School of Computer and Information Sciences

Software Engineering Lab

M.Tech (CS, AI) 2025-26 Jan-May 2026

Announcement Date: 13-1-2026

Submission Date: On or before 14-1-2026 (23:59 Hrs) on GitHub

Task-1 : **Problem Statement: Student Result Processing System**

Design and implement a **Student Result Processing System** in C that performs the following tasks:

1. Input & Validation

- Accept details for **N students**
- For each student, input: (Taken from a file)
    - Student ID (must be unique and alphanumeric).
    - Name (only alphabets, no digits or special characters).
    - Marks in 5 subjects (Minor-40 Marks, Major-60 Marks)

Perform validations:

- Reject invalid IDs (duplicate or containing special characters).
- Reject names with digits or symbols.
- Reject marks outside the range [0,100].

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2. Computation

- Calculate **Total Marks** and **Percentage** for each student.
- Minimum passing marks in each subject is 50%
- Assign **Grade** based on percentage:
    - ≥ 90 → 0
    - 85–90 → A+
    - 75–85 → A
    - 65–75 → B+
    - 60–65 → B
    - 55-60 → C
    - 50–55 → D
    - < 50 → F

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3. Output & Features

- Display a **tabular report** of all students with their ID, Name, Marks, Total, Grade, CGPA.
- Compute and display:
    - Class Average Percentage.
    - Highest and Lowest Percentage.
    - Number of students in each grade category.

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4. Additional Requirements

- Implement **modular programming** (use functions for input, validation, computation, and output).
- Use **structures** to represent student details and **Files** to store student details.
- Ensure proper **error handling** (e.g., re-prompt user if invalid data is entered).

Learning Outcomes (CO-6)

- Submit your program on the git
- Plagiarised (Code, AI, Gen AI) code will not be evaluated
- Share the git links for evaluation
