Team 5 Sprint 1 Planning Document

Team Members
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Sprint Overview

In this sprint, we aim to start off with the development of our first few user stories. A majority of these user stories revolve around authentication pages, setting up the user profile page, and inputting of the monthly budget pages. Specifically, the monthly budget pages require user input and specific UI so that the users can set their monthly budget categories, numeric budget, etc. By the end of this sprint, our goal is to have a web application with successful authentication functionality and a functional monthly budgeting input flow.

Scrum Master: Angela Joseph

Meeting Plan: MWF @ 12:30 - 1:30pm

Risks and Challenges:

A core challenge that our team could face is developing a web application in an efficient manner. Our team has limited experience in developing an application from scratch, so we will need to learn how our software architecture will effectively integrate the frontend and backend together. Additionally, since most of our team has not worked with Firebase and React, the first sprint will require a steep learning curve to be able to understand and implement these technologies and frameworks. We also tried to make accurate predictions with our time for each subtask, but debugging and developing the front-end can take more time than expected.

Furthermore, we may encounter scenarios where we need to add structural changes. We chose our user stories based on the features that are most critical to building the initial structure of our web application. However, when we start coding, we might run into complexities that we didn't foresee, leading us to make unplanned changes to our software architecture. This may include changes to our class hierarchy, interfaces, objects, and overall structure.

Current Sprint Detail

<u>User Story 1:</u> As a user, I would like to be able to create an account (including name, email address, password, phone number, age) for Budget Busters using the official website.

#	Description	Estimated Time	Owner
1	Create UI for inputting name, email address, password, phone number, and age.	6 hrs	Aditi
2	Create user account class	4 hrs	Sarah
3	Store email address, phone number, and age to a unique user.	3 hrs	Sarah
4	Store password in relation to a unique user.	2 hrs	Sarah
5	Verify email address via confirmation email.	2 hrs	Aditi
6	Display account creation success/fail message in the UI.	3 hrs	Aditi

Acceptance Criteria:
1. Given the user wants to create an account, when they start up the app, then there will be a page with input fields to create their account. These input fields include name, email, password, phone number, and age.
2. Given that the user fills out the respective fields, when they finish creating their account using the *Create Account* button, then there will be a confirmation email to verify their account creation.
3. Given that the account information is inputted correctly, when users attempt to create an account, then they will see a success message stating "You have successfully created an account."
4. Given that the account information is inputted incorrectly, when users attempt to create an account, then they will see an error message stating "Error with account creation. Please enter valid input."
5. Given successful implementation of Firebase, when users create their account, then they will be directed to their home page.
6. Given the successful implementation of creating the account, when users log in to the app, they should be able to enter their same email/password combination to successfully login.

User Story 2: As a user, I would like to be able to create an account for Budget Busters using Gmail.

#	Description	Estimated Time	Owner
1	Create UI that presents users with an option to sign up using their Gmail account	3 hrs	Aditi
2	Enable users to access their Google account via Firebase OAuth.	4 hrs	Sarah
3	Redirect users back to Budget Busters app after granting permission	2 hrs	Aditi
5	Pre-populate account registration input fields with information provided from Firebase/Google Oauth authorization	3 hrs	Sarah
6	Store email address, phone number, and age to a unique user	2 hrs	Sarah
7	Verify if the user already has an account with Gmail and prompt user to log in if so	3 hrs	Aditi
8	Display Gmail registration success/fail message in the UI.	2 hrs	Aditi

Acceptance Criteria:
1. Given that a user wants to create an account, when they're at the opening page, there will be a *Sign up with Google* button so that users can register using Gmail, and they will be directed to the Google Sign-In interface via Firebase OAuth.
2. Given the successful implementation of Google/Firebase OAuth, when users confirm the use of their Gmail account, some of the additional input fields will be populated based on the user's privacy settings.
3. Given that a user grants permission to use their Gmail account, when they click confirm, they will be redirected to the Budget Busters app.
4. Given the successful implementation of creating an account via Google, when users want to log in to the app, there will be a *Login with Google* button, and they can successfully log into the app.
5. Given that a user didn't create an account using Google, if users attempt to login using Google, there will be an error message stating "Error. You did not create an account with Google."

6. Given that a user doesn't have a valid Google account, when users attempt to sign up or login using Google, there will be an error message stating "Error. Verify your Google account."

User Story 3: As a user, I would like to be able to delete my Budget Busters account.

#	Description	Estimated Time	Owner
1	Create a 'delete account' button on the settings/user profile page	2 hrs	Aditi
2	Create a confirmation window to prompt the user when they click the delete account button	3 hrs	Sarah
3	Remove all user data from Firebase	2 hrs	Sarah
4	Display account deletion success/fail message in the UI.	3 hrs	Aditi

Acceptance Criteria:
1. Given that a user successfully logs in to the app, when they navigate to the settings/user profile page, there will be a *Delete Account* button.
2. Given that the user wants to delete their account, when they click the *Delete Account* button, there will be a confirmation window that pops up.
3. Given that the user wants to delete their account, when they click the confirmation button, the user won't be able to login with their previous credentials.
4. Given the successful implementation of account deletion, when the deletion process is complete, those credentials aren't assigned to any existing user, so a new user can sign up with those credentials.
5. Given that a user deletes their account, when they attempt to login to the web app using their previous credentials, an error message stating "This account does not exist." will be displayed.

User Story 4: As a user, I would like to be able to login to my Budget Busters account.

#	Description	Estimated Time	Owner
1	Create UI for users to enter their username (email) and password	3 hrs	Aditi
2	Validate users' login info with Firebase	3 hrs	Sarah
3	If credentials are valid/invalid, display an success/error message respectively	2 hrs	Sarah

4	Display account creation success/fail message in the UI.	3 hrs	Aditi
5	Create unit tests for login verification	4 hrs	Sarah

Acceptance Criteria:
1. Given that the user has successfully created an account, when they attempt to login using the correct credentials, there should be a successful login message stating "Successful login."
2. Given that the user has successfully created an account, if they attempt to login using the incorrect credentials, there should be an error message stating "Error. Wrong credentials, please try again." They should be prompted to re-attempt login with different credentials.
3. Given that users provide the correct login credentials, when they successfully login, they should be directed to their home page.
4. Given that a user provides the invalid credentials, when they click on the *Login* button, an error message stating "Error. Please create an account."
5. Given that a user provides the wrong credentials, when they click on the *Login* button, they will be prompted to reset their password via the *Reset Password* button.

User Story 5: As a user, I would like to be able to reset my password if my account is linked to the official website.

#	Description	Estimated Time	Owner
1	Create a Reset Password Option on the login page.	1 hr	Aditi
2	Create an input field for users to input their email address.	2 hrs	Aditi
3	Send a reset password link to the user's email.	3 hrs	Sarah
4	Update the reset password on Firebase.	2 hrs	Aditi
5	Users are redirected to the reset password page once they click the reset password link.	3 hrs	Sarah
6	Test to make sure that a user can recover their password with a recovery link sent to email.	2 hrs	Aditi

Acceptance Criteria:
1. Given that the user attempts to reset their password through email, when the user clicks on the link, they are redirected to the reset password page.
2. Given that a user wants to reset their password, when they click reset password on the login page, they will receive a reset password link to their email.

3. Given that a user has reset their password, when they access their Budget Busters account, they can login with their altered password.
4. Given that the old password is deleted on the database, when the user resets their password, then they can no longer access their account with their old password.
5. Given that the user inputted data is stored in the database, when the user inputs the new password, then the user can login to their budget account with their new password.

User Story 6: As a user, I would like to be able to create my profile page with a profile picture, age, notes section, and phone number (inputted from User Account page).

#	Description	Estimated Time	Owner
1	Create a UI for the user profile page	5 hrs	Rosie
2	Connect the user account class with the UI.	3 hrs	Sarah
3	Retrieve email, full name, profile picture, and age from Firebase.	4 hrs	Sarah
4	Once the user has edited the notes, the modified notes will be updated on Firebase.	2 hrs	Aditi
5	Retrieve notes from Firebase.	2 hrs	Aditi
6	Display email, full name, profile picture, age, and notes on UI.	3 hrs	Aditi
7	Verify input fields for the user profile, as the user modifies email and age.	3 hrs	Aditi

Acceptance Criteria:
1. Given that some fields in the user profile page are imported from the create account page, when the user accesses the user profile page, then the user can see the profile data they inputted from create account.
2. Given that the notes will be stored and retrievable, when the user first enters their notes, the user inputted notes will be displayed in the notes section.
3. Given that the notes will be stored and retrievable, when the user modifies their notes, then the modified notes will be displayed in the notes section.
4. Given that the inputted data will be stored and retrievable, when the user modifies their user profile details, then modified user profile details will be displayed in the profile page.

5. Given that the user is inputting data on their user profile page for the age and phone number, when the user types in an invalid text type, then an error message is displayed: "Error. Age and Phone Numbers fields only accept numeric values.".
6. Given that a user is updating their profile picture, when the user selects the profile icon, then a profile picture can be imported from their files.

User Story 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.

#	Description	Estimated Time	Owner
1	Retrieve email, full name, profile picture, age, and notes from Firebase.	2 hrs	Sarah
2	Update the user modified email, full name, profile picture, age, and/or notes to Firebase.	3 hrs	Sarah
3	Display the modified email, full name, profile picture, age, and notes on UI.	3 hrs	Angela

Acceptance Criteria:
1. Given that the preexisting data in the user profile page is imported from the create account page, when the user accesses the user profile page, then the user can see the profile data they inputted from create account.
2. Given that the user is modifying the age and phone number data on their user profile page, when the user types in an invalid text type, then an error message is displayed: "Error. Age and Phone Numbers fields only accept numeric values.".
3. Given that a user is modifying their profile picture, when the user selects the profile icon, then the updated profile picture can be imported from their files.
4. Given that the modified user profile data will be stored and retrievable, when the user wants to modify the email, full name, profile picture, and, and/or notes, then the modified user profile information will be displayed on the user profile page.
5. Given that the user can modify their user profile information, when the user modifies the email, full name, profile picture, and/or notes, then a message will be displayed: "User Profile Information Modified."

User Story 8: As a user, I would like to be able to upload my profile picture from my computer.

#	Description	Estimated Time	Owner
1	Implement a button to import a picture from the user's	4 hrs	Aditi

#	Description		
	PC files.		
2	Save the picture to the Firebase profile of the user.	3 hrs	Sarah

Acceptance Criteria:
1. Given that a user wanted to import a profile picture, when they go to the user profile page/click on their profile circle, there will be a "Import from files" option.
2. Given that a user wants to import a profile picture, when the user clicks the button to import a profile picture, then they will be able to access their files.
3. Given that the connection to the user's files is successful, when the user selects a picture and clicks open, then they can see which image they will be choosing to display.
4. Given that the user's selected image is saved to the database, when the user accesses their user profile page, then their profile picture will be displayed.
5. Given that the user's selected image is saved to the database, when the user wants to modify their profile picture, then they can click the "Import from files" button and modify their profile picture.

User Story 9: As a user, I would like to access the monthly goal setting page through a button on my home page.

#	Description	Estimated Time	Owner
1	Create UI for displaying the home page.	3 hrs	Angela
2	Create a button for navigating the user to the monthly goal setting page.	1 hr	Angela

Acceptance Criteria:
1. Given that the user has a Budget Busters account, when the user logs in, then they will be directed to the home page.
2. Given that the user logs in, when the user views the home page, then they will be able to see a button stating *Set Monthly Goal*.
3. Given that the user is on the home page, when the user clicks on the *Set Monthly Goal* button, then they will be taken to the monthly goal setting page.

User Story 10: As a user, I would like to be able to create my budget goal at the start of each month.

#	Description	Estimated Time	Owner
1	Create UI for monthly goal setting page, including the goal input field and submit button	6 hrs	Rosie
2	Create set monthly goal class	2 hrs	Angela
3	Assign inputted monthly goal to the corresponding user in Firebase.	4 hrs	Angela
4	Display an error message under the monthly budget field if it contains a non-numerical input.	3 hrs	Rosie
5	Display a message confirming monthly budget goal creation on UI.	2 hrs	Angela
6	Display monthly budget on the monthly goal setting page.	2 hrs	Angela

Acceptance Criteria:
1. Given that the user clicks on the *Set Monthly Goal* button, when the user views the monthly goal setting page, then they will see a field titled "Monthly Budget Goal".
2. Given that the user is setting their monthly goal, when the user types non-numeric characters into the field, then an error message stating "Invalid budget goal. Please provide a numerical input." will display underneath the field.
3. Given that the user is setting their monthly goal, when the user types non-numeric characters into the field, then the submit button will disable.
4. Given that the user inputted their monthly goal, when the user submits their budget amount, then they will see a confirmation message stating "This month's budget has been created!".
5. Given that the user inputted their monthly goal, after the user submits their budget amount, then they will see the budget amount displayed on the monthly goal setting page.

User Story 11: 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.

#	Description	Estimated Time	Owner
1	Create UI for displaying prepopulated spending categories for the user to select	3 hrs	Rosie

2	Create a spending category class	2 hrs	Angela
3	Create and read from a file with predefined spending categories	4 hrs	Rosie
4	Assign selected spending categories to the corresponding user in Firebase	5 hrs	Angela
5	Color in the user's selected spending category fields to indicate that they've been selected before creating.	2 hrs	Rosie
6	Remove colored in fields when the user deselects spending category fields to indicate that they've been deselected before creating.	2 hrs	Rosie
7	Display a message confirming category creation on UI.	2 hrs	Angela
8	Display the selected categories on the monthly goal setting page.	2 hrs	Angela

Acceptance Criteria:
1. Given that the user clicks on the *Set Monthly Goal* button, when the user views the monthly goal setting page, then they will see a header titled "Select Spending Categories".
2. Given that the user is on the monthly goal setting page, when the user views the "Select Spending Categories" header, then they will see a list of spending categories, including "rent", "groceries", "food", "shopping", "entertainment", "savings", etc.
3. Given that the user views the list of spending categories to select from, when the user selects one of the spending categories, then the field will color in to indicate that it has been selected.
4. Given that the user selects a spending category, when the user clicks on that category again, then the field color will be removed to indicate that it has been deselected.
5. Given that the user selected their spending categories, when the user submits their selections, then they will see a confirmation message stating "This month's spending categories have been created!".
6. Given that the user selected their spending categories, when the user submits their selections, then they will see their selected spending categories displayed on the monthly goal setting page.

User Story 12: As a user, I would like to be able to add my spending categories by manually typing them out.

#	Description	Estimated Time	Owner
1	Create a UI for Add Categories field.	3 hrs	Angela
2	Create a field to add the category name and an 'add' button.	4 hrs	Angela
3	List the previously-added categories before submission.	3 hrs	Angela
4	Display the added category once the name is added to a list on the monthly budget page.	3 hrs	Angela
5	Handle duplicate categories names.	4 hrs	Rosie
6	Display the submitted categories on the monthly budgeting page.	4 hrs	Rosie
7	Assign added spending categories to the corresponding user in Firebase	5 hrs	Rosie

Acceptance criteria:
1. Given that the user wants to set their monthly goal and categories, when the user views the categories section on the monthly goal page, then they will see an + button in that section.
2. Given that the user wants to create their own category, when the + button is selected, then an empty field and *Add* button will appear to manually type and submit a new category name.
3. Given that the user wants to add multiple categories, when the user clicks the + button, then the empty field will refresh and the user can input and add another category name by clicking the *Add* button.
4. Given that the user types in a new category name, when the user presses the *Add* button, then the manually added category name will be displayed in a list.
5. Given that the user wants to create their own category, when the user manually types a pre-existing category name, then the screen will display an error message stating "This category name already exists. Please create another name."
6. Given that the user wants to create their own categories, when the user submits their created categories, then they will see the created categories on the monthly goal setting page.

User Story 13: As a user, I would like to color-code each spending category.

#	Description	Estimated Time	Owner
1	Create a set of predefined colors that the user can choose to represent each of their categories.	5 hrs	Rosie
2	Reflect the color-coded spending categories on the monthly budget page after submission.	3 hrs	Rosie
3	Create a submit button to remove the dropdown of colors.	3 hrs	Angela

Acceptance criteria:
1. Given that the user has selected their categories, when the user submits their categories, then they will be directed to another page to color-code their categories.
2. Given that the user selects a color from the predefined list, when representing one category, then that color will be displayed to the respective category selected.
3. Given that the user doesn't assign a color to a category, when they submit without color coding that category, then the screen will display an error message stating "Please enter a color for every category."
4. Given that the user doesn't assign a color to a category, when they submit without color coding that category, then the submit button will be disabled.
5. Given that the user assigns a color to each category, when the user submits their color-coded categories, then the dropdown menu will disappear.

User Story 14: As a user, I would like to be able to modify the names of my spending categories.

#	Description	Estimated Time	Owner
1	Create UI for dropdown feature and edit button.	4 hrs	Angela
2	Create a dropdown list to rename selected category names.	2 hrs	Angela
3	Reflect the modified category name to the monthly budget page.	3 hrs	Angela
4	Test that the modified category name does not already exist.	2 hrs	Rosie
5	Handle cases when the user clicks to edit a category	3 hrs	Rosie

	name when they do not intend to modify it.		

Acceptance criteria:

1. Given that the categories are selected, when the user submits all of their desired categories for the month, then an *Edit* button will appear to edit any of the names.
2. Given that the user wants to modify a category name, when the *Edit* button is selected, then the user can select the category they wish to rename from the dropdown menu of all category names.
3. Given that the user wants to modify a category name, when the user selects a category name from the dropdown menu, then the user is given a new field to manually type the modified category name.
4. Given that the user did not intend to modify a category name, when the user selects a category name from the dropdown menu, then the user can press the *Edit* button to refresh their selection.
5. Given that the user intends to modify a category name, when the user selects a category name from the dropdown menu, then the modified category name will be displayed on the monthly goal page.

Remaining Backlog

Functional Requirements

- **User account**
  a) ~~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.~~
  b) ~~As a user, I would like to be able to create an account for Budget Busters using Gmail.~~
  c) ~~As a user, I would like to be able to delete my Budget Busters account.~~
  d) ~~As a user, I would like to be able to login to my Budget Busters account.~~
  e) ~~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**
  a) ~~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).~~
  b) ~~As a user, I would like to be able to edit my profile page with a profile picture, age, notes section, and phone number.~~
  c) ~~As a user, I would like to be able to upload my profile picture from my computer.~~

- **Home Page**
  a) As a user, I would like to view my personalized home page with my monthly goal and spending pie chart.
  b) ~~As a user, I would like to access the monthly goal setting page through a button on my home page.~~
  c) As a user, I would like to access the input daily spending page through a button on my home page.
  d) As a user, I would like to access the category breakdown page through a button on my home page.
  e) As a user, I would like to access the settings through an icon on my home page.

- **Monthly Goal Setting Page**
  a) ~~As a user, I would like to be able to create my budget goal at the start of each month.~~
  b) ~~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.~~
  c) ~~As a user, I would like to be able to add my spending categories by manually typing them out.~~
  d) ~~As a user, I would like to color code each spending category.~~

e) ~~As a user, I would like to be able to modify the names of my spending categories.~~
f) As a user, I would like to set my monthly goal spending only once for the month.
g) As a user, I would like to add in my categories only once for the month.

- **Inputting Daily Spending Page**
  a) 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."
  b) As a user, I would like to click on the plus button to manually enter one item, amount, and category for the day.
  c) As a user, I would like to select the category from a dropdown menu that is associated with the entered purchase.
  d) As a user, I would like to be able to edit my spending amount for a purchase for that day.
  e) As a user, I would like to be able to edit the category for each spending amount for that day.
  f) As a user, I would like to view my daily purchases.
  g) As a user, I would like to only be able to input numerical inputs for the spending amount field.
  h) 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**
  a) 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.

- **Notification Settings**
  a) As a user, I would like to be able to select the method of notifications (email and/or text message).
  b) As a user, I would like to receive mobile text notifications if I choose the text message option.
  c) As a user, I would like to receive email notifications if I choose the email option.
  d) As a user, I would like to edit my method of notifications.
  e) As a user, I would like to be able to set my daily input spending notification time.
  f) As a user, I would like to be able to set a budget limit warning notification via a percentage threshold.
  g) As a user, I will receive a notification if I reach the budget limit.
  h) 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.

i) 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**
    a) As a user, I would like to view my monthly spending in a pie chart, where it is divided based on spending category.
    b) 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.
    c) As a user, I would like to view my cumulative daily spending trend compared with the budget goal in a line graph.
    d) As a user, I would like to view a predictive line graph based on current monthly spending (if time allows).