**1. Name of the GUI Application**  
"Eco Budget Tracker"

**2. Purpose of the Application**  
This application helps users track expenses while simultaneously promoting eco-friendly spending habits. It encourages users to categorize their expenses based on sustainability factors and monitors progress toward a greener environment.

**3. Reasons for Creating the Application**  
With growing interest in sustainable living and climate change, many people want to make eco-conscious spending choices, but many people are unsure how to track this. This application makes it easier to log expenses with an eco-focus, categorizing items based on environmental impact and helping users manage sustainable spending.

**4. Goals for the Application**

This application will allow users to log expenses with categories like “Sustainable,” “Local,” and “Eco-Friendly.”, and it will provide a summary of eco-friendly vs. conventional spending for comparison. I also want it to show trends in eco-conscious purchases over time, encouraging users to improve personal sustainable spending. Lastly, the application will provide tips on sustainable purchases and budgeting.

**5. Target Audience**  
The application targets eco-focused adults, mostly ages 18-40, who are interested in sustainable living. This includes students, young professionals, millennials, Gen Z, etc. Mix of male and female, all races and ethnicities, and mostly predominately middle-class.

**6. Outline of the Final Python tkinter GUI Application**

* **Window 1 - Main Dashboard**

Buttons to navigate to "Add Expense," "Eco Summary," and "Eco Goals." An Exit button to close the application.

* **Window 2 - Add Expense**

A Label "Log Your Expense". Input fields for expense name, amount, sustainability category, and date. A button "Save Expense" with validation checks to ensure data accuracy. Then navigation button back to the Main Dashboard.

* **Window 3 - Eco Summary**

This window displays categorized spending with a breakdown of sustainable vs. conventional purchases. It will also include a bar chart or pie chart to visualize the actual percentage of eco-conscious spending. Another button “Get Eco Tips” will open a pop-up window with sustainable budgeting tips, and lastly, a navigation button back to Main Dashboard.

* **Additional Features:**
  + Images: An icon that is eco-related (leaf icon) for the main dashboard and an icon related to spending (dollar sign icon).
  + Labels: Clear instructions/prompts.
  + Buttons: Save Expense, Eco Summary, Set Eco Goals, Get Eco Tips, and Exit.
  + Callback Functions: Each button will trigger functions to navigate, save data, validate inputs, and display eco tips.

**7. Validation and Security Practices**

Input fields will validate data, and empty fields will show an error prompt to prevent missing data information.

**8. Testing Plan**

Develop test data to ensure valid entries, handle empty fields, and handle incorrect data types, then take screenshots of successful test cases and note any corrections needed.

**9. GitHub**  
A GitHub repository will house the source code, documentation, and user manual, along with clear version control for project milestones.

\*UPDATE – For Project Part 2\*

As of Module 6th, I have so far successfully created the wireframe and implemented the entire GUI TKinter code in Python, and my application runs smoothly. I also successfully created the GitHub Repository to store all the project details, which can be found here: <https://github.com/makaelynturner/EcoBudgetTracker>

I ran into some issues with the actual coding process, such as figuring out how to set up and get the graph/pie chart to work properly for the spending breakdown, but this was resolved by google searches and Artificial Intelligence. I did test the application and added some expenses, I will attach screenshots below:

A screenshot of a computer

Description automatically generated

My next step will be running some documented final testing using large datasets and invalid inputs as well. I will continue updating my GitHub Repository and create a small user manual that explains how to run the application, use the features, and troubleshoot common issues.

Wireframe:

A diagram of a business

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