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CS3704 Final Report - Budget Buddy

Problem Statement

Problem

Many individuals view budgeting as a chore or something that doesn't fit into their busy schedules. Existing budgeting apps often lack user-friendliness and fail to address this fundamental issue.

Solution

Budget Buddy is here to change the game. We've created an intuitive and effortless budgeting app that seamlessly integrates into your lifestyle.

Identifying the Challenges

Overspending

As college students, we are prone to overspending due to it being the first time we are away from parental control. This causes us to spend too much money whenever we go out, whether it be for a service, food, or an item. A lot of students hand over their card or tap with apple pay and never think twice about how it financially impacts them.

Money Distribution

Banking applications only provide a distribution that is categorized by the month. This can make it challenging for anyone looking to budget by the day or even week.

Missing Payments

Based on our research, we found that individuals tend to miss important payments just because they didn't get a heads up a couple of days/hours before the deadline.

Our Solution

To help deal with these challenges that we have identified, we decided to make a budgeting app named Budget Buddy. This app is an innovative application designed to revolutionize the way you manage your finances. It offers personalized budgeting plans tailored to your individual financial needs. Our user-friendly interface makes budgeting

efficient and enjoyable for users of all levels.

Key Features

Security Features: Budget buddy has a series of robust security features that can block any sort of suspicious activity.

Payment Reminders: Reminds users to pay upcoming bills by sending a notification.

Income Tracking: Allows users to track where income is coming from.

Easy to use UI: Gives users an easy to use UI which makes it easy for users to navigate through the app.

Expense Tracking: Gives users the ability to track their expenses by categorizing transactions.

Goal Setting: Allows users to set financial goals, which can be set to different dates.

Related Work

Rocket Money

This app provides subscription management as well as offering monthly spending information.

Quicken

This app can help with tracking spending and managing debt.

Concepts from Class

While we were developing our project and trying to figure out how to properly work on this app, we explored many different types of class concepts in order to maximize our efficiency and deliver the best work possible. The four class concepts were

- Storyboarding
- Pair Programming
- Black Box Testing
- Project Management

Storyboarding

We used storyboarding to help with our developmental process. This was particularly

useful because it allowed us to efficiently and effectively brainstorm, identify challenges that we had to overcome, and it allowed us to break down our project into manageable tasks.

Pair Programming

Pair programming is an agile software technique that involves two programmers, a driver and an observer. The observer strategizes and thinks about what to implement, while also overseeing each line of code that is written. The driver is responsible for writing the code and implementing the ideas that the observer has. This makes it so the driver has to think less which can lead to less errors and better efficiency. We used this to help with our back end, which helped with developing our teamwork skills.

Black Box Testing

For this class concept, it is where the tester is unaware of internal workings. They do not know about the source code. This can provide better data from testing, as well as understanding how a system will actually respond in a real scenario. Black box testing can test unexpected actions and can cover a lot of different tests and scenarios.

Project Management

When figuring out how to actually manage our project, we looked at what was discussed in class in order to get a better understanding of how we should plan our project. To start, we made goals and deadlines throughout the entire project. We also established constraints before starting the project. We then divided our work into teams and sections, such as back-end and front-end. We also held weekly meetings and scrum meetings to understand our current progress. We then established tests along the way and found the most efficient ways to collect data. Another key part to our project management was how we consistently looked at previous code written and adapted it based on newly found problems. All of these made our project management much simpler and far more efficient.\

Future Work

For our future work, we plan to actually implement our application. While it is not entirely finished currently, we hope to finish our final product soon so we can look at all the work we did. We also plan testing our project even more, such as alpha/beta testing. From this, we hope to gain feedback on the usability of the app. Ultimately, we hope to make more improvements to our app/project, as there still can be more improvements made as we continue to work.