**Document 2: Product Backlog (Requirements Document)**

**Cover Page**

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* Project Title: Infinite Task Leveling

**1. Problem Statement**

Students often use task management systems such as Google Calendar to juggle multiple assignments and group activities, but a purely task-focused system lacks incentives for students to complete tasks and keep using the system. A natural solution is to turn the task management system into a game, something few students dislike. While programs such as Habitica and TaskHero have already combined the RPG genre with task management systems, Infinite Task Leveling will go a step further and provide satisfying game progression and a more comfortable user interface.

**2. Background Information**

**Audience**

The primary audience for our application is students. Students who have trouble motivating themselves to do tasks will benefit from the application’s game-like incentives that take advantage of a game’s natural addictiveness. While there may be future plans for expansion to accommodate other audiences, our focus is to help students better manage their time and complete their tasks.

**Similar Platforms**

There are several different applications for task management. Examples of ones that incorporate a gaming aspect are Habitica and TaskHero, which offer an RPG-style of gameplay for users as they complete their tasks.

**Limitations**

One of the major limitations of the two aforementioned applications is their lack of an engaging story that will make users eager to return to the program. Our program will provide a meaningful story that meshes well with the game-like incentives and the design philosophy to supplement the users’ motivation. Another major limitation is the lack of team involvement in each app. By adding a team element, we will help motivate users in large groups as well as individually.

**3. Functional Requirements (User Stories)**

**User Account**

1. As a user, I'd like to be able to create an account so that I can access my tasks securely.
2. As a user, I'd like to be able to sign into my account so that I can access my tasks securely.
3. As a user, I'd like to be able to logout of my account.
4. As a user, I’d like to create a username unique to myself so that I can better interact with other people.
5. As a user, I would like to change my username so that I can differentiate more if I need to.
6. As a user, I would like to display my tasks completed stats on my profile so that other users can view my stats.
7. As a user, I would like to visit other users' profiles to view their tasks completed stats so that I can see how my friends are doing.
8. As a user, I would like to send, receive, and accept friend requests so that I can interact with my friends quicker.
9. As a user, I would like to view my personal profile information.
10. As a user, I would like to send and receive messages from friends.
11. As a user, I would like to display my hero’s stats on my profile so that other users can view my hero.
12. As a user, I would like to display my hero’s appearance on my profile so that other users can view my hero.

**Task Management**

1. As a user, I'd like to create and delete tasks so that I can manage my to-do list effectively.
2. As a user, I'd like to edit tasks so that I can manage my to-do list effectively.
3. As a user, I'd like to mark a task as completed so that I can track my progress and see what's done.
4. As a user, I'd like to add a due date to a task so that I can prioritize my work and meet deadlines.
5. As a user, I'd like to add a short description to a task so that I can provide details and context for others.
6. As a user, add a category to a task to facilitate organization of tasks.
7. As a user, I'd like to add subtasks to a main task so that I can break down complex work into smaller, manageable steps.
8. As a user, I'd like to view a calendar of my tasks so that I can plan my week and manage deadlines visually.
9. As a user, I'd like to be able to set task priorities (e.g., High, Medium, Low) so that I can focus on the most important work first.
10. As a user, I would like to receive notifications by email when an assignment due date is coming up so that I can stay on top of things.
11. As a user, I would like to set up recurring tasks so that I don’t have to repeat adding weekly tasks.
12. As a user, I would like to receive task suggestions that align with my standard tasks so that I have less repetition in creating tasks.
13. As a user, I would like to see my statistics for completed tasks so that I can track my physical progress.

**Team Creation**

1. As a user, I would like to create a new team so that I can invite groupmates to collaborate on tasks.
2. As a team leader, I would like to possess admin privileges to remove users from a group I’m a part of.
3. As a team member, I would like to invite other users to collaborate on tasks.
4. As a user, I would like to join a team through an invite so that I can collaborate on tasks.
5. As a user, I would like to join multiple teams so that I can manage tasks with multiple groups.
6. As a team member, I would like to give a name to my team so that I can stay organized across multiple teams.
7. As a team member, message my team at large
8. As a team leader, I would like to determine whether my group can be found by other users.
9. As a user, I would like to search for a public group and request to join it so that I can join a group without needing an invite.

**Team Task Management**

1. As a team member, I'd like to assign a task to a specific team member so that we can share and delegate work.
2. As a team member, I'd like to view all tasks assigned to my team so that I can have a clear overview of our workload.
3. As a team member, I'd like to see the status of all team members' tasks so that I can understand the overall project progress.
4. As a team member, I'd like to attach files to a task so that I can share relevant documents, images, and resources with my team.
5. As a team member, I'd like to filter and sort tasks so that I can easily find the information I need.
6. As a team member, I would like to be able to see my team members' changes in real time so that I am up to date as soon as possible.

**Game Aspects**

1. As a user, I would like to be able to customize my hero so that I can have a better look in game.
2. As a user, I would like to see my hero get stronger as I complete tasks (e.g. leaving up and increasing stats) so that I have more encouragement for completing them.
3. As a user, I would like to have different stats (attack, hp, etc.) for my hero so that I can accomplish more in-game things with my hero.
4. As a team member, I would like to have team “boss fights” (team fights where each member can contribute to defeating a high hp boss representative of a group assignment) so that we can stay engaged.
5. As a user, I would like to have rewards based on difficulty and priority so that I can feel more accomplished for bigger assignments.
6. As a user, I would like to use my hero in combat (missions against enemies using my upgraded stats) so that my progress can be seen on a further level.
7. As a user, I would like to unlock different abilities (time based abilities which can be activated in fights) for my hero so that I can customize the way my hero plays.
8. As a user, I would like to choose how my hero grows so that I can customize what they are good at in combat.
9. As a team leader, I would like to set up important events such as boss fights.
10. As a user, I would like to view my hero’s stats so that I can view my progress within the game.
11. As a user, I would like to cooperate with other users so that a big boss(task) can be defeated.

**4. Non-Functional Requirements (Quality Attributes)**

* The system should be secure, protecting user data from unauthorized access through authentication and authorization.
* The application must be scalable to support future growth and up to 20 concurrent users and tasks without a loss in performance.
* The software should respond within 1-2 seconds for all standard user actions like loading task lists and creating new tasks.
* The application must have high availability and be accessible 24/7, with minimal downtime for maintenance or upgrades. Uptime should be at least 99.9%.
* The system should maintain data integrity, ensuring that task information is always consistent and accurate across all user accounts within 1-2 seconds.
* As a user, I would like a UI that’s easy on the eyes with smooth yet quick animations.
* As a user, I would like to be able to adjust the color and layout of the UI.
* As a user, I would like the UI to feature aesthetically pleasing art.