# E-Commerce Application using Generative-AI

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Tools Used : ChatGPT, Nodejs, Angular CLI, VsCode
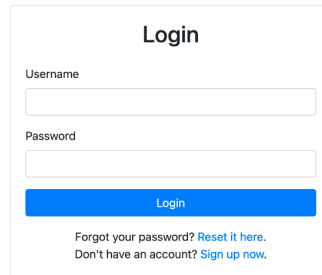Chat Link : https://chat.openai.com/share/478e0e1c-93d5-4e0e-b4a9-ff61546d8098
Resubmission: 21-02-2024

Index :
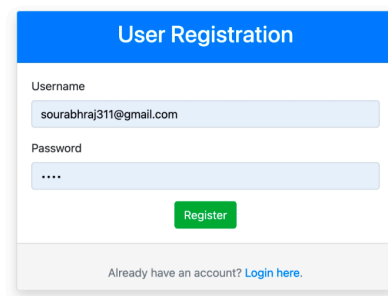
# Screenshots :

Login Module :



Registration Module :



Forgot/Change Password email

# Password Reset OTP  Inbox

**E-Commerece-App**  12:26 AM
Your OTP is: 2348

**E-Commerece-App**  12:27 AM
to me

Your OTP is: 8425

↩ Reply     → Forward     ☺

# Forgot Password

Username

Request OTP

Restart Process

# Forgot Password

Email is expensive, hence your OTP is here, Keep it secret 🤫
**8192**

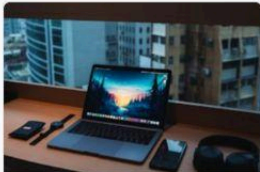New Password

Confirm Password

OTP Password

Change Password

Restart Process

Products Catalogue :

# Product Catalogue

## Laptop

High-performance laptop with the latest processor and graphics card.

Price: $999.99

Quantity:

| 1 |

**Add to Cart**

## Smartphone

Feature-packed smartphone with a stunning display and advanced camera.

Price: $599.99

Quantity:

| 1 |

**Add to Cart**

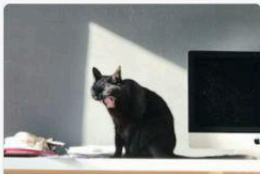## Wireless Headphones

Noise-canceling wireless headphones with immersive sound quality.

Price: $149.99

Quantity:

| 1 |

**Add to Cart**

## 4K Smart TV

Ultra HD Smart TV with a large screen and smart features for streaming.

Price: $799.99

Quantity:

| 1 |

**Add to Cart**

## Fitness Tracker

Advanced fitness tracker with heart rate monitoring and GPS.

Price: $79.99

Quantity:

| 1 |

**Add to Cart**

## Gaming Console

Next-gen gaming console with powerful hardware for an immersive gaming experience.

Price: $499.99

Quantity:

| 1 |

**Add to Cart**

## Digital Camera

Professional-grade digital camera with high-resolution imaging capabilities.

Price: $899.99

Quantity:

| 1 |

**Add to Cart**

## Coffee Maker

High-quality coffee maker for brewing the perfect cup of coffee at home.

Price: $49.99

Quantity:

| 1 |

**Add to Cart**

## Wireless Mouse

Ergonomic wireless mouse with precision tracking for efficient work.

Price: $29.99

Quantity:

| 1 |

**Add to Cart**
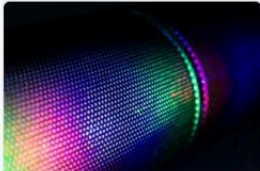
## Bluetooth Speaker

Portable Bluetooth speaker with crystal-clear audio for music lovers.

Price: $69.99

Quantity:

| 1 |

**Add to Cart**

## External Hard Drive

High-capacity external hard drive for secure data storage.

Price: $129.99

Quantity:

| 1 |

**Add to Cart**

## Electric Toothbrush

Smart electric toothbrush for effective oral hygiene.

Price: $39.99

Quantity:

| 1 |

**Add to Cart**

## Portable Charger

Compact portable charger for charging devices on the go.

Price: $19.99

## Wireless Keyboard

Full-sized wireless keyboard for comfortable typing.

Price: $49.99

## Smart Thermostat

Energy-efficient smart thermostat for home climate control.

Price: $89.99

Checkout Page :

## Checkout

**Laptop**
Quantity: 1

Price: $999.99    Delete

**Smartphone**
Quantity: 3

Price: $599.99    Delete

## Total Amount: $2799.96

Select Payment Option

[                                                    ⇕ ]

## Checkout

**Laptop**
Quantity: 1

Price: $999.99    Delete

**Smartphone**
Quantity: 1

Price: $599.99    Delete

## Total Amount: $1599.98

Select Payment Option

[ UPI                                                ⇕ ]

Full Name

[ Sourabh                                             ]

Address Line 1

[ PSL Hinjewadi                                       ]

[ Continue ]

# Checkout

There is no item in your cart, Go Back and add some good stuffs

Order placed successfully!

Email on order complete

Order Details: {"cartItem":[{"id":1,"name":"Laptop","description":"High-performance laptop with the latest processor and graphics card.","price":999.99,"image":"https://source.unsplash.com/300x200/?laptop","selectedQuantity":1,"quantity":1},{"id":2,"name":"Smartphone","description":"Feature-packed smartphone with a stunning display and advanced camera.","price":599.99,"image":"https://source.unsplash.com/300x200/?smartphone","selectedQuantity":1,"quantity":1}],"paymentOption":"UPI","address":{"fullName":"Sourabh","addressLine1":"defuwefeuwf","addressLine2":"","city":"","state":"","zipCode":"","phoneNumber":""}}

# Project Design Document

## 1. Introduction

This design document outlines the steps and code snippets discussed during the development of the project. The project involves creating a web application with features such as user registration, login, product catalog, shopping cart, and checkout.

# 2. Backend Implementation

## 2.1 User Registration

- Endpoint: `/register`
- Method: POST
- Description: Handles user registration by checking for existing usernames and saving new user data to MongoDB.

## 2.2 User Login

- Endpoint: `/login`
- Method: POST
- Description: Validates user credentials during login and returns a success message upon successful login.

## 2.3 Change Password

- Endpoint: `/change-password`
- Method: POST
- Description: Allows users to change their password by verifying the old password.

## 2.4 Forgot Password

- Endpoint: `/forgot-password`
- Method: POST
- Description: Initiates the process of resetting the password by sending an OTP to the user's email.

## 2.5 OTP Validation during Login

- Endpoint: `/login-otp`
- Method: POST
- Description: Validates the OTP entered during login.

## 2.6 Product Catalog

- Endpoint: `/products`
- Method: GET
- Description: Fetches product catalog data from a `data.json` file.

## 2.7 Add to Cart

- Endpoint: `/add-to-cart`
- Method: POST
- Description: Adds a product to the user's cart based on the provided parameters.

## 2.8 Checkout and Payment

- Endpoint: `/checkout`
- Method: POST
- Description: Handles the checkout process, creating an order and clearing the user's cart.

# 3. Frontend Implementation

## 3.1 User Interface

### 3.1.1 User Registration Page

- Component: RegistrationComponent
- Features:
  - User registration form with validation.
  - API call to the backend for registration.

### 3.1.2 User Login Page

- Component: LoginComponent
- Features:
  - User login form with validation.
  - API call to the backend for login.

### 3.1.3 Forgot Password Page

- Component: ForgotPasswordComponent
- Features:
  - Request OTP button.
  - Form to enter and submit the new password.

### 3.1.4 Product Catalogue Page

- Component: ProductCatalogComponent
- Features:
  - Fetches and displays the product catalog.
  - Add to cart functionality.

### 3.1.5 Checkout Page

- Component: CheckoutComponent
- Features:
  - Displays cart items.
  - Select payment option and enter address.
  - Place order functionality.

## 3.2 Code Snippets

### 3.2.1 Backend

- MongoDB models: User, Product, Cart, Order.
- Express.js routes for user authentication, product catalog, and checkout.
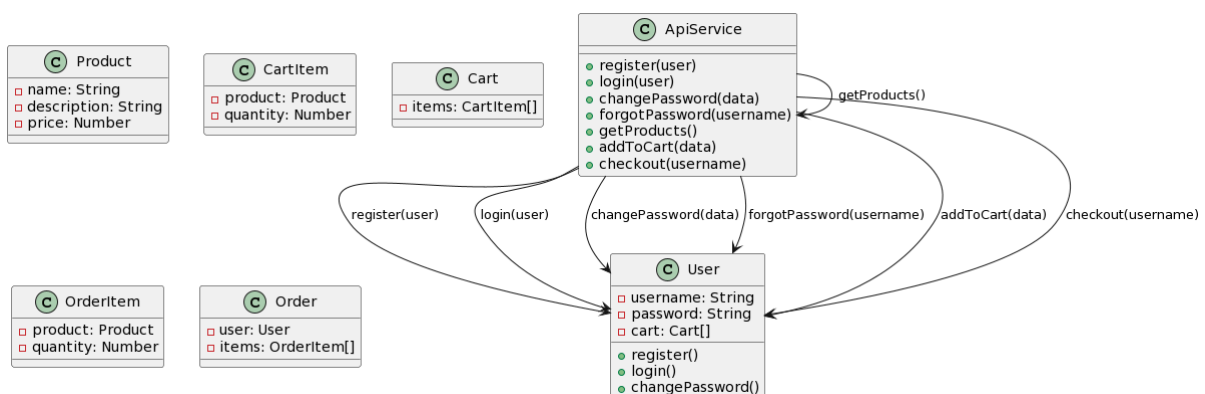
### 3.2.2 Frontend

- Angular components for user registration, login, forgot password, product catalog, and checkout.
- Service for API communication (ApiService).
- State management for cart items.

# 4. Conclusion

This design document summarizes the backend and frontend implementation steps, including API endpoints, components, and code snippets. Further enhancements and additional features can be integrated based on project requirements.

# Diagrams



## Frontend Design Document

**Angular Components:**

1. Registration Component:
   ○ Responsible for user registration.
   ○ Renders a form with fields for username and password.
   ○ Invokes the `register` method of `ApiService` for user registration.
2. Login Component:
   ○ Handles user login functionality.
   ○ Displays a form with fields for username and password.
   ○ Calls the `login` method of `ApiService` for user authentication.
   ○ Navigates to the product catalog page upon successful login.
3. Product Catalog Component:
   ○ Fetches and displays a list of products from the server using `getProducts` method of `ApiService`.
   ○ Allows users to view product details and add them to the cart.
   ○ Uses the `addToCart` method of `ApiService` for adding products to the cart.
4. Checkout Component:
   ○ Manages the checkout process.
   ○ Displays the user's cart items and the total amount.
   ○ Provides a dropdown for selecting payment options.
   ○ Collects user address details through a form.
   ○ Invokes the `checkout` method of `ApiService` to place an order.
5. User Service:
   ○ Stores user-related information and cart items.
   ○ Provides methods for user authentication and managing the cart.
   ○ Communicates with `ApiService` for server interactions.