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I am a Diploma level student with a passion for coding and mathematics.

Description

We have to make a Grocery store app with two different login systems for User and Admin respectively.

Users can buy or browse through various categories and products and add them to carts. Admin can do CRUD operations on categories and products. The admin can access userstore but users cannot access adminstore.

Technologies used

- Flask for application code
- Jinja2 templates + Bootstrap for HTML generation and styling
- SQLite for data storage
- Flask-sqlalchemy and SQLAlchemy for database connections
- Sqlalchemy.orm to import declarative base

DB Schema Design

- 'Users' Table: Columns: Username(String, unique, Primary key), Password(String, NOT nullable)
- 'Admins' Table: Columns: Username(String, unique, Primary key), Password(String, NOT nullable)
- 'Categories' Table: Columns: cid(Category ID, auto-increment, Primary Key), cname(Category name, unique, NOT nullable), cimage(Category image)
- 'Products' Table: Columns: pid(Product ID, auto-increment, primary key), pname(Product name, unique, NOT nullable), price(integer, NOT nullable), quantity(integer, NOT nullable), manufacturing_date(date of manufacturing, NOT nullable), expdate(expiry date, NOT nullable), cname(Category name, NOT nullable), pimage(Product Image, NOT nullable)
- 'Cart' Table: Columns: username(string, NOT nullable), pid(Product ID, NOT nullable), pname(Product name, NOT nullable), quantity(Quantity chosen by user, NOT nullable), price(Price per unit, NOT nullable), cname(Category name, NOT nullable)

Users store the Users information, same for Admin. I made two separate tables to make implementing validations easier. One table for Categories to store Category information. One table for Products to store Product information for every category (with attribute [cname]). The user can select the desired category and choose the desired products to add them in the Cart. The Cart has the information about the cart.

Architecture and Features

In my main folder,

- 'Applications' folder holds three .py files. Controllers.py has all the controllers. Database.py initialises the database. Models.py holds the relevant models or the application.
- 'Instances' folder holds the database.db file which has all the data.
- 'Templates' folder contains all the .html files for rendering in the application.
- The main python file is app.py file.
- The requirements.txt holds the required technologies.

I am using the sqlalchemy.orm for importing declarative base.

I have implemented browser sessions for userlogin and adminlogin for validations.

I have implemented the form validations and data validation for smooth conduct of the application.

I have used bootstrap for styling and aesthetics.

Video

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