Studying Buddy

Project Proposal

Version 1.0

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February 28, 2023

Reasons We Chose This Project

The main goal of our application is to drift from the concept of studying without a proper plan by implementing multiple studying techniques and methods to allow a more optimal learning environment for students reviewing all types of course material. In addition to creating an efficient studying environment, developing a studying application can be beneficial for the following reasons:

Accessibility: A studying app can be easily accessed from anywhere, any time, and on any device, making it a convenient tool for students who are always on the go or prefer to study in different environments other than at home.

Personalized Learning: Students can customize their learning experience by selecting specific studying methods and techniques that are the most optimal for their desired subject to ensure efficiency and productivity. With a more personalized learning environment, students are able to avoid burnout while focusing on areas they feel the need to improve on and spend less time on topics they are already comfortable with.

Interactive Learning: This application can offer a variety of interactive learning tools such as quizzes, flashcards, and tests in addition to selecting from a pool of studying methods. With an abundance of available tools to utilize for studying, it will push more engagement from the user ultimately becoming more effective than studying from a textbook or powerpoint slides.

Tracking Progress: In order to keep students motivated, the application can track students' progress, identify their strengths and weaknesses with areas they are confident and not confident in, and provide personal feedback to help improve their learning outcomes.

Time Management: To refrain from overly studying and burnout within students, the application is able to help students manage their time studying while following the studying techniques and methods. In addition, the application encourages the user to take scheduled study breaks in between their study session to avoid burnout and help in retaining the information the student had reviewed. The application is also time sensitive for when students have a limited time to study or review in which they can still obtain the knowledge regardless of the time they have.

Potential Kotlin concepts

The first Kotlin concept that would need to be implemented is proper user interface design. This is a critical feature for the application as it is directly related to the success of the application in respect to user usage. It should be designed to be easily navigable, intuitive, and visually

appealing. This can be achieved by implementing proper button displays and keeping in mind intuitive placement. Another addition that would help assist with this is implementation of list and scroll views. This would allow for better movement and flow for each of the user-interactable screens. Moreover, this stems into the idea of Gamification as another important concept that will be implemented within Kotlin.

Gamification is also another important point that should be considered within the Kotlin design as creating an enjoyable method to studying is one of the primary goals of this application. Some ideas for design would be creating a points system for completing tasks based around performance, unlocking achievements, and possibly using a leaderboard to enable competitive psychology. This can be achieved by using built-in Kotlin classes, like the timer class to keep track of time and display it to the user. The timer class would also work in conjunction with threads to assist in updating the User Interface in real-time. Furthermore, to gamify the application even more, careful design of the animations for each screen should be considered. As can be observed in other successful applications, the little details in animating actions on the user's screen goes a long way in supporting successful gamification and leads to user retention/usage. However, something that should be noted is that these methodologies would need exterior systems to assist, like a small database or connection to the internet.

Finally, another important Kotlin feature that is integral to the services of Studying Buddy is the usage of notifications. The application should be able to notify the user whenever there is an instance within the study methodology that requires the user's attention. Some examples would be when the student has reached a break period or when the student's break period is about to end. These notifications should not just be system notifications, but they should have sound cues and visual alarms as well. This will ensure that the student can study effectively given the parameterized constraints that were set or in place. Furthermore, the system notifications should also account for the psychology of students as there should be warnings for state transitions and an option to create a "pleasant" transition or a more abrupt one for students that require different study environments.

Potential Features

Study Technique Selection: A main feature of the app would be to allow users to select a studying technique based on their preference and the subject they are studying for. You can

provide a list of examples of studying techniques: SQ3R, Cornell Method, Feynman Technique, etc.

Customizable Study Techniques*:* Allowing users to customize their own study technique. Users could add or remove specific steps, change the time allotted for each step, and save their customized techniques for future use.

Progress Tracking: The app can track the user's progress, including the amount of time spent on each study session, the number of completed sessions, and the percentage of the chapter/subject covered. This will help users stay motivated and see the progress they're making over time.