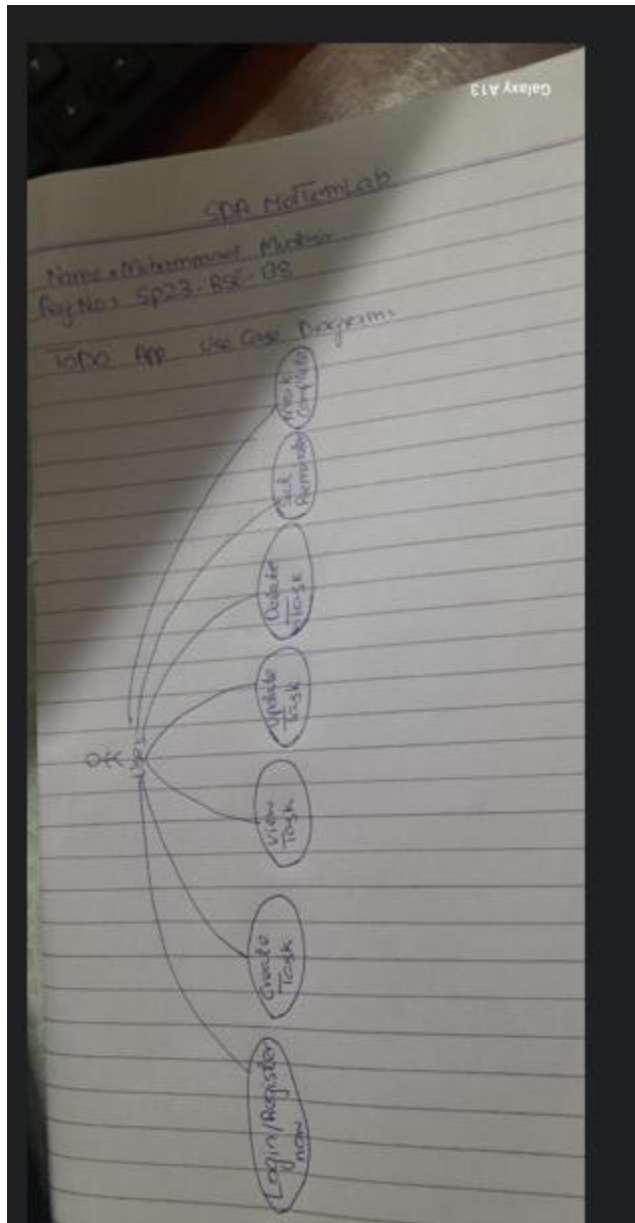


## USE CASE DIAGRAM:



The best suited principle/pattern that will help in my implementation is Creator principle.

The Creator principle states:

**"Assign the responsibility of creating an instance of class A to class B if one or more of the following is true: B contains A, aggregates A, records A, or closely uses A."**

### Application in my TODO App:

- In my app, the TaskFactory class is responsible for creating different types of tasks such as:
  - NamazTask
  - GymTask
  - GeneralTask
- The factory knows which type of task to instantiate based on the user's input.
- This clearly follows the Creator principle because:
  - TaskFactory is the one that knows the details of each subclass.
  - It encapsulates object creation, which keeps that logic out of the main app (like TaskManager or User).

### Focuses on Interactions

Communication diagrams are ideal when user want to show how objects interact to perform a task — in this case, updating a task. It shows the sequence and structure of interactions between:

- User
- UI
- TaskManager
- Task

### Clear Responsibility Distribution

- UI handles user interaction.
- TaskManager handles business logic and task retrieval.
- Task is responsible for maintaining and updating its internal data.

### Low Coupling, High Cohesion

- Each class does only what it's supposed to — following GRASP principles (like Controller and Creator).
- The update operation is handled by the Task itself, which means high cohesion — perfect for maintainability.

### Reflects Real OOP Design:

My app already uses object-oriented design with classes like Task, TaskManager, etc.

This diagram maps directly onto your existing code structure, making it accurate and practical.