Author

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I am a 19 year old undergraduate student with a keen interest in the field of computer science and all things coding.

Description

A simple grocery app with different modules for store manager and customer was to be created. Various functionality like adding,editing and deleting categories and products was to be added on the store manager's end. Basic grocery app functionality like searching, viewing and buying products was to be made on the customer's end

Technologies used

Flask for application code.
Flask_admin has been used to create model views
Flask_migrate is used to manage database migrations.
Flask_SQLAlchemy is used to manage database using Flask, SQLite is used for data storage.
Jinja2 templates , Bootstrap and CSS is used for HTML generation and styling
Other modules like os, re and datetime are used to provide basic functionality.

DB Schema Design

The code is designed to be a simple e-commerce application. The models are designed to represent the different entities in the application, such as categories, products, users, and so on. The relationships between the models are also defined, which allows the application to access and modify the data in the database in a consistent way.

Category(id, name, store_manager_id, cat_photo):

This table represents a category of products. Id is the primary key. category_id is a foreign key linked to Category Table. There exists a relationship with the Category table with regards to category. All fields are non-nullable. Name has to be unique.

Product(id,name,description,price,stock,unit.manufacturing_date,expiry_date,photo,category_id)

This table represents a product. Id is the primary key. Store_manager_id is a foreign key linked to Store Manager Table. There exists a relationship with the product table with regards to category.All fields are non-nullable. Name has to be unique.

User(username,password,is_store_manager)

This table represents a user. Id is primary key. Is_store_manager is a flag to check if the user is a store manager or not. All fields are non-nullable. Username has to be unique.

Customer(id, username, password):

This table represents a customer. Id is primary key. All fields are non-nullable. Username has to be unique.

StoreManager(id,username,password,categories)

This model represents a store manager. Id is primary key. There exists a relationship with categories table to define which categories are created by the store manager. All fields are non-nullable. Username has to be unique.

CartItem(id,quantity,user_id,product_id)

This model represents an item in a cart. Id is the primary key. User_id and product_id are the foreign keys. All fields are non-nullable.

Api Design

No additional APIs have been used in the creation of this project.

Architecture and Features

The root folder grocery_app contains:

1. _pycache_ : Directory that is created by the Python interpreter when it imports a module. It contains the compiled bytecode of the modules, which can be used to speed up subsequent imports of the same module.
2. instance : Stores the database instance with all values/changes made.
3. myenv : describes the virtual environment created with all the folders/files related to it. It includes Include, Lib, Scripts folders and pyenv.cfg file
4. static : contains various images used throughout the project. It has a folder called images which is the upload folder I.e. all product/category photos uploaded are stored here
5. templates : directory containing all the html template files used to render all pages. These are: category)products.html,customer_login.html, customer_register.html,edit_category.html, edit_product.html, index.html,login.html,order_placed.html , process_payment.html, sm_login.html,sm_register.html,store_manager_categories.html
6. app.py : python file containing main ap code include all logic/app routes and app configurations
7. models.py : python file containing definitions of all different models/tables
8. README : A simple readme file describing the steps to run the project

The App is an e-commerce platform designed to facilitate a seamless shopping experience for users. It offers a user-friendly interface for browsing a variety of grocery products, adding them to the cart, and placing orders. Additionally, the app includes a store manager module to assist in managing products and categories efficiently.

1. User Registration and Login:Users can easily register using their user and password. Subsequently, they can log into access the app's functionalities.
2. Product Catalog:: The app showcases a wide range of grocery items, each displaying essential information such as name, description, price, and an image.
3. Product Search and Category Browsing:: Users can search for products based on keywords and explore products categorized for easy navigation and also filter according to price, manufacturing date etc
4. Product Details: All necessary details are provided.
5. Adding to Cart: Users can specify the desired quantity and add products to their cart. The app ensures that items are in stock before allowing addition.
6. Cart Management: Users can view their cart and remove products. The cart summary displays the total bill amount.
7. Order Placement: Once satisfied with their cart, users can proceed to place an order, which confirms their purchase.
8. Order Confirmation and Redirection: After placing an order, users are shown an order confirmation page. The user is thanked before automatically redirecting users to their dashboard.
9. Responsive Design: The app is designed to be responsive, ensuring a consistent user experience across various devices.
10. Product and Category Management: Store managers can create, update, and delete products and categories. They can also manage amount of stock.

Video

https://drive.google.com/file/d/1okI3r3i7j1DNnElE0DYTT5YVXwZ0RDTy/view?usp=sharing