Whatchamabudget

Karki, A., Kemp, R., Knowles, E., Shrestha, R., Omordia, H.
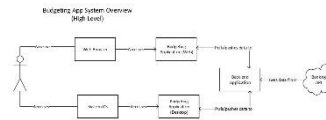## CSE Senior Design

Executive Summary

Whatchamabudget is a budgeting application that will let users manage their daily expenses with the help of different features that are available on it. After registering with the application, user can add multiple bank accounts. Plaid API will provide the necessary information of bank transactions, bill due date, available balances etc. and based on those information, it will let users set their budgeting plan, send due date notifications, view all transactions of different banks at one place, view expenses and income in different visual representations.

Background

We wish to change the relationship that people have with their budgeting apps, and with their money. On its own, the concept of budgeting apps is simple: let users generate a budget and send them notifications on how they're doing. Fundamentally, the apps on the market don't help users set realistic or sensible budgeting goals, and they don't hold users accountable. In an article by CNBC, the interviewed investment advisor stressed the difficulty that young adults have when trying to budget around their student debt. The final problem we have with traditional budgeting apps is the lack of ability for users to experiment with budgeting styles, if an individual wished to try different app styles, they would have to download five separate apps and transfer information between them.

Conceptual Design Phase

• The budgeting application will be composed of roughly four main components/sections. The first section is the means by which the user will access the application, being either a web browser or an operating system (for a desktop application). The second main section is the budgeting app itself, running on either a remote server and accessed via a web browser, or running locally on the user's machine. Third, the application back end runs on a remote server and will be used to store user data and authenticate users with the fourth and final major component, the Banking API. These components and their relationships to one another are shown in Figure 1 below.

Figure 1: High Level System Overview

Detailed Design Phase

• Because one of the main problems with currently popular budgeting apps is rigidity in budgeting structure, our application will ideally allow for users to dynamically switch between different budgeting styles. The application will provide a host of various pre-built budgets based on popular budgeting strategies. It will also provide budgets that are more bare-bones, allowing the user to customize them from the ground up.

• A major design goal of the app is the emphasis of simplicity. Therefore, menus, home screens, etc. are laid out as sparsely and simply as possible. Budgeting can be a very overwhelming task that is intimidating for people to delve into, and we seek to mitigate this intimidation by providing a clean, simple interface to allow people to manage their money.

• Our system contains a variety of pictorial representations of the user's budget such as graphs and charts to help users visually understand the financial situation, while not feeling overwhelmed or swallowed in complex charts and pictorials. Therefore, graphs, charts, and other visual aspects of the applications will be minimalistic, yet informative. We plan for our home screen to be customizable so that users can choose the best visual for easily determining the state of their finances at a glance.

Prototype & Test

• Sample pages of Whatchamabudget can be viewed below in Figures 2 and 3. Figure 2 depicts the process of linking a new bank account to the user's account (utilizes the Plaid Banking API). Figure 3 depicts the transactions on the user's account.
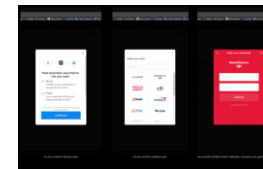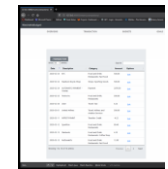
Figure 2: Linking Bank Account

Figure 3: Transactions

Conclusions

• Our app has met the initial expectations of the project.
• We have worked to the following list of features:
  • Overviews with expanding banks list, graph by category and graph over time of transactions
  • Transactions and expenses page that lists, orders, sorts, paginates, edit, and searches transactions
  • A link new account page that can connect to thousands of banks via the plaid API with user's bank credentials
  • Sign in and out pages
  • Profile page with a list of user bank accounts where you can edit how far back your transactions are looked at and you can delete these bank connections as well

References

1. Kelley Long. 5 reasons budgeting apps don't work for most people, Oct 2017.
2. Evan Kuh. Budgeting apps have major flaws when it comes to helping users actually save, Jun 2019.