

Team 9 Product Backlog

Budget Royale

Team Members:

Katelyn Chen, Samuel Duprey, Andrew Liu, Deepika Ramesh

Problem Statement:

Budgeting is an essential life skill, but factors such as a lack of financial literacy and minimal motivation can make it difficult for emerging adults to properly take care of their finances. While there are services to help with budgeting such as Money Helper, Mint, and NerdWallet, they lack the user engagement to aid consistent and long-term budgeting; Budget Royale adds an element of competition using data analysis that makes a task like money management more fun. With Budget Royale, users can input and track savings, income, expenditures, and goals in a centralized location, as well as join groups to compete with friends or users on the application, fostering competition among community members.

Background Information:

Audience

Over the past couple years, the average debt per person in the United States has risen from \$50,090 in 2018 to \$59,580 in 2023 according to Business Insider. 75% of American teenagers believe they have a lack of knowledge in personal finance and 23% of adults ages 18-29 have debt on their credit cards 90 days overdue according to Annuity.org. Budget Royale aims to create a platform to help emerging adults properly manage their finances. The added feature of competition will incentivize users to compete with their friends, take better care of their finances, and come back to the platform.

Similar Platforms

There are budgeting apps, like Goodbudget, PocketGuard, and Mint. These services allow users to set budgetary goals, and track their spending. Goodbudget lets the user sync their goals with more than one person. PocketGuard focuses more on bills, and helps users keep track of budgeting their income to pay recurring bills. Mint links cash accounts, credit cards, and investments to one account to track progress.

Limitations

While these platforms allow users to create financial goals and track their spending, they don't really incentivize users to come back. It's easy for a user to be motivated one week and track

their spending, and then the next week be lazy to input their spending and goals. That's what sets apart Budget Royale from other budgeting apps. Through Budget Royale, users can join groups and compete with others to fulfill their financial goals. Our aim is to make the application more interesting, and encourage young adults to budget and save their money.

Requirements:

Functional:

1. As a user, I want to be able to register for a Budget Royale account.
2. As a user, I want to be able to login to my Budget Royale account.
3. As a user, I would like to be able to reset my password if forgotten.
4. As a user, I would like the option to enable weekly emails regarding Budget Royale.
5. As a user, I would like to be able to access Budget Royale both on mobile and non-mobile devices.
6. As a user, I would like to be able to view how much I saved in total per week
7. As a user, I would like to be able to specify the currency I am using.
8. As a user, I would like to be able to input my spendings by category.
9. As a user, I would like to view a breakdown of my spendings by category of transactions
10. As a user, I would like to view my progress percentage to achieving a financial goal
11. As a user, I would like to view analytics of my cumulative spending from week to week
12. As a user, I would like to see a category breakdown of my cumulative spending for the week.
13. As a user, I would like to be able to toggle on and off specific categories on the analytics dashboard to be able see more specific information about my spending.
14. As a user, I would like to view analytics of my cumulative savings to see any trends.
15. As a user, I would like to view graphs of my cumulative spending and saving to see any trends.
16. As a user, I would like to be able to create a group to compete with.
17. As a user, I would like to join or search for a group to compete with.
18. As a user, I would like to be able to add other users as my friends.
19. As a group admin, I would like to generate invitational QR codes for my group.
20. As a group admin, I would like to be able to generate an invite link for my group.
21. As a group admin, I would like to create custom group goals.
22. As a group admin, I would like to be able to edit and delete group goals.
23. As a group admin, I would like to be able to add and remove group members.
24. As a user, I would like to be able to opt out of the competition features.
25. As a user, I would like to input my financial goals.
26. As a user, I would like to be able to edit and delete my financial goals.
27. As a user, I would like to view my statistics on a dashboard.

28. As a user, I would like to create custom categories of spending.
29. As a user, I would like to be able to win badges or icons from competitions.
30. As a user, I would like to be able to view the badges/icons on a dashboard
31. As a user, I would like the loser from the previous week to have an L next to their username on the scoreboard.
32. As a user, I would like to see a scoreboard for the group.
33. As a user, I would like to export my graphs.
34. As a user, I would like to have access to a navigation bar to be able to toggle between the different pages.
35. As a user, I want an easy to remember domain name to access Budget Royale.
36. As a user, I want to be able to send feedback to the developers through a form.

Non-Functional:

Architecture and Performance

We plan on creating a web application using the Django framework. Django is known for providing robust security features to safeguard web applications and built-in scalability options for handling increased user load. Django also provides built-in support for PostgreSQL, a relational database management system. We plan on taking advantage of that by storing users and groups, as well as retrieving data using PostgreSQL. Built-in support will make our architecture more straightforward and perform efficiently. As for generating graphs and analytics, we plan on using Python. Python contains powerful libraries like plotly and matplotlib that create intricate graphs at a fast speed. To connect Python plot generation with the web framework, we will be utilizing AJAX requests. Hopefully with these frameworks built for speed and efficiency, graph requests can be quickly sent to the back end, generated, and sent to render in less than 5 seconds for users.

Continuous Delivery

To support continuous delivery is important to us as it allows us to more efficiently create changes and updates in our application. Because our team involves both Mac and Windows users, we plan on containerizing our application on Docker. We will also be extensively using Git for version control. Lastly, we would like to set up automated testing, through programs like Jenkins or Circle CI.

Security

Security is important for our product. The database we will be using (PostgreSQL) has built in security through options such as user authentication, SSL encryption, configured allowed hosts,

and controlling roles and remote access. Additionally, we will have options that allow users to choose what information will be shared to other users on the platform.

Usability

Our user interface should be engaging and visually appealing. We need to have each of our features cleanly integrated into our front end so that nothing seems out of place and the users can easily navigate the website and engage with each part of our application. Our users should be able to know how to use each of our features based on the directions and UI we create without any problems. We plan to have our website up 24 hours a day to support users at any time and in any time zone. To support the large number of users the application is built for, we plan to support 100 simultaneous requests, which we will be rigorously testing through automated testing systems, examples being Circle CI/Jenkins and Apache JMeter.

Hosting

We plan to get a domain name through the Github student developer pack and host the website through Github pages.