



HACKATHON

HACKATHON: MILESTONE-BASED E-COMMERCE APP WITH NEXT.JS

Event Date: 6th September 2024
Duration: 24 Hours (Starting Midnight after the event)
Submission Deadline: 7th September 2024, Midnight

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Hackathon: Beginner-Level Project - Build a Basic Inventory Management System

Event Date: 06-Sep-2024

Duration: 24 Hours

Submission Deadline: 08-Sep-2024

Overview:

This hackathon is designed for beginners to build a **Basic Inventory Management System** using just **HTML**, **CSS**, and **TypeScript**. You will learn how to structure web pages, style them, and add simple interactivity with TypeScript. Each milestone focuses on a core aspect of front-end development, helping you gradually build a functional web application.

Hackathon Structure:

- The hackathon is divided into 5 simple milestones.
 - Each milestone carries 50 points.
 - You can submit your progress for each completed milestone.
 - Aim to complete as many milestones as possible within the 24-hour time frame.
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Milestone 1: Basic HTML Structure for Inventory Page (50 Points)

Objective:

Create a basic HTML page to display a list of products in an inventory.

Requirements:

- Create an HTML page with the following sections:
 - Header (with a page title "Inventory Management System")
 - A table to list products, including columns for Product Name, Quantity, and Price.
 - Footer (with some basic text, such as "Created by [Your Name]")

Scoring Breakdown:

- **HTML Structure (30 points):**
Is the HTML page structured correctly with a header, table, and footer?
 - **Proper Use of Tags (20 points):**
Are correct HTML tags like `<table>`, `<th>`, `<td>`, etc., used appropriately?
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Milestone 2: Add CSS Styling for the Inventory Page (50 Points)

Objective:

Style your inventory page to make it visually appealing using CSS.

Requirements:

- Style the header with a background color and centered text.
- Style the product table with borders, padding, and alternating row colors.
- Style the footer with a different background color and small text.

Scoring Breakdown:

- **Basic CSS Styling (30 points):**
Is the page styled with proper use of colors, padding, and borders?
 - **Table Design (20 points):**
Does the table look clean with properly styled rows and columns?
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Milestone 3: Add Products Dynamically using TypeScript (50 Points)

Objective:

Use TypeScript to add products dynamically to the inventory table.

Requirements:

- Create an array of products (objects) in TypeScript with properties: product name, quantity, and price.
- Use TypeScript to loop through the array and display the products in the HTML table.

Scoring Breakdown:

- **TypeScript Integration (30 points):**
Are you able to display products from a TypeScript array into the HTML table?
 - **Array and Looping (20 points):**
Is the array properly structured and looped through using TypeScript?
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Milestone 4: Add Input Fields to Add New Products (50 Points)

Objective:

Allow users to add new products to the inventory table using input fields and TypeScript.

Requirements:

- Add three input fields (Product Name, Quantity, Price) and an "Add Product" button below the table.

- Use TypeScript to add the entered product data to the table when the button is clicked.

Scoring Breakdown:

- **Form and Input Fields (25 points):**
Are the input fields and "Add Product" button functional and styled?
 - **TypeScript Event Handling (25 points):**
Can the user add new products dynamically, and does the table update accordingly?
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Milestone 5: Implement Basic Validation for Product Input (50 Points)**Objective:**

Add basic validation to ensure users can't add invalid products to the inventory.

Requirements:

- Ensure that the product name is not empty, the quantity is a positive number, and the price is a valid number.
- Show an alert if any input is invalid.

Scoring Breakdown:

- **Validation Logic (30 points):**
Is there basic validation implemented to check for empty or invalid inputs?
 - **Error Handling and Alerts (20 points):**
Are error messages or alerts shown when inputs are incorrect?
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Hackathon Timeline:

Start Time: Midnight [Insert Date]

End Time: Midnight [Insert Date]

Submission Deadline: Midnight [Insert Date]

Submission Guidelines:

- **Milestone 1:** Submit your HTML file with the basic inventory structure.
- **Milestone 2:** Submit the styled version of your HTML file with CSS applied.
- **Milestone 3:** Submit your TypeScript file where the products are dynamically added to the table.
- **Milestone 4:** Submit the form input fields and the working TypeScript functionality to add products.

- **Milestone 5:** Submit the final version with validation and error handling implemented.
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Awards and Recognition:

Participants who complete all milestones will receive the title of "**Junior Developer**". Those who finish with high scores will receive special recognition for their creativity and hard work.

Evaluation Criteria:

- **Completeness:** Did you meet the objectives of each milestone?
 - **Code Quality:** Is your code clean, well-organized, and efficient?
 - **Functionality:** Does your inventory system work as expected with proper interactivity?
 - **Design and User Experience:** Is your page visually appealing and easy to use?
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Good luck, and we look forward to seeing your beginner-friendly Inventory Management Systems!