WebX Project Restaurant Ordering Web Application

Using Flask and MongoDB

Submitted by: Himesh Pathai

(Roll No: 34)

Division: D15A

Problem Statement

- Create a simple and efficient blog web application where users can:
- Read, search, and manage blog posts.
- Provide a secure admin panel for CRUD operations.
- Securely store data in MongoDB.

Introduction

- Web-based blogging platform using Flask and MongoDB.
- Admins can create, update, or delete blog posts.
- Users can read and search posts.
- Acts as a mini CMS (Content Management System).

Objectives

- Build a dynamic and user-friendly blog system.
- Allow only registered admins to manage blog posts.
- Store data securely in MongoDB.
- Implement a search feature.
- Learn and apply real-world web development skills.

Methodology

- Flask Setup for routing and templates.
- MongoDB Integration using PyMongo.
- User Authentication and Session Management.
- Admin Dashboard for CRUD operations.
- Search functionality.
- UI Design with HTML/CSS (Bootstrap).
- Testing and Debugging.

Tools and Technologies Used

- Python
- Flask
- MongoDB
- HTML/CSS
- VS Code
- Jinja2

Features

- User Registration and Login System.
- Admin Dashboard for blog management.
- Create, Edit, and Delete blog posts.
- Search functionality.
- Responsive and simple UI.

Folder Structure

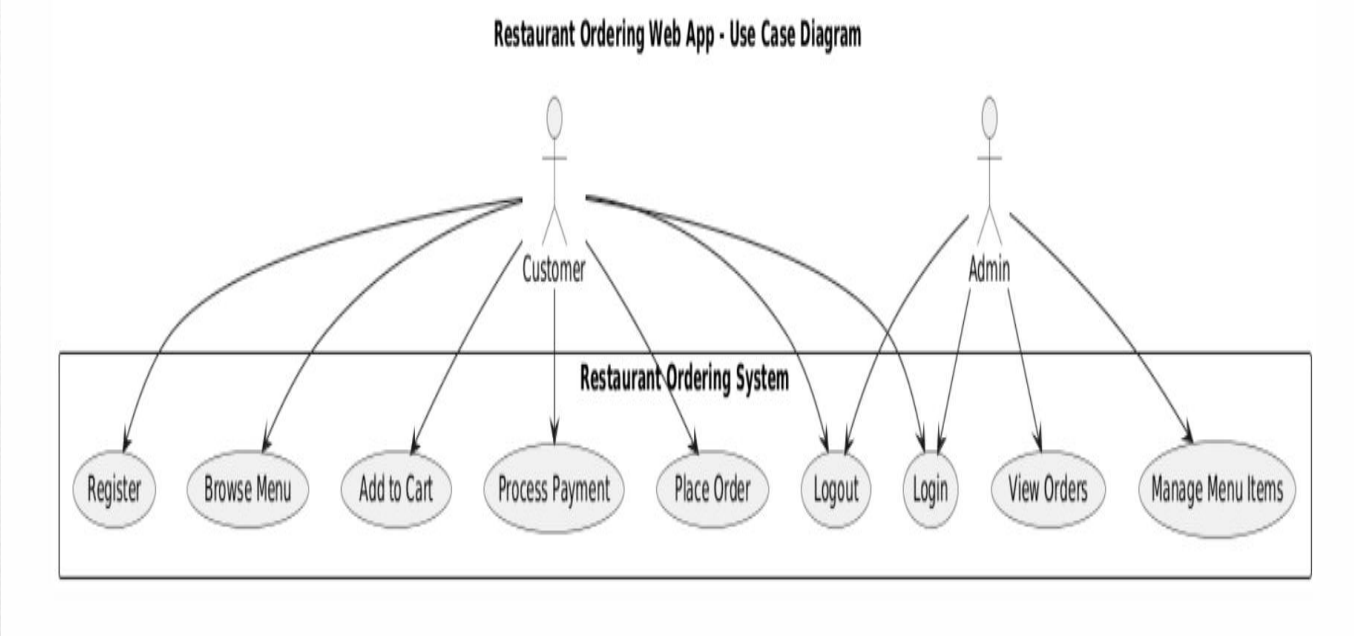
- __pycache__/: Compiled Python bytecode.
- screenshots/: Project images.
- static/: CSS, JavaScript, and image files.
- templates/: HTML templates.
- user/: User authentication and profiles.
- app.py: Main application.
- stripe_logic.py: Payment integration.
- test.py: Testing scripts.

Working of the Project

- Home Page: Browse posts without logging in.
- User Authentication: Register or login to post or manage content.
- Admin Dashboard: CRUD operations on blog posts.
- Payment Integration: Secure payments using Stripe.
- Profile Management: Update user profiles.

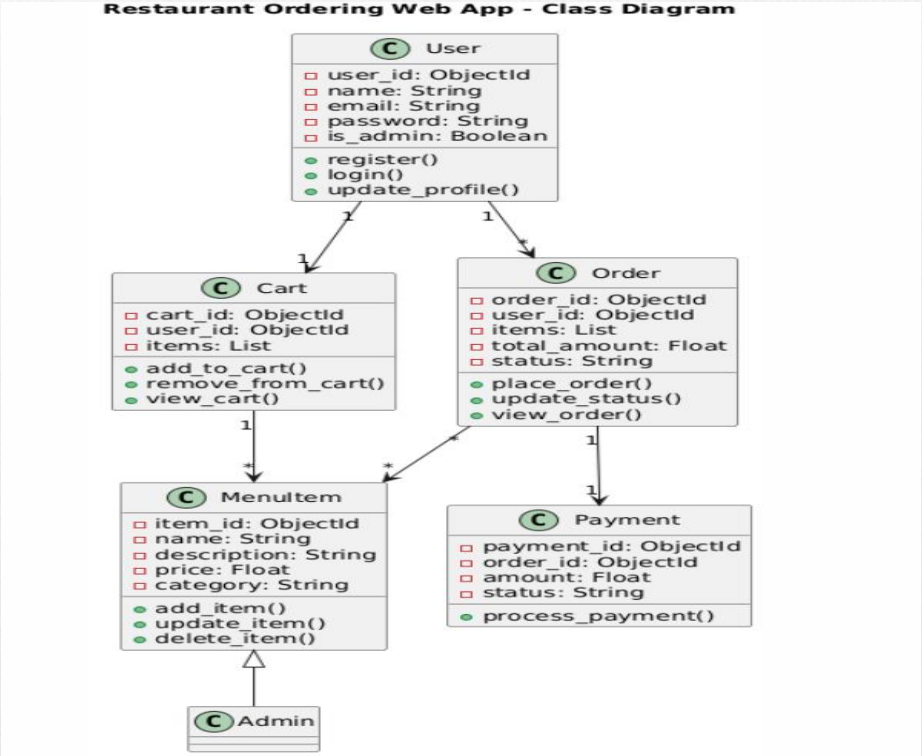
UML Diagrams

- Use Case Diagram



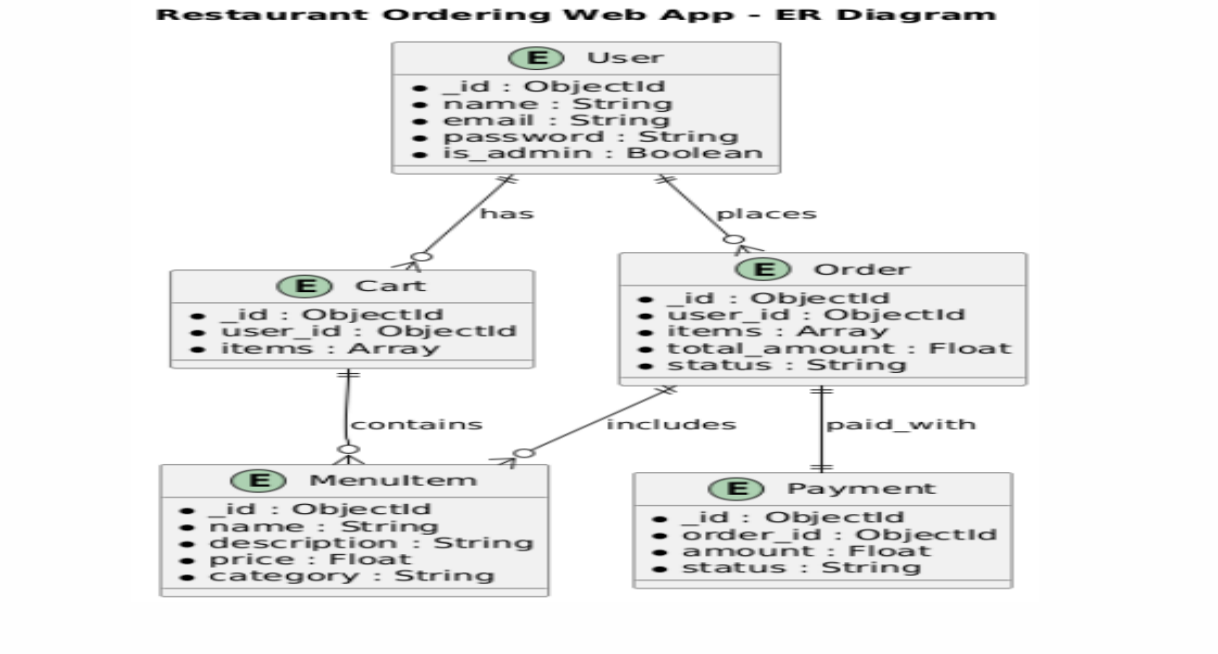
UML Diagrams

- Class Diagram



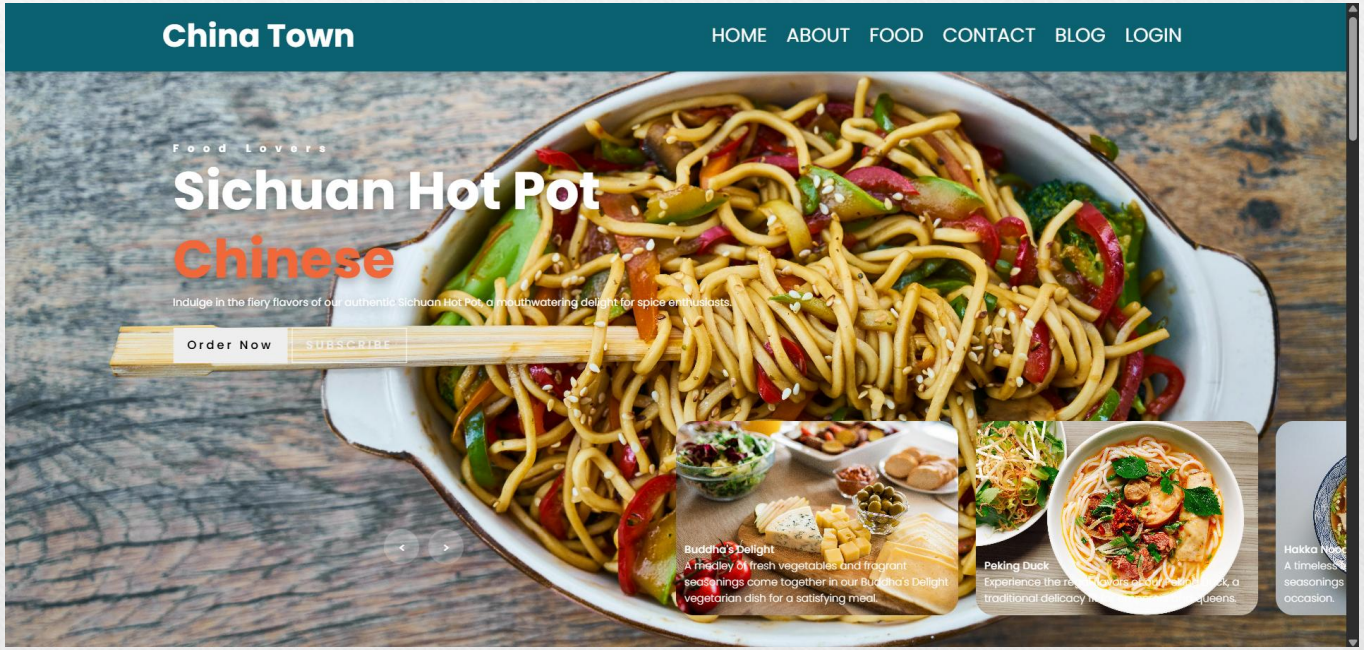
UML Diagrams

- ER Diagram



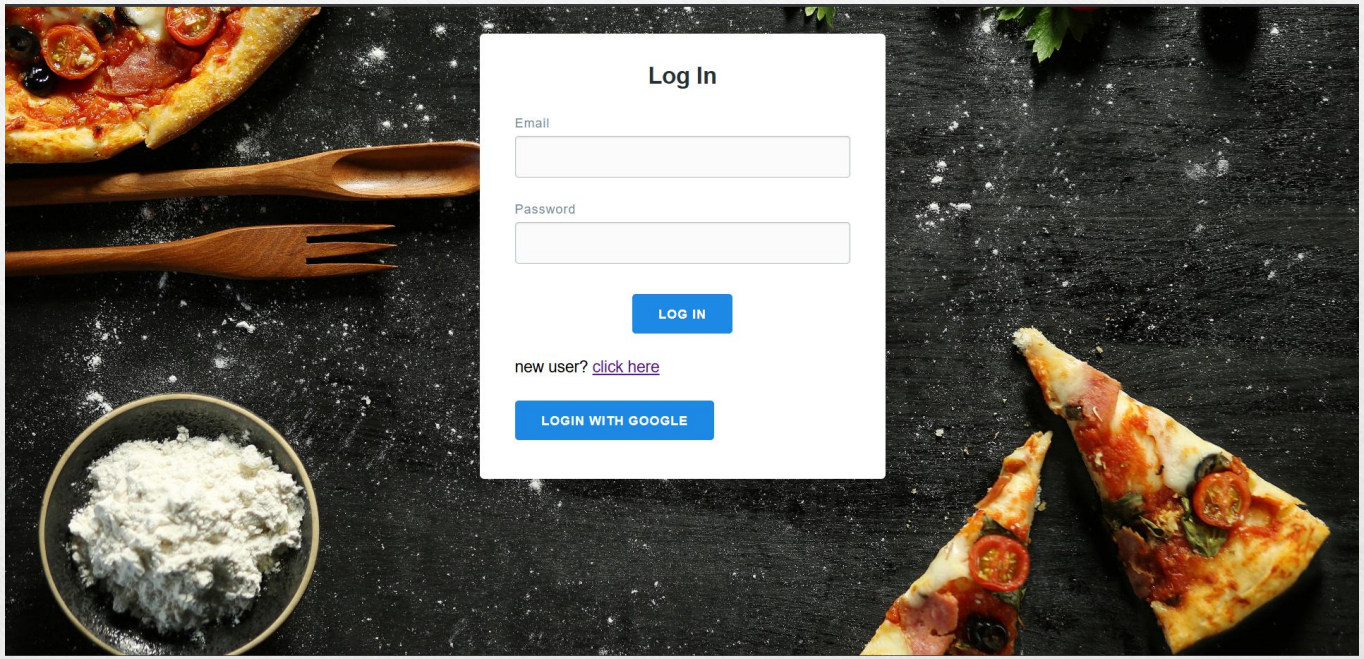
Screenshots

- Home Page



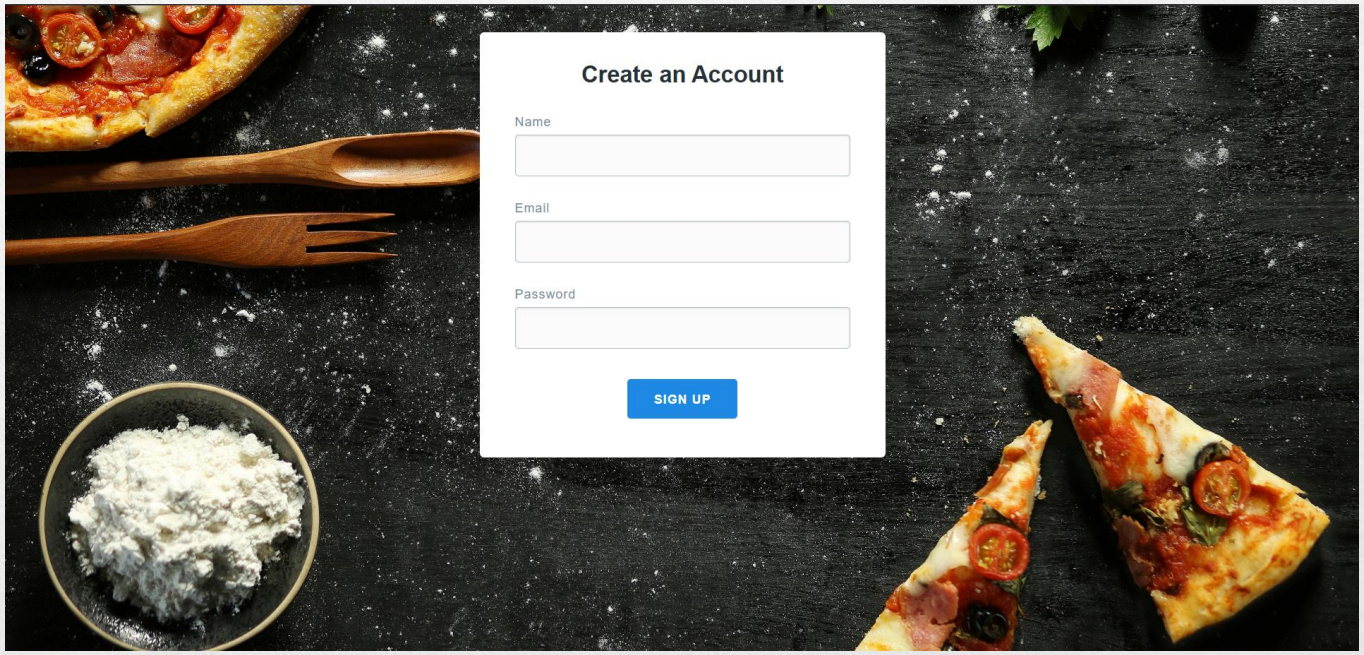
Screenshots

- Login Page



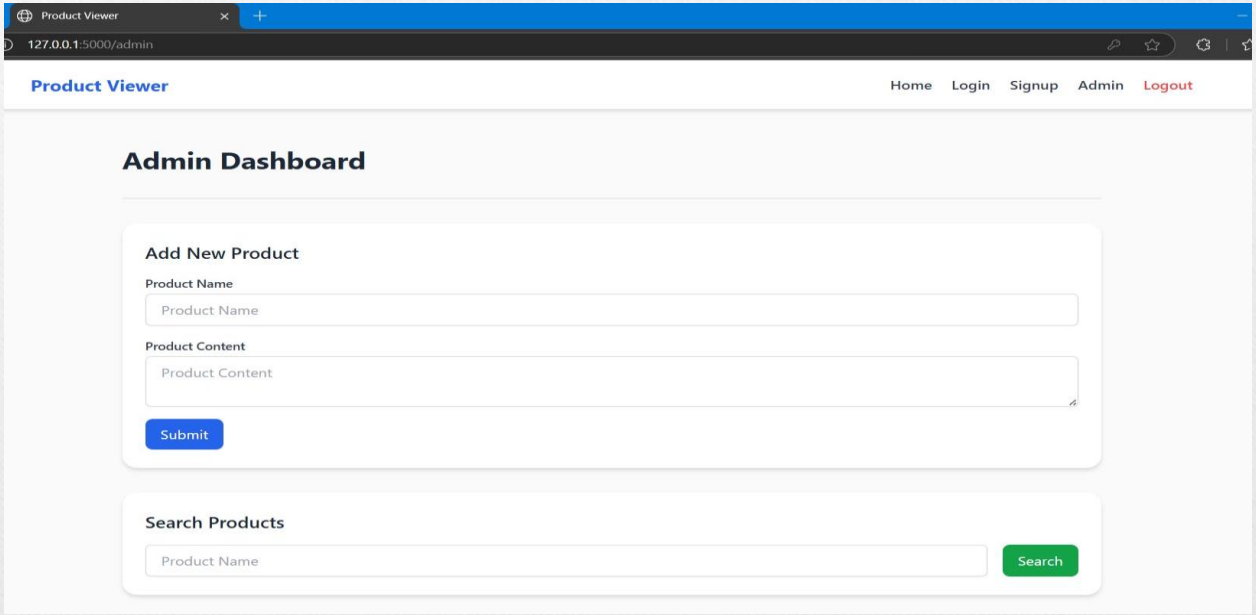
Screenshots

- Signup Page



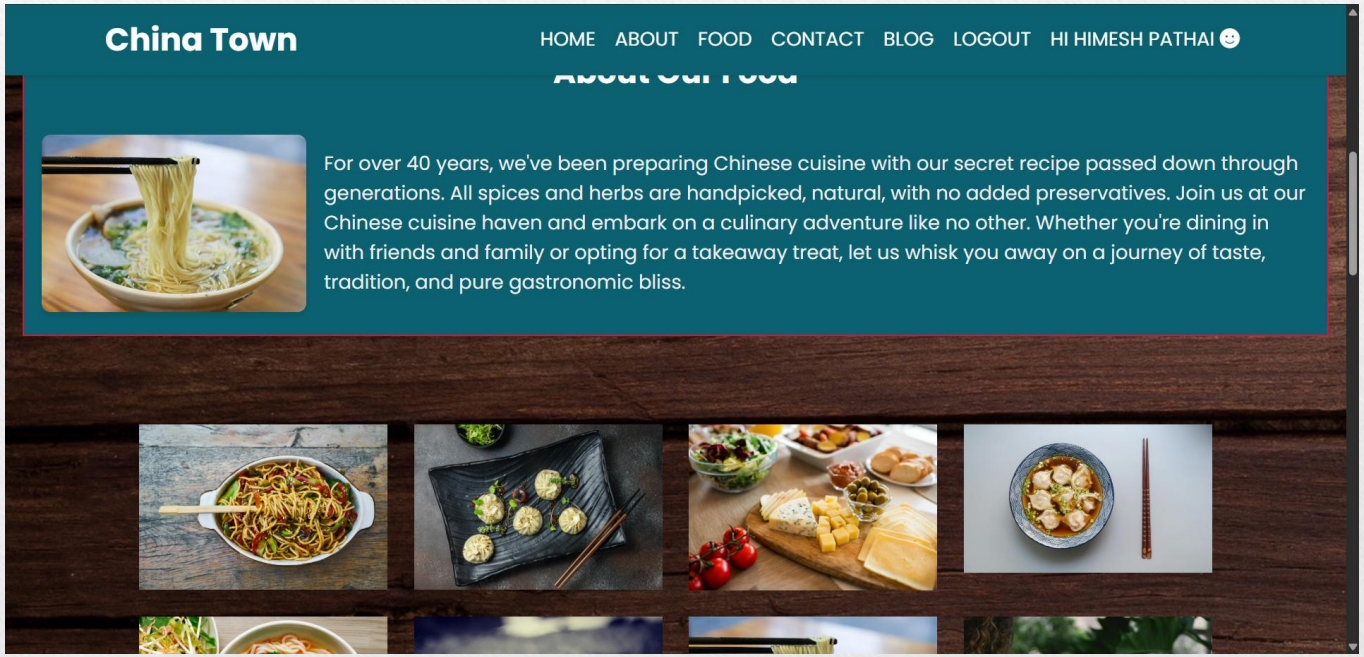
Screenshots

- Admin Dashboard



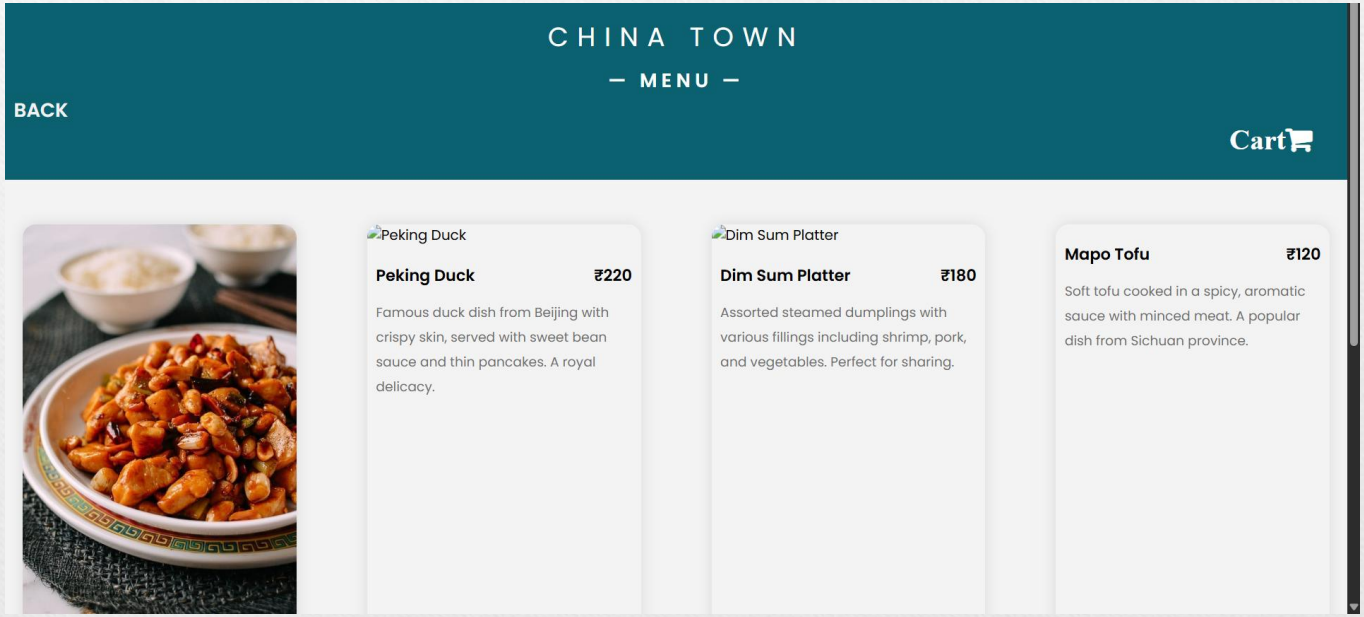
Screenshots

- About Us Page



Screenshots

- Food Menu Page



Sample Code Snippets

- MongoDB Connection:
- from pymongo import MongoClient
- client = MongoClient("mongodb://localhost:27017/")
- db = client['blog_app']

- Flask Route to Create Post:
- @app.route('/create', methods=['GET', 'POST'])
- def create_post():
- if request.method == 'POST':
- title = request.form['title']
- content = request.form['content']
- db.posts.insert_one({'title': title, 'content': content})
- return redirect(url_for('admin'))

Challenges Faced

- Flask to MongoDB connection.
- Session management.
- Dynamic content rendering.
- CRUD operations with form validation.

Conclusion

- Gained hands-on experience with Flask and MongoDB.
- Understood the full-stack development workflow.
- Strengthened knowledge of web app development, data management, and secure authentication.

Future Improvements

- - Add comments section.
- - Image uploads.
- - UI enhancement with Tailwind CSS.
- - Email verification.
- - JWT authentication.

Thank You!