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I am not a cs background student but I have strong interest in coding.

Description :

This project is a multi-user (one admin/store manager and other users) app for buying grocery from a grocery store where admin can create and manage categories and products and other users (customers) can create account and log in to buy products from the shop.

Technologies used :

1. Flask - for application code
2. Jinja2 templates and Bootstrap for HTML generation and styling.
3. SQLite and SQLAlchemy for data storage.

DB schema design :

a. The database has several models/tables created: Role, User, Category, Product, Cart, Cart-item, Shopping-list. Each table has different attributes and helper functions.

b. The database is designed to store role information, user username & password, category & product details and their images, cart, cart-item, shopping-list details and relationships between them for the smooth functioning of the application.

c. Structure and details of the columns :

1. Role : This table is used to define different roles within the application such as user role is User and admin role is Admin with role-id .
2. User : This table stores information about the users , including their username, password, assigned roles, shopping carts and shopping list .
3. Category : category table store the name and image path of category and also store relationship with associated product.
4. Product : This table stores detailed information about product including their name, pricing, availability, MFD ,Exp date, image path, and category. Also store information of relationship with cart item, shopping list.
5. Cart : This table represent shopping carts associate with users and contain cart item with a relationship .
6. CartItem : This table stores individual items with shopping carts , including product details and quantities.
7. ShoppingList : This table stores the information about shopping lists, including the user who created it , checkout date ,product in the list and quantities .

API design : I have defined the API routes BUT not used API in my working routes (part of the recommended section and not core).

Architecture and Features :

a. The project is organized using the Model-View-Controller (MVC) architecture, with the controllers handling logic and routing, templates for displaying views, and models for interacting with the database.

b. Features implemented include :

1. Admin(store manager) can login (using username and password which is set by developer).
2. Admin dashboard
    - Manage category
        - ✓ Add new category
        - ✓ Edit category
        - ✓ Delete category
        - ✓ View products under category
        - ✓ Search for category, product with different options like manufacture date, expiry date, price.
    - Manage products
        - ✓ Add new product
        - ✓ Edit product details
        - ✓ Delete product
        - ✓ Add quantity to product
        - ✓ Search for category, product with different options like manufacture date, expiry date, price.
    - Logout admin.
3. User (customer) can create account using username and password and login.
4. User dashboard
    - ✓ Search for category, product with different options like manufacture date, expiry date, price.
    - ✓ Basic view of available products and categories.
    - ✓ Add to cart & Buy
    - ✓ See product details
    - ✓ View cart
    - ✓ Checkout
    - ✓ View shopping history
    - ✓ Logout
    - ✓ Delete account
5. Validation
    - ✓ Server side validation with python, WT forms
    - ✓ Client side validation with HTML

These features are implemented using functions created inside particular route for each functionality.

Demo video link: https://drive.google.com/file/d/1h5huvBgqwRsjeSpEAIiJFdziBejrhicQ/view?usp=sharing