Project Plan: Mental Health App

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Clients:

Our target demographic are college age young adults, mostly being us and our own demographic. As such, we decided to find external individuals to act as clients that are in that demographic.

- Calvin Schwartz: External Client
- Maya Lindseth: External Client

Meeting Dates with Clients for Plan: 9/6/2021 for both.

Goal and Motivation:

Due to the recent pandemic, students have been isolated at home. The lack of social interaction and ability to go out has been negatively affecting their mental health. As students ourselves, we would like to provide an app to help monitor our mental health and factors relating to it. There are other free mental health apps for Android, but none of them include all of the features that we want to implement, and also ask for extensive amounts of detail to be useful. Our goal is to make a mental health app specifically for college students to help them manage their mental health, especially those who do not have the motivation to track their daily life rigorously.

Approach (key features of the system):

1. With this app you can log your mood as well as daily eaten food groups and if you exercised or not that day. By rating your mood every day, the app can compare your trends to the basics of your dietary and exercise daily habits, both of which are known to be connected to mental health. The app gives visual representations of this logged information to help you examine any potential trends that may be contributing or hint at mood problems and push you to think about your mental health in a more rigorous way. The visual representations through graphs allow the user to decide what factors they want to examine and

over what period of time - ensuring that the logged information can be examined for any trends to the specificity desired of the user. The information logging is chosen to be streamlined and easy, with the information requested being based on simple aspects of your daily life, tailored so that someone who may not have the motivation to track their habits in great detail can still have a way to see their trends and potential contributions to their mental health.

2. The app can send reminders to you about your logged information to notify you of any trends that could contribute to negative moods or mental health, giving some general, easy to follow small guidance to help decrease factors that may harm your mood. The frequency of these notifications and what kinds of notifications appear are able to be changed by the user, so that you can tailor the app to your needs or make it work more in conjunction with other systems. Since a large part of the app is making a reflective log that is easy to use, the ability to remove reminders that may feel pressuring and decrease motivation to use the app should help promote usage.
3. To help motivate the user into logging their information, the app holds a game that progresses each day. This game features an adventurer with a name you choose, who undergoes their own daily adventures and life that are logged like you when you do. Pixel art characters and landscapes all change based on this adventure, changing the theme of the app as you use the app more and more as you share your daily life with a character who is sharing their own. A log is kept of every daily scenario they find themselves in, so that you can look back and see their adventure as well as your own, with the aim of creating a sense of progression.

Novel Features:

None of the features or functionality themselves are novel individually, but in our research we could not find any apps that have all of the features together. Most apps that allow logging of daily information don't measure mood or use a game to incentivize usage - likely due to these kinds of apps being directed to individuals motivated to record and log information about themselves for future usage while this app is directed to those who may not have that motivation.

Technical Challenges:

1. Android uses Java, a programming language we are not familiar with.
2. Since this is a mobile app it will be a challenge to figure out how to set up a testing environment on our PC to develop the app.
3. This app logs a lot of information so space and time efficient database management is vital for its functionality to exist.

Milestone 1 Itemized Tasks (Oct 4):

1. Provide small ("hello world") demo(s) to evaluate Android Studio and the Android Emulator provided by Android.
2. Resolve technical challenges by familiarizing ourselves with introductory Java and Android development and obtaining reference resources. Resolve testing environment challenge by installing and testing Android Studio and its emulator. We also will communicate with the advisor to create a plan on how to manage the database for the logs.
3. Compare and select collaboration tools for software development, documents/presentations, communication, task calendar.
4. Create a Requirement Document.
5. Create a Design Document.
6. Create a Test Plan.

Milestone 2 Itemized Tasks (Nov 1):

1. Implement, test, and demo a basic Android UI.
2. Implement, test, and demo an interactive pop up with an input field.
3. Implement, test, and demo saving inputted information into an in app database.
4. Implement, test, and demo an in app database structured around a calendar.
5. Implement, test, and demo retrieving information from the database.

Milestone 3 Itemized Tasks (Nov 29):

1. Implement, test, and demo the full UI with temporary functionless buttons for not completed functionality.
2. Implement, test, and demo the exercise, mood and diet pop ups and saving of that information to correct places.
3. Implement, test, and demo a line graph of inputted mood over a default period of time.
4. Implement, test, and demo a bar graph of inputted diet over a default period of time.
5. Implement, test, and demo a bar graph of inputted exercise over a default period of time.
6. Implement, test, and demo a graph pop up that can combine the above 3 features into one large overlaid graph.

Task matrix for Milestone 1

Task	Josh	Phi	Daniel
"hello world" demos	Java	Android Emulate - 50%	Android Emulate - 50% Cooperate on getting demos working on Android Emulator.
Resolve Technical Challenges	Familiarize yourself with java. Plan database structure.	Familiarize yourself with java. Focus on ensuring Android emulation and IDE functions properly.	Familiarize yourself with java. Obtain java reference resources.
Compare and select Collaboration Tools	Look into using codeshare.io	Look into using codecollab.io	Look into using Visual Studio Code
Requirement Document	write 25%	write 25%	write 50%
Design Document	write 50%	write 25%	write 25%
Test Plan	write 25%	write 50%	write 25%

Approval from Faculty Advisor

"I have discussed with the team and approve this project plan. I will evaluate the progress and assign a grade for each of the three milestones."

Signature: _____ Date: _____