Restaurant Billing System

Project Report

Submitted by: Reshi Pulla

Email: pullarishi143@gmail.com

Internship: Python Internship at Broskieshub

Date: August 2025

Project completed as part of internship at Broskieshub

Introduction :

The Restaurant Billing System is a web-based application designed to simplify the billing process in restaurants. It enables users to search menu items, add them to an order, calculate totals with GST and discounts, and generate bills in multiple formats (PDF, CSV, JSON). The system ensures accuracy, improves efficiency, and maintains a record of transactions.

Abstract :

This project focuses on building a user-friendly and efficient billing system for restaurants using Python and Streamlit. It integrates menu management, order processing, tax calculation, and multi-format bill generation. The application allows real-time filtering of items, automatic GST calculation at 5%, and bill number auto-incrementing. Bills are displayed in a detailed summary table and saved in the local bills folder for future reference.
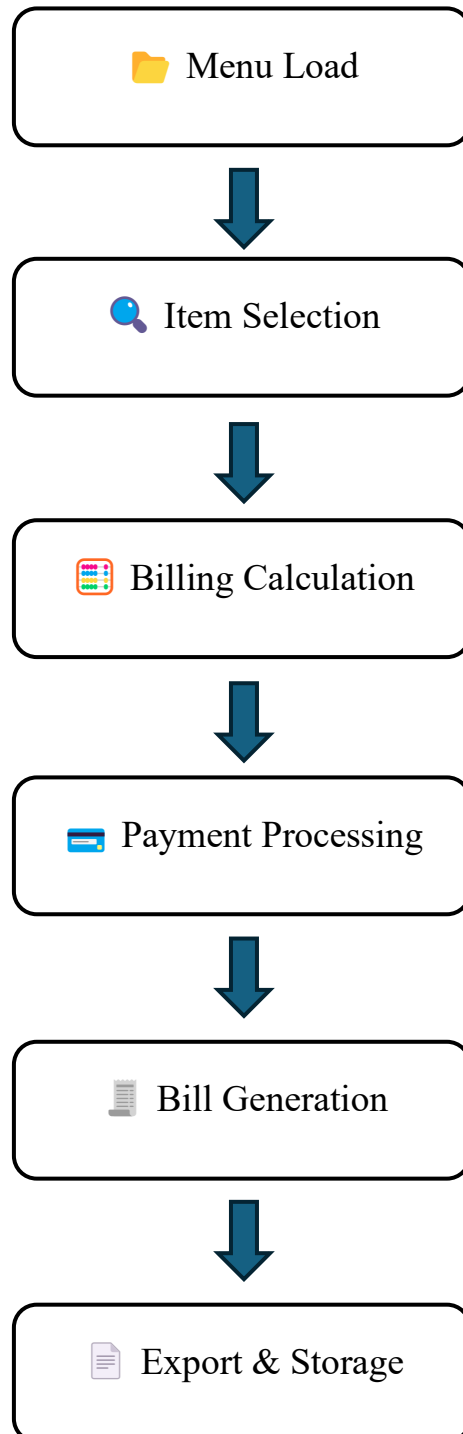
Tools Used :

- Python 3.x – Core programming language
- Streamlit – Web framework for interactive UI
- Pandas – Data handling and CSV operations
- FPDF – PDF bill generation
- JSON – Bill data storage in structured format
- CSV – Spreadsheet bill storage

• SQLite – Storing menu and order details
• VS Code – Code editor
• Git – Version control

Steps Involved in Building the Project :

1. Requirement Analysis – Understanding the need for a fast and accurate billing system.

2. Project Setup – Creating project folders, database, and menu CSV file.

3. Database Integration – Using SQLite to store and fetch menu and order details.

4. UI Development – Building the front-end using Streamlit with filters, search, and order entry.

5. Billing Logic – Implementing calculations for subtotal, fixed 5% GST, and discounts.

6. Bill Number Auto-Increment – Ensuring unique bill IDs per session.

7. Multi-format Export – Generating bills in PDF, CSV, and JSON formats.

8. File Management – Saving bills in the bills folder for easy access.

 9. Testing – Checking correctness of calculations and smooth UI flow.

Work Flow :

📁 Menu Load

⬇

🔍 Item Selection

⬇

🧮 Billing Calculation

⬇

💳 Payment Processing

⬇

🧾 Bill Generation

⬇

📄 Export & Storage

Output Screenshots :

Home Page :

Bill Summary :

Conclusion :

The Restaurant Billing System achieves its goal of providing a fast, accurate, and user-friendly billing process. With features like GST calculation, bill auto-increment, multi-format download, and local storage, it is suitable for small to medium restaurants. Future improvements can include cloud storage, multi-user access, and mobile compatibility.