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**Daily Expense Calculator Using Python GUI**

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## **Title: Daily Expense Calculator**

### **Domain:**

The domain of this project lies in personal finance management, specifically daily expense tracking. The application targets individuals who want a simple and efficient way to record and manage their daily expenditures. It caters to users who prefer a desktop-based solution for tracking expenses over time.

### **Introduction:**

The "Daily Expense Calculator" is a Python-based desktop application that provides a straightforward interface for users to log their daily expenses. Developed using the Tkinter GUI framework, the application leverages an SQLite database to store and manage expenditure records efficiently. The primary goal is to assist users in maintaining a clear record of their daily spending habits.

### **Literature review:**

While personal finance management applications are abundant, the project stands out by focusing on simplicity and ease of use. Tkinter, a popular GUI framework for Python, offers a native look and feel. SQLite, a lightweight database engine, is well-suited for small-scale applications like personal expense trackers.

The inclusion of a calendar widget (tkcalendar) enhances the user experience by simplifying date selection. This application aligns with the trend of developing lightweight, user-friendly finance tools for individuals who prefer locally installed solutions.

### **Limitations of Existing solutions:**

- Existing personal finance apps can be overly complex, offering features like budgeting and investment tracking that may overwhelm users seeking a simpler expense tracking solution
- Some apps require subscriptions or additional payments for premium features, discouraging users who prefer free or one-time-payment alternatives
- Cloud-based finance apps may raise privacy and security concerns as users are required to store sensitive financial data on external servers

### **Newly added features to overcome above limitations:**

- The application prioritizes a simple and intuitive user interface, ensuring that users can quickly and easily record their daily expenses without unnecessary complexity
- The application prioritizes user privacy by storing financial data locally on the user's device, reducing concerns associated with cloud-based storage
- The "Daily Expense Calculator" minimizes the learning curve by offering a user-friendly design. Features are presented in a clear and straightforward manner, allowing users to navigate the application effortlessly

**Explanation:**

There are three PIR sensors. First PIR sensor is placed outside the room, the second is on the door frame and the third is placed facing inside the room. If the PIR placed outside is triggered first followed by the other two implements the sequence for counter incrementation and vice-versa for counter defragmentation. When the counter is greater than zero then the supply is given to the load connected. A relay is used as an automatic switch for the above mentioned.

**Software:**

- Tkinter:
  - Used for creating the graphical user interface.
- SQLite:
  - Employed as the database engine for storing and managing expense records.
- tkcalendar:
  - A calendar widget integrated into the Tkinter interface for easy date selection.
- PIL (Pillow):
  - Used for working with images, specifically for the application icon.

**Project Drive Link:**

[Daily Expense Calculator Drive Link](#)

**Summary:**

The "Daily Expense Calculator" provides a user-friendly solution for individuals seeking a simple yet effective way to track and manage their daily expenses. The combination of Tkinter for the GUI, SQLite for data storage, and additional libraries for enhanced functionality results in a lightweight application suitable for personal use.

The application's features include expense entry, record updating, deletion, and the ability to view total expenditure over the last ten days. The integration of a calendar widget enhances the user experience. The project aligns with the current trend of developing accessible, locally installed tools for personal finance management. Further enhancements, such as improved error handling and report generation, could elevate the application's functionality and user appeal.