

Online Retail Store

Scope:

With the advent of the Covid-19 pandemic, the popularity of online applications, in general, has skyrocketed. One such use case which has seen tremendous growth in terms of usability is that of e-commerce websites. It allows users to shop from the comfort of their homes while eliminating the need to worry about long queues, inflexible working hours, and having to navigate/search for a product in offline retail stores.

In this project, we aim to build our own online retail management system. It offers different functionalities to clients and store managers.

Client-side features include the option to have a personalised account which can then be used to manage their orders. The management side allows the store to effectively manage various aspects of finances, such as maintaining accounts of transactions, recording profit/losses, and keeping track of the products currently in the inventory. This part of the application will only be accessible to the admin.

Functional Requirements:

The online retail store provides the following functions to clients/users:

- Allows customers to create an account(Sign in with authentication), store their details, and use those to handle discounts and other offers.
- Supports an in-store shopping cart that dynamically updates and cross-checks with the current inventory. It updates the inventory when products are added/removed from the cart and generates the bill on checkout.
- Allows users to filter products based on type, price, etc., to streamline the entire process.

Additional features offered on the store management side are:

- Keeping an inventory for the department store and tracking different categories and products that are available for sale in the store.
- Handling finances relating to the purchase and sale of different goods, generating profit and loss statements at different intervals.

Stakeholders:

- **Customers/ Users** looking to purchase goods conveniently.
- **Store Operators** looking to maximise efficiency in managing store accounts and product inventory.

Technical Requirements:

Data:

- The store's internal records are protected via authentication upon login and cannot be accessed by other users. Similarly a customer can only access their own cart.
- The various filters and dynamic shopping cart allows users to search for and keep track of products they wish to purchase more conveniently
- Ensures no concurrency issues by ensure each addition/removal from the cart is not duplicated between users thus preventing inventory tracking issues

Backend:

- MySQL
- Python
- Node.js
- Django

Frontend:

- HTML

- CSS
- JavaScript
- React
- Bootstrap

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