

**Premier University, Department of CSE**  
**Fall 2023, 4<sup>th</sup> Semester, Assignment, December 18, 2023**  
**Course Title:** Database Management System, **Course Code:** CSE 237  
**Course Outcome:** CO3, **Total Marks:** 10

In this assignment, you will explore into the realm of Database Design by addressing the needs of a School Result Management System. This real-time scenario involves various stakeholders and their requirements. You will navigate through the objectives, investigation, evaluation, design, and deliverables to propose an effective database solution.

**Objectives:**

- Analyze the requirements of different stakeholders and convert them into a comprehensive database design.
- Develop the ability to translate a real-world scenario into a practical and normalized database schema.

**Investigation:**

Imagine a school with different classes, students, instructors, and administrative staff. The school seeks to streamline its result management processes, including course registration, advising, course assignment to the teachers, grading, and student information management. Students want easy access to course details and their academic progress. Instructors require tools to manage classes and assessments. Administrative staff need to monitor course registration and generate reports.

**Evaluation:**

- Discuss the reasons behind utilizing a relational database for this scenario.
- How can a relational database efficiently manage complex relationships among students, courses, teachers, and administrative information?
- What are the benefits of using a structured database over file management systems or spreadsheets?

**Design:**

Propose a comprehensive database design for the School Result Management System.

**Deliverables:**

A printed assignment reporting the following tasks:

- (i) A perfect database design for the School Result Management System addressing the objectives.
- (ii) Briefly address the complex problem-solving questions:
  - a. Does the solution need in-depth engineering knowledge?
  - b. Does the solution involve wide-ranging or conflicting technical, engineering, and other issues?
  - c. Is the solution well-known, or does it require abstract thinking and analysis to formulate?
  - d. Does the solution involve infrequently encountered issues?
  - e. Does the solution need adherence to standards and codes of practice?
  - f. Does the solution involve stakeholders with conflicting technical requirements?
  - g. Does the solution involve interdependence between sub-problems or parts?

**Rubrics for Assignment marking:**

Task	Criteria	Good (4-5)	Moderate (2-3)	Poor (1)
i.	Problem solution	Properly or near appropriately reasoned solution	Appropriate solution for some cases	Inappropriate or no solution
ii.	Problem analysis	In-depth analysis	Shallow analysis	Incomplete analysis

