

Task Manager Application.

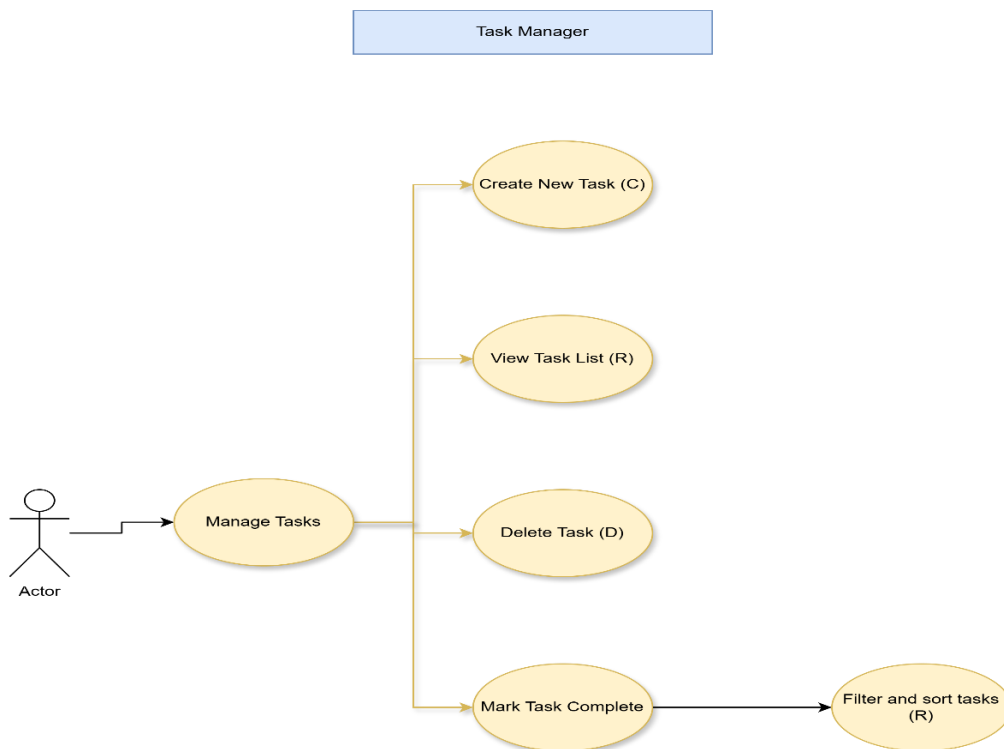
1. Use Cases:

- *Create.*
- *View Tasks / View Task Detail*
- *Edit Task.*
- *Delete Task.*
- *Mark Task Complete.*
- *Filter / Sort Tasks.*

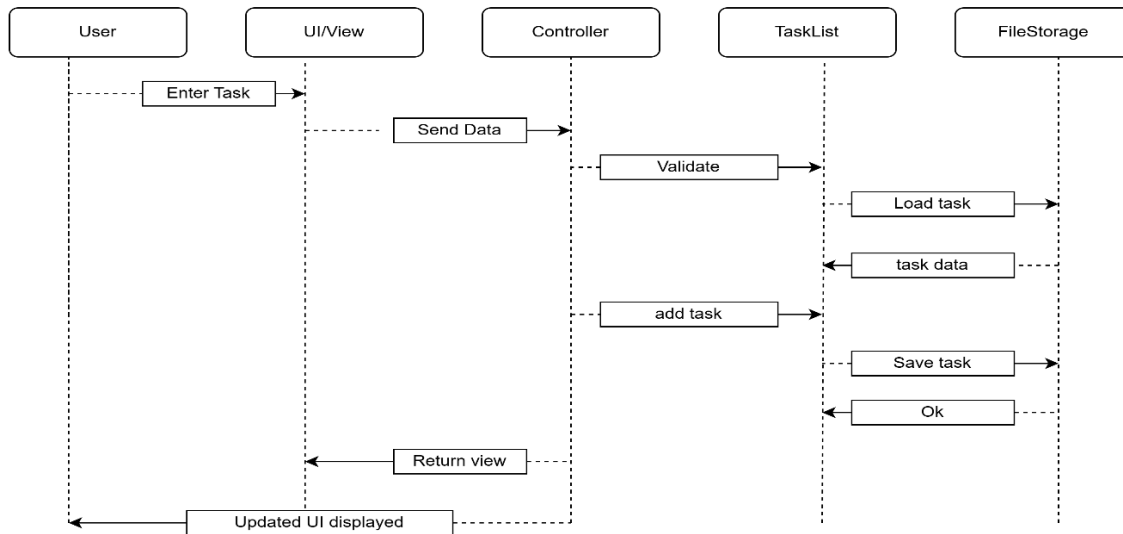
- **Actor**

User: The person using the Task Manager Application. All use cases connect directly to the user.

Task Diagram



2. Sequence diagram for task manager application.



3.

- The user enters new task information in the interface.
- The UI forwards the input to the Controller.
- The Controller validates the user's input.
- The Controller requests the current task list from the Task-List module.
- Task-List loads existing tasks from File-Storage.
- File-Storage returns the stored task data.
- The Controller instructs Task-List to add the new task.
- Task-List updates the data and saves the new list back to File-Storage.
- File-Storage confirms the save.
- The Controller sends updated task data to the UI.
- The UI displays the updated task list to the user.

4. Class Diagram

```

+-----+
|  Task  |
+-----+
| - title |
| - description |
| - dueDate |
| - status |
+-----+
| +markComplete() |
| +editTask() |
+-----+

+-----+
| TaskList |
+-----+
| - tasks[] |
+-----+
| +addTask() |
| +getTasks() |
| +updateTask() |
| +deleteTask() |
| +filterTasks() |
+-----+

+-----+
| FileStorage |
+-----+
| - filePath |
+-----+
| +loadTasks() |
| +saveTasks() |
+-----+

+-----+
| Controller |
+-----+
| - taskList |
+-----+
| +createTask() |
| +editTask() |
| +deleteTask() |
| +markComplete() |
| +showTasks() |
+-----+

+-----+
| View |
+-----+
| +displayTasks() |
| +displayForm() |
| +getInput() |
+-----+

```

5.

Entities:

- **Task** → The main data entity (title, description, due date, status)
- **User** → The actor interacting with the system

CRUD Operations:

- **Create** → Add a new task
- **Read** → View task list or specific task
- **Update** → Edit a task or mark complete
- **Delete** → Remove a task

Role / Entity	Create (C)	Read (R)	Update (U)	Delete (D)
User (Actor)	Y	Y	Y	Y
Task (Entity)	Created by User	Viewed by User	Modified by User	Removed by User