

# **E-commerce Website**

## **Project Members :**

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## **1. Abstract:**

This project aims to develop a simple e-commerce platform using Django (Python) for backend functionality and HTML/CSS for frontend design. The website allows users to browse products, view details, manage a shopping cart, and place orders. Administrators will have the ability to manage products, categories, and orders through the Django admin interface.

## **2. Objectives:**

- Primary Objective: Build an e-commerce website with core functionalities for product management and user interaction.
- Secondary Objectives:
  - Enable product browsing, searching, and detailed views.
  - Implement user authentication (login, registration).
  - Provide cart functionality for adding/removing products.
  - Develop a simple checkout process.
  - Enable admin control for managing products, categories, and orders.

## **3. Scope:**

- Frontend: Design responsive product listing and detail pages using HTML, CSS, and JavaScript. Users will be able to register, log in, and interact with the cart.

- Backend: Implement business logic using Django's Model-View-Template (MVT) structure to manage products, categories, users, and orders.

- Database: Use SQLite to store data for products, orders, and users. The Django ORM will handle all database interactions.

#### **4. Technologies:**

- Backend: Django (Python)
- Frontend: HTML, CSS, JavaScript
- Database: SQLite (or a scalable database such as PostgreSQL for production)
- Other Libraries: Django crispy forms, Pillow for image handling

#### **5. Key Features:**

##### User-Side Features:

- Product Browsing: Users can view and search for products by category.
- Product Detail: Each product has a detailed page showing price, description, and stock.
- User Authentication: Users can register, log in, and manage their accounts.
- Shopping Car: Users can add products to a cart, modify quantities, and proceed to checkout.

##### Admin Features:

- Product & Category Management: Admins can add, update, or delete products and categories via the Django admin panel.
- Order Management: Admins can view and manage customer orders.

## **6. Modules:**

### **1. User Authentication:**

- Registration, login/logout, and profile management.

### **2. Product & Category Management:**

- Create, update, view, and delete products and categories.

### **3. Shopping Cart:**

- Add/remove products and view cart summary.

### **4. Order Processing:**

- Simple order placement and order history (for logged-in users).

### **5. Admin Module:**

- Manage products, categories, and customer orders via Django's admin interface.

## **7. Development Phases:**

1. Setup: Initialize Django project and basic structure.

2. User Authentication: Implement registration and login.

3. Product Management: Create models for products and categories, and develop product listing and detail views.

4. Cart and Checkout: Develop shopping cart functionality and checkout process.

5. Admin Panel Customization: Enable product and order management through the admin panel.

6. Testing and Deployment: Test and prepare for deployment (e.g., on Heroku).

## **8. Expected Outcomes:**

- A functional e-commerce website with product listing, cart, and user authentication.
- Admin features for managing products, categories, and orders.
- Secure and responsive design for ease of use by both users and administrators.

## **9. Future Enhancements:**

- Payment Integration: Adding payment gateways like Stripe or PayPal.
- Advanced Filtering: Enable product filtering by price, rating, etc.
- Order Tracking: Real-time order status updates.
- Reviews & Ratings: Allow customers to leave reviews for products.
- Discounts and Promotions: Implement coupon codes and offers for users.