

Name: Muzammil Ahmed

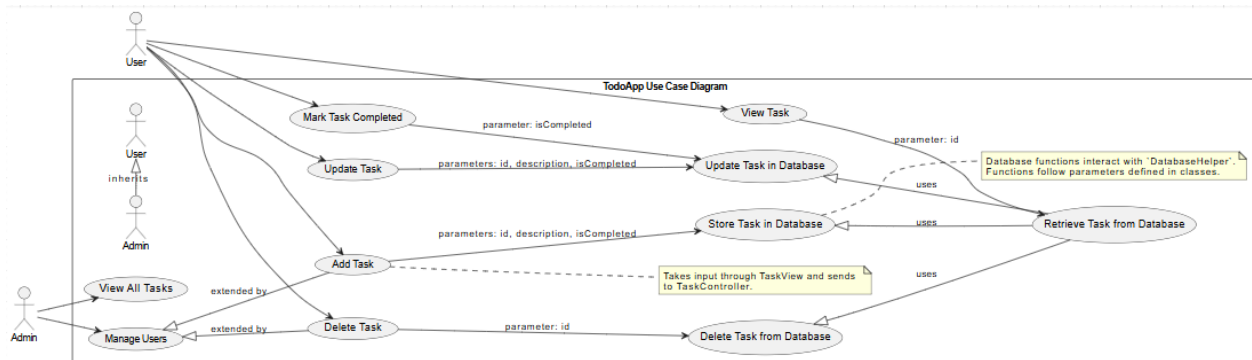
FA22-BSE-038

Topic: Todo App(Add task)

To

Sir Mukhtair Zamin

Use Case Diagram:

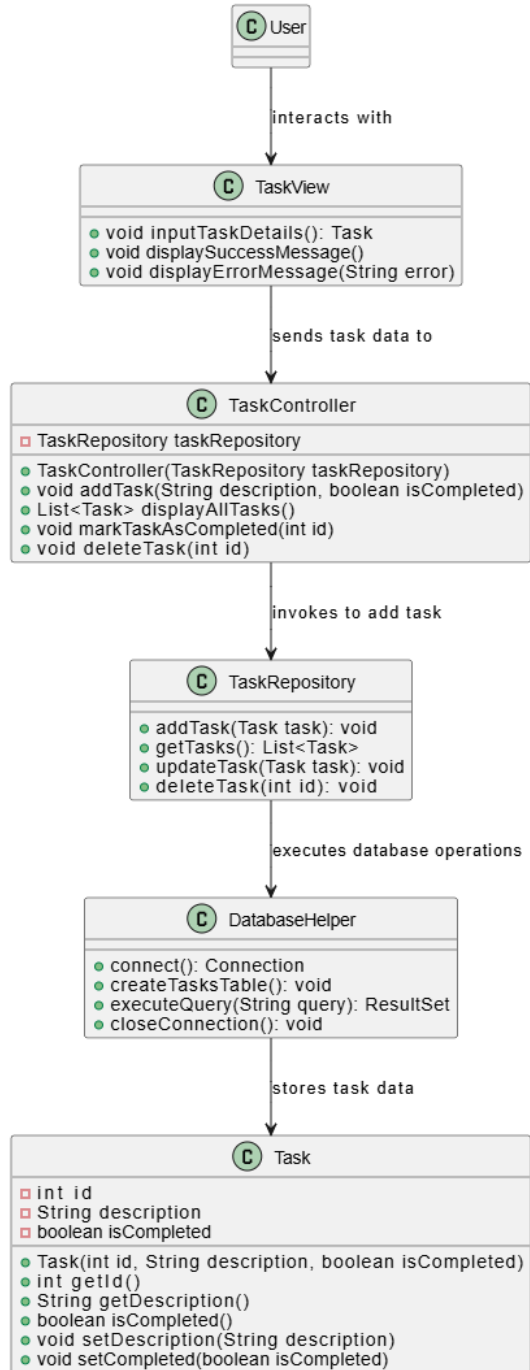


Fully dress USECASE Diagram(Add task):

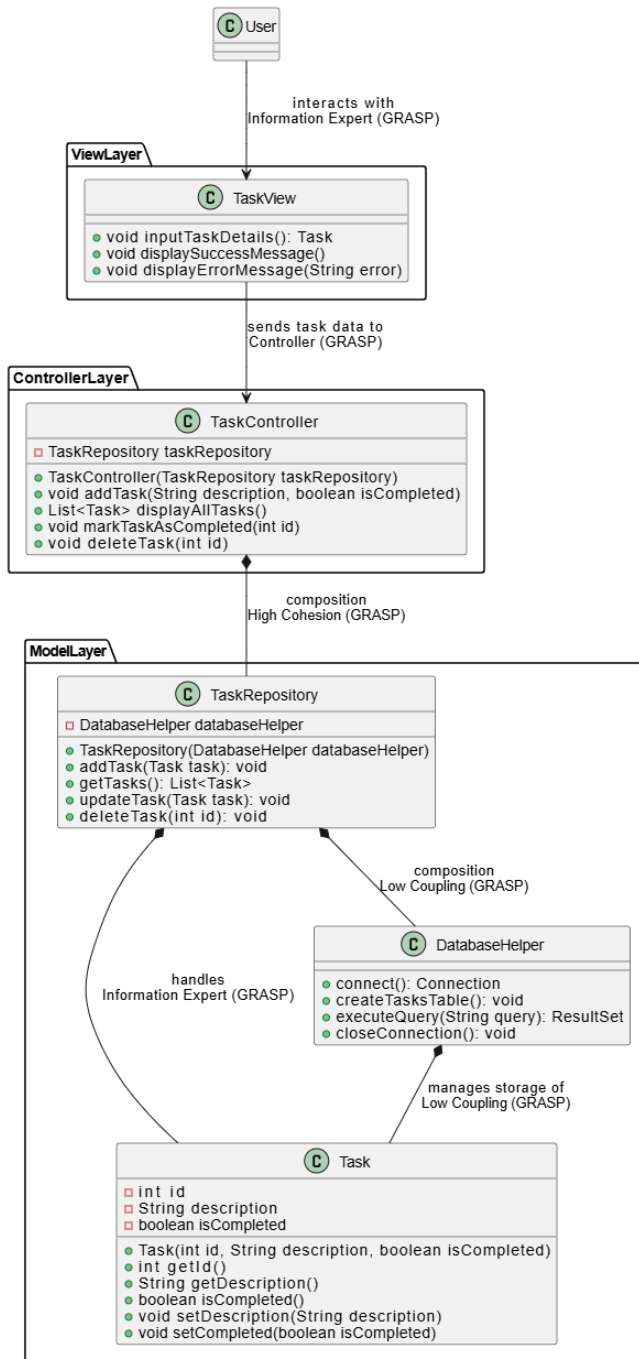
Use Case Name	Add Task
Primary Actor	User
Stakeholders and Interests	<p>User: Wants to add a new task to the TODO app to keep track of tasks.</p> <p>Admin: May review tasks added by users.</p> <p>System: Ensures the task is stored securely in the database with accurate data.</p>
Preconditions	<ul style="list-style-type: none">- User must be logged into the app.- Database connection should be active.
Postconditions	<ul style="list-style-type: none">- New task is successfully added and stored in the database.- Confirmation message is displayed to the user.
Main Success Scenario	<ol style="list-style-type: none">1. User opens the "Add Task" option in the app.2. System displays a form to input task details (description, completion status).3. User enters the task description and sets the status (default: <code>isCompleted = false</code>).4. User submits the form.5. System validates the input.6. System invokes the <code>TaskController</code> to process the data.7. <code>TaskController</code> calls <code>DatabaseHelper</code> to store the task.8. System stores the task in the database.

Extensions (Alternate Flows)	<p>5a. Invalid Task Details:</p> <ol style="list-style-type: none"> 1. If the task description is empty or invalid, the system prompts the user to enter valid data. 2. User re-enters the details. 3. Returns to step 4 in the main success scenario. <p>8a. Database Connection Error:</p> <ol style="list-style-type: none"> 1. If there is an issue connecting to the database, the system displays an error message. 2. System logs the error for further review by admins. 3. Ends the use case with an error message to the user.
Special Requirements	<ul style="list-style-type: none"> - Task description should be between 1 and 255 characters. - Task completion status should be a boolean (<code>true</code> or <code>false</code>).
Technology and Data Variations List	<ul style="list-style-type: none"> - Database: SQLite or alternative SQL database supporting <code>CREATE TABLE</code> , <code>INSERT</code> , and <code>SELECT</code> queries.
Frequency of Use	Frequently used by users to add tasks as part of their daily task tracking.
Assumptions	<ul style="list-style-type: none"> - Users are familiar with task management applications. - Database connectivity is reliable during app use.
Open Issues	<ul style="list-style-type: none"> - Consideration for possible task categories in the future. - Future integration with notification services for task reminders.

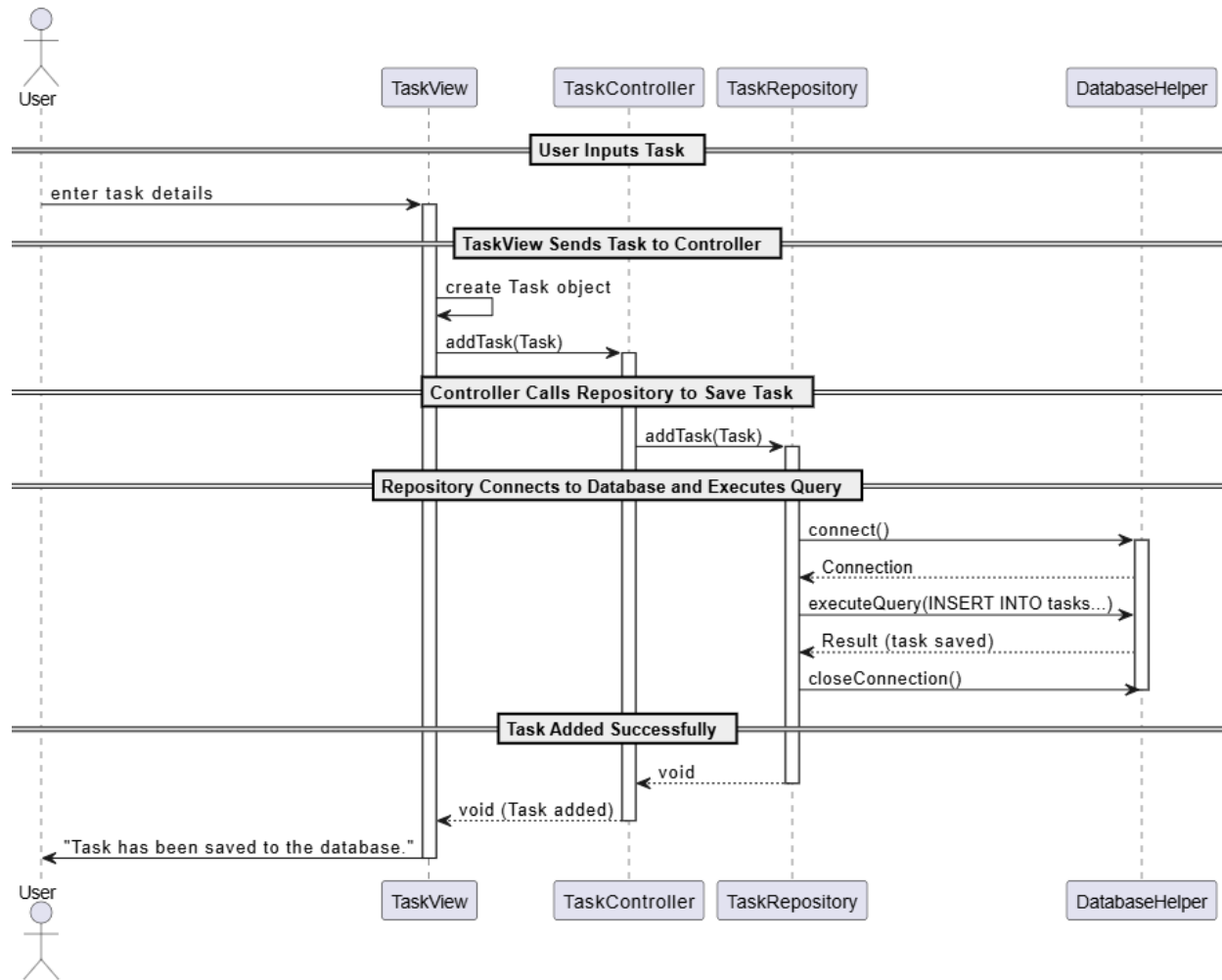
Class Diagram:



Composition Diagram:



System Sequence Diagram:



Package Diagram:

