Restaurant Billing

INDEX & TABLES

1. DESCRIPTION OF PROJECT

This project automates the overall functionalities of a restaurant billing and improves user experience. This project also provide facility to update, add, delete food items and their prices.

People have a tendency to visit the restaurant at exact time of interval to celebrate any occasion or to eat out outside the home. There are so many people who visit the restaurant to dine in and it is very crucial for the owner to attend the customer in a well manner by providing great services by the help of the staff members. The system will help in managing all the customers along with taking their orders in a simplified manner.

2.Modules:

1. **Login :**

In this module user enter the User id and password is checked and only valid user id and password will get entry into member’s zone. This is a security feature to avoid entry of unauthorized users.

2. **Items:**

The menu is decided by the restaurant which is based on the type of items which are in demand by the customers in the market. There are so many items included in different categories which are highly in demand by the customers. It will increase the profit margin of the restaurant and more users will give order in a particular restaurant. This entity will hold the information of all the items which are included in the menu of the restaurant by the owner. They are customizable as per the variance in the demand of the customer time to time

3. **Administrator:**

This is the Administrator’s module by which he keep the eye on whole site and maintain and upgrade the site’s service for sake of users.

4. **Bills:**

The user will choose the items from the menu based on their personal selection and according to that taste they want to digest, the system will provide an estimate bill to the customer including the service charges and the charges of the items which are taken by the customer so that they can pay the amount through online mode with the help of the system. This entity will hold the information of each bill which is generated for a particular customer whenever he books an order from any particular restaurant including the information of the customer and the restaurant details.

3. DATA FLOW DIAGRAM

DFD

The Data flow Diagram shows the flow of data. It is generally made of symbols given below :

(1) A **square** shows the Entity : - ▭

(2) A **Circle** shows the Process: - ○

(3) An **open Ended Rectangle** shows the data store : -- ⊏

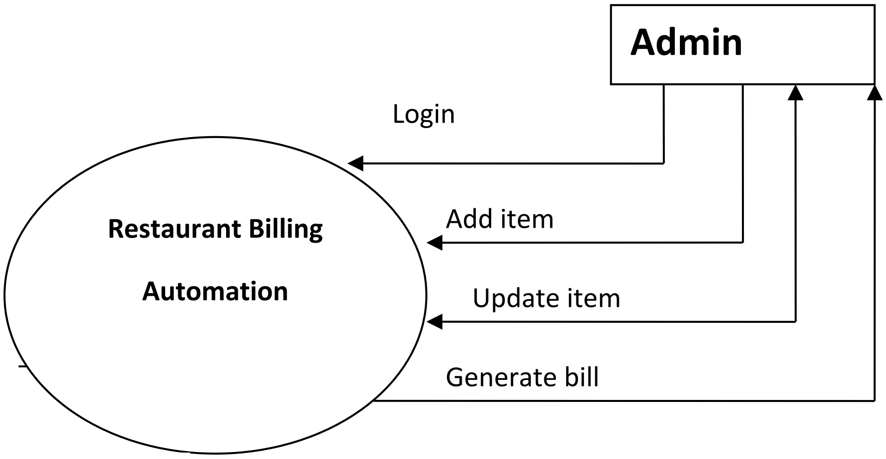
(4) An **arrow** shows the data flow :- →

The DFD can be up to several levels. The 0 level DFD states the flow of data in the system as seen from the outward in each module.

The first level DFD show more detail, about the single process of the 0 level DFD

The second level DFD can show even more details and so on.

Context Level DFD



Definition:

A -rel ship (ER) diagram is a specialized graphic that illustrates the interre ips een entities in a database. ER diagrams often use symbols to rep thr fferent types of information. Boxes are commonly used to repres titie amonds are normally used to represent relationships and ovals are o re nt attributes.

Entity Relationship (ER) diagram:

This diagramming technique is used to visually present a database schema or data model and was original proposed by Chen in the 1970s. There are many different data modeling notations; some are very similar to UML class diagrams (with the exception of operations). However, the notation the used here is slightly different, as proposed by Elmasri, et al.
The database schema for this system is shown in figure. The table object has been left out of the diagram because the table management feature set had been dropped from the requirements before this stage of the design process.

Some important database design decisions are as follows:
_ To store the total price of an order with the order rather than calculating it on the fly when looking at past orders. This is because the price of menu items could change at any time, so the total price at the time of ordering must be stored so that the total price is not incorrectly calculated in future.

_ Similar to the previous point, the order receipt is stored as a hard-copy and not regenerated when reviewing past orders because things such as the restaurant name or VAT percentage are subject to change. Receipts stored need to be exactly the same as the customer copy in case of dispute.

5. TOOLS/PLATFORMS, LANGUAGES

Front End : **Python tkinter**

Back End :

Business Logic: **Python**

Database : **SQLite**

- Security
- Performance
- Scalability
- Reliability
- Support RDMS concepts