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I am Aman Yadav currently in Diploma Level of this BS degree. This is my first ever web app project.

Description

It is a web application for buying and managing products and categories. The application has several pages, including a front page, a user login page, an manger login page, manager dashboard where manager can manage the products and categories (CRUD for categories and products) , a user dashboard where a user can see all available product and categories ang hence can buy products from one category or more. It also contains the summary page where a manager can see the graphs of sales and available stocks of different products. It also contains the my_cart page where a user can see all carted items and can buy all items. It contains purchase history page where a user can see the purchase history.

Technologies used

The project uses bootstrap and jinja2 for the frontend part and for the backend used “Flask” for implementing the web application.
Flask -2.3.2, Flask-Login - 0.6.2, Flask-Session -0.5.0, Flask-SQLAlchemy -3.0.5, Jinja2 - 3.1.2,
SQLAlchemy -2.0.17, matplotlib- 3.7.2
Flask, SQLAlchemy and Flask-SQLAlchemy are used to build the models and database.
Bootstrap is used for styling

DB Schema Design

The database for my ticket booking app consists of these tables: User , Category, Product , CartItem,
PurchaseHistory.
User: First_name, Last_name, email(primary_key), mobile_number, username, Password
Category: id(primary_key), name, products
Product: product_id(primary_key), name, unit,price, exp, stock, category_id
CartItem: id(primary_key), user_id,product_id,quantity, user, product
PurchaseHistory: id(primary_key), user_id, product_name, price, quantity, purchase_date

API Design

N/A

Architecture and Features

The application follows the Model-View-Controller (MVC) architecture pattern, with models defined using SQLAlchemy ORM and stored in yadav.py. Controllers, responsible for handling business logic, are also implemented in yadav.py using Flask framework. Acting as a mediator between the user and models, the controllers receive and process user input, retrieve data from models and render templates located in the templates folder. These templates define the user interface and are created using the Jinja2 template engine. Static

files, such as images and CSS, are stored in the static folder.
The project has been designed to provide a seamless user experience, with a variety of features that have been implemented.Flask Login has been implemented in this project for user authentication and authorization. Flask Login is a popular Python library that simplifies the implementation of user authentication for Flask web applications. With Flask Login, users can securely log in and out of the system, and administrators can restrict access to certain pages or features. This provides an extra layer of security to the project, ensuring that only authorized users can access sensitive information.
Regular users can view the list of available categories and products , buy products from a particular
category and even search for a particular category and product . The additional feature is in manager's dashboard admin can see the analysis or graphs of available stocks of products and sales summary
Video
Here is the link of Video Explanation of project