Revision #2
Revision Date: 12/4/2024

BudgetByte Test Plan and Report

System Test scenarios:

User Story 1: As a BudgetByte user, I want to create and access my profile, so my personal data is saved and I don't have to re-enter it every time I use the platform.

Scenario 1: Create a BudgetByte account (Pass)
Test Steps:

1. Start BudgetByte app
2. Click the 'Try it Out' button
3. Enter display name as **John Doe,** email as johndoe@gmail.com, password as **password123**, and confirm password as **password123**.
4. Click the Register button

Expected Result:

- A message saying "New User Created!" should be displayed.
- User is redirected to the dashboard

User Story 2: As a BudgetByte user, after I upload my receipt, I want the system to automatically extract each item name along with price so I don't have to type each in manually.

Scenario 2: Upload a Grocery Receipt and Extract Grocery Item Name and Price (Pass)
Test Steps:

1. Start BudgetByte app
2. Click on "Upload Receipt" Button
3. Upload the file: "receipt.png" (with good lighting and conditions)
4. Click "Upload and Parse"
5. Set receiptDate as 12/3/2024

Expected Result:

- The system should extract item names and prices from the receipt with at least 75% accuracy
- The extracted data is listed on the dashboard with item name and price
- The extracted data is saved to Firebase

User Story 3: As a BudgetByte user, after the system attempts to categorize each item, I want to be able to edit the data, so that I can correct any mistakes in categorization.

Scenario 3: Edit Categorized Grocery Items (Pass)
Test Steps:

1. Navigate to the dashboard
2. View the categorized grocery items.
3. Click on an item to edit its category or other details (.e.g., price, name).
4. Make changes and save.

Expected Result:

- The item's details are updated accordingly in the Receipt component on the dashboard
- Changes are reflected in real-time on both the Summary component, Analytics, and Firebase

User Story 4: As a health-conscious user, I want the system to categorize each item from my receipt into specific food groups, so I can see what types of food I am buying.

Scenario 4: Automatically Categorize Items into Food Groups (Pass)
Test Steps:

1. Start BudgetByte app
2. Click on "Upload Receipt" Button
3. Upload the file: "receipt.png"
4. Example: items: USDA CHOICE BEEF, ROSIE ORGNC CKN, TOMATOES, TORTILLA, SOUR CREAM
5. Click "Upload and Parse"
6. Set receiptDate as 12/3/2024

Expected Result:

- Each grocery item should have a foodGroup that assigned and uploaded to Firebase
    - USDA CHOICE BEEF → Protein
    - ROSIE ORGNC CKN → Protein
    - TOMATOES → Vegetables
    - TORTILLA → Grains
    - SOUR CREAM → Dairy

User Story 5: As a health-conscious money saver, I want to see a pie chart representation of my grocery spending by category, so that I can understand how much I spend on different food groups and see if I am eating a balanced diet.

Scenario 5: View Grocery Spending Breakdown in Pie Chart (Pass)
Test Steps:

1. Navigate to the dashboard
2. View the pie chart representation of spending by food category

Expected Result:

- The pie chart should display the percentage of total spending for each food group.
- The data should be accurate and represent the most recent receipt.

User Story 6: As a money-conscious user, I want to view how much I spend on groceries each month, so I can make informed budgeting decisions.

Scenario 6: View Total Monthly Grocery Spending (Pass)
Test Steps:

1. Navigate to “Analytics” section
2. Select the option to view the spending for the month

Expected Result:

- The total amount spent on groceries for the specified month is displayed

Unit tests:

We have created unit tests for the core functionalities (backend and frontend) of the app using Jest. The can be found under the “__tests__” directory at the root level of the project. Running “npm run test” will execute the test suite locally. We also have a Github workflow setup that runs all of the tests each time a merge is attempted. All of the unit tests pass locally and remotely on Github.