DATABASE MANAGEMENT SYSTEM(IDBM432C)
Project

Topic - Restaurant Management System

Database - PostgreSQL
Tools and Technologies- Django(Python)

Members -

Group Number: 4

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Abstract:

In this project, we present a web based restaurant management system to manage the food orders for the given menu and for the given customer. It also provides home delivery facility. Also, it provides an admin interface to view and control all the users, their orders, and the menu of the Restaurant.

Motivation:

This project was a way to explore the application of Database Management approach in Real Life Applications, and also to explore the latest web technologies and their integration with the database engines.

Technology Stack:

The product employes PostgreSQL as the Database Engine, and Django as the web framework for accessing and manipulating the database system.

Django is a high-level Python web framework that enables rapid deployment of secure and maintainable websites. Django, like the most of the modern web frameworks, supports **Model-View-Controller(MVC)** architecture. Django supports several major database engines such as MySQL, PostgreSQL, SQLite3, Oracle and MongoDb. Django comes with a lightweight web server for developing and testing applications. This server is pre-configured to work with Django, and more importantly, it restarts whenever we modify the code. However, Django does support Apache and other popular web servers such as Lighttpd.

PostgreSQL is an **object-relational database management system (ORDBMS)** based on POSTGRES, Version 4.2. PostgreSQL is an open-source descendant of this original Berkeley code. It supports a large part of the SQL standard and offers many modern features, such as :

- Complex Queries
- Foreign Keys
- Triggers
- Updatable Views
- Transactional Integrity
- Multiversion Concurrency Control

Features :

- Three levels of signing up : Customer, Admin and Delivery Boy
- Personalized dashboard for each user, depending on its role.
- Fluid UI and UX, based on latest components, having smooth navigation between components.

Customer -

- View all the food items and their latest price, according to different categories such as Chinese, Gujrati, Punjabi, Fast Food and South Indian.
- Personalized Cart for each user, where user can add multiple quantities of different food items.
- User can place place order, depending on the food items present in their cart.
- View all the previous orders done by the user.

Admin -

- All functionalities of the customer.
- Personalized dashboard, where admin can see all the users and the orders.
- Admin can add user, food items, and can also edit them at any time.
- Add discount for food items, for which the sale price updates accordingly.
- Add all the expenses of a particular day, and view them graphically on the dashboard.
- Confirm order, and the delivery of every order, and also assign delivery boy for each user.

Delivery Boy -

- All functionalities of the customer.
- View all the orders assigned to deliver.
- Confirm the delivery of a particular order.

Future Improvements :

- Live Tracking of the Delivery by the Customer.
- Payment Portal Integration, after the order has been placed.
- Extend the project to mobile devices, by developing Android App for the system.

Links:

Source Code - https://github.com/sashank27/Caviar

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