Amora

Team 4 - Product Backlog

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Problem Statement

Managing group work can be difficult due to conflicting schedules, unclear task assignments, differing rates of work, and disruptive meetings. Our application will address these issues by providing an easy way for groups to see what project tasks are incomplete/in progress/complete, filter tasks by the subgroups and individuals they are assigned to, and monitor what tasks are in progress across the team. Further, a “today” view individual to each team member will allow users to manage what tasks they hope to accomplish in their remaining hours of work that day. Additional features such as a points system and productivity rating will make the application more fun for casual users and more useful for managers who want to view which members contribute the most.

Background Information

When collaborating in a team, it’s natural for workers to break down tasks by making to-do lists and daily schedules for themselves. Every member of a team may have a different preferred platform for this organization, making it hard to communicate the status of their work without frequent meetings. Particularly with larger groups of five or more members, miscommunication and under-communication can seriously hamper productivity. Although current solutions to these problems exist, managers may be hesitant to implement them due to the overhead of setting them up, managing them, and teaching workers how to use them. It can be frustrating if an application meant for increasing your productivity only slows you down in the long run. What is needed is a streamlined, collaboratory application for managing group work that doesn’t get in the way of the actual work. Amora will be that application. Amora will be targeted at the domain of productivity and workflow tools, and will target professional and amateur teams alike.

Similar Applications

Amora is similar to two applications, Asana and Trello. Trello acts as an online to-do list, but lacks features specifically targeted at professional teams. It also has a dated design and suffers from a confusing interface that includes dozens of buttons whose functions aren't immediately clear. Asana removes some of these flaws, giving users the ability to create tasks, work in teams, assign tasks for specific times/dates, and be able to see what tasks a user has for specific days of the week. However, similar to Trello, Asana lacks the simplicity and ease of a true productivity app. Asana also does not allow managers to have a hierarchical view of the project and be able to assign tasks to team members. We plan to cater our software to professional and casual users that desire to take their productivity to the next level. While we are competing with other productivity software that certainly has more market maturity, we expect that Amora can improve upon past designs with a cleaner and simpler interface, expanded statistics and diagnostics, and a set of improved managerial controls that provide additional functionality.

Requirements

Functional Requirements

1. As a user, I would like to be able to register and log into an account for Amora with Google authentication.
2. As a user, I would like to access Amora from desktop and mobile browsers.
3. As a user, I would like a clean, easy-to-use interface.
4. As a user, I would like to be able to create tasks for myself.
5. As a user, I would like to be able to create tasks for my team.
6. As a user, I would like to assign an estimated time to tasks.
7. As a user, I would like to set deadlines for my tasks.
8. As a user, I would like to mark a task as complete.
9. As a user, I would like to be able to compare time estimates and actual time taken for tasks.
10. As a user, I would like to customize my profile with a profile photo and description.
11. As a user, I would like to view statistics on the accuracy of my time estimates.

12. As a user, I would like to filter all project tasks by priority, type, time, and deadline.
13. As a user, I would like to view a dashboard of upcoming tasks.
14. As a user, I would like to see my personal suggested tasks based on due date and priority levels.
15. As a user, I would like to add tasks to my ‘Today’ view.
16. As a user, I would like to assign tasks to the hours of my day.
17. As a user, I would like to be notified when it is time to start a new task.
18. As a user, I would like to set what hours of my day are public ‘working hours’ for teammates to view.
19. As a user, I would like to see the estimated time left in my day.
20. As a user, I would like to create a team and become the manager of that team.
21. As a user, I would like to join teams.
22. As a user, I would like to view a dashboard with tasks assigned for my team.
23. As a user, I would like to view the profiles of my teammates.
24. As a user, I would like to see my teammates’ ‘Today’ view.
25. As a user, I would like to comment on tasks.
26. As a user, I would like to see a log of tasks and comments.
27. As a user, I would like the ability to edit the names of tasks.
28. As a user, I would like the ability to edit comments left on a task.
29. As a user, I would like to be suggested meeting times based on everyone’s schedules for the day/week.
30. As a manager, I would like to view a manager-specific dashboard and updated options on each task.
31. As a manager, I would like to assign priority levels to tasks.
32. As a manager, I would like to create projects.
33. As a manager, I would like to assign tasks to projects
34. As a manager, I would like to give tasks specific categories (bug fixes, new feature, etc).
35. As a manager, I would like to add project details that will be visible to all team members.
36. As a manager, I would like to invite users to join my team.
37. As a manager, I would like to make other teammates managers for my team.
38. As a developer, I would like to have clean, fluid code.
39. As a developer, I would like to have well-documented code.
40. As a developer, I would like to have a list of bugs and bug fixes.
41. As a developer, I would like to have descriptive commit comments that accurately describe alterations.

42. As a user, I would like to be given a productivity score to compare my performance with co-workers, if time allows.
43. As a user, I would like to see events in my Google calendar for each day, if time allows.
44. As a user, I would like to create events for my Google calendar for each day, if time allows.
45. As a manager, I would like suggestions on which categories my team members appear to excel at, if time allows.
46. As a manager, I would like suggestions on which team member to assign a specific task to, if time allows.
47. As a user, I would like an entirely offline version of Amora for independent use, if time allows.

Non-Functional Requirements

Security

Security is an inherently important aspect of Amora because of the personal information held in each user's account. Fortunately, we'll be using Firebase and Google authentication for our backend and login services so most of the heavy lifting is off of our shoulders. Users can be confident their authentication data is safe with Google. However, we will still have to ensure a tight experience by programming carefully and methodically. For example, while Firebase itself is secure from outward hacking attempts, we will have to implement a permissions system ourselves to ensure users can access only what they are allowed to. Some user information will be shared with team members, while other information should be private.

Usability

The core idea of our app is not complex, and the UI won't be either. We plan to guide the user through the simple task management process of Amora with a simple and intuitive front-end layout. We also want to make signing up as simple as possible, so users can get to work right away. Features that suggest meeting times and enable team members to view each others' schedules will allow teams to more easily communicate, allowing for a more pleasant user experience. Finally, we want to make sure the the site is clearly displayed on common form factors such as mobile and tablet, so users have the flexibility to use any device.

Performance

As with any application, performance is crucial in getting users to use our product. We need to make sure that our application provides snappy queries, especially when searching through a large database full of tasks. Firebase's free plan allows 100 simultaneous connections to the database, and this will serve our purposes fine for development and initial release. We can easily upgrade as we expand to a plan with 100k simultaneous connections for a small monthly fee. We will optimize our sorting and data retrieval algorithms and minimize the computation that has to be completed on-the-fly as users interact with the application. Firebase's free plan includes 1 GB of storage in the database, which will be plenty to start, as almost all of our data will be simple text. Again, we may upgrade as needed, allowing for easy scalability.

Reliability

Reliability is key to the success of Amora. Our users need to be able to get their data and update tasks. We are implementing Firebase to help improve reliability. Firebase boasts a minimum 99.95% uptime. This means that, at worst, our users will only experience 1.83 days of downtime in a full year. As all computations required for the app to function are performed locally, the application will function as long as Firebase does. A potential offline version would ensure that single members wouldn't have to worry about downtime at all.