Title: Team Management

1. Business Requirements:

I propose developing a comprehensive Team Management Application. This application will serve as a centralized hub for teams to collaborate, plan, execute, and monitor their projects effectively.

Key Features:

- **Task Tracking**: Task tracking is an integral part of our Team Management Application. Team leaders can create projects and break them down into manageable iterations. Within each iteration, they can create task assignments, specifying details such as title, date range, assigned users, and description.
- **Collaborative Task Management**: All team members can view assigned tasks and engage in collaborative discussions by adding comments. The communication between members ensures everyone is aligned on project goals and progress.
- **Task Editing and Review**: Team leaders have the authority to edit tasks and review the edit history. This feature enables them to track changes made to tasks over time, ensuring accountability and transparency.
- **Document Sharing**: Team members can share documents, files, and resources relevant to their assignments. This centralized document repository facilitates access and collaboration.
- **Progress Monitoring**: Each team member can monitor the progress of tasks within the iteration and project. They have visibility into the number of tasks completed, providing insight into overall project status.

a. Nouns

  - Project
  - Task
  - Tracking
  - Leaders
  - Iterations
  - Title
  - Date
  - Users
  - Description
  - Assignments
  - Discussions
  - Comments
  - Communication
  - Goals
  - Progress

- Authority
- History
- Changes
- Documents
- Files
- Resources
- Visibility
- Status

b. Verbs

- Collaborate
- Plan
- Execute
- Monitor
- Create
- Break
- View
- Engage
- Add
- Edit
- Review
- Track
- Share
- Facilitate

c. Target audience

- Project Managers
- Team Leaders
- Team Members
- Freelancers and Contractors
- Educational Institutions
- Remote Teams
- Healthcare Institutions
- Engineering and Development Teams

d. Rules

1. All users must authenticate themselves before accessing the application.
2. Users are assigned specific roles with corresponding access permissions.
3. Only team leaders can assign tasks to team members.
4. The edit history of tasks must be preserved, documenting all changes made to task details.
5. Users can share documents and files within the application.
6. Team members must confirm task completion within the application once they finish their assigned tasks.

e. Challenge Questions

1. How would you ensure that the Team Management Application effectively caters to the diverse needs and preferences of different user roles?
2. How would you ensure that the Team Management Application remains adaptable to accommodate future growth and evolving project management requirements?
3. How would you approach the design and implementation of the task tracking feature to ensure that it effectively captures and visualizes project progress, milestones, and dependencies?
4. Can you integrate external tools and services, such as document management systems, to enhance the Team Management Application's functionality?
5. Can team members char with each other in the Team Management Application.

f. Summary of Classes, Attributes and Associations

- Project
  - Title
  - Users
  - Monitor
  - Break
- Task
  - Title
  - Description
  - Date Range
  - Status
  - History
  - Review
  - Edit
- Iterations
  - Monitor
  - Track
- Users
  - Role
- Comments
  - User
  - Create
  - View

g. Identify and rank potential dimensions.

1. Prefer Real-time Communication vs. Prefer Asynchronous Communication

2. Novice Users vs. Advanced Users
3. Old People vs. Young People
4. Local Teams vs. Remote Teams
5. Simple Projects vs. Complex Projects
6. Highly Regulated Industries vs. Non-regulated Industries
7. Old-fashioned Thinkers vs. Trendy Thinkers
8. Large Corporations vs. Startups
9. Project Managers vs. Team Members

h. User Personas

1. **Name**: Joe (Real-time Communication & Novice Users)
   Background: He works as a social media coordinator for a small marketing agency.
2. **Name**: Lee (Real-time Communication & Advanced Users)
   Background: He is a senior software developer working for a tech startup.
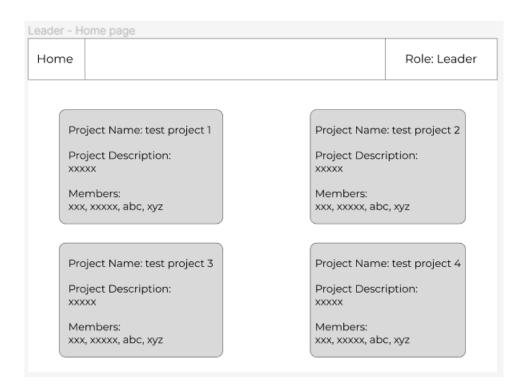3. **Name**: Alex (Asynchronous Communication & Novice Users)
   Background: He works as an educational coordinator at a nonprofit organization.
4. **Name**: Emily (Asynchronous Communication & Advanced Users)
   Background: She is a data analyst at a large corporation. Preferring asynchronous communication to maintain focus and productivity while collaborating with cross-functional teams.

i. User stories

1. As a social media coordinator, Joe wants to easily collaborate with his team in real-time, because he needs to stay updated on project progress and discuss ideas quickly to meet tight deadlines.
2. As a senior software developer, Lee wants to seamlessly integrate real-time communication tools into his project management workflow, because he needs to coordinate with remote team members and resolve technical issues to ensure timely project delivery.
3. As a project manager, Maria wants to easily communicate with her team members in real-time by commenting on tasks, because she needs to provide feedback, clarify requirements, and address issues during project execution.
4. As a project manager, Maria wants to share important project documents with her team members in real-time, because she needs to ensure that everyone has access to the latest project files to collaborate effectively.

j. Interface low level mockups

1. **The Team Leader Home Page:** He can see all his projects and choose one to look the detail.

Home		Role: Leader

Project Name: test project 1

Project Description:
xxxxx

Members:
xxx, xxxxx, abc, xyz

Project Name: test project 2

Project Description:
xxxxx

Members:
xxx, xxxxx, abc, xyz

Project Name: test project 3

Project Description:
xxxxx

Members:
xxx, xxxxx, abc, xyz

Project Name: test project 4

Project Description:
xxxxx

Members:
xxx, xxxxx, abc, xyz

2. **The Team Leader View Tasks Page:** After the leader choose one project, he can see all the tasks in this project.

Leader - View Tasks Page

Home	test projct 1	Create Task	View Tasks	Role: Leader
Title	Date Range	Description	Edit	Status
test task 1	2/11/2024-3/5/2024	test task description	Edit	Uncompleted
test task 2	1/11/2024-2/5/2024	test task description	Edit	Completed

3. **The Team Leader Create Task Page:** when the leader click the Create Task button, then will jump to a page to submit a new task.

| Home | test projct 1 | Create Task | View Tasks | Role: Leader |

Title:

Date Range: _____ to _____

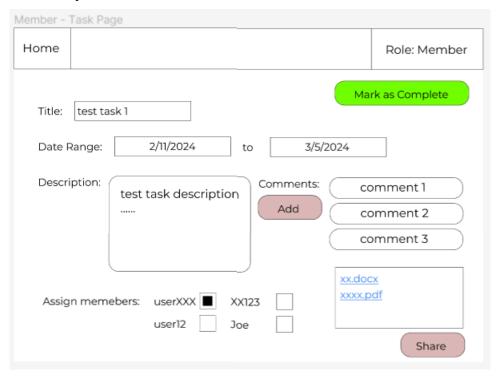Description:

Assign memebers: userXXX ☐ XX123 ☐
user12 ☐ Joe ☐

Submit

4. **The Team Leader Edit Task Page:** The leader can choose one task to edit and view its edited history.

| Home | test projct 1 | Create Task | View Tasks | Role: Leader |

history

Title: test task 1

Date Range: 2/11/2024 to 3/5/2024

Description: test task description ......

Comments: comment 1
comment 2
comment 3

Assign memebers: userXXX ■ XX123 ☐
user12 ☐ Joe ☐

Edit

5. **The Team Member Home Page:** The team member will see the assigned tasks and add information on them.
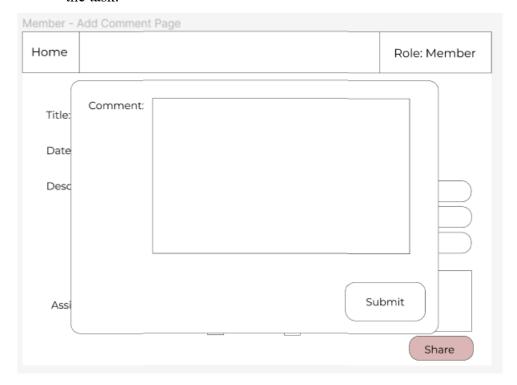
6. **The Team Member Task Page:** When the member chooses one task, they can view the information and add comments or share documents.
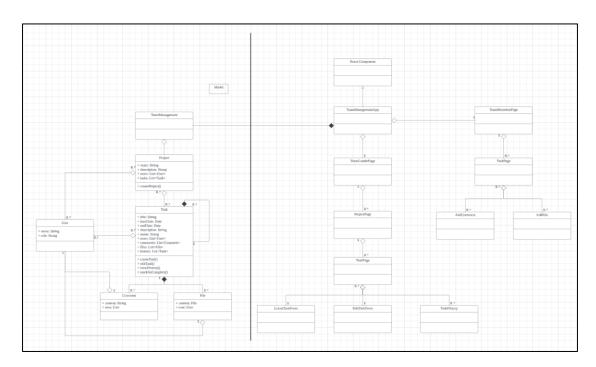

7. **The Team Member Share File Page:** The member can upload the file to the task.

8. **The Team Member Task Page:** The member can add comment to the task.

k. UML Class Diagram

Link: https://lucid.app/lucidchart/3ab7517a-a0e0-46ec-bd66-57cbe9c85351/edit?viewport_loc=-743%2C-487%2C4987%2C2280%2Cvf-~HFXfO8Mr&invitationId=inv_b3ee0f44-8f1b-44e4-97fa-2fc9ac0a4a35