Team 5 Product Backlog
Budget Busters

Team Members

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Problem Statement

Financial literacy and planning is an extremely essential and yet overlooked skill for most young adults, especially when they are living in a city. The various factors that go into forming a budget, along with the stress of managing one's own money for the first time, is what prompted us to create a budgeting app to easily organize personal finances for young adults. With Budget Busters, users can set monthly budget goals and track their daily spending, encouraging them to be more attentive with their spending habits and make necessary adjustments to meet their goals. Budget Busters is different from most budgeting apps because it gives a friendly introduction to money management through visual representations of user spending data and goal setting features.

Background Information

    a. **Audience**

    Budget Busters is primarily for young adults between the ages of 18-30 or anyone new to managing their finances. Managing finances can be a daunting task when getting started. This application allows users to manually input their daily spending and see visual representations of their spending data, motivating them to form daily routines that will enhance their budgeting skills.

    b. **Similar Platforms**

    There are several budgeting applications currently including Mint and RocketMoney. Mint is an online application that collects all your financial information into one application. It links your spending directly from your credit card, balances, and budgets. RocketMoney manages all your subscriptions in one place and helps pay bills on time.

    c. **Limitations**

    While apps like RocketMoney and Mint are other forms of budgeting apps, there are some limitations to those applications that Budget Busters better addresses. RocketMoney solely manages subscriptions and bill payments, while Budget Busters tracks all user purchases on a monthly basis, giving users an insight on how much they are spending overall. This shows how Budget Busters is more tailored towards young adults, as users can measure all aspects of their finances as opposed to just their automatic payments.

    Mint tracks its customer's finances by linking their credit card account, bank account, and more. However, Budget Busters tracks the user's purchases through direct inputs of their transactions throughout the day. For individuals who are new to managing their finances, inputting daily purchases is an effective method to stay mindful of their spending habits, thereby reducing

impulsive spending. Moreover, Budget Busters offers better security than Mint because the user doesn't have to worry about their credit card or bank account getting hacked.

In summary, Budget Busters' target audience is young adults and people who are new to managing their finances. It includes features like goal setting, daily input spending, and spending trend graphs to help users be mindful with how they spend their money. This differs from the other two apps, as they target anyone interested in organizing certain aspects of their finances.

Functional Requirements
- **User account**
    1. As a user, I would like to be able to create an account (including name, email address, password, phone number) for Budget Busters using the official website.
    2. As a user, I would like to be able to create an account for Budget Busters using Gmail.
    3. As a user, I would like to be able to delete my Budget Busters account.
    4. As a user, I would like to be able to login to my Budget Busters account.
    5. As a user, I would like to be able to reset my password if my account is linked to the official website.

- **User Profile Settings**
    6. As a user, I would like to be able to create my profile page with a profile picture, age, and notes section, and phone number (inputted from User Account page).
    7. As a user, I would like to be able to edit my profile page with a profile picture, age, notes section, and phone number.
    8. As a user, I would like to be able to upload my profile picture from my computer.

- **Home Page**
    9. As a user, I would like to view my personalized home page with my monthly goal and spending pie chart.
    10. As a user, I would like to access the monthly goal setting page through a button on my home page.
    11. As a user, I would like to access the input daily spending page through a button on my home page.
    12. As a user, I would like to access the category breakdown page through a button on my home page.
    13. As a user, I would like to access the settings through an icon on my home page.

- **Monthly Goal Setting Page**
    14. As a user, I would like to be able to create my budget goal at the start of each month.
    15. As a user, I would like to be able to add my spending categories at the start of each month by selecting from the provided options.
    16. As a user, I would like to be able to add my spending categories by manually typing them out.
    17. As a user, I would like to set my monthly goal spending only once for the month.

18. As a user, I would like to add in my categories only once for the month.

- **Inputting Daily Spending Page**
    19. As a user, if I have not inputted any of my purchases for the day yet, I will see a default message on the Daily Spending Page stating "You did not spend anything today."
    20. As a user, I would like to click on the plus button to manually enter one item, amount, and category for the day.
    21. As a user, I would like to select the category from a dropdown menu that is associated with the entered purchase.
    22. As a user, I would like to be able to edit my spending amount for a purchase for that day.
    23. As a user, I would like to be able to edit the category for each spending amount for that day.
    24. As a user, I would like to view my daily purchases.
    25. As a user, I would like to only be able to input numerical inputs for the spending amount field.
    26. As a user, I would like to be notified with an error message if I try to add a duplicate purchase, so I can verify if I accidentally logged the same purchase twice.

- **Category Breakdown Page**
    27. As a user, I would like to view each of my spending categories with their own separate progress bars indicating how it fits into the monthly goal.
    28. As a user, I would like to color code each spending category.
    29. As a user, I would like to be able to modify the names of my spending categories.

- **Notification Settings**
    30. As a user, I would like to be able to select the method of notifications (email and/or text message).
    31. As a user, I would like to receive mobile text notifications if I choose the text message option.
    32. As a user, I would like to receive email notifications if I choose the email option.
    33. As a user, I would like to edit my method of notifications.
    34. As a user, I would like to be able to set my daily input spending notification time.
    35. As a user, I would like to be able to set a budget limit warning notification via a percentage threshold.
    36. As a user, I will receive a notification if I reach the budget limit.
    37. As a user, I would like to receive a notification on the 1st day of every month to fill in my monthly goals and spending categories.
    38. As a user, if my account is through gmail, I would like to receive a Google Calendar reminder on the 1st day of every month to fill in my monthly goals and spending categories (if time allows).

- **Data visualization**
    39. As a user, I would like to view my monthly spending in a pie chart, where it is divided based on spending category.
    40. As a user, I would like to view the percentage amount of each category in relation to my budget goal when I hover over each section on the pie chart.
    41. As a user, I would like to view my cumulative daily spending trend compared with the budget goal in a line graph.
    42. As a user, I would like to view a predictive line graph based on current monthly spending (if time allows).

Non-Functional
  a. **Response Time**
  Budget Busters is a web application with multiple user accounts, so there must be a minimal server lag for enhanced user experience. Some mechanisms to prevent this is to utilize Java's concurrency features, like thread pools or asynchronous processing, to ensure that multiple server requests can be handled concurrently and efficiently. Additionally, we can utilize load balancing to distribute the user traffic among multiple server instances. This would prevent any overloading for a single server and eventually improve response times. We will also be using the Firebase Realtime Database so that the application can handle a large amount of concurrent connections. It also offers real-time data synchronization, implying that any changes to the user data would be immediately shown to the connected clients. This ultimately enhances the response time for users since it reduces the latency for real time updates.

  b. **Security**
  The main security concern with Budget Busters is the storing of user details, specifically their login credentials. The login credentials will give them access to their account with all their budgeting goals, which places a high emphasis on security. We will be using Firebase's Authentication System to manage the user credentials and information. Firebase offers robust security features to protect users data by using industry-standard security practices, like using encryption. Additionally, Firebase is a cloud-based platform which implies that it can easily scale to accommodate a growing user base, without changing much of the applications infrastructure. For storing specific information related to the users budgeting goals, we will use Firebase's Database. This database will store the users' specific categories, budgeting goals per category, daily input spendings, and etc.

  c. **Usability**
  Budget busters will take the form of a web application. For easy navigation, the home page will display noticeable buttons denoting each of the available pages: profile, monthly goal setting, input daily spending, and category breakdown. Each of these page interfaces will be simple, employing input fields and dropdowns where necessary. Additionally, the home page will display visual cues such as a welcome message with the user's name, the numerated monthly goal, and the spending breakdown pie chart to make the budgeting data easily understandable. Users can also color-code their spending categories for further personalization.

Moreover, users can choose how and when they receive notifications by clicking on the settings icon from the home page.

d. **Hosting/Development**

Budget Busters will be hosted on Firebase, as it offers a NoSQL cloud database. Specifically, this database utilizes data synchronization, allowing data from multiple devices to be stored and updated in real time. We will implement this hosting by configuring each user's JSON data to set and subscribe to data changes, and it will then listen to incoming requests to make necessary changes onto Firebase. We will receive up to 10 GB of hosting storage, which will be enough to complete the Budget Busters application given the scope of this project.