Assignment 1:

(CLO-1: Employ linear data structures to solve computing problems.**)**

Deadline: 24th September 2024

Submission Requirements:

Code Implementation:

Implement the code for the assignment in a single C++ file (linked_list_operations.cpp).

Ensure the code is well-documented with comments explaining the logic and functionality of each function.

Report:

Prepare a PDF report (linked_list_report.pdf) that includes:

Title Page: Assignment title, your name, enrollment number, and date.

Introduction: Briefly describe the objective of the assignment and the operations implemented.

Code Explanation: Explain the logic behind each function implemented in your code.

Screenshots: Include screenshots of the program output demonstrating the working of each operation.

Conclusion: Reflect on what you learned through this assignment and any challenges faced.

GitHub Submission:

Navigate to your existing course repository on GitHub.

Inside this repository, create a new folder named Assignment 1.

Add the following files to this folder:

linked_list_operations.cpp (Your C++ code file).

linked_list_report.pdf (Your report in PDF format).

Final Submission:

Once all files are uploaded, verify the contents of the Assignment 1 folder on GitHub.

Share the link to the Assignment 1 folder with the Class Representative (CR) for collection.

Task Management System

Task: Create a simple task management system using a singly linked list where each task is represented as a node in the list.

Instructions:

1. Each task should contain:
    - A unique task ID (integer).
    - A task description (string).
    - A priority level (integer).
2. Implement the following functionalities:
    - Add a new task to the list at the correct position based on priority (higher priority tasks come first).
    - Remove the task with the highest priority (i.e., delete from the start).
    - Remove a specific task using its task ID.
3. Create a console-based menu to:
    - Add a new task.
    - View all tasks.
    - Remove the highest priority task.
    - Remove a task by ID.