

# GROCEASY (Grocery Store) - Report

## Author

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- **About me:** I graduated with a Bachelor of Technology in Computer Science and Engineering from PSIT Kanpur in 2023. Currently, I am pursuing a Bachelor of Science in Data Science from IIT-Madras, and I am currently at the diploma level.

## Description

Groceasy is a multi-user app that allows users to shop groceries and essential items from the comfort of their homes. The app has various features for the Store manager (admin) such as adding categories, products, deleting them, etc. The features provided to the users are they can shop multiple products from different categories and can search for some specific items.

## Technologies Used

- **Python:** Develop the controllers and serve as the host programming language for the application
- **HTML:** Develop the required web-pages
- **CSS:** Style the web-pages
- **Bootstrap:** To make the frontend appealing and easy to navigate
- **SQLite:** Serves as the database for the application
- **Flask:** Serves as the web-framework for the application
- **Flask-SQLAlchemy:** Used to access and modify the app's SQLite database
- **Jinja2:** Allows us to build expressive and extensible templates.

## Database Schema

The database has four tables and the schema is as follows:

User Table	Category Table
<ul style="list-style-type: none"><li>• <b>id</b> (Integer): Primary Key, Auto Increment</li><li>• <b>name</b> (String): Unique, Not Null</li><li>• <b>password</b> (String): Not Null</li><li>• <b>role</b> (String): Default user</li></ul>	<ul style="list-style-type: none"><li>• <b>id</b> (Integer): Primary Key, Auto Increment</li><li>• <b>name</b> (String): Unique, Not Null</li></ul>

Product Table	Order Table
<ul style="list-style-type: none"> <li>● <b>id</b> (Integer): Primary Key, Auto Increment</li> <li>● <b>name</b> (String): Unique, Not Null</li> <li>● <b>exp_date</b> (Date): Not Null</li> <li>● <b>rate_per_unit</b> (Integer): Not Null</li> <li>● <b>qnt_avl</b> (Integer)</li> <li>● <b>cat_id</b> (Integer): Foreign Key (Category.id), Not Null</li> </ul>	<ul style="list-style-type: none"> <li>● <b>id</b> (Integer): Primary Key, Auto Increment</li> <li>● <b>product_id</b> (Integer): Not Null</li> <li>● <b>product_name</b> (String): Not Null</li> <li>● <b>user_id</b> (Integer): Not Null</li> <li>● <b>amount</b> (Integer): Not Null</li> <li>● <b>order_date</b> (Date): Not Null, Default Today</li> </ul>

## Architecture and Features

The application follows the standard MVC architecture. The Model is created using SQLite. The View of the application is created using HTML, CSS, and Bootstrap. The Controller is created using Python and Flask.

The features of the application are as follows:

- Signup and Login for users
- Login for admin (Store Manager)
- Admin can create, view, update, and delete categories
- Admin can create, view, update, and delete products
- User can view all the products available for a given category
- Ability to search specific products, category that includes various products
- Navigate and view the user's cart
- User can buy many products for one or multiple categories
- System will automatically show the latest products added
- Ability to show out of stock for the products that are not available
- Ability to show the total amount to be paid for the transaction

## Video

For the video, click [video](#)