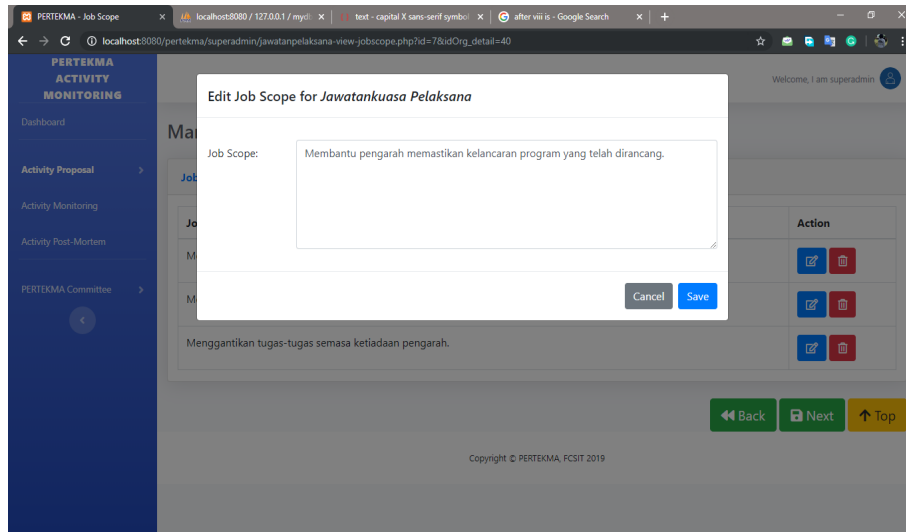


Figure 4.20 – Edit Job Scope Details

Figure 4.67 above shows the edit Module to edit the details of the Job Scope of the "Jawatankuasa Pelaksana". Once Superadmin clicked edit button in the specific Job Scope of the "Jawatankuasa Pelaksana", the edit module displayed will shown it details of the job scope as added previously. Save once the changing has made and Cancel to dismissed the Edit Module.

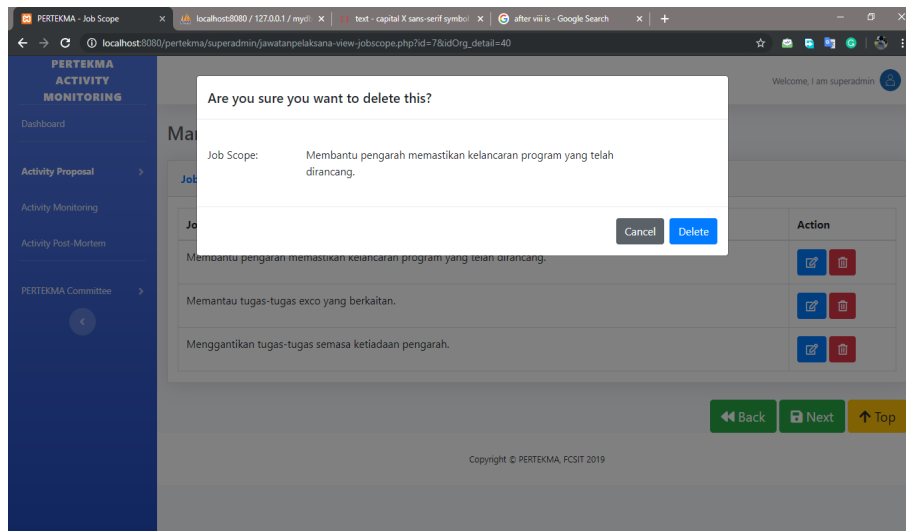


Figure 4.21 – Delete Job Scope Details

Figure 4.68 above shows the Delete Module to Delete the details of the Job Scope of the "Jawatankuasa Pelaksana". Once Superadmin clicked delete button in

the specific Job Scope of the "Jawatankuasa Pelaksana", the Delete module displayed as shown in Figure 4.68. Delete once Superadmin confirmed to delete it and Cancel to dismissed the Delete Module.

c) Activity Post-Mortem

The screenshot displays the 'PERTEKMA ACTIVITY MONITORING' dashboard. The left sidebar contains navigation links: Dashboard, Activity Proposal, Activity Monitoring, Activity Post-Mortem, and PERTEKMA Committee. The main content area is titled 'Manage Activity Post-Mortem' and shows a form for 'IT Week 2019'. The form is divided into two columns: 'Objectives of the Activity' and 'Achievements'. The 'Objectives' column lists six points (i) through (vi) regarding computer science education and student development at UNIMAS. The 'Achievements' column lists three points (i) through (iii) regarding the success of the computer science education and student development. At the bottom right of the form, there are 'Back' and 'Top' buttons. The footer of the page reads 'Copyright © PERTEKMA, FCSIT 2019'.

| Objectives of the Activity | Achievements |
|--|--|
| i) Memberi pendedahan dalam bidang sains komputer dan teknologi maklumat kepada warga UNIMAS. | i) Pendedahan dalam bidang sains komputer dan teknologi maklumat kepada warga UNIMAS tercapai. |
| ii) Menggalakkan warga UNIMAS khususnya para pelajar untuk menjadi lebih proaktif dalam bidang sains komputer. | ii) Para Pelajar lebih proaktif dalam bidang sains komputer |
| iii) Mengetengahkan bakat dan potensi warga UNIMAS | iii) aaaaa |
| iv) Mengeratkan hubungan silaturahmi di antara warga UNIMAS dan komuniti luar. | |
| v) Pelajar dan warga UNIMAS akan menunjukkan kebolehan untuk menganalisis masalah dan mengenal pasti dan menentukan keperluan pengkomputeran yang sesuai dengan penyelesaiannya. | |

Figure 4.22 – Update the Activity Post-Mortem

Figure 4.22 above shows the form for Activity Post-Mortem. In this section, Superadmin just simply monitor the Activity Post-Mortem updated by Admin and it is basically shows the achievements for the completion of the activity.

d) Activity Monitoring

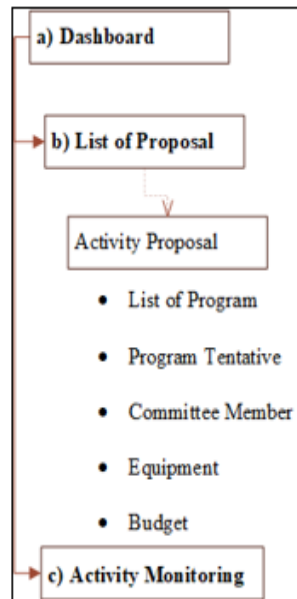


Figure 4.23 – Third Access Module of the system is Activity Monitoring

Based on Figure 4.23, the next module for Superadmin is Activity Monitoring where Superadmin is able to monitor the Exco's Activity and involvement as their jobscope stated in the Activity Proposal. The features are explained in details as below:

i) Monitor Exco Based on List of Activity

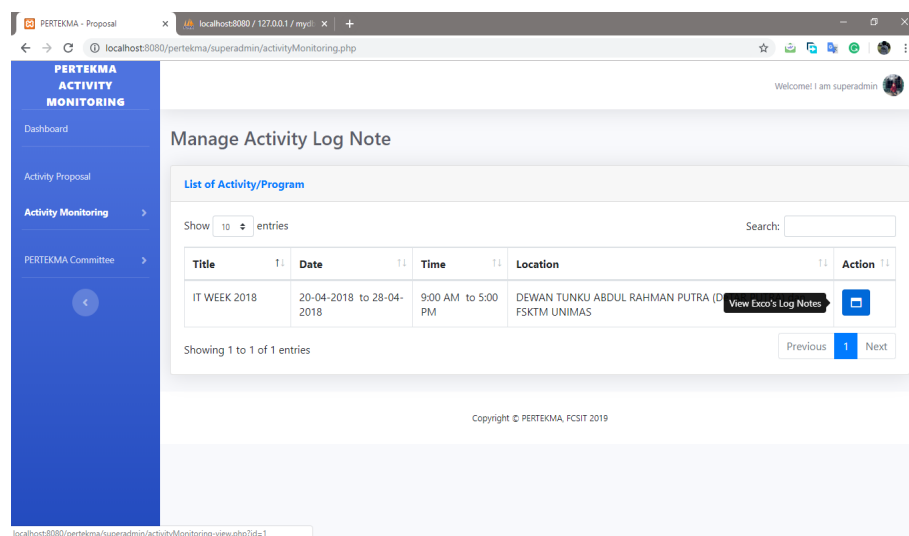
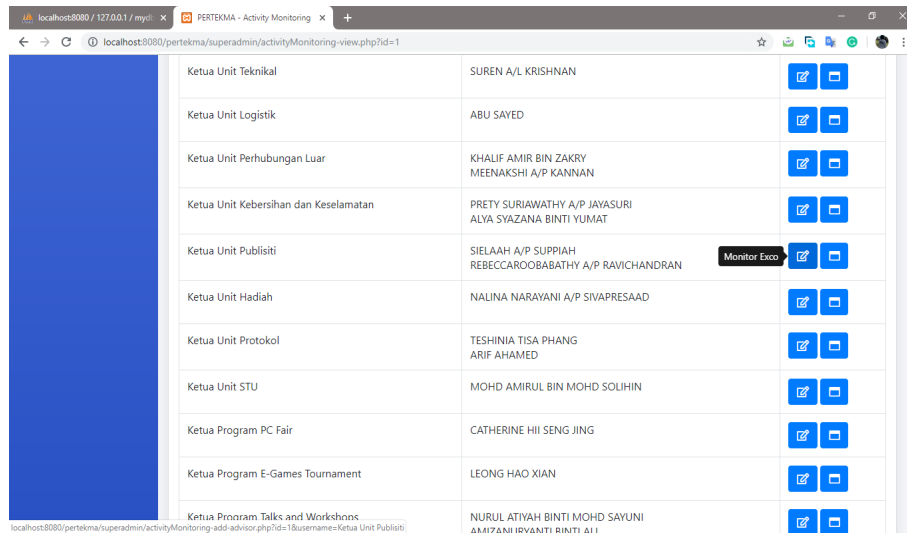


Figure 4.24 – List of Activity Successfully Done

Based on Figure 4.24 above shows the list of activity or program that has been

done. In this page, Superadmin are able to monitor the excos by viewing the list of Activity Log Note for each of the excos who are involved in the program/activity.

ii) Monitor Exco Based on List of Activity

























| | | |
|---------------------------------------|---|---|
| Ketua Unit Teknikal | SUREN A/L KRISHNAN |   |
| Ketua Unit Logistik | ABU SAYED |   |
| Ketua Unit Perhubungan Luar | KHALIF AMIR BIN ZAKRY MEENAKSHI A/P KANNAN |   |
| Ketua Unit Kebersihan dan Keselamatan | PRETY SURIWATHY A/P JAVASURI ALYA SYAZANA BINTI YUMAT |   |
| Ketua Unit Publisiti | SIELAAH A/P SUPPIAH REBECCAROOBABATHY A/P RAVICHANDRAN |   Monitor Exco |
| Ketua Unit Hadiah | NALINA NARAYANI A/P SIVAPRESAAD |   |
| Ketua Unit Protokol | TESHINIA TISA PHANG ARIF AHAMED |   |
| Ketua Unit STU | MOHD AMIRUL BIN MOHD SOLIHIN |   |
| Ketua Program PC Fair | CATHERINE HII SENG JING |   |
| Ketua Program E-Games Tournament | LEONG HAO XIAN |   |
| Ketua Program Talks and Workshops | NURUL ATIYAH BINTI MOHD SAYUNI AMIZANIRYANTI BINTI ALI |   |

Figure 4.25 – Manage Activity Log Note of the ExcOs

Based on Figure 4.25, once Superadmin click the specific activity listed in the previous page as stated in Figure 4.18, the list of “jawatan kuasa pelaksana” appeared. At the moment this page showing all the name list for “jawatan kuasa pelaksana” however only the main excos is being monitor for their updates. Once Superadmin click the “Monitor Exco Button” as shown in Figure 4.19. This button will bring to another page of the specific Main Exco.

iii) Monitor Exco Based on List of Activity

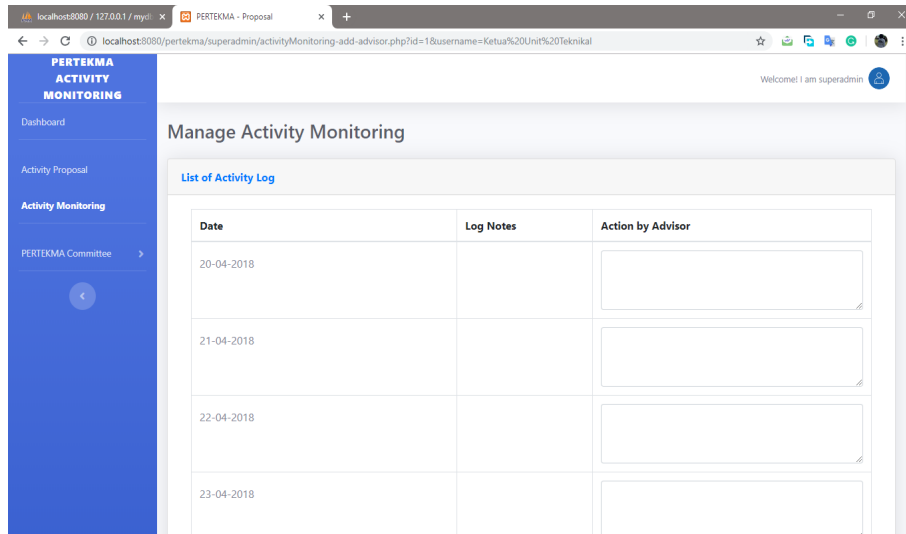


Figure 4.26 – View and Update Activity Log Note of the ExcOs

Figure 4.26 shows the Activity Log Note of the Exco, in this pages Superadmin is able to view the Exco's Log Note and then give review or comment if any to the Exco for any improvement in the future activities.

e) **PERTEKMA Committee**

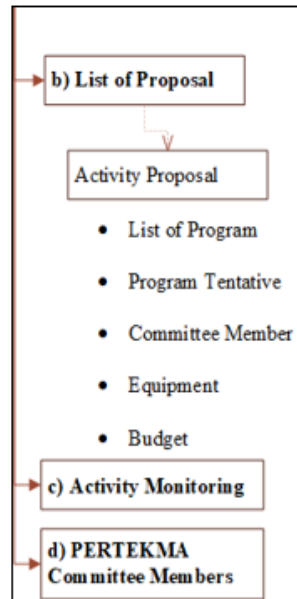


Figure 4.27 – The Last Access Module of the Superadmin is PERTEKMA Committee Members

As stated in the Figure 4.27 previously, PERTEKMA Committee Members is the most crucial section for Admin to update the data in order to proceed to the Activity Proposal and Activity Monitoring. The reason why is to ensure the Admin experiencing of less typing repeatedly of the same person in the Committee Member's sub-module of the Activity Proposal as shown in Figure 4.21. Clear vision for these features will explain in the section 4.3.3 Access Module for Admin.

Below is the brief explanation for Page PERTEKMA Committee:

i) Manage PERTEKMA Batch Page

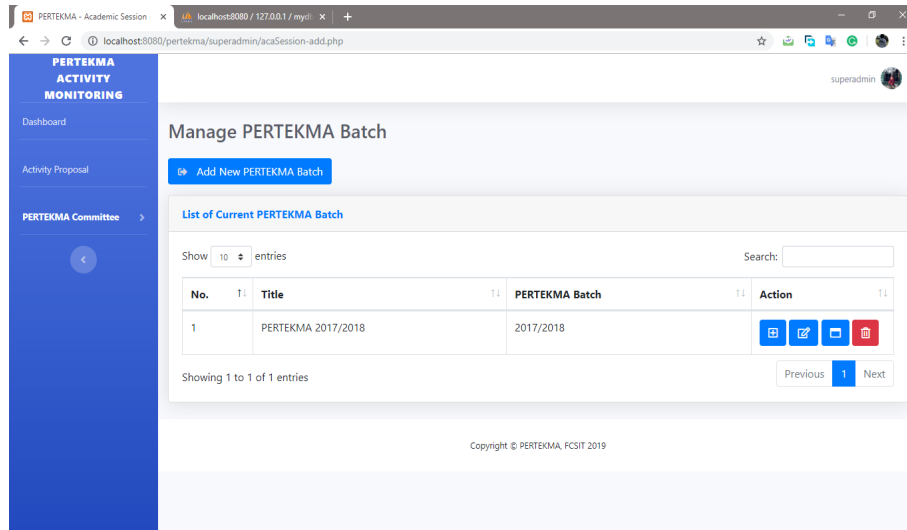


Figure 4.28 – Manage PERTEKMA Batch

Superadmin are able to add new PERTEKMA Batch, edit details of the current batch, view details or even delete it as shown in Figure 4.28. The list of current PERTEKMA Batch shown in the data table.

ii) Details of Manage PERTEKMA Batch Page

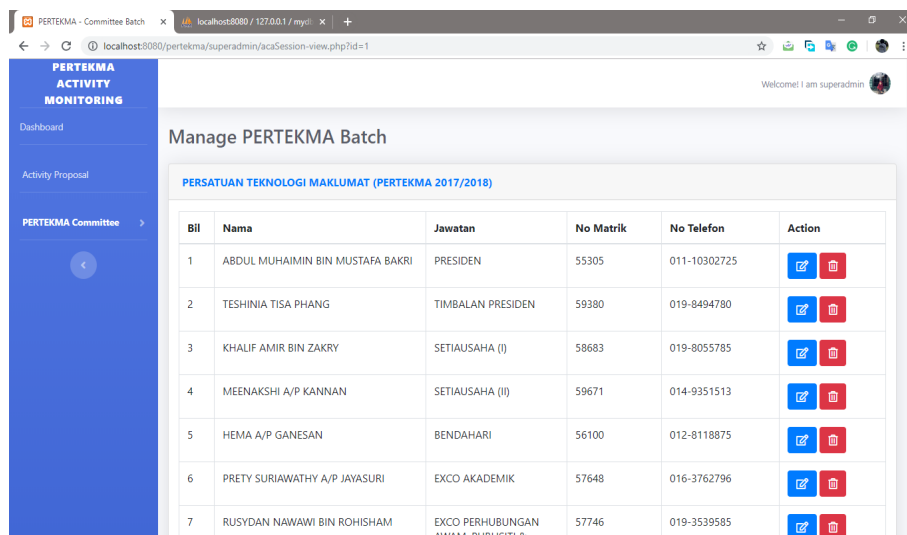


Figure 4.29 – View Details of PERTEKMA Batch

Based on Figure 4.29, it shows the name list of PERTEKMA Batch 2017/2018.

In this page Superadmin are able to keep track the details of the committee members record. Superadmin also can edit their details and delete it from the record.

4.3.3 Access Module for Admin

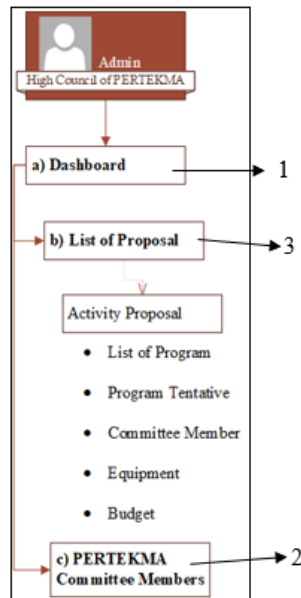


Figure 4.30 – Access Module for Admin

Based on Figure 4.30 above, the numbering shown a sequence for Admin to follow up once he/she login into the system. The sequences consist of Dashboard (1), followed by PERTEKMA Committee Members (2) and List of Proposal (3). Admin have to follow the sequence correctly in order to understand the flow of the system as well. This is due to the data in each module are related and connected to each other.

a) Dashboard-Admin

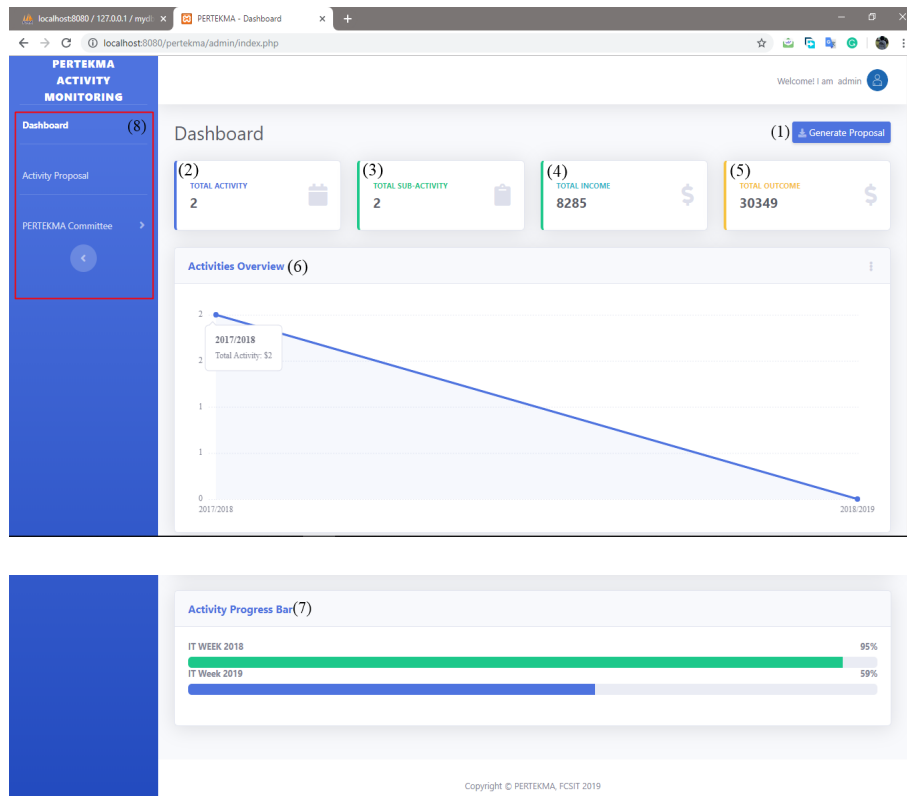


Figure 4.31 – Superadmin Dashboard

Figure 4.31 shows the dashboard for the Admin once he/she login into the system. In the Dashboard, it will count and summarize all the related information to the Admin. It include:

- a) button for generate proposal (print proposal)-(1)
- b) the total number of activities that has been done yearly-(2)
- c) total number of sub-activities throughout monthly-(3)
- d) total income (“Anggaran Pendapatan”) for all Activity Proposal-(4)
- e) total outcome (“Anggaran Perbelanjaan”) for all Activity Proposal-(5)
- f) Statistical Data View of Activities Overview to show number of Activity Proposal that being handled by PERTEKMA Batch-(6)
- g) Activity Progress Bar shows percentage of updates in the Activity Proposal form-(7)

h) navigation items that consist of Dashboard, Activity Proposal, Activity Monitoring and PERTEKMA Committee-(8)

b) List of Proposal

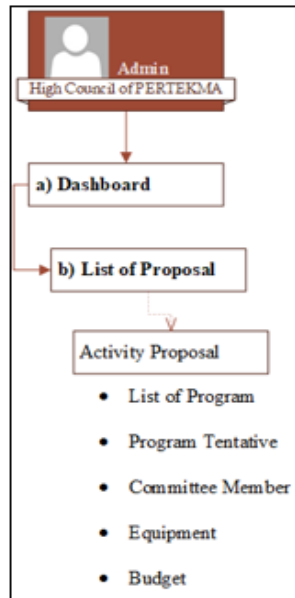


Figure 4.32 – Access Module in the List of Proposal

This section will discuss in detail the access module for List of Proposal and its sub-module which is the Activity Proposal. The dependency of the sub-module in the Activity Proposal is define based on the proposal Id. The flow of this access module are illustrated based on Figure 4.32 above.

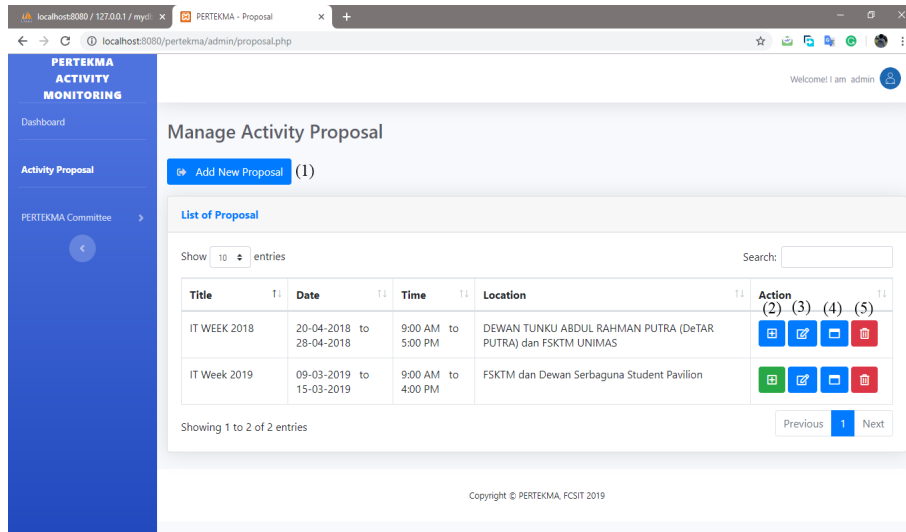


Figure 4.33 – List of Activity Proposal

Figure 4.33 shows the list of added activity proposal. In this page, Admin are able to add the new proposal (1), add details for activity proposal (2), edit the list proposal (3), print the proposal (4) and delete the proposal (5). The blue (+) button indicates the details of the activity proposal already being update while the green (+) button indicates that the proposal does not being update yet.

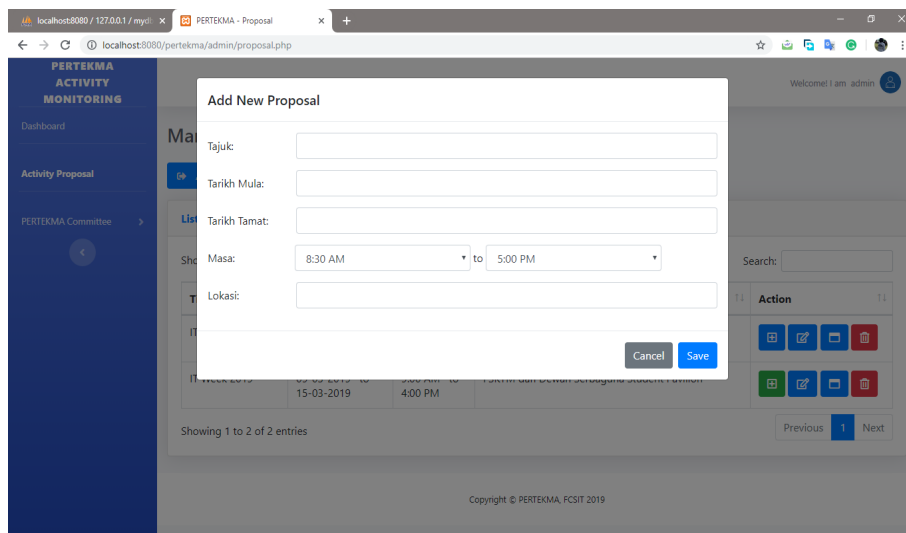


Figure 4.34 – Add New Proposal

Based on Figure 4.34, Admin are required to fill in each of the field in the Add New Proposal Modal. Each field of the form are compulsory for Admin to fill in. After

the new proposal added, Admin can proceed to the next stage of the Activity Proposal.

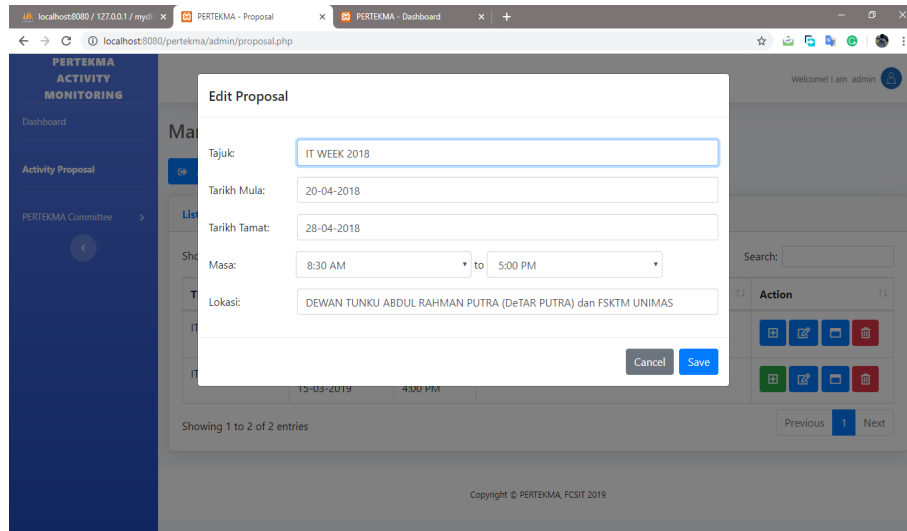


Figure 4.35 – Edit Activity Proposal

Figure 4.35 shows the edit module of activity proposal. In this module, Admin are able to edit the details of the proposal as shown in the Figure 4.35 above.

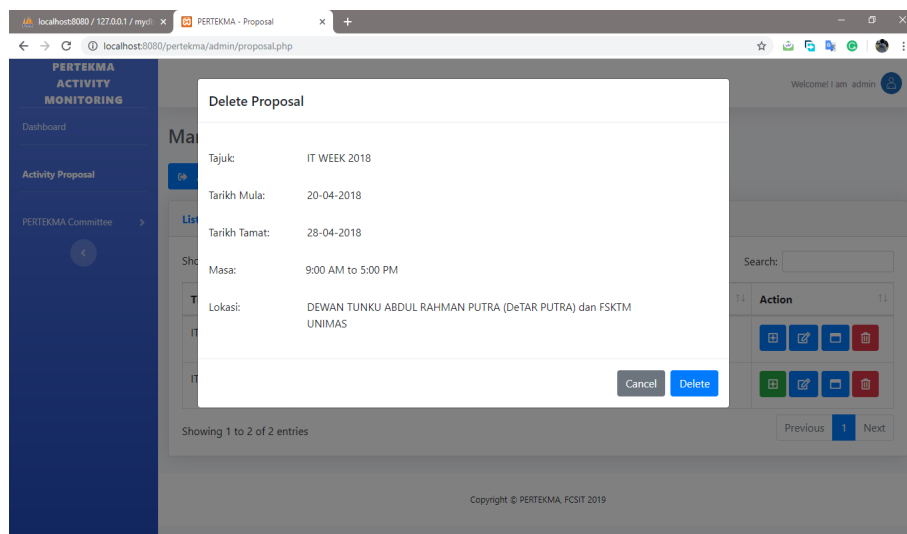


Figure 4.36 – Delete Activity Proposal

In the Delete Proposal module, the delete confirmation module will appear and shows the detail of the proposal before deleting it as shown in the Figure 4.36.

In the Activity Proposal page, the drop-down list consist of List of Program, Program Tentative, Committee Members, Equipment and Budget. The details for each of this sub-module are described as below:

i) Update proposal details (Activity Proposal Form)

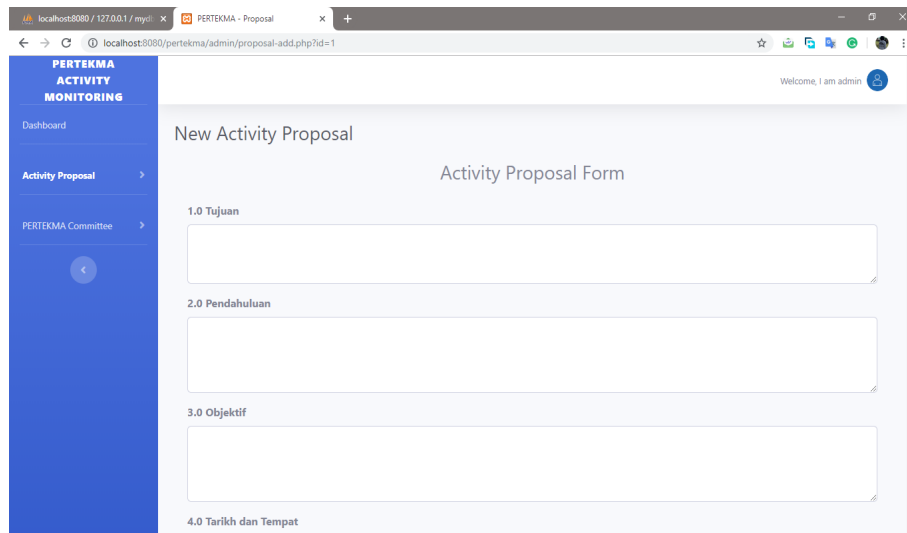
The screenshot shows a web browser window with the URL 'localhost:8080/pertekma/admin/proposal-add.php?id=1'. The page has a blue sidebar on the left with the title 'PERTEKMA ACTIVITY MONITORING' and navigation links for 'Dashboard', 'Activity Proposal', and 'PERTEKMA Committee'. The main content area is titled 'New Activity Proposal' and 'Activity Proposal Form'. It contains four text input fields labeled '1.0 Tujuan', '2.0 Pendahuluan', '3.0 Objektif', and '4.0 Tarikh dan Tempat'. A user profile icon in the top right corner shows 'Welcome, I am admin'.

Figure 4.37 – Activity Proposal Form

Figure 4.37 shows the activity proposal form. In this form admin are required to fill this form with the related contents and information needed. Once all field is successfully submitted, the page will bring Admin to the List of Program Page.

ii) Manage Program or Activity Details (List of Program)

This section provide the list of Program or Activity Details in the Proposal. Admin can simply manage this section by add, edit, view or even delete the Program details.

Figure 4.38 – Add Program or Activity Details

Based on Figure 4.38, Admin are required to fill in the program details and assign the excos who are responsible for the activity.

Figure 4.39 – Edit Program or Activity Details

In Figure 4.39, admin are able to edit each detail in each of the field as their need. Admin just simply edit the detail and save it or click cancel to close the edit Module.

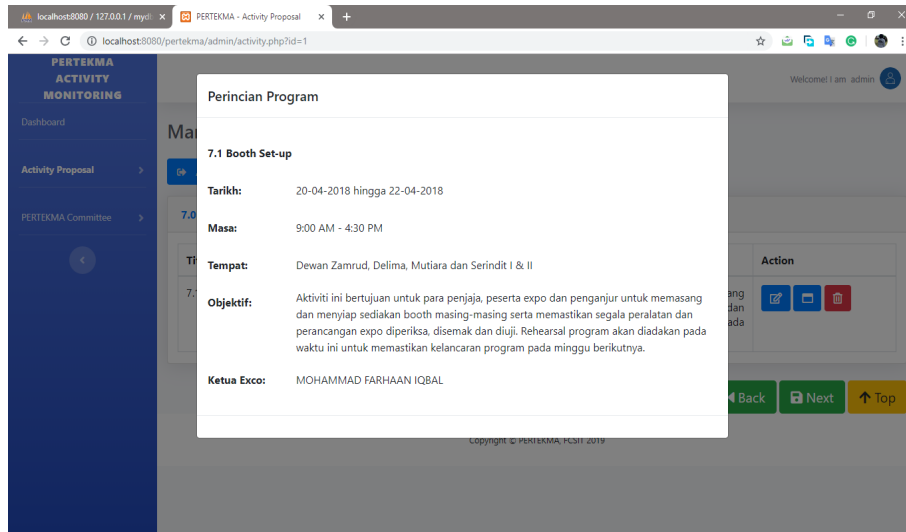


Figure 4.40 – View Program or Activity Details

Based on Figure 4.40, admin can simply read the detail in the View Program module and just simply click any space in the screen to dismiss the Module.

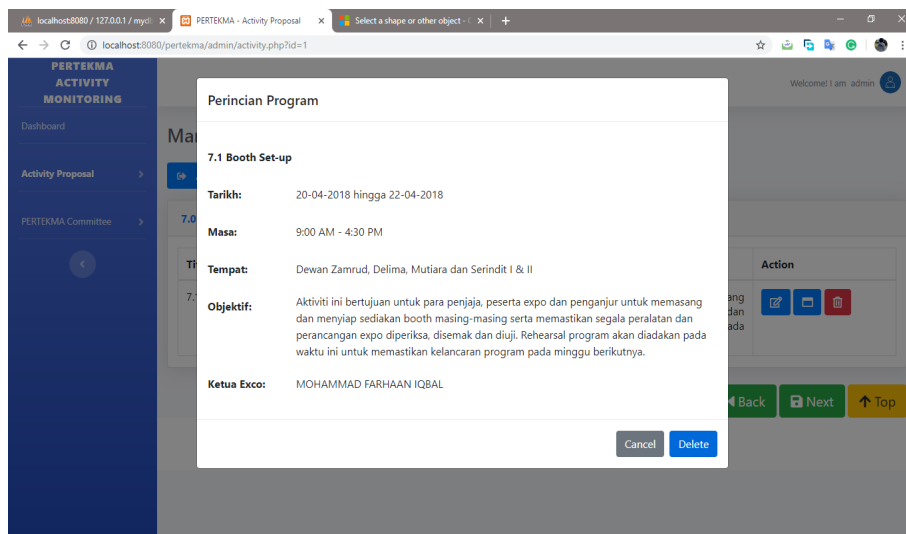


Figure 4.41 – Delete Program or Activity Details

Admin can simply click the delete button in the module to delete the Program/Activity from the list as shown in the Figure 4.41 above.

iii) Manage Program Tentative

In Manage Program Tentative Page, admin can manage the dates of the Program by simply add new date, edit or change the date of the program tentative, view details for each of the date or even delete it. All this action button are provided in the column Action in the table.

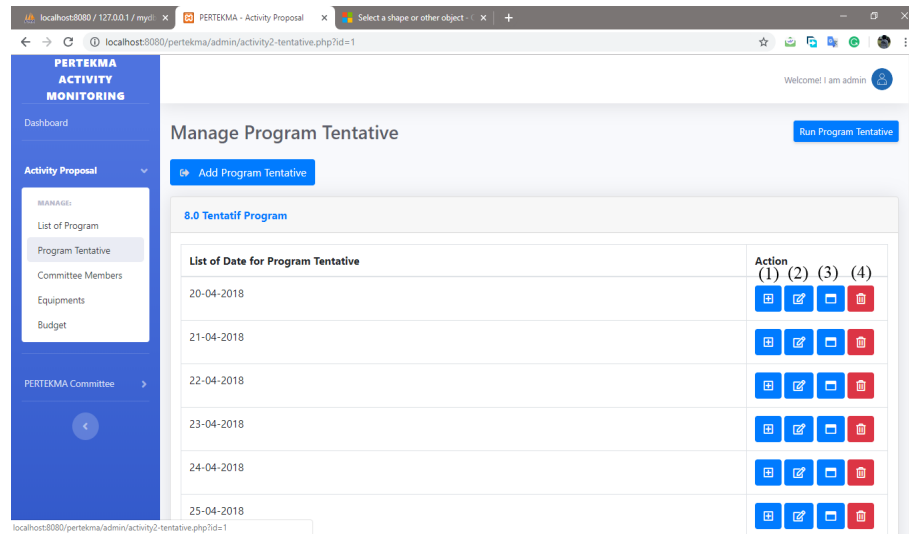


Figure 4.42 – List of Date for Program Tentative

Basically, Figure 4.42 shows the list of date for program tentative. This list based on how long the activity are going to be held as stated in the Activity Proposal. In order to manage the details of the Program Tentative, Admin can simply use the button provided in the Action column. (1) indicates for add details of Program Tentative, (2) is change the date in the list, (3) is view Program Tentative and (4) delete the date from the list.

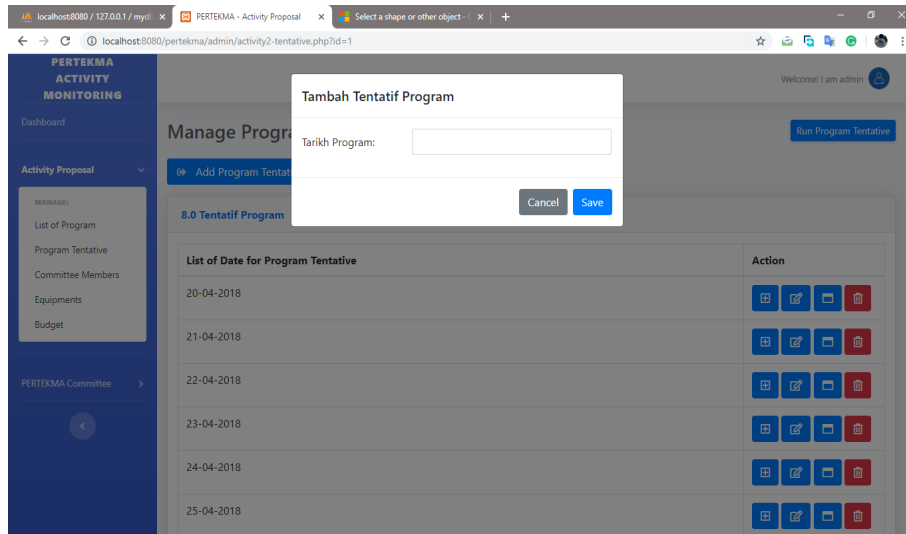


Figure 4.43 – Add New Date Program Tentative

Figure 4.43 shows the Module to add a new date, Admin should add the dates for Program before proceeds to the Program Tentative. This list of dates will appear in the table as shown in Figure 4.42 above.

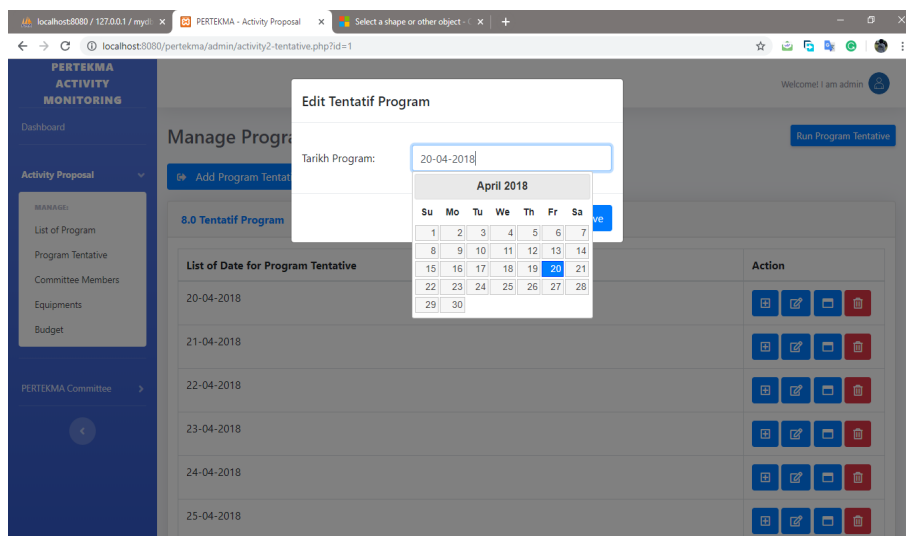


Figure 4.44 – Edit Date Program Tentative

Figure 4.44 shows the Module to edit the existing date in the list which is button (2) as shown in Figure 4.42, Admin can simply choose the new date in the date picker provided in edit Module above.

PERTEKMA ACTIVITY MONITORING

Dashboard

Activity Proposal

Activity Monitoring

PERTEKMA Committee

Welcome! I am admin

Manage Program Tentative

8.0 Tentatif Program

Tarikh: 20-04-2018

Masa: 8:30 AM to 5:00 PM

Lokasi:

Acara:

+

Back Next Top

Figure 4.45 – Add Details for Program Tentative

Figure 4.45 shows the dynamic form to add details for program tentative when Admin click the add details button (1) as stated in Figure fig:chap436. Admin can simply click the plus (+) button to add more details.

PERTEKMA ACTIVITY MONITORING

Dashboard

Activity Proposal

Activity Monitoring

PERTEKMA Committee

Welcome! I am admin

Manage Program Tentative

Tentative Details

-->

Show 10 entries

Search:

| Masa | Acara | Lokasi | Action |
|--------------------|--|--------|-------------|
| 9:00 AM to 4:30 PM | <ul style="list-style-type: none"> PC FAIR BOOTH SETUP HALL SETUP REHEARSAL | DeTAR | (1) (2) |

Showing 1 to 1 of 1 entries

Previous 1 Next

Back Top

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Figure 4.46 – View Details of Program Tentative

Figure 4.46 show the details of the program tentative after Admin successfully add the details of the program tentative shown in the Figure 4.40, this list basically show the time, activity are going to held and location of the events. In this list, admin can simply edit the details (1) or delete (2) it as they want. The process of deleting

and add the details is similar to the previous Module.

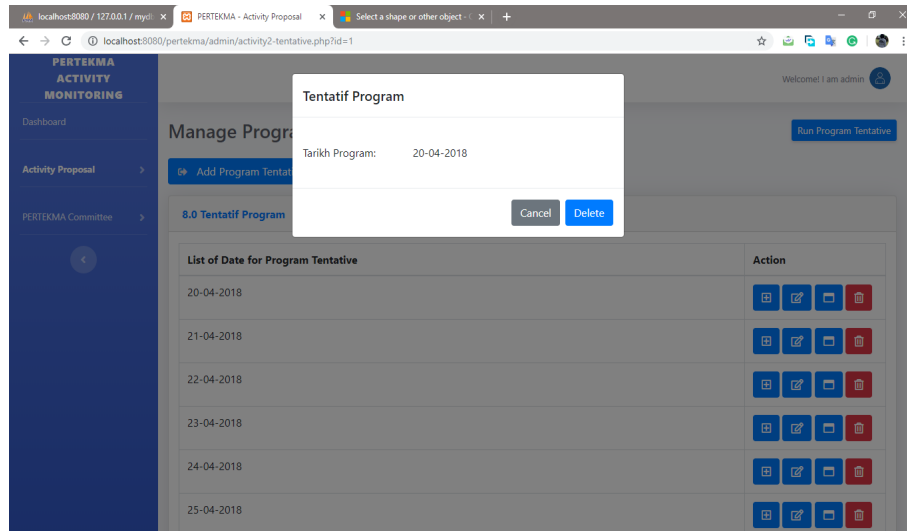


Figure 4.47 – Delete module for Program Tentative

This Module basically delete the entire details of Program Tentative once the Admin click the delete button as shown in Figure 4.47.

iv) Manage Guest

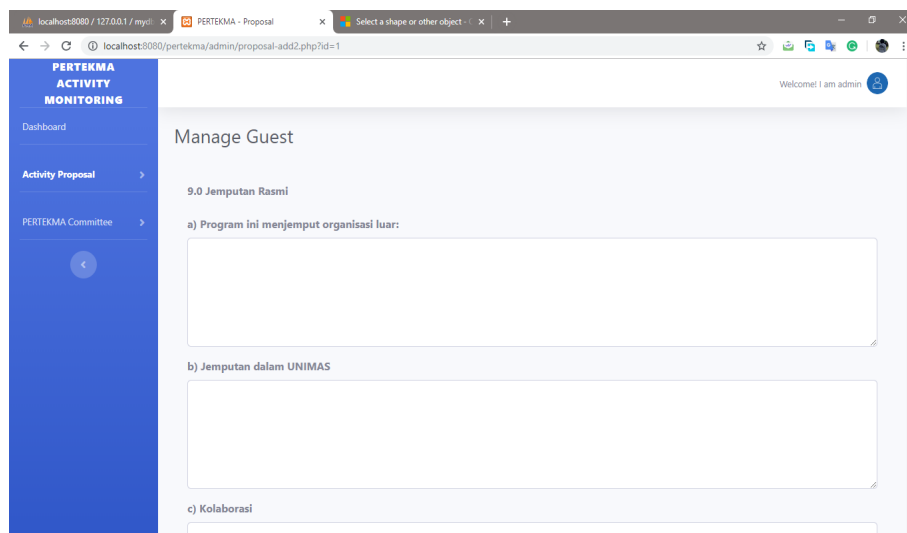
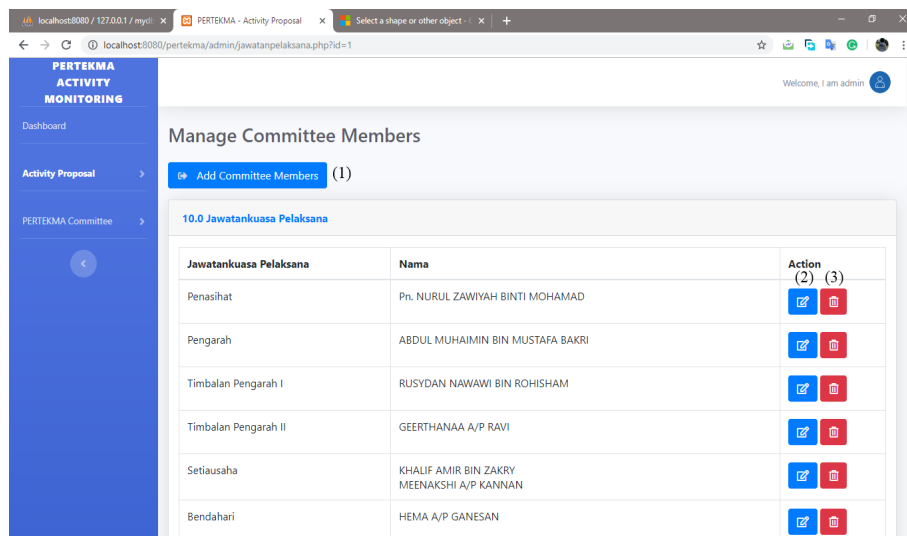


Figure 4.48 – Add List of Guest

In this section, the form provided for the guest or “Jemputan Rasmi” who attend or involved in the activity. Based on Figure 4.48, the guest is divided into three section or division. The Admin is able to add the guests as needed in the field provided.

v) Manage Committee Members

In the Manage Committee Members Page, this page basically manage the details of the committee members who are involved in the activity or the program. This committee members will define their responsibility and their job scope along the activity or program. In this page Admin has an authority to assign the username and password for “Ahli Jawatankuasa” to access the system as well.



The screenshot shows a web application interface for 'PERTEKMA ACTIVITY MONITORING'. The left sidebar contains navigation links: 'Dashboard', 'Activity Proposal', and 'PERTEKMA Committee'. The main content area is titled 'Manage Committee Members' and features a button 'Add Committee Members (1)'. Below this is a table with the heading '10.0 Jawatankuasa Pelaksana'. The table lists committee members with their positions, names, and action buttons (edit and delete).

| Jawatankuasa Pelaksana | Nama | Action (2) (3) |
|------------------------|---|-----------------|
| Penasihat | Pn. NURUL ZAWIYAH BINTI MOHAMAD | [Edit] [Delete] |
| Pengarah | ABDUL MUHAJIMIN BIN MUSTAFA BAKRI | [Edit] [Delete] |
| Timbalan Pengarah I | RUSYDAN NAWAWI BIN ROHISHAM | [Edit] [Delete] |
| Timbalan Pengarah II | GEERTHANAA A/P RAVI | [Edit] [Delete] |
| Setiasaha | KHALIF AMIR BIN ZAKRY MEENAKSHI A/P KANNAN | [Edit] [Delete] |
| Bendahari | HEMA A/P GANESAN | [Edit] [Delete] |

Figure 4.49 – List of Committee Members of the Activity or Program

In this list, the details such as name and their position “Jawatankuasa Pelaksana” shown in the table provided in Figure 4.49. Each row of data table have the edit (2) and delete (3) button to manage each of it. Admin can simply manage the list with this button. (1) is to add a new committee member.

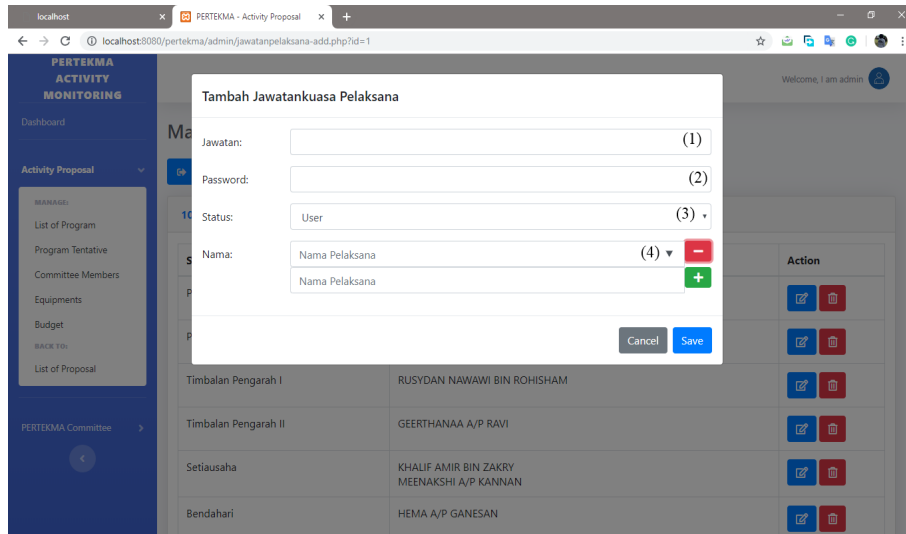


Figure 4.50 – Add New Committee Members

Once Admin click Add Committee Members button (1) as stated in Figure 4.49, a Modul for “Tambah Jawatankuasa Pelaksana” will pop out on the screen as shown in Figure 4.50 above. In this Modul, Admin will add their “Jawatan” as in (1), Password to access into the system as in (2), Status of the “Jawatankuasa Pelaksana” as in (3) and Name of the person who’s in charge the Activity (4). The login Status are consisting of **User, Admin and Superadmin**. This status will define their roles in the system. In field number (4), Admin can add the person in the “Jawatankuasa Pelaksana” by looking the name in the dropdown list provided. If the person who’s not listed in the drop-down list, Admin can simply add the person by typed a new name in the field as in (4). This new name will be added into the database and will appear in the drop-down list for future Activity Proposal if the same person appear again in the “Jawatankuasa Pelaksana”. The purposed of this drop-down list for the name is to decrease the 2.1.1 Access Module for Admin’s experience of key-in the same person repetitively over and over again. In order to able this drop-down feature, Admin is compulsory to add the name list for the PERTEKMA Committee Members in the

Section 4.3.3 Access Module for Admin number (2) as stated previously. "-" button indicates to drop the name while "+" button to add more names from the drop-down list.

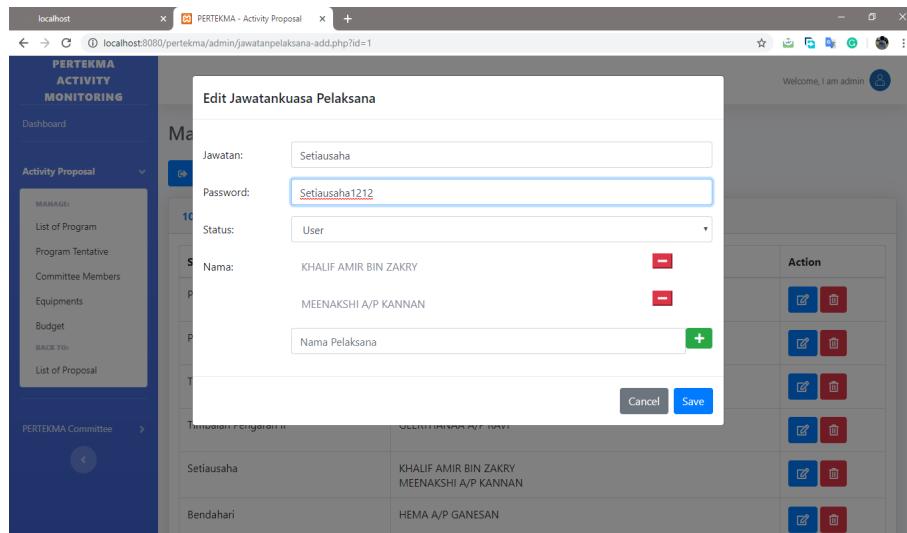


Figure 4.51 – Edit Committee Members

Based on Figure 4.51, Admin can simply edit the details of the Committee Members once Admin clicked the edit button as in (2) in Figure 4.49. The "-" button indicates to drop the name from the list and "+" button is to add more name into the list.

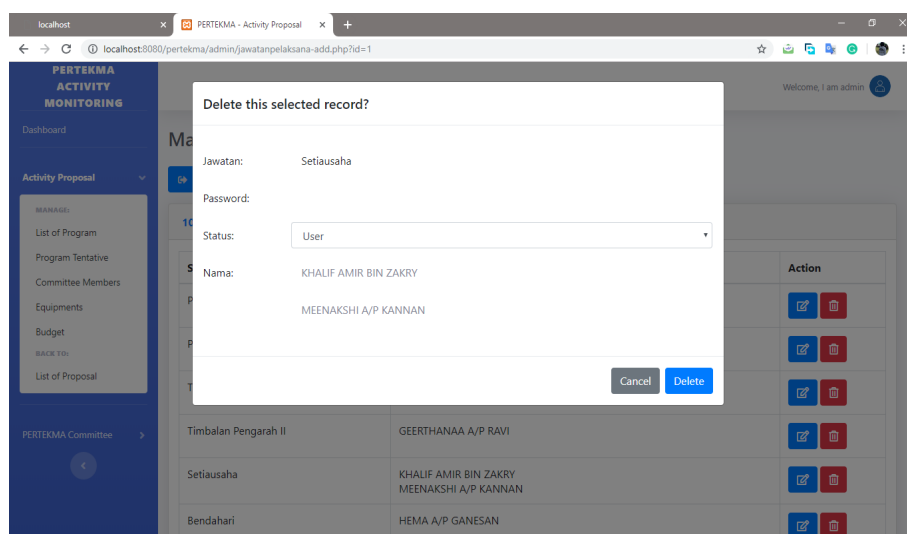


Figure 4.52 – Delete Committee Members

This delete Module will delete the entire record as it is shown in the Figure 4.52.

vi) Manage Equipment and Needs

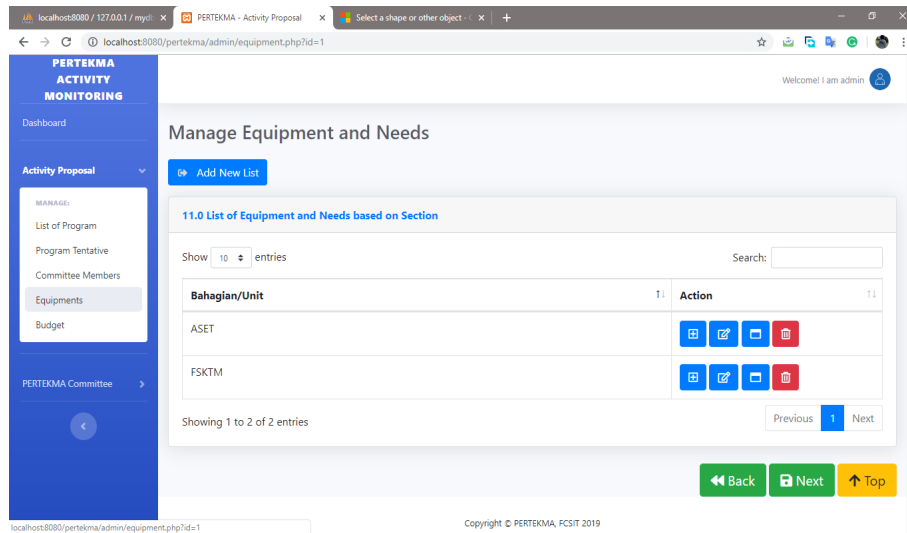


Figure 4.53 – List of Equipment and Need based on the “Unit”

Based Figure 4.53, the data table shows the list of the “Unit” or “Bahagian” added by the Admin. In each of the list consist of add, edit, view and delete button to manage it details provided in Action column.

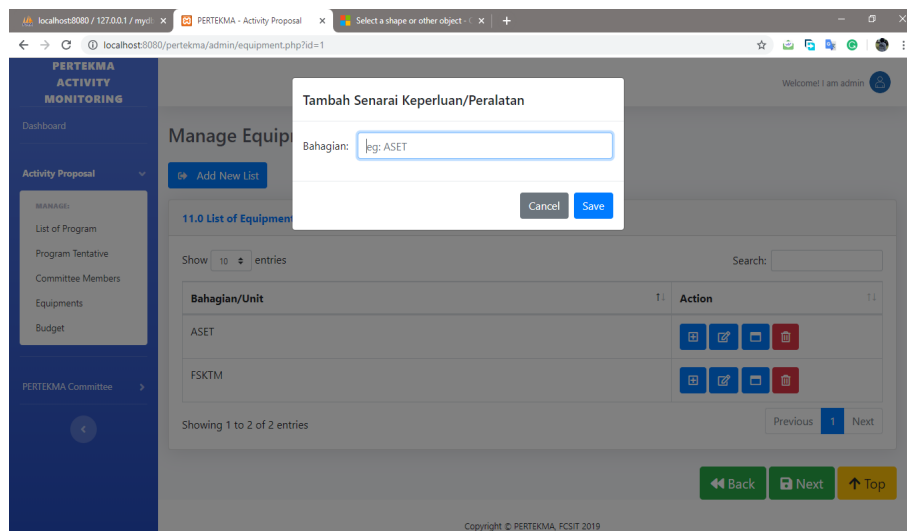


Figure 4.54 – Add Unit Title

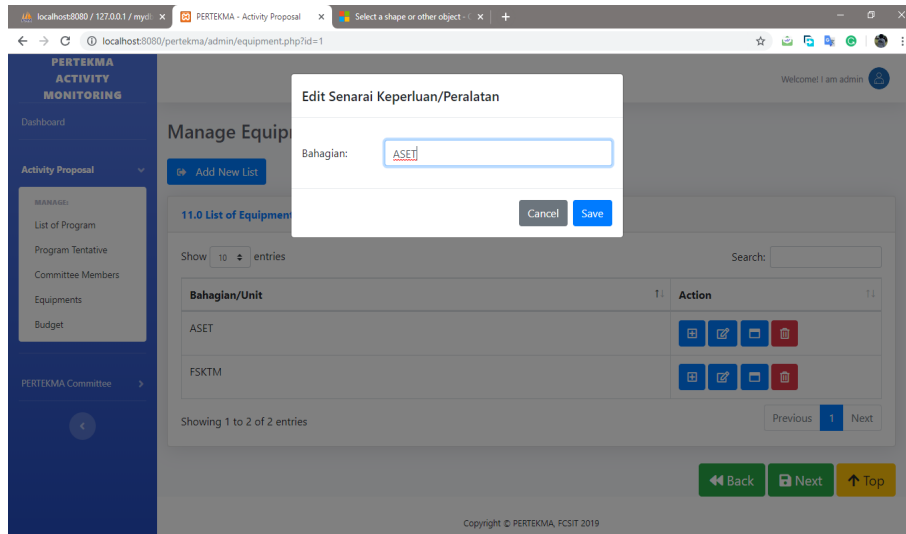


Figure 4.55 – Edit Unit Title

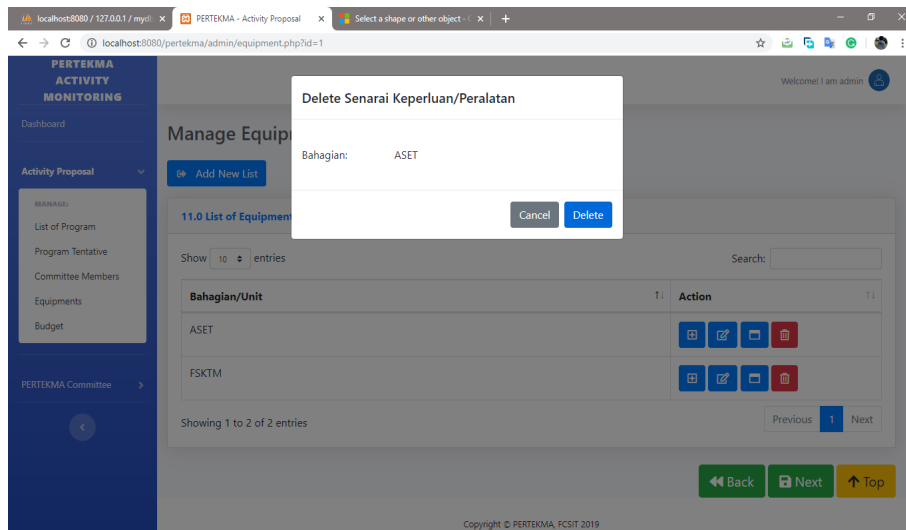


Figure 4.56 – Delete Unit from the List

Figure 4.54 shows Module to add new unit. Figure 4.55 shows Module to edit Unit Title and Figure 4.56 shows the Module to Delete Unit from the List.

PERTEKMA ACTIVITY MONITORING

Dashboard

Activity Proposal

PERTEKMA Committee

Welcome! I am admin

Manage Equipments and Requirements

11.0 Senarai Keperluan/Peralatan

Keperluan

Kuantiti

Unit

Catatan

Copyright © PERTEKMA, FCSIT 2019

Figure 4.57 – Form to Add Details of Equipment and Requirement Based on the Unit

Figure 4.57 shows dynamic form to add details based on the Unit requirements. This form consist of “Keperluan”, “Kuantiti”, “Unit” and “Catatan”. “+” indicates to add more field. In the Unit field, the drop-down button consist of “Logistik”, “Teknikal”, “Keselamatan” and “Pengangkutan” to be choose.

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PERTEKMA - Activity Proposal

Select a shape or other object

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→

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localhost:8080/pertekma/admin/equipment-view.php?id=1&equipmentId=1

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Figure 4.58 – View Page of the Unit Details

Based on Figure 4.58, the data table shows the list of Equipment and Requirements once the Admin finished added the details. Admin is able to edit and delete each of it with the action button provided in the Action Column. The process of edit

and delete of the details are the same as the previous Module.

vii) Manage Budget

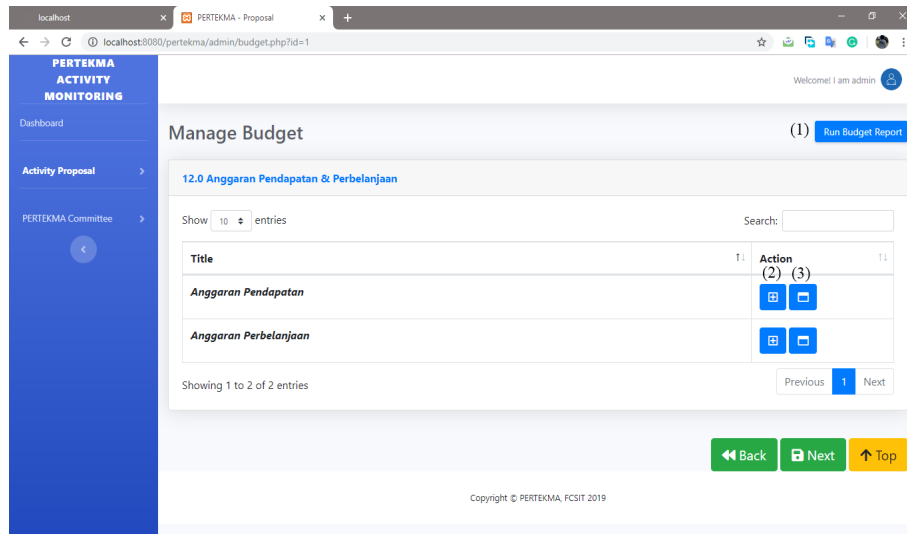


Figure 4.59 – Page to Manage Budget

Based Figure 4.59, Run Budget Report Button as in (1) is to run the full report for “Anggaran Pendapatan” and “Anggaran Perbelanjaan” records, (2) to add details and (3) to view the records. Refer to **Figure 4.14: Manage Budget** in the Superadmin section for details.

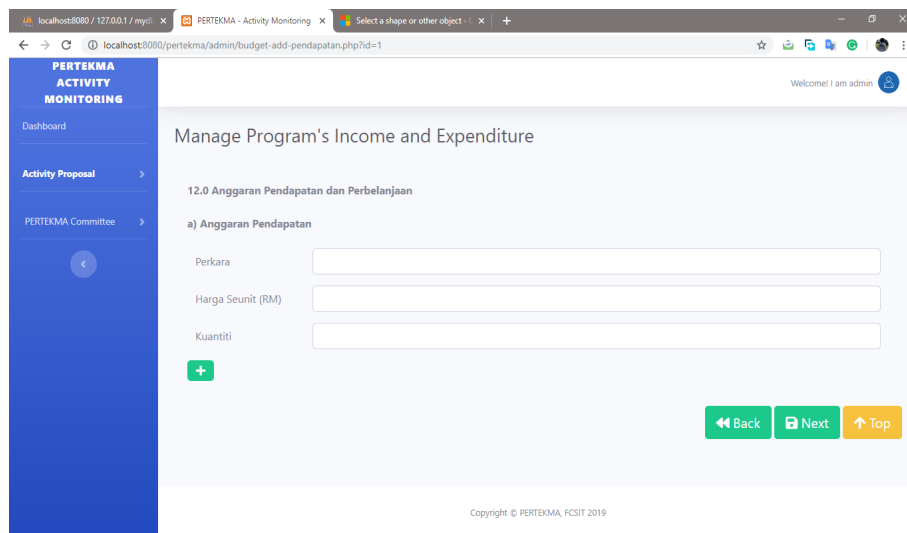


Figure 4.60 – Add Details form for Budget “Anggaran Pendapatan”

Figure 4.60 shows the dynamic form to add the details for Program Income and Expenditure. "+" button indicates the add more fields to add more details.

PERTEKMA ACTIVITY MONITORING

Dashboard

Activity Proposal

PERTEKMA Committee

Welcome! I am admin

Manage Budget

Anggaran Pendapatan

| Perkara | Harga Seunit(RM) | Kuantiti | Jumlah |
|--------------------|------------------|----------|-------------|
| Dana dari PERTEKMA | 1000.00 | 12 | 1000 |
| Sewa booth PC Fair | 300.00 | 4 | 1200 |
| Penaja | 6000.00 | 1 | 6000 |
| Total | | | 8200 |

Anggaran Perbelanjaan

| Perkara | Harga Seunit (RM) | Kuantiti | Jumlah |
|-------------------------------------|-------------------|----------|--------|
| Cenderahati | 100.00 | 102 | 1000 |
| Printing (Tag nama, banner, poster) | 500.00 | 1 | 500 |

Figure 4.61 – Run Budget Report

Figure 4.61 shows the report for the “*Anggaran Pendapatan*” and “*Anggaran Perbelanjaan*” once Admin clicked Run Budget Report Button (1) as stated in Figure 4.59.

PERTEKMA ACTIVITY MONITORING

Dashboard

Activity Proposal

PERTEKMA Committee

Welcome! I am admin

Manage Budget

12.0 Anggaran Pendapatan

| Perkara | Harga Seunit(RM) | Kuantiti | Jumlah | Action |
|--------------------|------------------|----------|-------------|---|
| Dana dari PERTEKMA | 1000.00 | 12 | 1000 | View Delete |
| Sewa booth PC Fair | 300.00 | 4 | 1200 | View Delete |
| Penaja | 6000.00 | 1 | 6000 | View Delete |
| Total | | | 8200 | |

[Back](#) [Top](#)

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Figure 4.62 – View Budget in “*Anggaran Pendapatan*”

Figure 4.62 shows the report for the “*Anggaran Pendapatan*” once Admin clicked View Button (3) as stated in Figure 4.62. In the data table, Edit and Delete Button are provided in the Action Column to manage the list specifically.

viii) End Section of the Activity Proposal

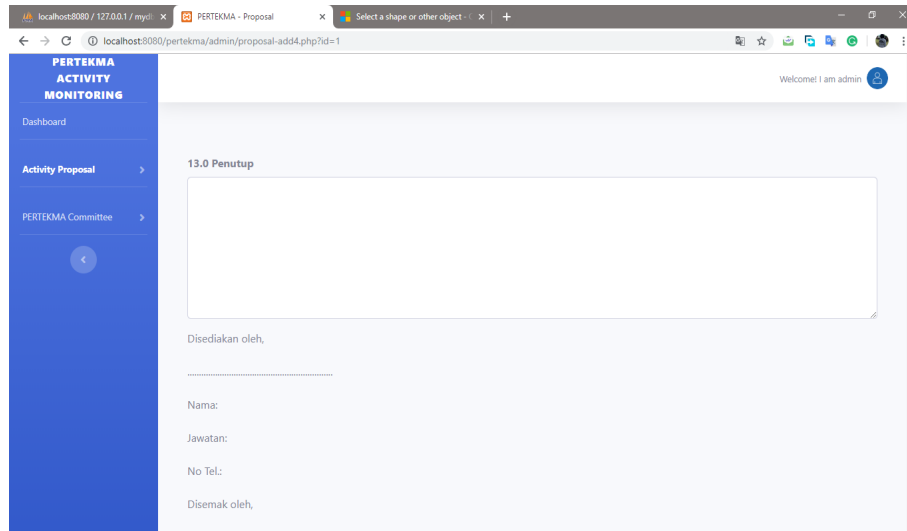
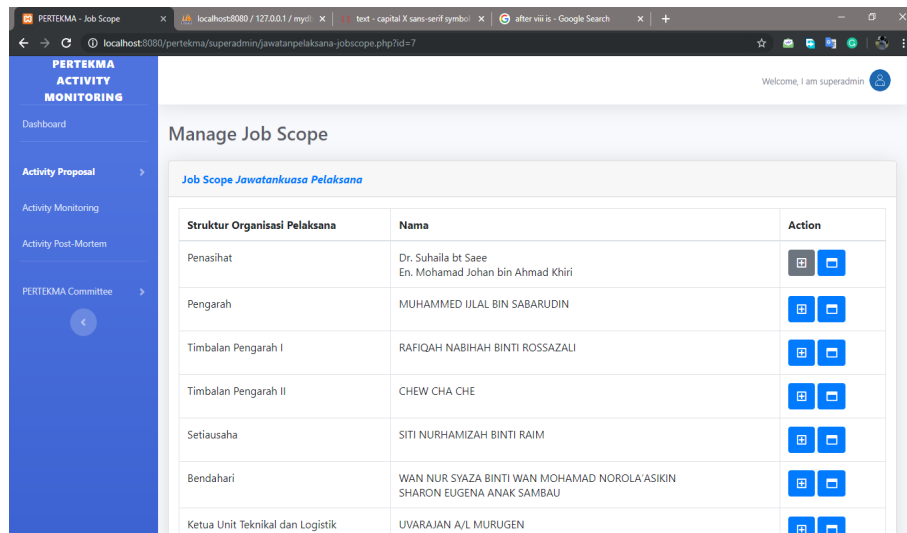


Figure 4.63 – End Section of the Activity Proposal Form

Figure 4.63 shows the last section of the Activity Proposal form that need to be filled by the Admin. Once finished, Admin will clicked "Update" button to save all the records and will return to the List of Proposal Page.

ix) Manage Job Scope for "Jawatankuasa Pelaksana"

















| Struktur Organisasi Pelaksana | Nama | Action |
|----------------------------------|--|---|
| Penasihat | Dr. Suhaila bt Saee En. Mohamad Johan bin Ahmad Khiri |   |
| Pengarah | MUHAMMED ULAL BIN SABARUDIN |   |
| Timbalan Pengarah I | RAFIQAH NABIHAH BINTI ROSSAZALI |   |
| Timbalan Pengarah II | CHEW CHA CHE |   |
| Setiausaha | SITI NURHAMIZAH BINTI RAIM |   |
| Bendahari | WAN NUR SYAZA BINTI WAN MOHAMAD NOROLA'ASIKIN SHARON EUGENA ANAK SAMBAU |   |
| Ketua Unit Teknikal dan Logistik | UWARAJAN A/L MURUGEN |   |

Figure 4.64 – Manage Job Scope for List of "Jawatankuasa Pelaksana"

Figure 4.64 shows the list of "Jawatankuasa Pelaksana" and to manage the job scope of the "Jawatankuasa Pelaksana", Admin must clicked the add button to add the

details of their job scope and clicked View Button to view in details of the job scope for each of them.

Figure 4.65 – Add Job Scope for List of "Jawatankuasa Pelaksana"

Figure 4.65 shows the dynamic form to add the details of the Job Scope of the "Jawatankuasa Pelaksana". Admin can add the details of their job scope as many as he/she want.

| Job Scope | Action |
|---|---|
| Membantu pengarah memastikan kelancaran program yang telah dirancang. | Edit Delete |
| Memantau tugas-tugas exco yang berkaitan. | Edit Delete |
| Mengantikan tugas-tugas semasa ketiadaan pengarah. | Edit Delete |

Figure 4.66 – View Job Scope for List of "Jawatankuasa Pelaksana"

Figure 4.66 above shows the details of the Job Scope of the "Jawatankuasa Pelaksana". Once Admin clicked view specific Job Scope of "Jawatankuasa Pelaksana", the page will shown the list of their job scope as added previously.

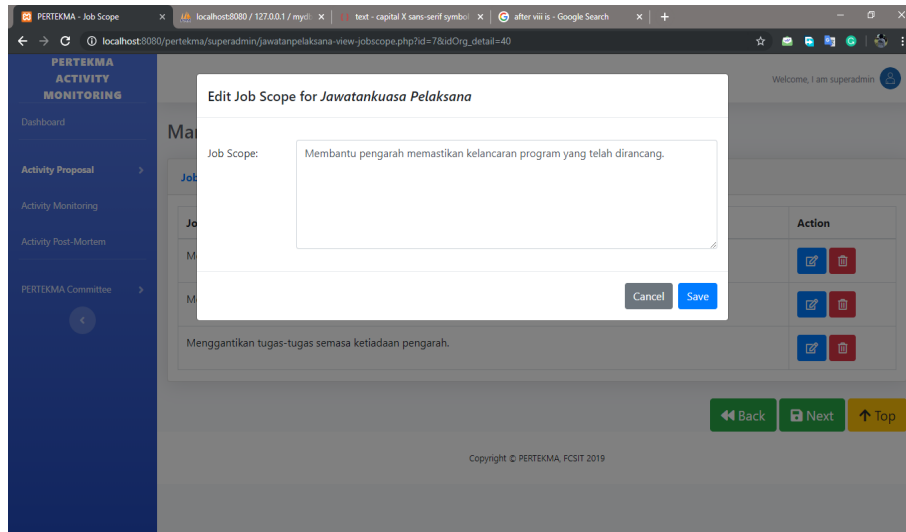


Figure 4.67 – Edit Job Scope Details

Figure 4.67 above shows the edit Module to edit the details of the Job Scope of the "Jawatankuasa Pelaksana". Once Admin clicked edit button in the specific Job Scope of the "Jawatankuasa Pelaksana", the edit module displayed will shown it details of the job scope as added previously. Save once the changing has made and Cancel to dismissed the Edit Module.

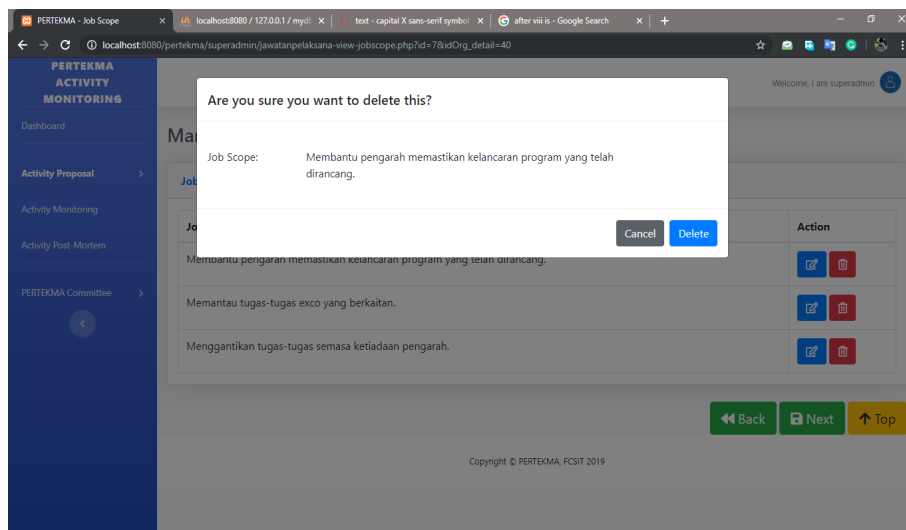


Figure 4.68 – Delete Job Scope Details

Figure 4.68 above shows the Delete Module to Delete the details of the Job Scope of the "Jawatankuasa Pelaksana". Once Admin clicked delete button in the

specific Job Scope of the "Jawatankuasa Pelaksana", the Delete module displayed as shown in Figure 4.68. Delete once Admin confirmed to delete it and Cancel to dismissed the Delete Module.

c) Activity Post-Mortem

The screenshot displays a web application interface for 'PERTEKMA ACTIVITY MONITORING'. The left sidebar contains navigation links: Dashboard, Activity Proposal, Activity Post-Mortem, and PERTEKMA Committee. The main content area is titled 'Manage Activity Post-Mortem' and shows details for 'IT Week 2019'. It features two columns: 'Objectives of the Activity' and 'Achievements'. The 'Objectives' column lists six points (i) through (vi) regarding information dissemination, student engagement, and analysis. The 'Achievements' column lists three points (i) through (iii), including information dissemination and student engagement. At the bottom right, there are three buttons: 'Back', 'Update', and 'Top'. The footer indicates 'Copyright © PERTEKMA, FCSIT 2019'.

Figure 4.69 – Update the Activity Post-Mortem

Figure 4.69 above shows the form for Activity Post-Mortem. In this section, Admin is required to filled the achievements of the activity completions based on the objectives stated in the Activity Proposal previously. Then, clicked Update button to update the form. The Activity Post-Mortem is basically the end or the completion of the activity.

d) PERTEKMA Committee Members

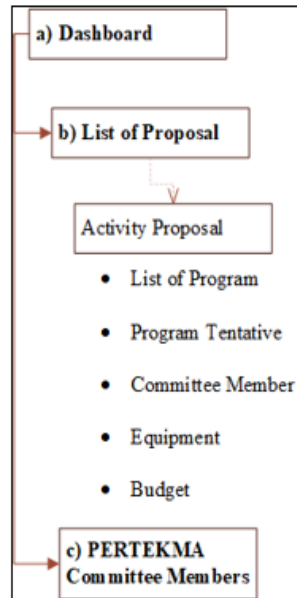


Figure 4.70 – The Last Access Module for Admin is PERTEKMA Committee Members

Figure 4.71 – Dynamic Form to Add PERTEKMA Committee Members

Admin can add more details as wanted by clicked the "+" to add more fields. This Dynamic Form will help Admin in managing numbered of person in a time, fast and time consume.

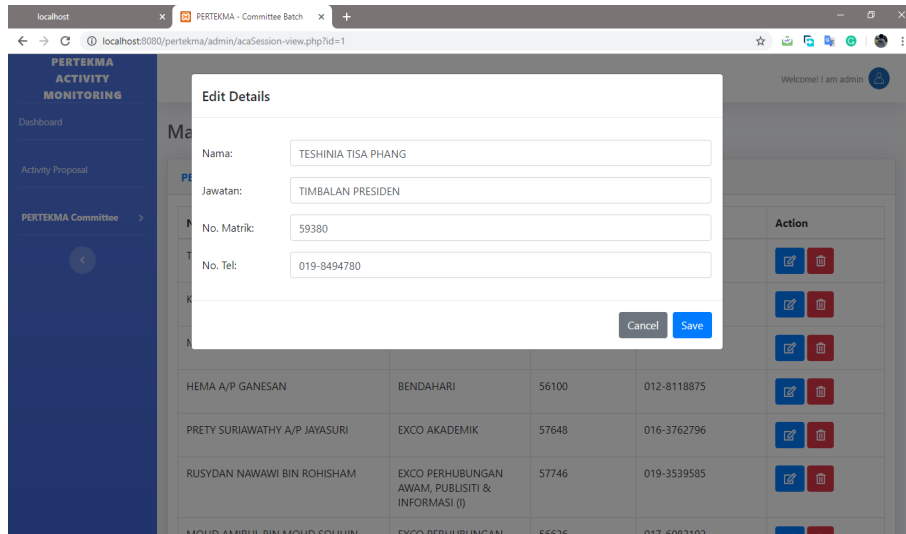


Figure 4.72 – Edit Module for the List of the PERTEKMA Committee Members

Figure 4.72 shows the Edit Module of the selected members. Admin can simply edit their details in this Modul and clicked anywhere on the screen to dismiss the Module.

4.3.4 Access Module for User

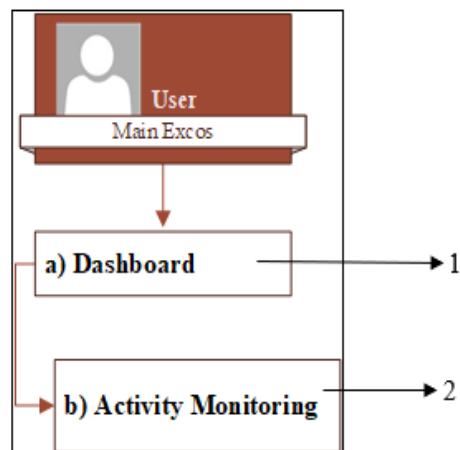


Figure 4.73 – Access Module for Admin

Based on Figure 4.73 above, the numbering shown a sequence for User to follow up once he/she login into the system. The sequences consist of Dashboard (1), followed by Activity Monitoring (2). User have to follow the sequence correctly in order to understand the flow of the system as well. This is due to the data in each module are related and connected

to each other.

In this section, user basically login with their position “*Jawatankuasa Pelaksana*” instead of login with individual username. This login information and roles access are already explained in the section.

4.3.5 Access Module for Admin (i. Manage Committee Members).

i) Dashboard-User

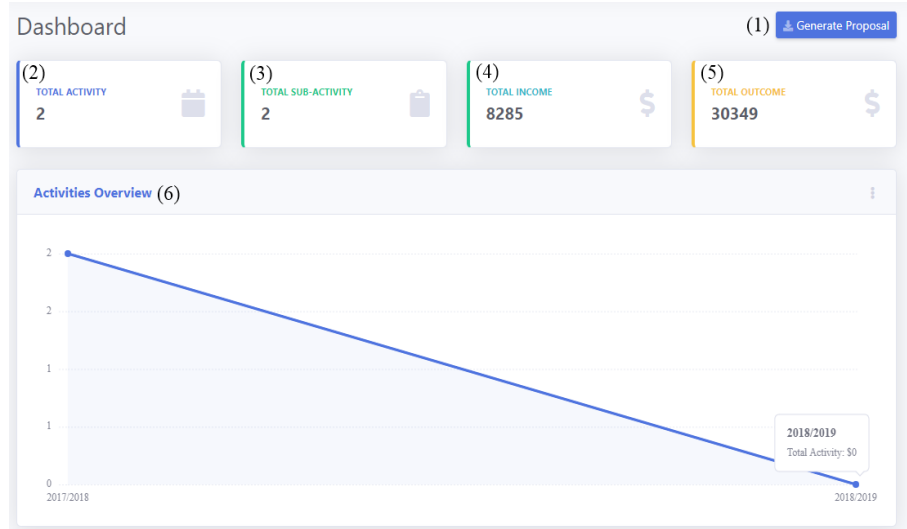


Figure 4.74 – Dashboard for User

Figure 4.62 shows the dashboard for the User once login into the system. In the Dashboard, it will count and summarize all the related information to the User. It includes:

- a) the total number of activities that has been done yearly-(2)
- b) total number of sub-activities throughout monthly-(3)
- c) total income ("*Anggaran Pendapatan*") for all Activity Proposal-(4)
- d) total outcome ("*Anggaran Perbelanjaan*") for all Activity Proposal-(5)
- e) Statistical Data View of Activities Overview to show number of Activity Proposal that being handled by PERTEKMA Batch-(6)

ii) Activity Monitoring

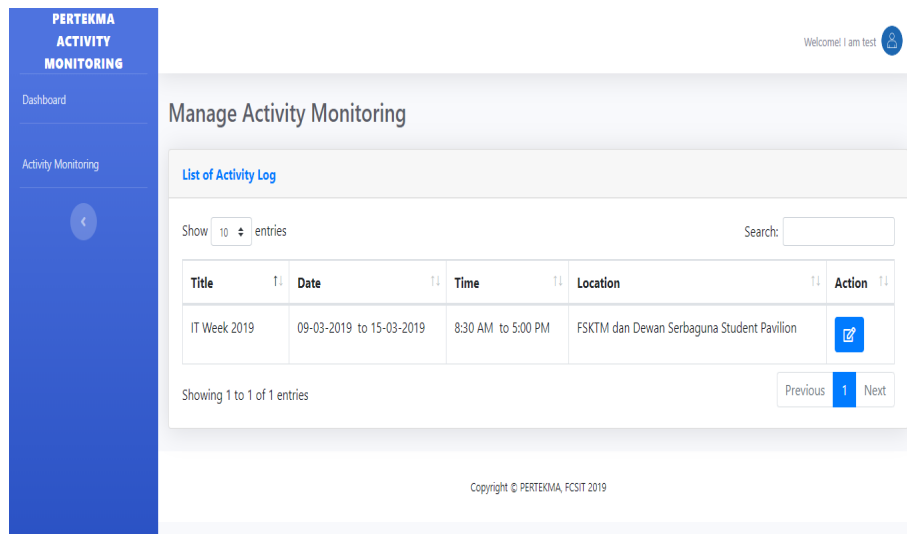


Figure 4.75 – List of Activity Involved by the Exco

Figure 4.75 shows the list of exco's activity involvement. In the Action Column, exco is able to update his/her Activity Log Note.

List of Activity Log

Show 10 entries

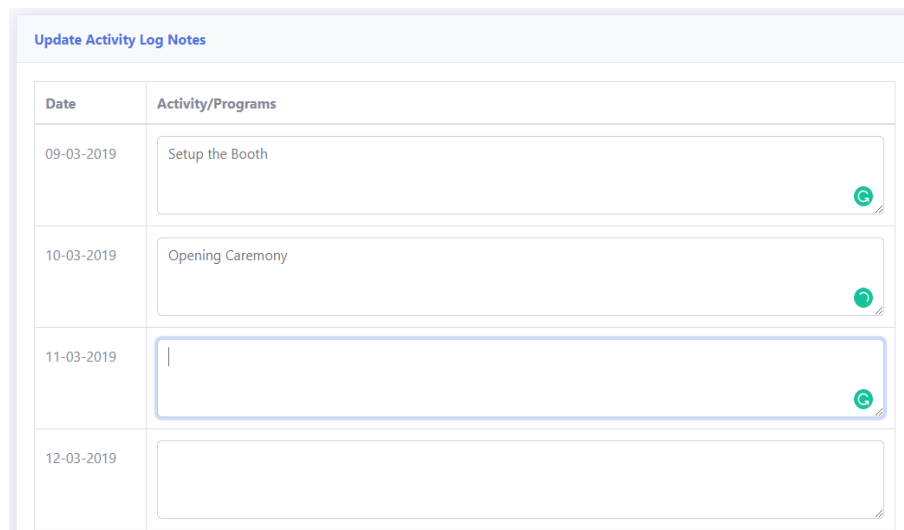
Search:

| Date | Action | Action by Advisor |
|------------|--------|-------------------|
| 09-03-2019 | ✓ | |
| 10-03-2019 | ✓ | |
| 11-03-2019 | ✓ | |
| 12-03-2019 | ✗ | |

Figure 4.76 – List of Activity Log Notes

Based on Figure 4.76, User will direct go to this page once he/she clicked the "edit" button as shown in Figure 4.75. The Dates in the table is basically automated calculate based on the dates of the Activity. In the Action Column, "✓" symbol indicates that the log notes on that day is already updated while "X" symbol means the user does not

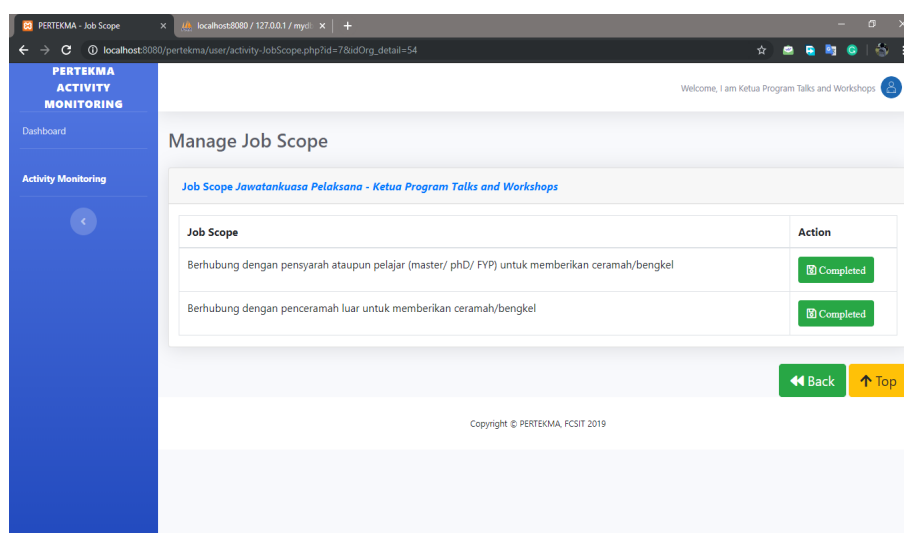
update his/her log notes yet. Action by Advisor basically will be shown if the Advisor has updated any comments or reviews in their log notes. User can simply click "update" button in the bottom of the page.



| Date | Activity/Programs |
|------------|-------------------|
| 09-03-2019 | Setup the Booth |
| 10-03-2019 | Opening Caremony |
| 11-03-2019 | |
| 12-03-2019 | |

Figure 4.77 – Updates of Activity Log Notes

Figure 4.77 shows the Update Activity Log Notes Form for the excos to updates their activities along the event based on their Job Scope allocation. Basically, the excos need to update along the activities taken placed until the event or activities has been finished. This updates will be monitored by the Advisor along this activities or tasks.



| Job Scope | Action |
|--|-----------|
| Berhubung dengan pensyarah ataupun pelajar (master/ PhD/ FYP) untuk memberikan ceramah/bengkel | Completed |
| Berhubung dengan penceramah luar untuk memberikan ceramah/bengkel | Completed |

Figure 4.78 – Updates Job Scope by "Jawatankuasa Pelaksana"

Figure 4.78 shows Job Scope by "Jawatankuasa Pelaksana for the excos to updates their completion of their Job Scope allocated based on the Activity Proposal previously. Basically, the excos need to update their Job Scope allocation by clicking the Action button provided as shown in Figure 4.78 above. This updates will be monitored by the Advisor along the activities or tasks.

4.3.6 Access Module for Deputy Dean and Dean

i) Dashboard-Deputy Dean

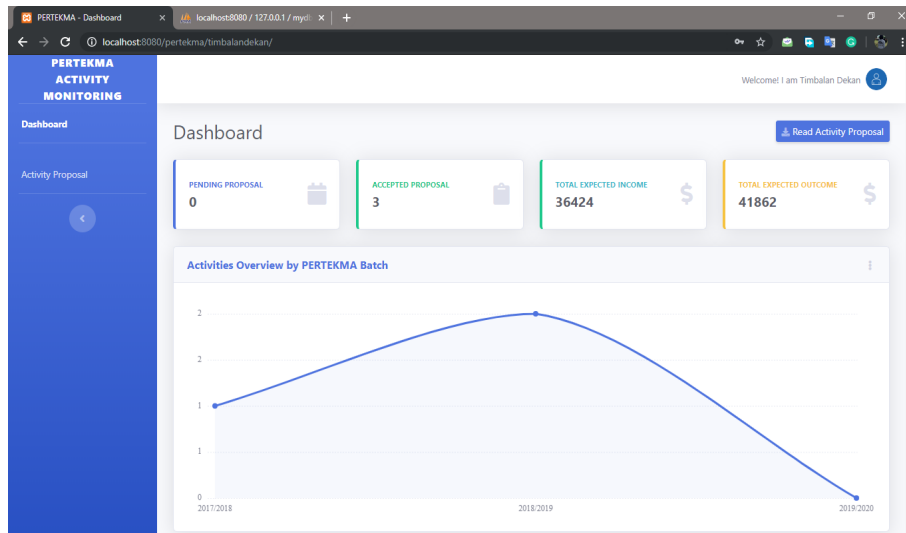


Figure 4.79 – Dashboard for Deputy Dean

Figure 4.79 shows the dashboard for the Deputy Dean once login into the system.

In the Dashboard, it will count and summarize all the related information. It includes:

- Pending proposal need to be review by the Deputy Dean-(1)
- Total number of accepted proposal-(2)
- Total expected income (*"Anggaran Pendapatan"*) for all Activity Proposal-(3)
- total expected outcome (*"Anggaran Perbelanjaan"*) for all Activity Proposal-(4)
- Statistical Data View of Activities Overview to show number of Activity Proposal that being handled by PERTEKMA Batch-(5)

f) Read Activity Proposal Button to redirect to the page list of Activity Proposal-(5)

ii) Read Activity Proposal

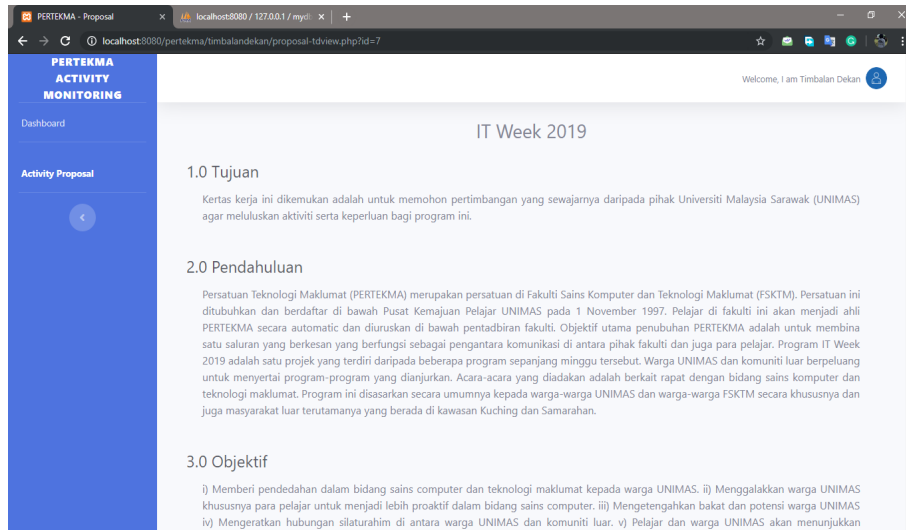


Figure 4.80 – Read the Activity Proposal

Figure 4.80 shows the complete proposal need to be review and comments by the Deputy Dean. In this section, Deputy Dean is able to give any comments or feedback to the Proposal by the end of this page. By clicking the Update button, the comments will saved into the records and by pass to the Superadmin.

The login page for the Dean is similar to the Deputy Dean. Deputy Dean has an authority to accept or decline the proposal and this approval are supported by the Dean.

iii) Accept or Decline Activity Proposal

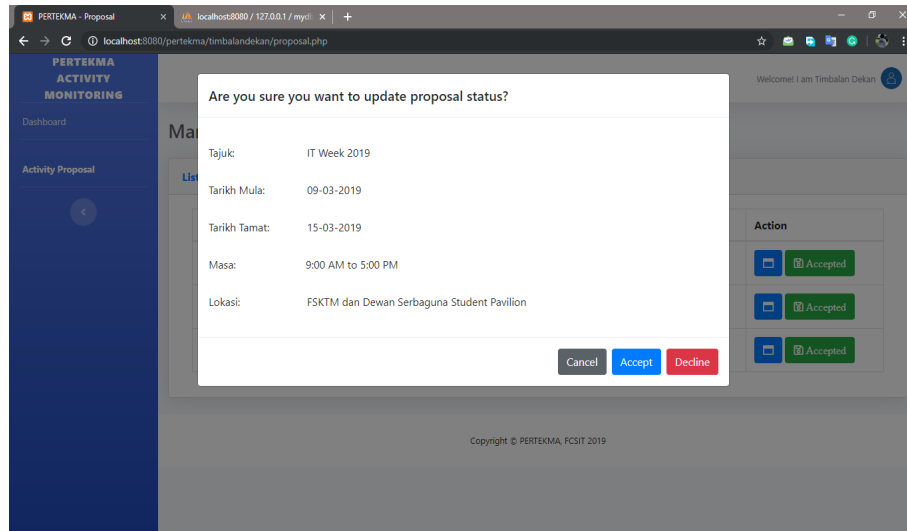


Figure 4.81 – Accept or Decline Activity Proposal

Figure 4.81 shows the update module to accept or decline the Proposal. In this module, it will show the main details of the proposal. Once the deputy dean clicked the Accept button, the status of the proposal will change to Accepted and otherwise.

iv) Status of the Activity Proposal

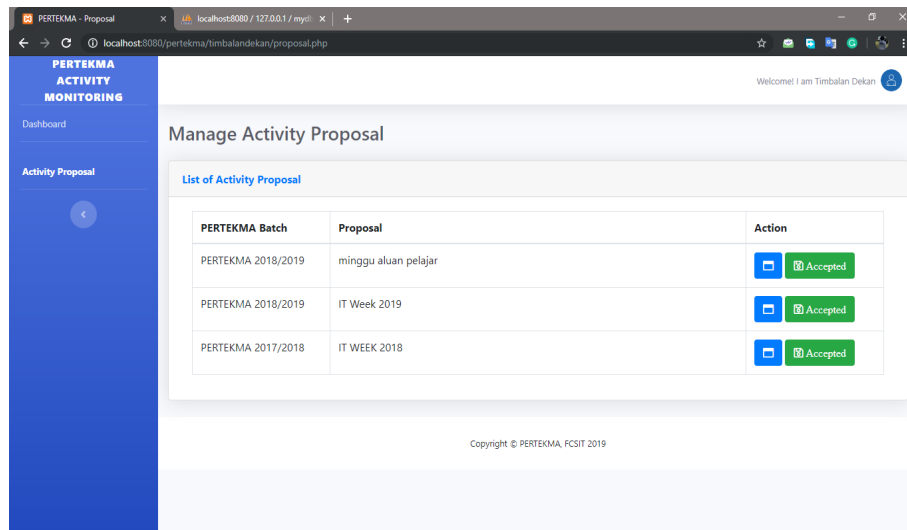


Figure 4.82 – Accept or Decline Status of the Activity Proposal

Figure 4.82 above shows the List of Activity Proposal manage by the PERTEKMA Batch and its current status. The status of the proposal Pending, Accept and Decline.

Pending proposal indicate as the proposal has not been approved yet. Accept means that the proposal is succesfully approved and Decline means the proposal has been rejected.

4.4 Conclusion

This chapter described the implementation of the PERTEKMA Activity Monitoring. The configuration to set up the development environment and brief description of each function and structure of the system has also been explained. The roles of each user within the system plays an important part in the possible success of the system. Moreover, every user role has their own functionality and features that enables them to perform their task accordingly.

CHAPTER 5

TESTING AND EVALUATION

5.1 Introduction

Test and Evaluation (T&E) is the process by which a system or components are compared against the requirements and specification through the testing.

5.2 Integration Testing

PERTEKMA Activity Monitoring will include the module as listed below:

- i) List of modules for Superadmin (PERTEKMA's Advisor):
 - a) Login/Logout of the system
 - b) Add/edit/delete/view Admin and User
 - c) Add/edit/delete/view Activity Proposal
 - Add/edit/delete/view List of Program
 - Add/edit/delete/view Program Tentative
 - Add/edit/delete/view Committee Members
 - Add/edit/delete/view Equipment and Needs
 - Add/edit/delete/view Budget
 - d) Generate Activity Proposal
 - e) Add/edit/delete/view Activity Monitoring
 - f) Add/edit/delete/view PERTEKMA Committee Members
- ii) List of modules for Admin (High Council of PERTEKMA):

- a) Login/Logout of the system
 - b) Add/edit/delete/view Activity Proposal
 - Add/edit/delete/view List of Program
 - Add/edit/delete/view Program Tentative
 - Add/edit/delete/view Committee Members
 - Add/edit/delete/view Equipment
 - Add/edit/delete/view Budget
 - c) Generate Activity Proposal
 - d) Add/edit/delete/view Activity Monitoring
 - e) Add/edit/delete/view PERTEKMA Committee Members
- iii) List of modules for User (Main Excors):
- a) Login/Logout of the system
 - b) Add/edit/delete/view Activity Monitoring

5.3 System Testing

System Testing is the testing of a complete and fully integrated software product to check whether how the components interact with one another and with the system as whole. In this section, the system testing can be categorized into two which are consists of functionality testing and non-functionality testing. In functionality testing it consists of the unit testing that come out with the test case for each while non-functionality testing are involved the usability and reliability testing.

5.3.1 Functionality Testing

Unit Testing is to test the functionality of the system. Below are the test case for each of the module in the system and their Unit Testing Test Case:

Table 5.1 – Test Case 1- Login into PERTEKMA Activity Monitoring

| Test Case | Validate login credentials in PERTEKMA Activity Monitoring | | | | | |
|-----------------------------------|--|--|-------------|--------------------|-------------------|----------|
| Pre-Condition | The Superadmin, Admin and User are the Committee Members of PERTEKMA | | | | | |
| Input | Expected Result | Actual Result | Pass / Fail | Severity of Defect | Summary of Defect | Comments |
| Valid Username and Password | Successfully login into the system | Login into the system | Pass | NULL | NULL | NULL |
| Valid Username and Wrong Password | Cannot login into the system with error message shown | Cannot login into the system with no error message shown | Pass | NULL | NULL | NULL |
| Wrong Username and Password | Cannot login into the system with error message shown | Cannot login into the system with no error message shown | Pass | NULL | NULL | NULL |

Table 5.2 – Test Case 2-Logout from PERTEKMA Activity Monitoring

| Test Case | To test the logout function in PERTEKMA Activity Monitoring | | | | | |
|---|---|--|-------------|--------------------|-------------------|----------|
| Pre-Condition | The credentials are the Committee Members of PERTEKMA, Dean, Deputy Dean which are accessible in PERTEKMA Activity Monitoring | | | | | |
| Input | Expected Result | Actual Result | Pass / Fail | Severity of Defect | Summary of Defect | Comments |
| The credentials in the site of the system and click the Logout button in the setting | Logout Message display and should return to the Login screen | Logout Message display and should return to the Login screen | Pass | NULL | NULL | NULL |
| The credentials in the site of the system, click the Logout button in the setting and click Cancel Button | Logout Message display and Logout module is dismissed | Logout Message display and Logout module is dismissed | Pass | NULL | NULL | NULL |

Table 5.3 – Test Case 3-View Admin and User

| | | | | | | |
|--|--|--|--------------------|---------------------------|--------------------------|-----------------|
| Test Case | To test the Superadmin view superadmin, admin and user of the system | | | | | |
| Pre-Condition | The Superadmin must login into the system | | | | | |
| Input | Expected Result | Actual Result | Pass / Fail | Severity of Defect | Summary of Defect | Comments |
| Click the Committee Members in the drop-down List of the Activity Proposal | Superadmin in the Manage Committee Members Page and the list of "jawatankuasa pelaksana" displayed on the screen with edit and delete button | Superadmin in the Manage Committee Members Page and the list of "jawatankuasa pelaksana" displayed on the screen with edit and delete button | Pass | NULL | NULL | NULL |

Table 5.4 – Test Case 4-Edit admin and user

| | | | | | | |
|--|--|--|--------------------|---------------------------|--------------------------|-----------------|
| Test Case | To test the Superadmin edit superadmin, admin and user of the system | | | | | |
| Pre-Condition | The Superadmin must login into the system | | | | | |
| Input | Expected Result | Actual Result | Pass / Fail | Severity of Defect | Summary of Defect | Comments |
| Click the Edit icon in the list of the "Jawatankuasa Pelaksana" to edit specific records in the list | Edit module displayed the records with cancel and save button provided. Once save button clicked, it is successfully updating the list | Edit module displayed the records with cancel and save button provided. Once save button clicked, it is successfully updating the list | Pass | NULL | NULL | NULL |
| Click the Cancel button to dismissed the edit Module | The name list displayed in the "Jawatankuasa Pelaksana" is still in the list and "Edit Jawatankuasa Pelaksana" Module dismissed | The name list displayed in the "Jawatankuasa Pelaksana" is still in the list and "Edit Jawatankuasa Pelaksana" Module dismissed | Pass | NULL | NULL | NULL |

Table 5.5 – Test Case 5-Delete Admin and User

| | | | | | | |
|---|---|---|--------------------|---------------------------|--------------------------|-----------------|
| Test Case | To test the Superadmin edit superadmin, admin and user of the system | | | | | |
| Pre-Condition | The Superadmin must login into the system | | | | | |
| Input | Expected Result | Actual Result | Pass / Fail | Severity of Defect | Summary of Defect | Comments |
| Click the Delete icon in the list of names of the "Jawatankuasa Pelaksana" to delete specific records from the list | Delete module displayed the records with cancel and save button provided. Once save button clicked, it is successfully updating the list and the records is no longer in the list | Delete module displayed the records with cancel and save button provided. Once save button clicked, it is successfully updating the list and the records is no longer in the list | Pass | NULL | NULL | NULL |

Table 5.6 – Test Case 6-Add Admin and User

| | | | | | | |
|---|--|--|--------------------|---------------------------|--------------------------|-----------------|
| Test Case | To test the Superadmin add admin and user | | | | | |
| Pre-Condition | The Superadmin must login into the system | | | | | |
| Input | Expected Result | Actual Result | Pass / Fail | Severity of Defect | Summary of Defect | Comments |
| Click Add Committee Button in the Manage Committee Members Page | Add Module for the "Tambah Jawatankuasa Pelaksana" displayed. | Add Module for the "Tambah Jawatankuasa Pelaksana" displayed. | Pass | NULL | NULL | NULL |
| Add position in the "Jawatan" field provided | Should allow character input | Should allow character input | Pass | NULL | NULL | NULL |
| Add Password for the Login Credentials | Should allow character and integers input | Should allow character and integers input | Pass | NULL | NULL | NULL |
| Assign Status based on drop-down listed | Drop-down listed shows option for User, Admin and Superadmin | Drop-down listed shows option for User, Admin and Superadmin | Pass | NULL | NULL | NULL |
| Add name from the drop-down list provided, name displayed in the drop-down list | Drop-down listed shows the list of names based on PERTEKMA Batch Committee Members | Drop-down listed shows the list of names based on PERTEKMA Batch Committee Members | Pass | NULL | NULL | NULL |
| Add name from the drop-down list provided, name not in the drop-down list | Add name in the field provided, then the system should allow to add the new name into the list for future user | Add name in the field provided, then the system should allow to add the new name into the list for future user | Pass | NULL | NULL | NULL |

Table 5.7 – Test Case 7-View List of Activity Proposal

| | | | | | | |
|--|--|--|--------------------|---------------------------|--------------------------|-----------------|
| Test Case | To test the Superadmin view the List of Activity Proposal | | | | | |
| Pre-Condition | The Superadmin must login into the system | | | | | |
| Input | Expected Result | Actual Result | Pass / Fail | Severity of Defect | Summary of Defect | Comments |
| Click the List of Proposal in the drop-list of Activity Proposal | Superadmin in the Manage Activity Proposal Page and the list of Proposal displayed on the screen with add details, edit, print and delete button for each record | Superadmin in the Manage Activity Proposal Page and the list of Proposal displayed on the screen with add details, edit, print and delete button for each record | Pass | NULL | NULL | NULL |

Table 5.8 – Test Case 8-Edit List of Activity Proposal

| | | | | | | |
|---|---|---|--------------------|---------------------------|--------------------------|-----------------|
| Test Case | To test the Superadmin edit the List of Activity Proposal | | | | | |
| Pre-Condition | The Superadmin must login into the system | | | | | |
| Input | Expected Result | Actual Result | Pass / Fail | Severity of Defect | Summary of Defect | Comments |
| Click the Edit button on the specific record to edit details of Activity Proposal in the list | Superadmin in the Manage Activity Proposal. Edit Module displayed in the records with cancel and save button provided. Once save button clicked, it is successfully updating the details of Activity Proposal | Superadmin in the Manage Activity Proposal. Edit Module displayed in the records with cancel and save button provided. Once save button clicked, it is successfully updating the details of Activity Proposal | Pass | NULL | NULL | NULL |
| Click the Cancel button to dismissed the edit Module | The records for Proposal are still in the list and "Edit Proposal" Module dismissed | The records for Proposal are still in the list and "Edit Proposal" Module dismissed | Pass | NULL | NULL | NULL |

Table 5.9 – Test Case 9-Delete Proposal from the List of Proposal

| | | | | | | |
|---|--|--|--------------------|---------------------------|--------------------------|-----------------|
| Test Case | To test the Superadmin delete proposal from the List Activity Proposal | | | | | |
| Pre-Condition | The Superadmin must login into the system | | | | | |
| Input | Expected Result | Actual Result | Pass / Fail | Severity of Defect | Summary of Defect | Comments |
| Click the Delete icon on the specific record to delete the details of Activity Proposal from the list records | Delete module displayed the records with cancel and save button provided. Once save button clicked, it is successfully deleting the proposal from the records, the details of Activity Proposal are no longer available and Message Box for deleted record displayed | Delete module displayed the records with cancel and save button provided. Once save button clicked, it is successfully deleting the proposal from the records, the details of Activity Proposal are no longer available and Message Box for deleted record displayed | Pass | NULL | NULL | NULL |

Table 5.10 – Test Case 10-Add Activity Proposal

| | | | | | | |
|---|--|--|--------------------|---------------------------|--------------------------|-----------------|
| Test Case | To test the Superadmin add the Activity Proposal | | | | | |
| Pre-Condition | The Superadmin must login into the system | | | | | |
| Input | Expected Result | Actual Result | Pass / Fail | Severity of Defect | Summary of Defect | Comments |
| Superadmin in the Manage Activity Proposal Page, clicked Add New Proposal button and filled in all the field in the Module with different Title of Proposal | Once saved button clicked, Message box displayed for saved Proposal | Once saved button clicked, Message box displayed for saved Proposal | Pass | NULL | NULL | NULL |
| Add New Proposal button, filled in all the form in the Module with the same Title of Proposal in the record previously | Once saved button clicked, Message box displayed the Same Title Proposal added. Data cannot be saved. No new proposal was added. | Once saved button clicked, Message box displayed the Same Title Proposal added. Data cannot be saved. No new proposal was added. | Pass | NULL | NULL | NULL |

Table 5.11 – Test Case 11-View List of Program

| | | | | | | |
|--|---|---|--------------------|---------------------------|--------------------------|-----------------|
| Test Case | To test the Superadmin view the List of Program in the Proposal | | | | | |
| Pre-Condition | The Superadmin must login into the system | | | | | |
| Input | Expected Result | Actual Result | Pass / Fail | Severity of Defect | Summary of Defect | Comments |
| Click List of Program in the drop-down menu of Activity Proposal | Superadmin in the manage Program or Activity Details Page and the list of Perincian Program displayed on the screen with edit, view and delete button for each record | Superadmin in the manage Program or Activity Details Page and the list of Perincian Program displayed on the screen with edit, view and delete button for each record | Pass | NULL | NULL | NULL |
| Click the View Activity button in the specific record | Details for Perincian Program Module displayed on the screen, clicked anywhere to dismissed it | Details for Perincian Program Module displayed on the screen, clicked anywhere to dismissed it | Pass | NULL | NULL | NULL |

Table 5.12 – Test Case 12-Edit List of Program

| | | | | | | |
|---|--|--|--------------------|---------------------------|--------------------------|-----------------|
| Test Case | To test the Superadmin edit the List of Program | | | | | |
| Pre-Condition | The Superadmin must login into the system | | | | | |
| Input | Expected Result | Actual Result | Pass / Fail | Severity of Defect | Summary of Defect | Comments |
| Click the Edit button on the specific record to edit details of Perincian Program in the list | Superadmin in the page Manage Program or Activity Details. Edit module displayed the records with cancel and save button provided. Once save button clicked, new record displayed. Message box displayed for Program has been updated. | Superadmin in the page Manage Program or Activity Details. Edit module displayed the records with cancel and save button provided. Once save button clicked, new record displayed. Message box displayed for Program has been updated. | Pass | NULL | NULL | NULL |
| Click the Cancel button to dismissed the edit Module | The initial records are still in the list and "Edit Perincian Module" dismissed | The initial records are still in the list and "Edit Perincian Module" dismissed | Pass | NULL | NULL | NULL |

Table 5.13 – Test Case 13-Delete Program

| | | | | | | |
|---|---|---|--------------------|---------------------------|--------------------------|-----------------|
| Test Case | To test the Superadmin delete Program the List of Program | | | | | |
| Pre-Condition | The Superadmin must login into the system | | | | | |
| Input | Expected Result | Actual Result | Pass / Fail | Severity of Defect | Summary of Defect | Comments |
| Click the Delete icon on the specific record to delete the details of Perincian Program from the list records | Delete module displayed the records with cancel and save button provided. Once save button clicked, it is successfully deleting the Program from the records, the details of Perincian Program are no longer available and Message Box for deleted record displayed | Delete module displayed the records with cancel and save button provided. Once save button clicked, it is successfully deleting the Program from the records, the details of Perincian Program are no longer available and Message Box for deleted record displayed | Pass | NULL | NULL | NULL |
| Click the Cancel button to dismissed the delete Module | The initial records are still in the list and delete Module dismissed | The initial records are still in the list and delete Module dismissed | Pass | NULL | NULL | NULL |

Table 5.14 – Test Case 14-Add Date Program Tentative

| | | | | | | |
|---|---|---|--------------------|---------------------------|--------------------------|-----------------|
| Test Case | To test the Superadmin add Date for Program Tentative and its details | | | | | |
| Pre-Condition | The Superadmin must login into the system | | | | | |
| Input | Expected Result | Actual Result | Pass / Fail | Severity of Defect | Summary of Defect | Comments |
| Superadmin in the Manage Program Tentative Page, clicked Add Program Tentative button to add new date | Once save button clicked, Message box displayed for saved Dates | Once save button clicked, Message box displayed for saved Dates | Pass | NULL | NULL | NULL |

Table 5.15 – Test Case 15-View Details of Program Tentative

| | | | | | | |
|--|---|---|--------------------|---------------------------|--------------------------|-----------------|
| Test Case | To test the Superadmin view the Details of Program Tentative | | | | | |
| Pre-Condition | The Superadmin must login into the system | | | | | |
| Input | Expected Result | Actual Result | Pass / Fail | Severity of Defect | Summary of Defect | Comments |
| Clicked View Program Tentative button on the specific date | Redirecting to the new page and show details of the Program Tentative. Action button for edit and delete in each Program Tentative | Redirecting to the new page and show details of the Program Tentative. Action button for edit and delete in each Program Tentative | Pass | NULL | NULL | NULL |
| Incorrect details for Program Tentative, edit Program Tentative Button clicked | Edit Module to edit the details of Program Tentative, once Save button clicked. Message box show the list that has been updated. Updated records displayed | Edit Module to edit the details of Program Tentative, once Save button clicked. Message box show the list that has been updated. Updated records displayed | Pass | NULL | NULL | NULL |
| Removed the details for Program Tentative from the record, Delete Program Tentative Button clicked | Delete Module to delete the details of Program Tentative, once Delete button clicked. Message box shows the list has been updated. The deleted records are no longer displayed. | Delete Module to delete the details of Program Tentative, once Delete button clicked. Message box shows the list has been updated. The deleted records are no longer displayed. | Pass | NULL | NULL | NULL |

Table 5.16 – Test Case 16-Edit Date for Program Tentative

| | | | | | | |
|--|--|--|--------------------|---------------------------|--------------------------|-----------------|
| Test Case | To test the Superadmin edit Date of Program Tentative | | | | | |
| Pre-Condition | The Superadmin must login into the system | | | | | |
| Input | Expected Result | Actual Result | Pass / Fail | Severity of Defect | Summary of Defect | Comments |
| Clicked the Edit Date button for the specific Date Listed in the table List of Date for Program Tentative to change the date | Edit Module for Date displayed, field only received the input data for date picker. Once Save button clicked, Message box appeared to show that the Date has changed | Edit Module for Date displayed, field only received the input data for date picker. Once Save button clicked, Message box appeared to show that the Date has changed | Pass | NULL | NULL | NULL |
| Clicked Cancel button or anywhere on the screen to dismiss the Edit Date Module | Edit Date Module dismissed and actual date maintained on the list | Edit Date Module dismissed and actual date maintained on the list | Pass | NULL | NULL | NULL |

Table 5.17 – Test Case 17-Delete Date for Program Tentative

| | | | | | | |
|---|--|--|--------------------|---------------------------|--------------------------|-----------------|
| Test Case | To test the Superadmin delete Date of Program Tentative | | | | | |
| Pre-Condition | The Superadmin must login into the system | | | | | |
| Input | Expected Result | Actual Result | Pass / Fail | Severity of Defect | Summary of Defect | Comments |
| Clicked the "Delete" button for the specific Date Listed in the table List of Date for Program Tentative to remove the date from record | Edit Module for Date displayed, field only received the input data for date picker. Once Save button clicked, Message box appeared to show that the Date has changed | Edit Module for Date displayed, field only received the input data for date picker. Once Save button clicked, Message box appeared to show that the Date has changed | Pass | NULL | NULL | NULL |
| Clicked Cancel button or anywhere on the screen to dismiss the Delete Date Module | Delete Date Module dismissed and actual date maintained on the list | Delete Date Module dismissed and actual date maintained on the list | Pass | NULL | NULL | NULL |

Table 5.18 – Test Case 18-Add Detail for Program Tentative

| | | | | | | |
|--|--|--|--------------------|---------------------------|--------------------------|-----------------|
| Test Case | To test the Superadmin add details in the List of Date of Program Tentative | | | | | |
| Pre-Condition | The Superadmin must login into the system | | | | | |
| Input | Expected Result | Actual Result | Pass / Fail | Severity of Defect | Summary of Defect | Comments |
| In the List of Date for Program Tentative, click Add Details for Program Tentative button in the specific Date | Redirecting to new page to add the details of Program Tentative in the dynamic form. Once Next button clicked, record saved and new List for Program Tentative shown | Redirecting to new page to add the details of Program Tentative in the dynamic form. Once Next button clicked, record saved and new List for Program Tentative shown | Pass | NULL | NULL | NULL |

Table 5.19 – Test Case 19-View Committee Members

| | | | | | | |
|---|--|--|--------------------|---------------------------|--------------------------|-----------------|
| Test Case | To test the Superadmin view the committee members of the activity/event of the Activity Proposal | | | | | |
| Pre-Condition | The Superadmin must login into the system | | | | | |
| Input | Expected Result | Actual Result | Pass / Fail | Severity of Defect | Summary of Defect | Comments |
| Click Committee Members in the drop-list of Activity Proposal | Superadmin in the Manage Committee Member Page and the list of Jawatankuasa Pelaksana Program displayed on the screen with edit, and delete button for each record | Superadmin in the Manage Committee Member Page and the list of Jawatankuasa Pelaksana Program displayed on the screen with edit, and delete button for each record | Pass | NULL | NULL | NULL |

Table 5.20 – Test Case 20-Edit Details of Committee Members

| | | | | | | |
|---|---|--|--------------------|---------------------------|--------------------------|-----------------|
| Test Case | To test the Superadmin edit details committee members of the activity/event of the Activity Proposal | | | | | |
| Pre-Condition | The Superadmin must login into the system | | | | | |
| Input | Expected Result | Actual Result | Pass / Fail | Severity of Defect | Summary of Defect | Comments |
| Clicked edit details "Jawatankuasa Pelaksana" button in the specific list of the table "Jawatankuasa Pelaksana" | Edit Module for Edit Jawatankuasa Pelaksana displayed. Password input can consist of varchar, "Nama" can be drop by clicking the (-) button and can be added more by clicking (+) to add from drop down list or simply typed for new input. | Edit Module for Edit Jawatanuasa Pelaksana displayed. Password input can consist of varchar, "Nama" can be drop by clicking the (-) button and can be added more by clicking (+) to add from drop down list or simply typed for new input. | Pass | NULL | NULL | NULL |
| Clicked Save button in the Edit Jawatankuasa Pelaksana | The record displayed the latest update. Message box displayed to notify that the list successfully edited. | The record displayed the latest update. Message box displayed to notify that the list successfully edited. | Pass | NULL | NULL | NULL |
| Clicked Cancel button in the Edit Jawatankuasa Pelaksana | Dismissed the Edit Jawatankuasa Pelaksana Module to cancel the edit | Dismissed the Edit Jawatankuasa Pelaksana Module to cancel the edit | Pass | NULL | NULL | NULL |

Table 5.21 – Test Case 21-Delete Details of Committee Members

| | | | | | | |
|--|---|---|--------------------|---------------------------|--------------------------|-----------------|
| Test Case | To test the Superadmin delete committee members of the activity/event | | | | | |
| Pre-Condition | The Superadmin must login into the system | | | | | |
| Input | Expected Result | Actual Result | Pass / Fail | Severity of Defect | Summary of Defect | Comments |
| Clicked Delete Committee Members button in the specific list of the table Jawatankuasa Pelaksana | The Delete Module (conformation box) displayed and shows the details of the records to be delete. | The Delete Module (conformation box) displayed and shows the details of the records to be delete. | Pass | NULL | NULL | NULL |
| Clicked Cancel button in the Delete Module | Dismissed the Delete Module to cancel the delete | Dismissed the Delete Module to cancel the delete | Pass | NULL | NULL | NULL |

Table 5.22 – Test Case 22-Add Committee Members

| | | | | | | |
|---|---|---|--------------------|---------------------------|--------------------------|-----------------|
| Test Case | To test the Superadmin add committee members of the activity/event | | | | | |
| Pre-Condition | The Superadmin must login into the system | | | | | |
| Input | Expected Result | Actual Result | Pass / Fail | Severity of Defect | Summary of Defect | Comments |
| Clicked Add Committee Members button in Manage Committee Members Page | “Tambah Jawatankuasa Pelaksana” Module displayed. “Jawatan” and Password fields accept the input for numbers and character. Status consist of drop- down menu and “Nama” can be choose by clicking the field or simply type new names for those who are not in the list. The (+)/ (-) buttons are to add/drop the names | “Tambah Jawatankuasa Pelaksana” Module displayed. “Jawatan” and Password fields accept the input for numbers and character. Status consist of drop- down menu and “Nama” can be choose by clicking the field or simply type new names for those who are not in the list. The (+)/ (-) buttons are to add/drop the names | Pass | NULL | NULL | NULL |
| Clicked Save button in the Tambah Jawatankuasa Pelaksana module | Message box displayed shows the recorded has been added. New list displayed in the table Jawatankuasa Pelaksana. | Message box displayed shows the recorded has been added. New list displayed in the table Jawatankuasa Pelaksana. | Pass | NULL | NULL | NULL |
| Clicked Cancel button in the Jawatankuasa Pelaksana Module | Module dismissed | Module dismissed | Pass | NULL | NULL | NULL |

Table 5.23 – Test Case 23-View Job Scope

| | | | | | | |
|---|---|--|--------------------|---------------------------|--------------------------|-----------------|
| Test Case | To test the Superadmin view Job Scope in the Manage Job Scope Page | | | | | |
| Pre-Condition | The Superadmin must login into the system | | | | | |
| Input | Expected Result | Actual Result | Pass / Fail | Severity of Defect | Summary of Defect | Comments |
| Clicked Job Scope in the drop-list of Activity Proposal | Superadmin in the Manage Job Scope Page and the list of Struktur Organisasi Pelaksana Program displayed on the screen with add, and view button for each record | <p>“Tambah Jawatankuasa Pelaksana” Module displayed.</p> <p>“Jawatan” and Password fields accept the input for numbers and character.</p> <p>Status consist of drop- down menu and “Nama” can be choose by clicking the field or simply type new names for those who are not in the list.</p> <p>The (+)/(-) buttons are to add/drop the names</p> | Pass | NULL | NULL | NULL |

Table 5.24 – Test Case 24-View Job Scope Details

| | | | | | | |
|---|---|---|--------------------|---------------------------|--------------------------|-----------------|
| Test Case | To test the Superadmin view Job Scope Details in the list of “Struktur Organisasi Pelaksana” | | | | | |
| Pre-Condition | The Superadmin must login into the system | | | | | |
| Input | Expected Result | Actual Result | Pass / Fail | Severity of Defect | Summary of Defect | Comments |
| Clicked View Job Scope details button in the specific list of the “Struktur Organisasi Pelaksana” | The list of Job Scope for the Jawatankuasa Pelaksana displayed in the form of table with edit and view button for each record | The list of Job Scope for the Jawatankuasa Pelaksana displayed in the form of table with edit and view button for each record | Pass | NULL | NULL | NULL |

Table 5.25 – Test Case 25-Edit Job Scope Details

| | | | | | | |
|--|---|---|--------------------|---------------------------|--------------------------|-----------------|
| Test Case | To test the Superadmin edit Job Scope Details in the list of “Struktur Organisasi Pelaksana” | | | | | |
| Pre-Condition | The Superadmin must login into the system | | | | | |
| Input | Expected Result | Actual Result | Pass / Fail | Severity of Defect | Summary of Defect | Comments |
| Clicked Edit details button in the specific list of the Job Scope in the table | Edit Job Scope for Jawatankuasa Pelaksana Module displayed. Job Scope text area allowed text or varchar input | Edit Job Scope for Jawatankuasa Pelaksana Module displayed. Job Scope text area allowed text or varchar input | Pass | NULL | NULL | NULL |
| Clicked Save button in the Edit Job Scope for Jawatankuasa Pelaksana Module | The record displayed the latest update. Message box displayed to notify that the list successfully edited. | The record displayed the latest update. Message box displayed to notify that the list successfully edited. | Pass | NULL | NULL | NULL |
| Clicked Cancel button in the Edit Job Scope for Jawatankuasa Pelaksana Module | Dismissed the Edit Job Scope for Jawatankuasa Pelaksana Module to cancel the edit | Dismissed the Edit Job Scope for Jawatankuasa Pelaksana Module to cancel the edit | Pass | NULL | NULL | NULL |

Table 5.26 – Test Case 26-Delete Job Scope Details

| | | | | | | |
|--|---|---|--------------------|---------------------------|--------------------------|-----------------|
| Test Case | To test the Superadmin delete Job Scope Details in the list of “Struktur Organisasi Pelaksana” | | | | | |
| Pre-Condition | The Superadmin must login into the system | | | | | |
| Input | Expected Result | Actual Result | Pass / Fail | Severity of Defect | Summary of Defect | Comments |
| Clicked Delete details button in the specific list of the Job Scope in the table | Delete Job Scope for Jawatankuasa Pelaksana Module (delete conformation box) displayed | Delete Job Scope for Jawatankuasa Pelaksana Module (delete conformation box) displayed | Pass | NULL | NULL | NULL |
| Clicked Delete button in the delete conformation box Job Scope for Jawatankuasa Pelaksana Module | The record displayed the latest update. Massage box displayed to notify that the list successfully deleted. | The record displayed the latest update. Massage box displayed to notify that the list successfully deleted. | Pass | NULL | NULL | NULL |
| Clicked Cancel button in the Delete Job Scope for Jawatankuasa Pelaksana Module | Dismissed the Delete Job Scope for Jawatankuasa Pelaksana Module to cancel the edit | Dismissed the Delete Job Scope for Jawatankuasa Pelaksana Module to cancel the edit | Pass | NULL | NULL | NULL |

Table 5.27 – Test Case 27-View Equipment and Needs

| | | | | | | |
|---|---|---|--------------------|---------------------------|--------------------------|-----------------|
| Test Case | To test the Superadmin view list of equipment and needs | | | | | |
| Pre-Condition | The Superadmin must login into the system | | | | | |
| Input | Expected Result | Actual Result | Pass / Fail | Severity of Defect | Summary of Defect | Comments |
| Clicked Equipment in the drop-list of Activity Proposal | Superadmin in the Manage Equipment and Needs Page and the list of Equipment and Needs based on section displayed on the screen with manageable add details, edit Bahagian/Unit, view details and delete Bahagian/Unit actions buttons for each record | Superadmin in the Manage Equipment and Needs Page and the list of Equipment and Needs based on section displayed on the screen with manageable add details, edit Bahagian/Unit, view details and delete Bahagian/Unit actions buttons for each record | Pass | NULL | NULL | NULL |

Table 5.28 – Test Case 28-Edit Equipment and Needs

| | | | | | | |
|---|---|---|--------------------|---------------------------|--------------------------|-----------------|
| Test Case | To test the Superadmin edit “bahagian/unit” in manage equipment and needs page | | | | | |
| Pre-Condition | The Superadmin must login into the system | | | | | |
| Input | Expected Result | Actual Result | Pass / Fail | Severity of Defect | Summary of Defect | Comments |
| Clicked the Edit Bahagian/Unit button for the specific List in the table to change the title of Bahagian/Unit | Edit Module “Senarai Keperluan/ Peralatan” displayed, a text area for “Bahagian” allowed character or varchar input data. Once Save button clicked. Message box appeared to show that the List has been updated | Edit Module “Senarai Keperluan/ Peralatan” displayed, a text area for “Bahagian” allowed character or varchar input data. Once Save button clicked. Message box appeared to show that the List has been updated | Pass | NULL | NULL | NULL |
| Clicked Cancel button or anywhere on the screen to dismissed the Edit Module | Edit Module dismissed and actual Title of “Bahagian” maintained on the list | Edit Module dismissed and actual Title of “Bahagian” maintained on the list | Pass | NULL | NULL | NULL |

Table 5.29 – Test Case 29-Delete Equipment and Needs

| | | | | | | |
|--|---|---|--------------------|---------------------------|--------------------------|-----------------|
| Test Case | To test the Superadmin delete list of equipment and needs | | | | | |
| Pre-Condition | The Superadmin login into the system | | | | | |
| Input | Expected Result | Actual Result | Pass / Fail | Severity of Defect | Summary of Defect | Comments |
| Clicked “Bahagian/Unit” button for the specific List in the table to remove the list from the record | Delete Module (conformation box). Once Delete button clicked. Message box appeared to show that the list has been deleted | Delete Module (conformation box). Once Delete button clicked. Message box appeared to show that the list has been deleted | Pass | NULL | NULL | NULL |
| Clicked Cancel button or anywhere on the screen to dismissed the Delete Module | Delete Module dismissed and actual record maintained on the list | Delete Module dismissed and actual record maintained on the list | Pass | NULL | NULL | NULL |

Table 5.30 – Test Case 30-Add List Equipment and Needs

| | | | | | | |
|---|---|---|--------------------|---------------------------|--------------------------|-----------------|
| Test Case | To test the Superadmin add list of equipment and needs | | | | | |
| Pre-Condition | The Superadmin login into the system | | | | | |
| Input | Expected Result | Actual Result | Pass / Fail | Severity of Defect | Summary of Defect | Comments |
| In the list of “Bahagian/Unit”, Clicked Add Details button on the specific List | User will be redirecting to the new page to add the details of Equipment and Needs in the dynamic form. Once Next button clicked. Record were saved and the details of the Bahagian/Unit shown in the form of table that consist of “Keperluan, Kuantiti, Unit, Catatan and Action Buttons” | User will be redirecting to the new page to add the details of Equipment and Needs in the dynamic form. Once Next button clicked. Record were saved and the details of the Bahagian/Unit shown in the form of table that consist of “Keperluan, Kuantiti, Unit, Catatan and Action Buttons” | Pass | NULL | NULL | NULL |

Table 5.31 – Test Case 31-View Budget Income

| | | | | | | |
|---|---|---|--------------------|---------------------------|--------------------------|-----------------|
| Test Case | To test the Superadmin view Budget Income in Manage Budget Page | | | | | |
| Pre-Condition | The Superadmin must login into the system | | | | | |
| Input | Expected Result | Actual Result | Pass / Fail | Severity of Defect | Summary of Defect | Comments |
| Clicked Budget in the drop-list of Activity Proposal | Superadmin in the Manage Budget Page and the list of “Anggaran Pendapatan and “Anggaran Perbelanjaan” displayed with add and view details button. | Superadmin in the Manage Budget Page and the list of “Anggaran Pendapatan and “Anggaran Perbelanjaan” displayed with add and view details button. | Pass | NULL | NULL | NULL |
| Clicked View Details button in “Anggaran Pendapatan” list | The records for “Anggaran Pendapatan” displayed with action buttons provided to edit and delete the specific records | The records for “Anggaran Pendapatan” displayed with action buttons provided to edit and delete the specific records | Pass | NULL | NULL | NULL |

Table 5.32 – Test Case 32-Edit Budget Income

| | | | | | | |
|---|--|--|--------------------|---------------------------|--------------------------|-----------------|
| Test Case | To test the Superadmin edit details of Budget Income | | | | | |
| Pre-Condition | The Superadmin must login into the system | | | | | |
| Input | Expected Result | Actual Result | Pass / Fail | Severity of Defect | Summary of Defect | Comments |
| Clicked the Edit Details button in the specific List in the table “Anggaran Pendapatan” | Edit Module displayed. Text area for “Perkara” allowed character or varchar input data. “Harga Seunit” and “Kuantiti” text area allow integers input. Once Save button clicked. Message box appeared to show that the List has been updated | Edit Module displayed. Text area for “Perkara” allowed character or varchar input data. “Harga Seunit” and “Kuantiti” text area allow integers input. Once Save button clicked. Message box appeared to show that the List has been updated | Pass | NULL | NULL | NULL |
| Clicked Cancel button or anywhere on the screen to dismissed the Edit Module | Edit Module dismissed and actual records maintained on the list | Edit Module dismissed and actual records maintained on the list | Pass | NULL | NULL | NULL |

Table 5.33 – Test Case 33-Delete Budget Income

| | | | | | | |
|---|---|---|--------------------|---------------------------|--------------------------|-----------------|
| Test Case | To test the Superadmin delete Budget Income | | | | | |
| Pre-Condition | The Superadmin must login into the system | | | | | |
| Input | Expected Result | Actual Result | Pass / Fail | Severity of Defect | Summary of Defect | Comments |
| Clicked the Delete Details button in the specific List in the table "Anggaran Pendapatan" | Delete Module (conformation box) displayed. Once Delete button clicked. Message box appeared to show that the list has been deleted | Delete Module (conformation box) displayed. Once Delete button clicked. Message box appeared to show that the list has been deleted | Pass | NULL | NULL | NULL |
| Clicked Cancel button or anywhere on the screen to dismissed the Delete Module | Delete Module dismissed and actual record maintained on the list | Delete Module dismissed and actual record maintained on the list | Pass | NULL | NULL | NULL |

Table 5.34 – Test Case 34-Add Budget Income

| | | | | | | |
|--|--|--|--------------------|---------------------------|--------------------------|-----------------|
| Test Case | To test the Superadmin add Budget Income details | | | | | |
| Pre-Condition | The Superadmin login into the system | | | | | |
| Input | Expected Result | Actual Result | Pass / Fail | Severity of Defect | Summary of Defect | Comments |
| Clicked the Add Details button in the specific List in the table “Anggaran Pendapatan” | Superadmin will be redirecting to the new page to add the details of “Anggaran Pendapatan” in the dynamic form. Once Next button clicked. Record were saved in the form of table that consist of “Perkara, Harga Seunit (RM), Kuantiti, Jumlah and Action Buttons” | Superadmin will be redirecting to the new page to add the details of “Anggaran Pendapatan” in the dynamic form. Once Next button clicked. Record were saved in the form of table that consist of “Perkara, Harga Seunit (RM), Kuantiti, Jumlah and Action Buttons” | Pass | NULL | NULL | NULL |

Table 5.35 – Test Case 35-View Budget Expenditure

| | | | | | | |
|---|---|---|--------------------|---------------------------|--------------------------|-----------------|
| Test Case | To test the Superadmin view Budget Expenditure | | | | | |
| Pre-Condition | The Superadmin must login into the system | | | | | |
| Input | Expected Result | Actual Result | Pass / Fail | Severity of Defect | Summary of Defect | Comments |
| Clicked Budget in the drop-list of Activity Proposal | Superadmin in the Manage Budget Page and the list of “Anggaran Pendapatan and “Anggaran Perbelanjaan” displayed with add and view details button. | Superadmin in the Manage Budget Page and the list of “Anggaran Pendapatan and “Anggaran Perbelanjaan” displayed with add and view details button. | Pass | NULL | NULL | NULL |
| Clicked View Details button in “Anggaran Perbelanjaan” list | The records for “Anggaran Perbelanjaan” displayed with action buttons provided to edit and delete the specific records | The records for “Anggaran Perbelanjaan” displayed with action buttons provided to edit and delete the specific records | Pass | NULL | NULL | NULL |

Table 5.36 – Test Case 36-Edit Budget Expenditure

| | | | | | | |
|---|--|--|--------------------|---------------------------|--------------------------|-----------------|
| Test Case | To test the Superadmin edit Budget Expenditure in Manage Budge Page | | | | | |
| Pre-Condition | The Superadmin login into the system | | | | | |
| Input | Expected Result | Actual Result | Pass / Fail | Severity of Defect | Summary of Defect | Comments |
| Clicked the Edit Details button in the specific List in the table “Anggaran Perbelanjaan” | Edit Module displayed. Text area for “Perkara” allowed character or varchar input data. “Harga Seunit” and “Kuantiti” text area allow integers input. Once Save button clicked. Message box appeared to show that the List has been updated | Edit Module displayed. Text area for “Perkara” allowed character or varchar input data. “Harga Seunit” and “Kuantiti” text area allow integers input. Once Save button clicked. Message box appeared to show that the List has been updated | Pass | NULL | NULL | NULL |
| Clicked Cancel button or anywhere on the screen to dismissed the Edit Module | Edit Module dismissed and actual records maintained on the list | Edit Module dismissed and actual records maintained on the list | Pass | NULL | NULL | NULL |

Table 5.37 – Test Case 37-Delete Budget Expenditure

| | | | | | | |
|--|---|---|--------------------|---------------------------|--------------------------|-----------------|
| Test Case | To test the Superadmin delete Budget Expenditure | | | | | |
| Pre-Condition | The Superadmin login into the system | | | | | |
| Input | Expected Result | Actual Result | Pass / Fail | Severity of Defect | Summary of Defect | Comments |
| Clicked the Delete Details button in the specific List in the table “Anggaran Perbelanjaan | Delete Module (conformation box) displayed. Once Delete button clicked. Message box appeared to show that the list has been deleted | Delete Module (conformation box) displayed. Once Delete button clicked. Message box appeared to show that the list has been deleted | Pass | NULL | NULL | NULL |
| Clicked Cancel button or anywhere on the screen to dismissed the Delete Module | Delete Module dismissed and actual record maintained on the list | Delete Modul dismissed and actual record maintained on the list | Pass | NULL | NULL | NULL |

Table 5.38 – Test Case 38-Add Budget Expenditure

| Test Case | To test the Superadmin add Budget Expenditure details | | | | | |
|--|--|--|-------------|--------------------|-------------------|----------|
| Pre-Condition | The Superadmin login into the system | | | | | |
| Input | Expected Result | Actual Result | Pass / Fail | Severity of Defect | Summary of Defect | Comments |
| Clicked the Add Details button in the specific List in the table “Anggaran Perbelanjaan” | Superadmin will be redirecting to the new page to add the details of “Anggaran Perbelanjaan” in the dynamic form. Once Next button clicked. Record were saved in the form of table that consist of “Perkara, Harga Seunit (RM), Kuantiti, Jumlah and Action Buttons” | Superadmin will be redirecting to the new page to add the details of “Anggaran Perbelanjaan” in the dynamic form. Once Next button clicked. Record were saved in the form of table that consist of “Perkara, Harga Seunit (RM), Kuantiti, Jumlah and Action Buttons” | Pass | NULL | NULL | NULL |
| Clicked the Add Details button in the specific List in the table “Anggaran Perbelanjaan” | Superadmin will be redirecting to the new page to add the details of “Anggaran Perbelanjaan” in the dynamic form. Once Next button clicked. Record were saved in the form of table that consist of “Perkara, Harga Seunit (RM), Kuantiti, Jumlah and Action Buttons” | Superadmin will be redirecting to the new page to add the details of “Anggaran Perbelanjaan” in the dynamic form. Once Next button clicked. Record were saved in the form of table that consist of “Perkara, Harga Seunit (RM), Kuantiti, Jumlah and Action Buttons” | Pass | NULL | NULL | NULL |

Table 5.39 – Test Case 39-Print Activity Proposal

| | | | | | | |
|--|--|--|--------------------|---------------------------|--------------------------|-----------------|
| Test Case | To test the Superadmin Print Activity Proposal | | | | | |
| Pre-Condition | The Superadmin must login into the system | | | | | |
| Input | Expected Result | Actual Result | Pass / Fail | Severity of Defect | Summary of Defect | Comments |
| Click the List of Proposal in the drop-list of Activity Proposal | Superadmin in the Manage Activity Proposal Page and the list of Proposal displayed on the screen with add details, edit, print and delete button for each record | Superadmin in the Manage Activity Proposal Page and the list of Proposal displayed on the screen with add details, edit, print and delete button for each record | Pass | NULL | NULL | NULL |
| Click the Print Proposal Button in the List of Proposal | Superadmin will directed into the Print page for the Activity Proposal | Superadmin will directed into the Print page for the Activity Proposal | Pass | NULL | NULL | NULL |

Table 5.40 – Test Case 40-Monitor Activity Job Scope and Activity Log

| | | | | | | |
|---|--|--|--------------------|---------------------------|--------------------------|-----------------|
| Test Case | To test the Superadmin monitor Activity Job Scope and Activity Log for each exco | | | | | |
| Pre-Condition | The Superadmin must login into the system | | | | | |
| Input | Expected Result | Actual Result | Pass / Fail | Severity of Defect | Summary of Defect | Comments |
| Click View Activity Job Scope in the Monitor Activity Job Scope | Superadmin in the Monitor Activity Job Scope Pages and the list of Job Scope for the excos displayed on the screen with status shown either has been completed or uncompleted based on the excos updates | Superadmin in the Monitor Activity Job Scope Pages and the list of Job Scope for the excos displayed on the screen with status shown either has been completed or uncompleted based on the excos updates | Pass | NULL | NULL | NULL |
| Click View Activity Log in the Monitor Activity Log | Superadmin in the Monitor Log Notes Pages of the exco. The list of log notes updated by the excos displayed on the screen | Superadmin in the Monitor Log Notes Pages of the exco. The list of log notes updated by the excos displayed on the screen | | | | |

Table 5.41 – Test Case 41-Activity Post-Mortem

| Test Case | To test the Superadmin view the Activity Post-Mortem | | | | | |
|---|--|--|-------------|--------------------|-------------------|----------|
| Pre-Condition | The Superadmin must login into the system | | | | | |
| Input | Expected Result | Actual Result | Pass / Fail | Severity of Defect | Summary of Defect | Comments |
| Clicked Activity Post-Mortem in the side-bar menu | Superadmin in the Manage Activity Post-Mortem Page and the list of Activity/Program displayed with view Activity Post-Mortem details button. | Superadmin in the Manage Activity Post-Mortem Page and the list of Activity/Program displayed with view Activity Post-Mortem details button. | Pass | NULL | NULL | NULL |
| Clicked View Activity Post-Mortem button | The objectives and achievements of the Activity/Program displayed | The objectives and achievements of the Activity/Program displayed | Pass | NULL | NULL | NULL |

Table 5.42 – Test Case 42-View PERTEKMA Committee Members

| Test Case | To test the Superadmin view PERTEKMA Committee Members | | | | | |
|---|--|--|-------------|--------------------|-------------------|----------|
| Pre-Condition | The Superadmin must login into the system | | | | | |
| Input | Expected Result | Actual Result | Pass / Fail | Severity of Defect | Summary of Defect | Comments |
| Clicked PERTEKMA Committee and then clicked PERTERKMA Batch in the drop-down list | Superadmin in the Manage PERTEKMA Batch Page and the list of current PERTEKMA Batch displayed on the screen with add, edit, view details and delete button for each record | Superadmin in the Manage PERTEKMA Batch Page and the list of current PERTEKMA Batch displayed on the screen with add, edit, view details and delete button for each record | Pass | NULL | NULL | NULL |

Table 5.43 – Test Case 43-Edit Details of PERTEKMA Committee Members‘

| Test Case | To test the Superadmin edit details of PERTEKMA Batch | | | | | |
|--|--|--|-------------|--------------------|-------------------|----------|
| Pre-Condition | The Superadmin must login into the system | | | | | |
| Input | Expected Result | Actual Result | Pass / Fail | Severity of Defect | Summary of Defect | Comments |
| Clicked button View details of PERTEKMA Batch in the current PERTEKMA Batch list | Superadmin will redirected to name list of PERTEKMA Committee Members. The screen displayed the details of name, position, matric number, contact number and action buttons to delete and edit the specific record in the list | Superadmin will redirected to name list of PERTEKMA Committee Members. The screen displayed the details of name, position, matric number, contact number and action buttons to delete and edit the specific record in the list | Pass | NULL | NULL | NULL |
| Clicked edit button in the specific record from the list | Edit Module displayed to edit the details. Form field for “Name, Jawatan, No Matric and No.Tel” allowed any input for characters and integers | Edit Module displayed to edit the details. Form field for “Name, Jawatan, No Matric and No.Tel” allowed any input for characters and integers | Pass | NULL | NULL | NULL |
| Clicked Save button in the Edit Module | The record displayed the latest update. Message box displayed to notify that the list successfully edited. | The record displayed the latest update. Message box displayed to notify that the list successfully edited. | Pass | NULL | NULL | NULL |
| Clicked Cancel button in the Edit Module | Dismissed the Edit Module to cancel the edit | Dismissed the Edit Module to cancel the edit | Pass | NULL | NULL | NULL |

Table 5.44 – Test Case 44-Delete Details of PERTEKMA Committee Members

| | | | | | | |
|---|--|--|--------------------|---------------------------|--------------------------|-----------------|
| Test Case | To test the Superadmin delete PERTEKMA committee members | | | | | |
| Pre-Condition | The Superadmin must login into the system | | | | | |
| Input | Expected Result | Actual Result | Pass / Fail | Severity of Defect | Summary of Defect | Comments |
| Clicked Delete Details button from the list in the table Jawatankuasa Pelaksana | The Delete Module (conformation box) displayed and shows the details of the records to be delete. Once deleted button clicked. The records will be deleted. The message box shown that the record has been deleted and no longer available on the list | The Delete Module (conformation box) displayed and shows the details of the records to be delete. Once deleted button clicked. The records will be deleted. The message box shown that the record has been deleted and no longer available on the list | Pass | NULL | NULL | NULL |
| Clicked Cancel button in the Delete Module | Dismissed the Delete Module to cancel the delete | Dismissed the Delete Module to cancel the delete | Pass | NULL | NULL | NULL |

Table 5.45 – Test Case 45-Add PERTEKMA Committee Members

| | | | | | | |
|--|--|--|--------------------|---------------------------|--------------------------|-----------------|
| Test Case | To test the Superadmin add PERTEKMA committee members | | | | | |
| Pre-Condition | The Superadmin must login into the system | | | | | |
| Input | Expected Result | Actual Result | Pass / Fail | Severity of Defect | Summary of Defect | Comments |
| Clicked Add Details button in the current list of PERTEKMA Batch | Superadmin will redirected to a new page where the dynamic form used to record the details. “Nama, Jawatan, Matric No., No. Telefon” input fields are accepting any characters and integers as input. (+) button clicked to add more details and (-) button to drop the details. Once Next button clicked. The details successfully recorded into the list | Superadmin will redirected to a new page where the dynamic form used to record the details. “Nama, Jawatan, Matric No., No. Telefon” input fields are accepting any characters and integers as input. (+) button clicked to add more details and (-) button to drop the details. Once Next button clicked. The details successfully recorded into the list | Pass | NULL | NULL | NULL |

5.4 Non-Functional Testing

5.4.1 Usability and Reliability Testing

a) Usability Testing

Usability Testing is to describe the level of ease with which a system allow a user to get the goals and to test the understanding of the users about the prototype. The goal of this testing is to satisfy users and it mainly concentrates on the following parameters of the prototype:

- The prototype is easy to learn by PERTEKMA Committee Members where the prototype meet the objective and clearly understand each navigational structure and sectional pages of the prototype.
- No training required since the user has familiarity with all the button and image used.

b) Reliability

The prototype expected to work with failure-free operation under the constraint of time period and environment.

- The environment of the prototype are already specifically defined in Chapter 3.
- Regressive testing has been performed on previous section show the capability of the prototype to deal with invalid input. It safely said that the prototype deal well based on the test case.

c) Maintainability

The capability of the prototype to be maintained for future work.

- The prototype is built in web-based development (PHP, jQuery) which has wide resources.
- The lightweight of the prototype which did not required a lot of resources to perform

task. This allow user to use difference type of web-browser to access the prototype.

5.5 User Testing

User Testing refers to a technique used to evaluate PERTEKMA Activity Monitoring in terms of user experience and their understanding throughout the system. This testing explains about the capabilities of the system to be understood and users learnt when it is used under certain conditions. In conducting this testing, 11 respondents from PERTEKMA Committee Members and FCSIT students were chosen to experiencing the system in real time and they are required to answer the questionnaire attached in Appendix B. The questionnaire consists of 5 scales of rating which indicates as 5-Excellent, 3-Average and 1-Poor. The High Council of PERTEKMA are given permission to access as Admin and the excos or random FCSIT students are given accessed role as User. The analysis of the response from the respondents are summarized as below:

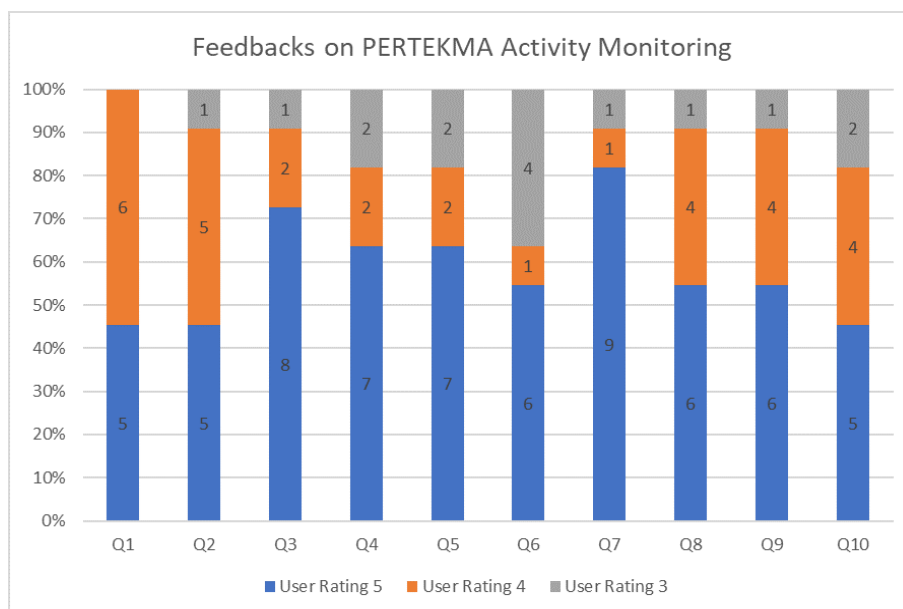


Figure 5.1 – Feedbacks on PERTEKMA Activity Monitoring

The Bar Graph in Figure 5.1 above shows the feedback received on PERTEKMA

Activity Monitoring. In Q1, six respondents out of 11 rated 5 out of 5 and considered satisfied with the easiness when used the system while the rest only given rating 4. In Q2, the questionnaire asked respondents about the completion of task when using the system. One respondent given rating 1, five respondents given rating 4 and the rest given rating as 5. Based on this analysis, it shown that, the completion of task while using this system given by the respondents were excellent in overall. In Q3, 70% of respondents were agreed that the system was simple to used. Q4 asked for the respondents on how productive they are while using the system and 60% of the respondents were felt productive with the used of the system in managing their records. In Q5, more than half of the respondents found out and fully satisfied that the various function in the system were well integrated. Other than that, in Q6, six of the respondents were agreed that the interface of the system was pleasant to see while the others were rated for 4. In Q7, 85% of the respondents satisfied that PERTEKMA Committee Members would learn to use this system easily. Besides that, Q8 and Q9 have the same answered from the respondents where 55% were agreed that the system reduced the time consume and confident while using the system. Last but not least, 45% of the respondents agreed that the system has all functions and capabilities that they are expecting to have in the system. In overall, all the respondents were fully satisfied with the functions and features in PERTEKMA Activity Monitoring.

5.6 Summary

In conclusion, functionality testing and non-functionality testing have been successfully carried out in this chapter.

CHAPTER 6

CONCLUSION AND FUTURE WORKS

6.1 Introduction

This chapter presents the summary of the study and the presentation of the objective achievements of the project. This chapter also discussed in detail the project constraint that defines a project's limitation that limit of what the project is expected to accomplish. Therefore, the most significant for the project constraint are the future works. The future works signifies the opportunity to overcome the project limitations.

6.2 Objective Achievement

| Objective | Achievement |
|--|---|
| 1. To propose a workflow of the activity execution of PERTEKMA's exco in managing their activities | A flowchart was designed and system implementation are based on the flowchart |
| 2. To design and develop a monitoring system for managing PERTEKMA's records | Deliver a prototype to monitor PERTEKMA activity execution. The prototype provides efficiency in managing the activity proposal, proper documentations and reduce time consumed |
| 3. To display the statistical data of PERTEKMA's activity proposal yearly | The system provides statistical data presentation such as line graph for activities overview manage by PERTEKMA Batch and activity completion progress |

6.3 Project Limitation

There are limitations of the current system that are stated below:-

- The development of the prototype is using a localhost server and does not required an

Internet connection. The limitation of using this, it is hosted locally in the developer's computer, cannot being hosted elsewhere and inaccessible by the stakeholders

- b) The prototype limited to three level of user's login which only consist of Superadmin (advisors), Admin (High Council of PERTEKMA), User (main excos). The approval of the activity proposal is based on faculty's Deputy Dean and supported by Dean. However, another approval by Student Affair and Deputy of UNIMAS's Chancellor also needed
- c) The system does not have a feature to record the list of memos for each of the activity proposal
- d) The system does not have a feature for media upload such as picture, documents etc. in the activity monitoring

6.4 Future Works

Some suggestion listed as below for the improvement of the proposed project for better performance and its functionality. The suggestions are:

- a) Hosting the system (Internet access require) to make it accessible by the PERTEKMA Committee anytime and anywhere. This is to ensure the efficiency and accessibility of the system.
- b) Email notification to notify the Dean, Deputy Dean, Director of Student Affair and Deputy of UNIMAS's Chancellor about the pending proposal
- c) Add login pages for the Director of Student Affair and Deputy of UNIMAS's Chancellor to monitor and approve the activity proposal. Digital sign needed in term of approval
- d) The system must have a menu to record the memo of every activity proposal. The purpose of having this to make sure there is no repetition of having the same person or agency in applying the sponsorship of the event

- e) The system should be able to upload any media contents for better performance such as uploading the images of the activity that has been done or even upload any other related text documents
- f) Provide the activity dependency for each of the activity execution
- g) Graphical Use Interface (GUI) or activity sorted based on date or person responsible

6.5 Conclusion

In summary, the project was properly done and developed based on the proposed design system and achieved the objectives. PERTEKMA Activity Monitoring provides efficiency and better use of the system, proper documentation for every activity proposal, clearly identify of the excos job scope and proper way to monitor the activity. Last but not least, the most important thing to highlight is PERTEKMA Activity Monitoring is the transition from the conventional file system to the automation system.

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APPENDIX A

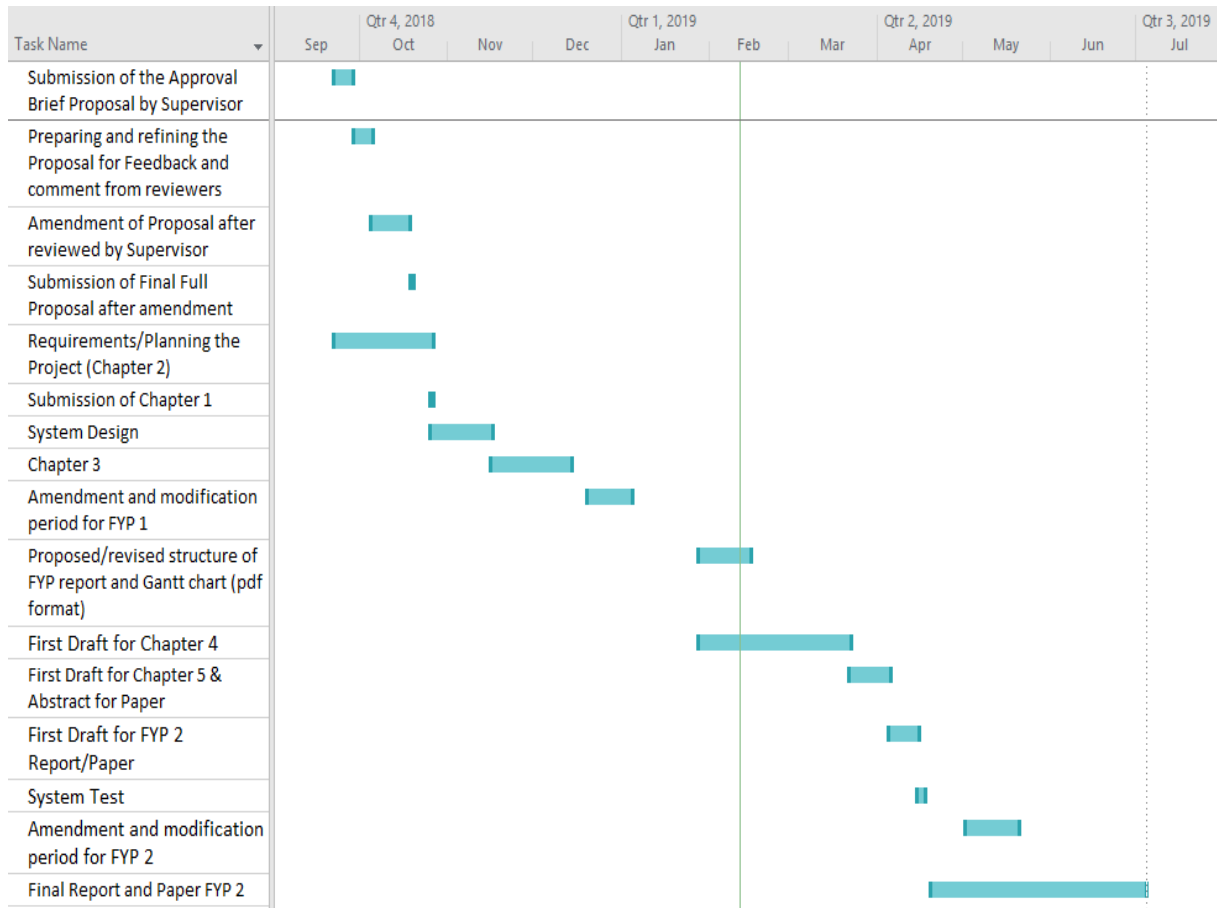


Figure A.1 – Project Gantt C

APPENDIX B

| No | Task | Rating | | | | |
|-----|---|------------------|-------------|----------------|-------------|------------------|
| | | Very Poor (5) | Poor (4) | Average (3) | Good (2) | Excellent (1) |
| 1. | Overall, I am satisfied with how easy to use the system | | | | | |
| 2. | I found the system is unnecessarily complex | | | | | |
| 3. | It was simple to use the system | | | | | |
| 4. | I believe I could become productive quickly using this system | | | | | |
| 5. | I found the various functions in the system were well integrated | | | | | |
| 6. | The interface of this system was pleasant | | | | | |
| 7. | I would imagine that PERTEKMA Committee would learn to use this system very quickly | | | | | |
| 8. | I found the system reduce my time consumed | | | | | |
| 9. | I felt very confident using the system | | | | | |
| 10. | This system has all the functions and capabilities I expect it to have | | | | | |