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Department of Computer Science,

CUI,Attock Campus.

**Program: BSE**

**Assignment # 1**

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### Introduction:

The provided C++ program is a simple task management system that demonstrates the use of linked lists to handle a series of tasks. It defines a structure (Node) to represent a task and a class (TaskManagementSystem) that manages a list of these tasks. Each task includes attributes such as task\_id, description, and priority. The program features a menu-driven interface for interacting with tasks, allowing users to add, view, and delete tasks.

### Purpose:

The primary purpose of this program is to demonstrate how linked lists can be used to manage a collection of tasks in an ordered manner. Each task is represented as a node in the linked list, and the program provides functionality to:

1. **Add new tasks** to the end of the list.
2. **Display all tasks** stored in the list.
3. **Delete the first task** in the list.
4. **Delete a specific task by its ID**.

These operations allow users to manage a dynamic list of tasks without needing to worry about memory management or reallocation, as the linked list can grow and shrink as needed.

### Conclusion:

The conclusion of the program is that users can efficiently manage tasks using a simple command-line interface. The system provides options for adding, viewing, and deleting tasks, making it an intuitive task management tool. The program exits gracefully when the user selects the exit option (5), ensuring that the user experience is complete and controlled. This basic program can be expanded with additional features (like sorting tasks based on priority) and can serve as a foundation for more complex task management systems.

