GROUP PROJECT BRIEFING (20%)

Title: "Student Task Management System"

Learning Outcomes:

- CLO3: Design and develop a GUI-based application that solves a real-world problem as a team.

Project Overview:

This project involves developing a **GUI-based task management system** using JavaFX, where students can add, update, delete, and track their tasks. The system will allow users to organize tasks by categories (e.g., Assignments, Exams, Personal Tasks) and set deadlines. It provides an interactive user interface with dynamic features such as **data persistence using text files, exception handling, and GUI interactivity**.

In a group of 5 students, you are to register your group by submitting the registration form by Week 3 (17th March 2025). All development must be done using Java as the tool and JavaFX for the GUI.

Project Requirements

Functional Requirements:

1. User Interface (GUI)

   - Home Screen: Displays system title and navigation buttons.
   - Task List Screen: Displays existing tasks in a ListView.
   - Task Management Panel: Users can add, edit, and remove tasks.
   - Search & Filter Features: Users can search tasks based on category or deadline.

2. Task Features

   - Add a new task (Task name, Category, Due Date, Priority)

- Edit existing tasks

- Mark tasks as "Completed"

- Remove tasks

- Save and Load tasks using text files (Data Persistence)

3. Exception Handling

- Handle invalid user inputs (e.g., empty task name, past due date).

- Prevent duplicate tasks.

4. JavaFX Components Used:

- RadioButton: Select task category

- CheckBox: Mark task as completed

- ComboBox: Set task priority

- DatePicker: Choose task due date

- ListView: Display tasks

- FileChooser: Save and Load tasks

Group Work Distribution:

Each student should be responsible for a different aspect of the project, ensuring collaboration and accountability.

For example:

- GUI Design Lead: Designs JavaFX UI, ensuring an intuitive and user-friendly interface.

- File I/O & Data Persistence: Implements saving and loading of tasks using text files.

- Task Logic & Exception Handling: Manages task addition, deletion, validation, and exception handling.

- Event Handling & Interactivity: Ensures user actions (button clicks, input handling) function correctly.

- Testing & Debugging: Performs testing and bug fixing, ensuring smooth performance.

Submission Requirements:

- Complete **JavaFX Project Files**.

- **Group Project Rubric:** Fill out the group information (to be done by the Team Leader)

- **Project Report**

  o Brief Explanation of member's role in the team and their part of the implementation

  o GUI Design

  o UML Class Diagram

  o Features implemented

  o Challenges faced

- **Peer Review Form**: Each member evaluates the contributions of their teammates (Submission is mandatory; non-submission will incur a penalty.).

Deadline: Week 14

- Project Demonstration and Submission: Tuesday, 10th June 2025.