Aggregation.md 2025-04-16

Aggregation Problem Statement: **Personal Task Manager Console App**

🕸 Scenario:

You are building a simple **Personal Task Manager** to help users keep track of their daily tasks. This consolebased C++ application should allow users to add tasks, view them, update them, and delete them as needed.

Each Task will include:

- A unique task **ID** (integer)
- A title (short name for the task)
- A description (details about the task)
- A status (e.g., "Pending", "In Progress", "Completed")

Tasks are stored and managed by a TaskManager class, which uses **aggregation** (i.e., it holds pointers to individual Task objects, but doesn't own their lifecycle permanently).

© Functional Requirements:

The program must support basic **CRUD operations**:

1. Create Task

- User provides id, title, and description
- o status defaults to "Pending"

2. Read All Tasks

Display all tasks with their details

3. Update Task

Modify the title, description, or status by task ID

4. Delete Task

Remove a task by ID