Project Report

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Description:

The Project aims to create a platform for commerce, by providing both buyers and sellers access to the marketplace. The buyers or the main user is able to order products, from multiple categories, and can have multiple orders in a given session. A copy of their monthly spendings shall be sent to them on the first of next month along with a graphical representation of their categorical expenditure. The sellers or the store managers are able to list their products and update their products. The owner of the website is able to manage the store managers and approve requests for new category creation and new manager roles to other users.

Technologies Used:

Frontend:

Vue framework of JavaScript is used for frontend development. Vue-router and Vue Components have been used to ensure maximum reactivity and responsiveness. In UI Design CSS and Bootstrap has been used for styling and responsiveness.

Backend:

The application uses Flask, Flask RESTful, SQLAlchemy, Flask caching to implement core functionalities. In addition, with Matplotlib for graphs and FlaskCORS to support Swagger API. Redis is used for caching and celery for backend jobs.

Data Storage:

The application uses SQLite for data storage.

Architecture and Features:

The project has an application folder in root which contains a templates folder which has all the templates in it, a static folder containing images folder and CSS files, an application folder which has python files of controllers, models and API and a document folder which contains yawl file, project report and readme. Components folder, present in src contains all the VUE components. Further a main.py file to run the application.

API Design:

The application has an API with multiple endpoints protected by authorization with Flask JWT for optimal security. The API allows users to register, login, and logout. Further they can create, read, update and delete all their Lists and Cards (CRUD operations).

DB Schema:

Table 1: Approvals

Column Name	Type	Constraints
id	integer	Not null
name	varchar	Not null

Table 2: Categories

Column Name	Type	Constraints
id	integer	Not null
name	varchar	Not null

Table 3: Items

Column Name	Type	Constraints
id	integer	Not null
name	varchar	Not null
Price	integer	Not null
Category_id	integer	Foreign key
Stock left	integer	Not null
Img_url	text	Not null
Expiration Date	datetime	nullable

Table 4: Order

Column Name	Type	Constraints
Order_id	integer	Not null
User_id	varchar	Foreign key
Item data	varchar	nullable
Order_date	Date time	Not null

Table 5: user

Column Name	Type	Constraints
User_id	integer	Primary key
First_name	varchar	Not null
Last_name	varchar	Not null

Video link