**User Profiles:**

Project Manager Goals:

* Organize and assign tasks to team members quickly
* Monitor Progress of ongoing tasks
* Ensure tasks are completed on time
* Motivate team members through gamified elements.

Team Member Goals:

* Receive tasks assigned by someone and complete them
* Being able to track said tasks
* Gain some fun or recognition through gamified elements.

**Functional Requirements:**

* Task Management
  + Ability to create, edit, and delete tasks & subtasks
  + Add checklists to tasks
  + Assign tasks to a specific user
  + Add comments to tasks
  + Assign due dates to tasks
* Real time updates for tasks
* Gamification elements
  + Users can earn points for entering/completing tasks
  + Implement some kind of metal system and leaderboard for tasks
  + Spend points when asking help from others
* Dashboard Overview
  + Should be able to see progress of a projects tasks
  + Change view to organize tasks by project or by amount completed.
* Drag and Drop Task Management
  + Be able to drag and drop tasks between different status for example To Do, in Progress, and Completed.
* Profile Menu Where they can edit their personal information and see medals.
* User Login Screen
  + User Authentication
  + Forgot Password
  + Sign Up / Registration
  + Error Messages

**Non-Functional Requirements:**

* Usability
  + Easy to use interface
  + Responsive and works on mobile and desktop
* Scalability
  + Should be able to handle multiple projects
* Security
  + User authentication to ensure privacy and good login security.
  + Role based access controls? (Don't know about doing this kind of thing or not)
* Performance
  + There should be real time updates in the app
* Graphics
  + Simple 2d graphics for easier time adding gamification and other features down the line.

**User Stories:**

As a Project Manager, I want to be able to create and assign tasks to team members and assign deadlines to those tasks and comment on them. I also want to be able to track the progress of each task through real time updates. Finally, I also want to be able to assign a new project manager if necessary.

As a team member, I want to be able to view all the tasks (especially those assigned to me). I also want to be able to comment on tasks and communicate with team members so we can collaborate if needed without using other tools. I also want a menu to view all of the potential achievements so I can feel motivated and recognized for work.

**Potential Challenges:**

* Gamification implementation might be difficult to develop the points system. We may need to research some existing gamification platforms like Duolingo’s daily streaks or for some ideas.
* Real-time updates may be difficult to keep performance good. We probably need to use WebSockets or real-time libraries to ensure it is smooth.
* UI/UX design may be difficult, we may need to use figma in order to design it to be user-friendly
* Limited experience with 2d graphics for game-like elements for the gamification system.
* User experience actually being enhanced by the gamification without making it seem like a gimmick.