

COSC 4P02 - Project Proposal
Jan 16, 2024
Instructor: Naser Ezzati-Jivan

Project Proposal Topic PRJ6: Habit Tracker with Progress Leaderboards

GitHub: <https://github.com/kphillippo/habit-tracker>

Team members:

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Problem

With the increase in the number of people living sedentary and unhealthy lifestyles, a lot of people are beginning to realize they need to make a shift to healthier habits in order to improve their lifestyles. Many people have made the decision to strive for a better lifestyle, but the step which most often prevents progress is turning activities into actual habits. Some people have very busy daily schedules, or just forget to take the next step. With an introspective tool that acts as a mirror for an individual to monitor their own daily habits and routines, this can become much easier.

Objective

The main objective of this project is to act as a self-reflection tool for anyone who wants to make improvements to their lifestyle. It could be small commitments like making your bed every-morning, or bigger commitments like going to the gym 5 times a week.

Other objectives include:

- Keeping a record of daily habits and tracking progress towards certain goals.
- Sending timely reminders for users to complete tasks or send them motivation to help boost their drive.
- Supporting friendly competition to see who could get to their goals quicker or maintain their habits for the longest amount of time.
- Improving self-reliance and cognitive control by allowing the user to take more control of their daily activities based on their long term goals and not short term pleasure.

Importance

Habit trackers enhance self-awareness, as users can easily identify patterns and trends in their behavior, helping them recognize both positive and negative habits. Habit trackers promote accountability, as the app serves as a constant reminder of commitments, encouraging individuals to stay on track. Additionally, habit trackers offer motivation by showcasing progress over time, reinforcing the sense of accomplishment and spurring continued effort. Lastly, they

contribute to time management and efficiency, as users can allocate specific time slots for desired habits, fostering a more organized and productive lifestyle.

Project Description

Our project will be an online platform that acts as a personal coach for adapting positive habits and tracking growth. The main feature of our web app allows users to set goals and log their efforts towards their personal development. However, there are many other bonus features that help people stay on track such as reminders, daily streaks, motivational quotes, and group challenges.

The application will be easy to access and use. It provides users with the ability to create an account linked to their email to track their journey or as a guest to explore the app. Customers can log in their achievements effortlessly and visual representation helps with understanding. If the user is up for a competitive experience they can participate in the leaderboards which will rank their progress against other participants. Further specification of app features and plans for implementation will be included in release planning documentation.

Software Engineering Process

The project will follow Agile principles to facilitate quick changes and adapt to any challenges. The group of 7 consisting of the Product Owner, Project Manager, Scrum Master and the development team will be working closely with stakeholders to complete this.

Roles:

- Scrum Master: Kacie (Responsibilities: meeting minutes, scheduling, facilitating scrum meetings (weekly, retrospectives...), reporting and submission)
- Product Owner: Muiz (Responsibilities: defining goals for the website, providing direction)
- Project Manager: Elya (Responsibilities: organize and manage backlog, plan objectives for the development team and monitor progress, analyzing completed and planned workload, managing resources and facilitate needs of the team)
- Developer team: All team members
 - Front-End Leads: Yifan, Max
 - Back-End+Database Leads: Robert, Lysa

Roles were assigned by taking into account the skills of each person, and their comfortability with each component. This allows those with more managerial experience to take the positions of Scrum master and Product owner, as well as allowing those that are more comfortable with each of the libraries chosen to take leading roles in front-end and back-end respectively.

We have created a Discord server for the group. This is where our scrum meetings will occur. Since we won't be meeting daily, this server will act as a constant line of communication, and will be used to message each other during the development process.

For testing we will each be writing our own automated testing for the parts we will work on. Additionally code review will be left to the whole group, testing on a development branch before pushing finalized changes to a master branch.

Meeting Schedule:

Each sprint will be 1 month, and we will have 3 sprints. Each sprint will end approximately one week before each progress report is due on a Friday between 3:00 pm and 8:00 pm. The first sprint review meetings will most likely occur on Friday February 23rd. The second meeting will most likely occur on Friday March 15th, and the final meeting will most likely occur on Friday April 12th. We will schedule our sprint retrospective meetings on a later date, to take place following the report deadlines.

Additionally, to balance our other responsibilities, we will not have daily scrum meetings, but we will be meeting 2 times a week for our scrum meetings. The days and times we will be meeting are Wednesdays from 3:00 pm to 4:00 pm and Fridays from 3:00 pm to 4:30 pm. Additional meetings will be scheduled as needed leading up to report deadlines and meetings with the TA.

Technical Breakdown

Technical tools to be used (so far):

- Front-end: React.js, UI-library: Reactstrap
- Back-end: Node.js + Express.js
- Database: MongoDB
- Deployment: Github (<https://github.com/kphillippo/habit-tracker>)
- Planning: Google Drive/Docs, Jira (<https://habittracker.atlassian.net/jira/software/projects/SCRUM/boards/1>)
- Design: Figma (<https://www.figma.com/file/g4kPNHIQEehR718MbzsWRJ/Design?type=design&node-id=0%3A1&mode=design&t=GJo5eAb9d65vOeO9-1>)

Since we decided to build this project in the form of a website, we decided React is a good choice for the front-end. React is a popular front-end framework that has been used by many companies. Additionally, using React would be a great practice and it fits potential future job requirements. We also have some members who have experience using React in past projects. For the back-end, we are going to use Node.js and Express.js. Both of them are flexible and popular. MongoDB, a NoSQL database, will be used in our project.

For deployment and version controlling, we chose the most common and simple tool: Git with Github. Personal branches will be used for local development. The development branch will be used for testing, including code review. The master branch will house the complete, working release.

For document sharing/editing, we are using Google Drive for convenient synchronous communication. For planning, we will use Jira, a tool for project management. We will also be using collaborative platform Figma for planning website designs.

Proposal Contribution Breakdown:

Every group member attended all group meetings.

- Kacie Phillippo: GitHub README section, meeting minutes, full report beautification/editing, meeting lead, proposal submission
- Yifan Zhu: GitHub file organization, technical tools breakdown section
- Maxwell Young: Project importance section
- Robert Pierik: SE process section
- Lysa Hannes: SE process section, full document editing
- Elya Denysova: Project description section, product backlog (draft)
- Muiz Odebiyi: Project problem section, project objective section