

Sprint One: Semester 4-Winter 2025

Project Title: To-Do List Manager

Description:

The goal of this project is to create a simple to-do list manager where users can add tasks, mark tasks as completed, and view their list of tasks. Each user has their own to-do list, and each to-do list is represented as a single linked list of tasks. The users are stored in an array. The project will demonstrate the use of arrays and single linked lists in Java.

Expectations and Functionalities:

1. User Management:

1. Ability to create users and store them in an array.
2. Each user has a unique name.

2. Task Management:

1. Ability to add tasks to a user's to-do list.
2. Each task has a description and a completion status (completed or pending).
3. Tasks are stored in a single linked list for each user.

3. Mark Tasks as Completed:

1. Ability to mark a task as completed by updating its completion status.

4. View Tasks:

1. Ability to view all tasks in a user's to-do list, along with their completion status.

Implementation Details:

1. Task class:

1. Stores the description and completion status of a task.
2. Includes a method to mark a task as completed.

2. User class:

1. Stores the name of the user and their to-do list (a single linked list of

tasks).

2. Includes methods to add a task, mark a task as completed, and print all tasks.

3. TaskList class (single linked list):

1. Represents the to-do list for a user.
2. Includes methods to add a task, mark a task as completed, and print all tasks.

4. Main class:

1. Creates users and adds them to an array.
2. Adds tasks to users' to-do lists.
3. Marks tasks as completed.
4. Prints all tasks for each user.