

Report of My Project – Grocery Store

Author Part

Name- Sanjeev Kumar Yadav

Roll number – 21f2001185

Email - 21f2001185@ds.study.iitm.ac.in

Description

After reading the topic , it is evident that , I am tasked with creating a standalone , multi-user web application. We can see the application in 2 part 1st part is “Manager” part which add the product/category and other part is “ User” ,we also have to use login to framework .This application is designed to provide a user-friendly interface ,enabling use to register ,browse ,search, and purchase product ,also have the shopping cart interaction.

Technologies used –

- Flask – A micro web framework in Python for building web application
- Jinja2 templates + Bootstrap for HTML for generation and styling
- SQLite for data Storage
- SQLAlchemy: A powerful ORM (Object-Relational Mapping) library for database interaction.

DB Schema Design

Category –

- c_id (primarykey)
- c_name(unique=True ,so that no 2 category have same name),
- c_product is a relationship between 1 to many with Product table

Product –

- p_id (primarykey)
- p_name (unique=True , so that no 2 product have same name)
- p_quantity (amount of product available)
- p_expiry
- p_unit (in this column we save the unit of the product 2l , 1kg etc)
- p_category_id (ForeignKey(“category.c_id”) , it tells the product,which category this product belong to)

Cart-

In this table we save the item that user have saved in cart to buy

- c_id (primarykey)
- c_name (name of product that he saved to cart)
- c_rate (rate of 1 unit)
- c_quantity(quantity to be purchase)
- c_totalprice(integer,total price after selecting the quantity)
- c_user(ForeignKey(“user.id”){this tell the cart item belong to which user

User-

In this table we maintain the data for user account detail to login

- Id (primary_key=True)
- Username (unique=True) so that no 2 user have same username
- Password
- cart_item

Manager-

- Id
- Managername(same as Class User, unique= True, so that no 2 user have same Username)
- password

Architecture and Features

Authentication –

- user can register and log in using username and passwords.
- Uses sessions are managed using Flask's session for maintaining logged-in state

Product Management:

- Manager can log in to the system and manage categories.
- Categories and product can be added, updated ,and deleted
- Shopping Cart
- User can add product to their shopping cart.
- Quantites of item in the cart can be updated and item can be removed also.

Search Functionality ,Error Handling:

Conclusion:

The Flask web application presents a functional platform for managing products, categories, and shopping cart interactions. While the core functionality is implemented, there's room for enhancement in terms of error handling, security measures, and user experience. Future iterations could focus on scalability, additional features, and optimizing code structure.

Video Link –

https://drive.google.com/file/d/1mqatAfmYPFzcl_NgEL5UNoIH09Y1trSu/view?usp=sharing