Task Manager Application Assignment Document

1. Introduction:

The Task Manager application is designed to provide users with a convenient way to manage tasks effectively. This document outlines the requirements, functionalities, and specifications for the development of the Task Manager application.

2. Functional Requirements:

The Task Manager application should fulfill the following functional requirements:

- Users should be able to add tasks by providing a title, description, priority (High/Medium/Low), and status (Pending/In Progress/Completed).
- Users should be able to edit existing tasks by specifying the task ID and providing updated information for the title, description, priority, and status.
- Users should be able to delete tasks by specifying the task ID.
- Users should be able to view all tasks to see a list of all existing tasks along with their details.
- Users should be able to filter tasks by priority to view tasks with a specific priority level.

3. Class Structure:

The Task Manager application should consist of the following classes:

- Task Class:
  - Attributes: id, title, description, priority, status.
  - Methods: `__init__()`, `__str__()`.
- TaskManager Class:
  - Attributes: tasks (list of Task objects).
  - Methods: `__init__()`, `add_task()`, `edit_task()`, `delete_task()`, `get_task_by_id()`, `view_all_tasks()`, `filter_tasks_by_priority()`.

4. User Interaction:

- The Task Manager application should provide a command-line interface for user interaction.

- Users should be presented with a menu containing options to perform various tasks (add, edit, delete, view all tasks, filter tasks by priority, exit).
- Users should input their choice by entering a corresponding number.

5. Error Handling:

- The Task Manager application should provide error handling for invalid user inputs, such as incorrect task IDs or priority/status values.
- Error messages should be displayed to guide users in correcting input errors.

6.Sample Input And Outputs :

```
Select C:\Windows\System32\cmd.exe                                              —    □    ×

1. Add Task
2. Edit Task
3. Delete Task
4. View All Tasks
5. Filter Tasks by Priority
6. Exit

Enter your choice (1-6): 4
Task ID: 1, Title: Task 1 Edit, Description: Desc 1, Priority: High, Status: Pending

1. Add Task
2. Edit Task
3. Delete Task
4. View All Tasks
5. Filter Tasks by Priority
6. Exit

Enter your choice (1-6): 5
Enter priority to filter tasks (High/Medium/Low): High
Task ID: 1, Title: Task 1 Edit, Description: Desc 1, Priority: High, Status: Pending

1. Add Task
2. Edit Task
3. Delete Task
4. View All Tasks
5. Filter Tasks by Priority
6. Exit

Enter your choice (1-6): Exit
Invalid choice. Please enter a number from 1 to 6.

1. Add Task
2. Edit Task
3. Delete Task
4. View All Tasks
5. Filter Tasks by Priority
6. Exit

Enter your choice (1-6): 6
                                                        Activate Windows
```