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I am currently a diploma level student of BS degree. I have completed my diploma in data science and have a lot of interest in AI an ML.

Description

This project is about making a grocery store web application. So, the application should contain two types of functionalities, one is user side in which the buyer can see various products and can buy it, another is admin side in which owner can see, update and remove the products according to availability.

Technologies used

I have used python, flask, HTML for making this app with CSS and bootstrap for styling purpose. These are the flask extension which I have used-

- Flask
- render_template
- session
- request
- api
- redirect
- CORS
- flash
- json
- flask_sqlalchemy

I used render_template for rendering HTML pages, session for login, request to fetch data from html forms, redirect for redirection to a route, flash for alerting and giving message, api, json, CORS for API purpose and SQLAlchemy of flask_sqlalchemy for creating database.

DB Schema Design

The database has six tables- categories, products, association, user, cart and orders.

- Categories has four columns c_id (primary key), name, description and products (which is associated with the product table with class association).
- Product table has six columns- p_id (primary key), name, manufacture date, expiry date, rate and units (which tells about quantity of products available).
- Association table defines the relationship between category and products.
- User table has three columns- id (primary key), name and password.
- Cart has five columns- p_id (primary key), name, quantity, price and user_id (foreign key from user table).
- Orders has five columns id (primary key), name, quantity, price, and user_id (foreign key from user table).

API Design

I applied CRUD operations like adding, deleting, updating and reading on products and categories in the admin side of functions. The basic code for these are in resources.py file.

Architecture and Features

app.py has all the controllers related to admin and user. The view functions related to user such as view categories, products, edit and delete as per requirement whereas the view functions related to user are as view products from different categories, search products, add products to the cart, delete products from the cart and make shopping. model.py contains the model definitions of the database. The templates directory contains all the HTML templates that define the structure and layout of the webpages to be rendered. The key features are as follow-

- User registration and authentication (using session)
- User Roles and Authorization (session.get('username') is used to check users and authorize access to specific pages).
- Admin is defined as the first user of user's table whose name constraint is 'pragyasingh'.
- Product and category section – Admin can add, edit and delete products or categories as per need whereas the user can view the sections, products, add them to cart and delete it.
- Search and Filter products – products can be filtered based on categories and other criteria.
- Shopping cart – The cart keeps track of the all the products with their quantity and price.
- Inventory management -Products units are tracked to ensure accurate inventory management. If a product is out of stock, user cannot add it to the cart.

Video

https://drive.google.com/file/d/12xLwTA5Whsq0Qo30AMWbtq4QMmMJBX__/view?usp=sharing