PROG 7313

Formative Part 1

Planning and Design

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Planning and Design

Budget Buddy is an app we've developed to help users easily track their personal finances, monitor spending, and work towards savings goals. Our goal is to make budgeting more engaging and less stressful by offering a user-friendly interface and practical features. The app could alsoincorporate a simple gamification element to encourage consistent usage and provide motivation.

We chose the name Budget Buddy to reflect how the app acts as a helpful companion in managing personal finances. Our logo features a black and yellow color scheme with the words "Budget Buddy" and a piggy bank icon. This visually represents the app's purpose—helping users save money and manage their budget in a simple, effective way.

The app is built for Android devices, with a clean, minimalistic design focused on ease of use. Our core features will allow users to track their spending habits, set budgets, and receive notifications that keep them on track. By making budgeting feel a little more fun and less overwhelming. We hope our users can take control of their finances more easily.

App Requirements and Main Features

1. User Registration and Login

• The app will allow users to create an account with a username and password. This is crucial for keeping financial data secure and personal. By having an account, users can

save their data across multiple sessions and devices, making the app much more accessible and convenient.

2. Expense Categories

• One of the first features users will engage with is creating expense categories. Users will be able to define categories like "Groceries," "Entertainment," and "Transport." This allows users to better organise and manage their spending, which is essential for budgeting.

3. Adding an Expense

• The ability to add expenses is central to the app. Users will input the amount, date, description, and category of each expense. This feature ensures users can track every purchase accurately. There will also be an option to upload a photo of the receipt, providing an easy way to store and refer to receipts later.

4. Setting Budget Goals

• Users will be able to set a monthly budget goal, both for their total expenses and for individual categories. This feature is crucial for ensuring users stay within their financial limits. If users exceed their budget in a category, the app will alert them, helping them stay on track.

5. Viewing Expenses

• The app will display a list of all expenses recorded within a specific time period. Users will be able to filter expenses by date, amount, or category. This feature will give users an easy way to review their spending history and ensure all entries are logged correctly.

6. Category Spending Tracking

• Budget Buddy will track how much users have spent within each category over time. This feature is important for understanding spending patterns and identifying areas where users can reduce costs. It will also allow users to compare their current spending against their budget goals.

7. Local Database Storage

• To ensure data security and privacy, all user data (including expenses, budget goals, and categories) will be saved in a local database. This allows users to access their information even if they don't have internet access, providing them with flexibility and convenience.

Possible Additional Features

1. Progress Dashboard

• The progress dashboard will give users a real-time overview of their budgeting status. It will display their total monthly expenses compared to their budget, show how much they have left to spend, and highlight any overspending categories. This dashboard will be easily accessible from the home screen, providing users with quick feedback on their financial progress.

2. Simple Rewards System

• To keep users motivated, the app will include a simple rewards system. Users will earn badges or points for activities such as logging a certain number of expenses, staying within budget for a week, or consistently hitting savings goals. These rewards will add an element of gamification, making budgeting feel more like a challenge and less like a task.

3. Spending Overview Graph

• A graph will show how much the user has spent in each category over a selected period (e.g., week, month). This visual representation will help users spot spending trends and identify categories where they could cut back. For example, if the user notices they've been spending too much on dining out, the graph will give them a clear, visual prompt to adjust their spending behaviour.

4. Expense History List

• The expense history list will show a chronological list of all past expenses, complete with amounts, descriptions, and categories. This will allow users to easily track how much they've spent and on what, providing a clear record of all financial activities. The list will be searchable, making it simple for users to find specific transactions.

5. Expense Reminders

• If a user hasn't logged any expenses in a while, the app will send reminders to encourage them to stay on track. These reminders will help users avoid neglecting their budget and will prompt them to enter new expenses as they occur. This will be especially useful for users who tend to forget to log smaller expenses, such as those for transportation or coffee.

6. Recurring Expense Tracking

• The app will offer a way for users to set up recurring expenses, such as rent, subscriptions, and insurance payments. Users can set the frequency for each expense, and the app will automatically add it to the expense list at the appropriate time. This will save users the hassle of manually entering these recurring expenses each month.

7. Multi-Device Syncing

• While this feature isn't included in the initial version, it could be a future addition. The ability to sync data across multiple devices would allow users to access their budgeting information on different smartphones, tablets, or computers. This would be particularly useful for people who like to check their finances from different devices or who want to share their budget data with a partner or family member.

Screens & Descriptions

1. Welcome Screen

- ☐ **Purpose:** Provides a welcoming interface and directs users to log in or sign up.

- ☐ **Key Elements:**

  - ○ App logo

  - ○ "Login" button

  - ○ "Sign Up" button

  - ○ Background image or animation

- ☐ **Functionality:**

  - ○ Tapping "Login" directs users to the Login Screen.

  - ○ Tapping "Sign Up" directs users to the Registration Screen.

2. Login Screen

☐ **Purpose:** Allows existing users to log into their accounts securely.

- ☐ **Key Elements:**

  - ○ Email/Username input field

- Password input field

  - "Forgot Password" link

  - "Login" button

☐ **Functionality:**

- Users enter credentials and tap "Login" to access the Home Screen.

- "Forgot Password" redirects users to the Password Recovery Screen.

3. Registration Screen

☐ **Purpose:** Enables new users to create an account.

  ☐ **Key Elements:**

  - Name input field

  - Email input field

  - Password input field

  - "Sign Up" button

  - Terms & Conditions checkbox

  ☐ **Functionality:**

  - Users enter details and tap "Sign Up" to create an account.

  - Successful registration redirects to the Home Screen.

4. Home Screen

☐ **Purpose:** Acts as the main hub where users access core app features.

  ☐ **Key Elements:**

    - Navigation bar (Home, Profile, Settings)

    - Featured content/cards

○ Action buttons (depending on app functionality)

□ **Functionality:**

○ Users can browse content or navigate to different sections.

5. Profile Screen

□ **Purpose:** Displays user profile details.

□ **Key Elements:**

○ Profile picture

○ User details (name, email, etc.)

○ "Edit Profile" button

□ **Functionality:**

○ Users can view and edit their profile information.

6. Settings Screen

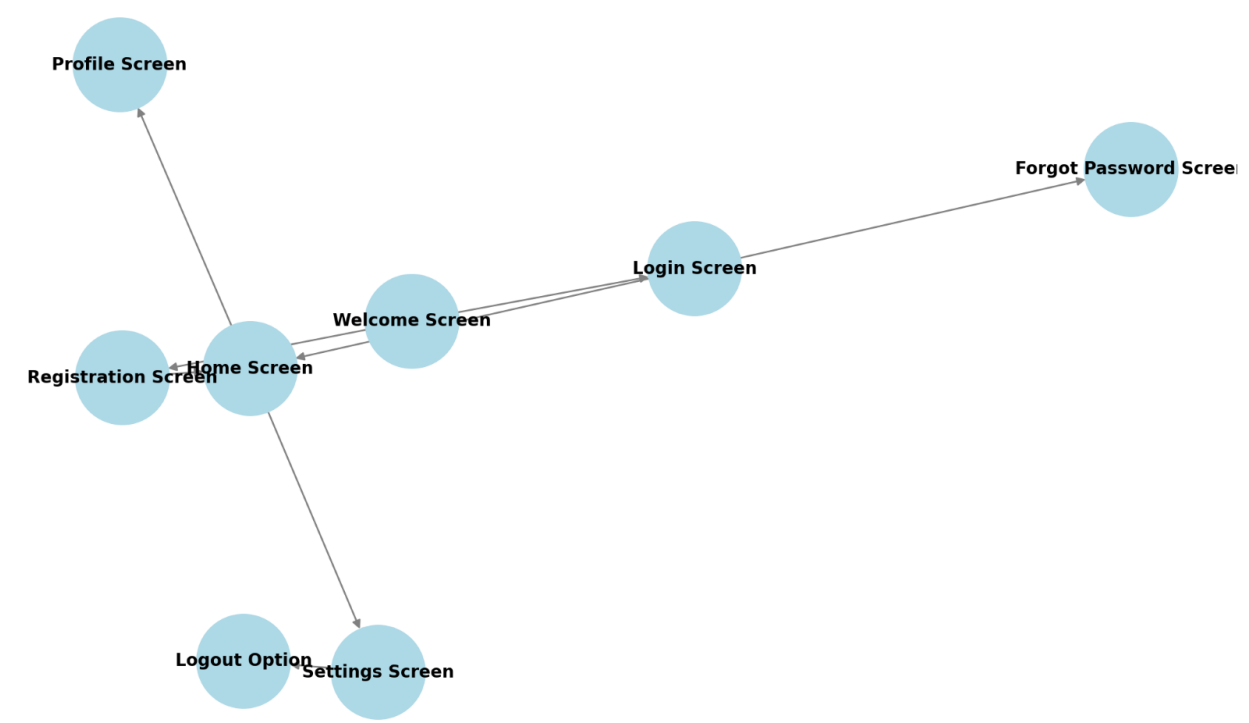□ **Purpose:** Allows users to configure app preferences.

□ **Key Elements:**

○ Toggle switches for notifications and privacy settings

○ Logout button

□ **Functionality:**

○ Users can modify settings and log out.

Navigation Flowchart:

Mobile App Navigation Flowchart

Gantt Chart

Project Plan for Budgeting App

Task	Duration (days)	Start Date	End Date	Milestone/Notes
Research Phase				
Research existing budgeting apps	7	21 Mar 2025	27 Mar 2025	Complete with a detailed report (1500-2000 words).
Compile innovative features	2	28 Mar 2025	29 Mar 2025	Summarize features to include in your app.
Planning and Design Phase				

Task	Duration	Start	End	Notes
Define app requirements	3	30 Mar 2025	1 Apr 2025	Finish clear specifications and goals.
Draft wireframes for UI	4	2 Apr 2025	5 Apr 2025	Create app layout design.
Review and revise wireframes	2	6 Apr 2025	7 Apr 2025	Include feedback for final designs.
Create design prototype	5	8 Apr 2025	12 Apr 2025	Complete using preferred design tools.
Implementation Phase				
Set up project environment	3	13 Apr 2025	15 Apr 2025	Include GitHub setup with actions for CI/CD.
Implement login and registration system	5	16 Apr 2025	20 Apr 2025	Test username/password authentication.
Create expense categories	3	21 Apr 2025	23 Apr 2025	"Groceries," "Entertainment," "Transport," etc.
Add expense entry functionality	5	24 Apr 2025	28 Apr 2025	Include receipt photo upload option.
Set budget goal functionality	4	29 Apr 2025	2 May 2025	Implement monthly and category-specific limits.
Generate expense list view	4	3 May 2025	6 May 2025	Include filter by period and receipt access.
Create local database storage	5	7 May 2025	11 May 2025	Save expenses, budgets, and categories locally.

Develop data visualization	5	12 May 2025	16 May 2025	Add graph for daily/category spending trends.
Implement dashboard UI	6	17 May 2025	22 May 2025	Include progress tracking and overspending alerts.
Add gamification features	5	23 May 2025	27 May 2025	Rewards or badges for consistent usage.
Migrate data to online database	6	28 May 2025	2 Jun 2025	Ensure multi-device compatibility.
Testing and Bug Fixing Phase				
Unit testing	5	3 Jun 2025	7 Jun 2025	Test individual components thoroughly.
Integration testing	4	8 Jun 2025	11 Jun 2025	Ensure modules work seamlessly together.
User testing	6	12 Jun 2025	17 Jun 2025	Get feedback from peers or test group.
Fix bugs identified during testing	7	18 Jun 2025	24 Jun 2025	Resolve issues and retest fixed components.
Submission Phase				
Final review and polish	3	25 Jun 2025	27 Jun 2025	Ensure all requirements are met.
Submit project	1	28 Jun 2025	28 Jun 2025	Celebrate your hard work!

Budget Buddy is designed to simplify the budgeting process, providing users with the tools they need to track their spending, set goals, and achieve financial stability. By incorporating core features like expense tracking, budget goals, and category spending, alongside possible additional features such as rewards, progress tracking, and expense reminders, we aim to create a well-rounded app that makes budgeting easy, fun, and motivating.

The app's user-friendly design and practical features will help users take control of their finances, reduce stress, and assistwith spending goals. As we continue developing Budget Buddy, we are confident that it will serve as an essential tool for anyone looking to manage their money more effectively.