**Grocery Bill Management System**

The Grocery Bill Management System is a lightweight, yet powerful Python application tailored for retail billing. With its user-friendly Tkinter-based interface, the system simplifies customer and product data management, ensures accurate tax calculations, and automates bill generation. This application is a valuable tool for small-to-medium retail settings, providing both efficiency and reliability in sales transactions.

**Python Libraries Used**

* **Tkinter:** Primary library for building the GUI, enabling the creation of windows, buttons, labels, and other interface components.
* **Random:** Used to generate random bill numbers, ensuring unique identifiers for every transaction.

**Backend and Frontend Components**

1. **Frontend**
   * Built entirely with Tkinter, responsible for providing an interactive and visually organized layout for user interaction.
2. **Backend**
   * Core functionality relies on Python's built-in functions and data structures for handling product data, tax calculations, and bill generation.
   * No additional libraries or external databases are used, ensuring a lightweight and portable application.

**Key Features**

1. **Customer Information Management**
   * Enables the input of customer details, such as name and phone number.
   * Automatically generates a unique bill number for every transaction to ensure accurate tracking and reference for future inquiries.
2. **Product Selection and Pricing**
   * Provides categorized product options, including cosmetics, groceries, and other items.
   * Each product has predefined pricing, and the total cost is automatically calculated based on user-entered quantities, ensuring an error-free billing process.
3. **Tax Calculation**
   * Automatically computes applicable taxes for each product category.
   * Ensures compliance with tax regulations while maintaining transparency in the billing process.
4. **Bill Generation**
   * Creates a detailed bill that includes:
     + Customer details.
     + A comprehensive list of purchased items with their quantities, unit prices, and total costs.
     + Applicable taxes and the grand total amount due.
   * The generated bill can be reviewed in a text area and printed if needed.