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About: I am a bachelor with half a decade of experience with web development, entrepreneurship, research and development, and music.

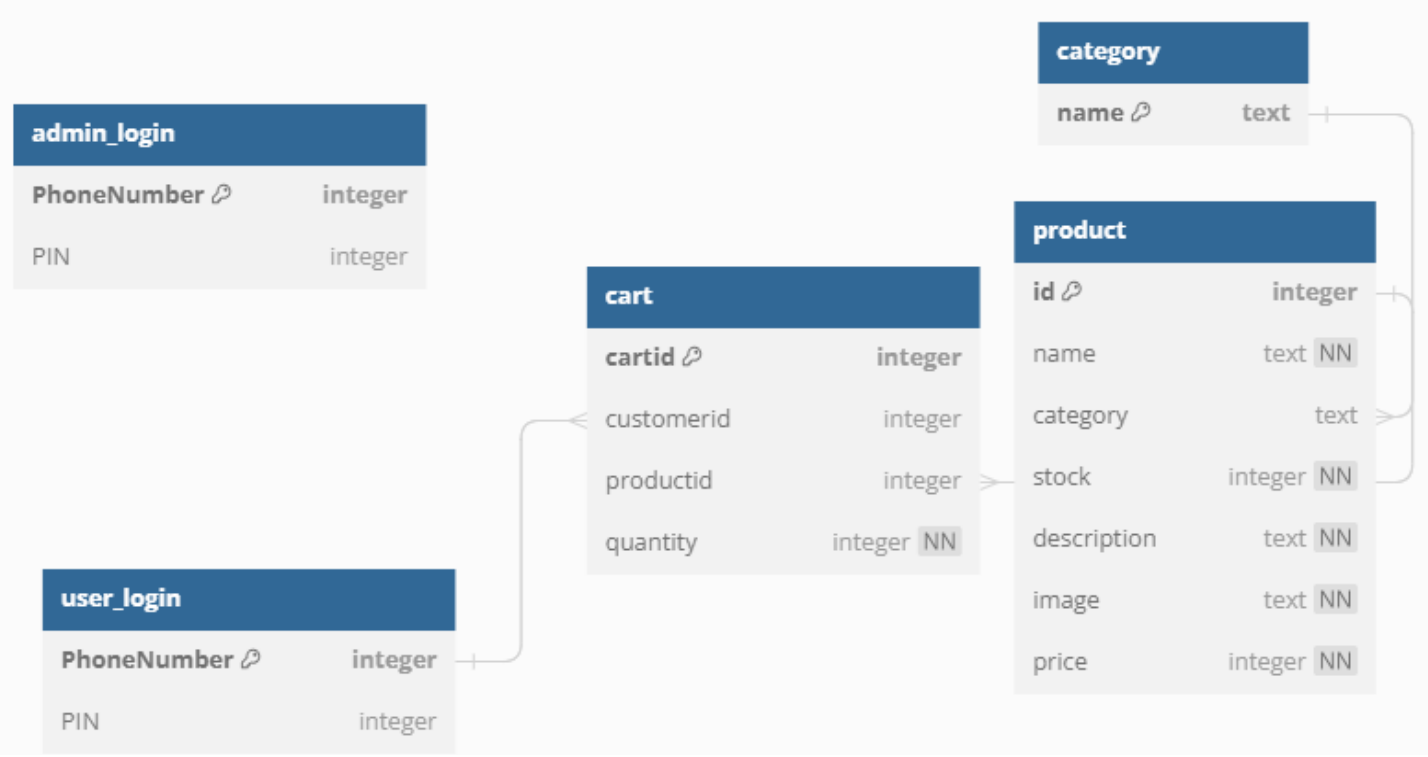
Description

The application is a grocery app, which allows searching for products based on their name or category. The users can buy products,, the admin can create, update, delete, and view products and categories to be displayed to the users.

Technologies used

- ***Python*** (Used for creating the backend)
    - ***Flask*** (Used to create the web application)
    - ***Flask-SQLAlchemy*** (Used for interacting with the SQLite database)
    - ***Flask-RESTful*** (Used for creating REST APIs in Flask)
    - ***Jinja2*** (Used for templating in Flask)
    - …and related dependencies for the above packages to function
- ***SQLite*** (Used for storing data)
- ***HTML5*** (Used to create a structure for the front end)
- ***CSS3*** (Used for custom styling)
- ***Bootstrap*** (Used for basic styling of the webpages)

Database Schema Design



The database architecture was crafted with scalability in mind, drawing loose inspiration from. Big Basket The core framework revolves around three primary components: products, categories and cart. These elements are interconnected through one-to-many relationships, as illustrated in the provided diagram. While both the users and admin tables share commonalities, they hold distinct access privileges within the backend infrastructure.

API Design

The API has been created for the following features:

- **Category**: To perform CRUD operations for categories
- **Product**: To perform CRUD operations for products

Architecture and Features

The project follows an iteration of the MVC model and follows the fundamental idea of separation of concerns. The models for each of the tables are defined in the `models` folder, the controllers which contain the functional methods with respect to the models are stored in the `controller` folder, the files which control the UI and the usage of controllers are stored in the `views` folder. Additionally, there are some utility methods / classes for exceptions, which are stored in the `utils` folder. All these folders are collectively part of the `app` folder. The SQLite database is stored in the folder called `db`. The `static` and `templates` folder contain the static assets, like CSS files needed for styling the appearance, and the design templates respectively.
Further details have been explained in the README.md file in the root folder.

Features implemented in the application are:

- Proper login and signup page for users and admin.
- CRUD on category and product
- Searching for products using various parameters like name, description, and category
- Displaying all the products and their details to the user.
- Marks the unavailable products
- Ability for users to cart multiple products and purchase them

Video

https://drive.google.com/file/d/1O0dhnxmKbvz6ildzTU9s8f_HuNieoL5N/view?usp=sharing