Abbottabad University of Science and Technology

Department of Computer Science

BSSE

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Class :	BSSE 4th Semester Section-B
Assignment :	01
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Assignment#1

Software Requirements Specification (SRS)

1. Introduction

Purpose

The purpose of this document is to outline the requirements for developing a console-based Task Management System. The system will allow users to create, view, edit, delete, and manage tasks via a text-based interface, with a focus on modular design, coding standards, and version control.

Scope

This application is a command-line program for managing personal or team tasks. The system will support basic task operations (create, read, update, delete), status updates, and filtering based on completion. It will be built using C++ and Git for version control, with documentation and unit testing included. Optional features may include GUI and persistent storage.

Intended Audience

- Software developers and instructors
- Project managers or students tracking tasks
- Reviewers evaluating software construction practices

Definitions

- **Task**: A record containing a description, status (complete/incomplete), and optional due date.
- **CRUD**: Create, Read, Update, Delete.

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2. Overall Description

Product Perspective

The system is a stand-alone console application, requiring no network access. It can optionally be extended to include GUI or database storage.

Product Functions

- Add a new task

- View all tasks
- Edit or delete tasks
- Mark tasks as complete or incomplete
- Filter tasks by status or due date

User Classes and Characteristics

- **End User**: A person interacting with the CLI to manage tasks.
- **Developer**: Will extend, test, and maintain the system.

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3. Specific Requirements

Functional Requirements

- The system shall allow the user to add a new task with a description.
- The system shall display a list of all tasks.
- The system shall allow the user to update task description or status.
- The system shall allow the user to delete a task.
- The system shall allow filtering of tasks by status or due date.

Non-Functional Requirements

- The system shall respond to user input within 1 second.
- The system shall be usable from any standard terminal or console.
- The code shall follow SOLID and clean code principles.
- The system shall be documented with a README, developer guide, and user manual.

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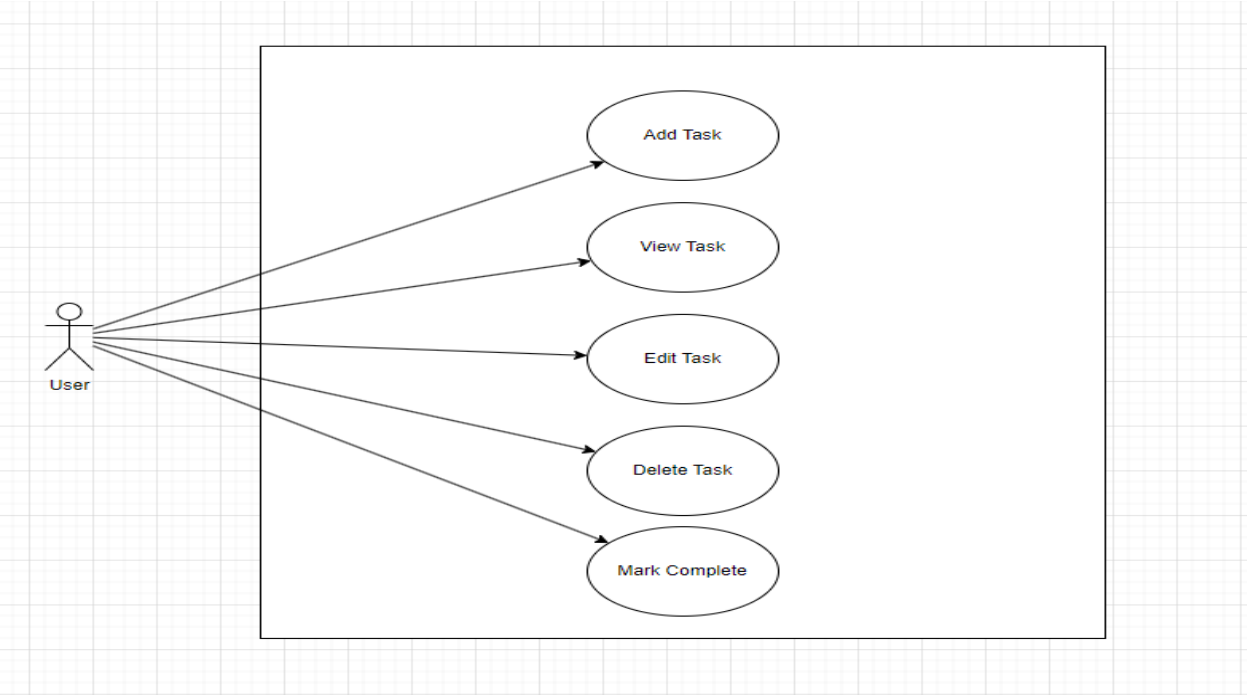
4. Assumptions and Dependencies

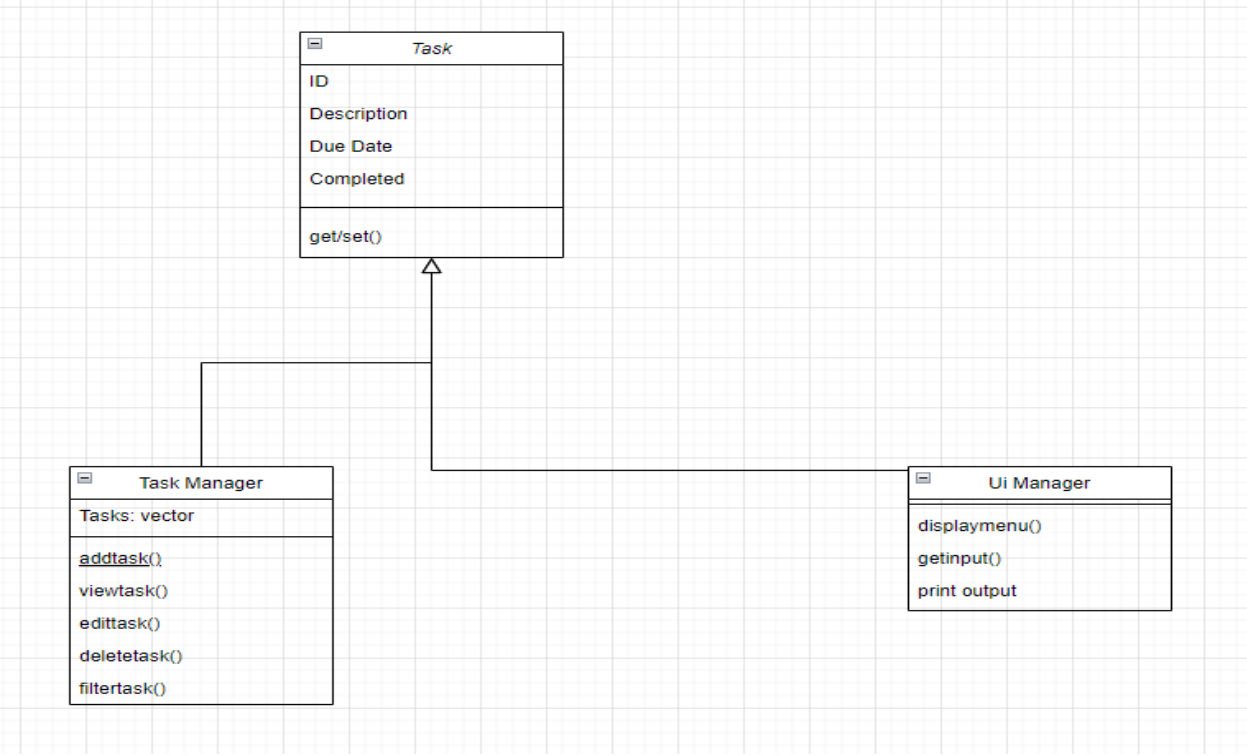
- The user has a terminal and C++ compiler installed.
- Git is available for version control.
- Optional features depend on additional libraries (e.g., Qt for GUI).

UML DIAGRAMS

Use Case Diagram:



Class Diagram:



Activity Diagram: