# Lovely Professional University

Project Report On

# ONLINE FOOD DELIVERY WEB APPLICATION

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# Abstract

The Online Food Delivery Web Application is a Django-based system developed to simplify online ordering for restaurants. It allows customers to browse food menus, view product details, and place orders through a responsive interface. Users can create accounts, manage their cart, and track order history. The admin can manage products, orders, and customer details.

This project demonstrates Django's powerful Model-View-Template (MVT) architecture along with Bootstrap-based frontend design for a seamless user experience. SQLite database ensures smooth storage and retrieval of user, product, and order data. This project serves as a real-life example of a scalable food e-commerce solution.

## Major Modules

1. User Authentication Module:
   - Login/Signup using Django authentication.
   - Session management & secure password handling.

2. Product Management Module:
   - Add, update, delete food items with images & prices.
   - Displays menu items for customers.

3. Shopping Cart Module:
   - Add to cart, remove items, and update quantity.

4. Order Management Module:
   - Checkout process saves order linked to the user.
   - Admin can manage & track orders.

5. Admin Dashboard Module:
   - Product and order management via Django admin panel.

## Minor Modules

- Search & Filter: Quickly locate food items.
- Responsive UI: Works on desktop, tablet & mobile.
- Static Pages: About Us, Contact Us, Newsletter Subscription.
- Logout & Profile: Manage user sessions.
- Basic Notifications: Order confirmation & alerts.

## Tools & Technologies Used

### Backend: Django Framework (Python 3.11)
### Frontend: HTML5, CSS3, Bootstrap, JavaScript
### Database: SQLite (lightweight relational DB)
### Code Editor: Visual Studio Code
### Version Control: Git & GitHub
### Server: Django Development Server for testing

# Database Design & ER Diagram

The application uses 4 main tables:

- User Table: Stores user info (id, username, email, password)
- Product Table: Contains food details (id, name, category, price, image)
- Order Table: Stores order details (id, user_id, total, status)
- Cart Table: Temporary cart before order placement

Relationships:

- One user can place multiple orders.
- One order can include many products.
- Cart belongs to a single user but can hold many products.

ER Diagram (Descriptive): User -> Orders -> Products (Many-to-Many via Cart)

# Project Description

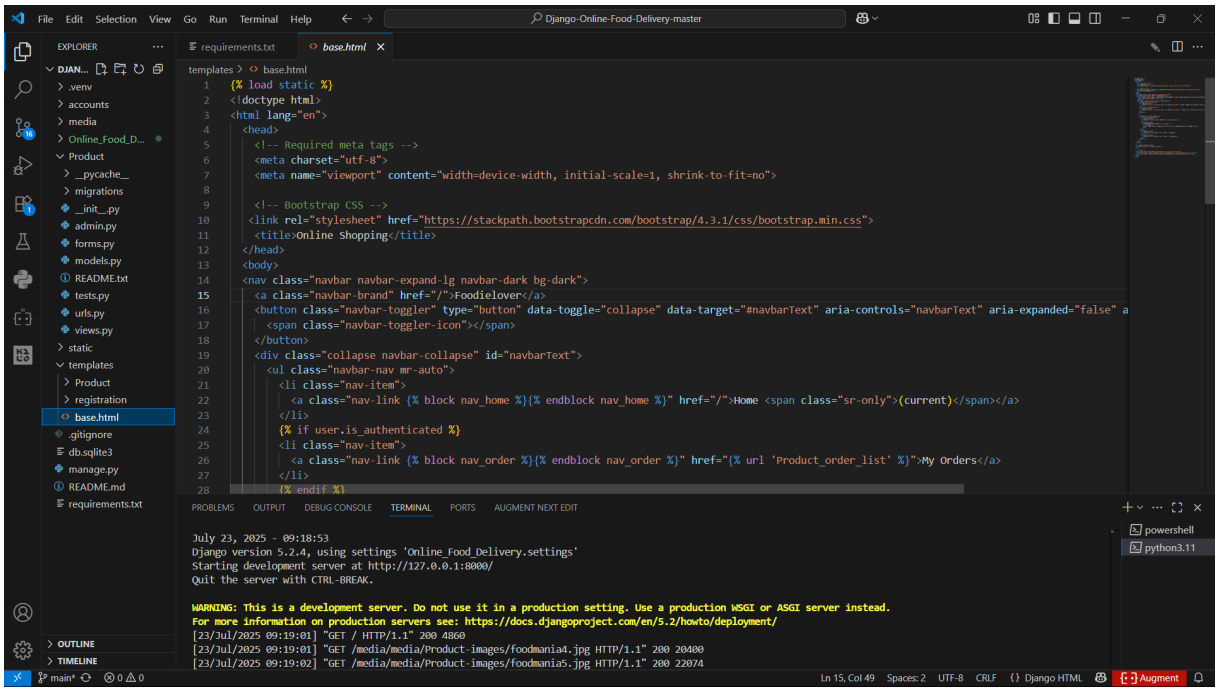
The project follows a simple and effective workflow:

1. Users visit homepage to view food menu.
2. They can add items to cart and proceed to checkout.
3. Login/signup is required to complete orders.
4. After checkout, order is saved to the database.
5. Admin can manage all products and orders from backend.

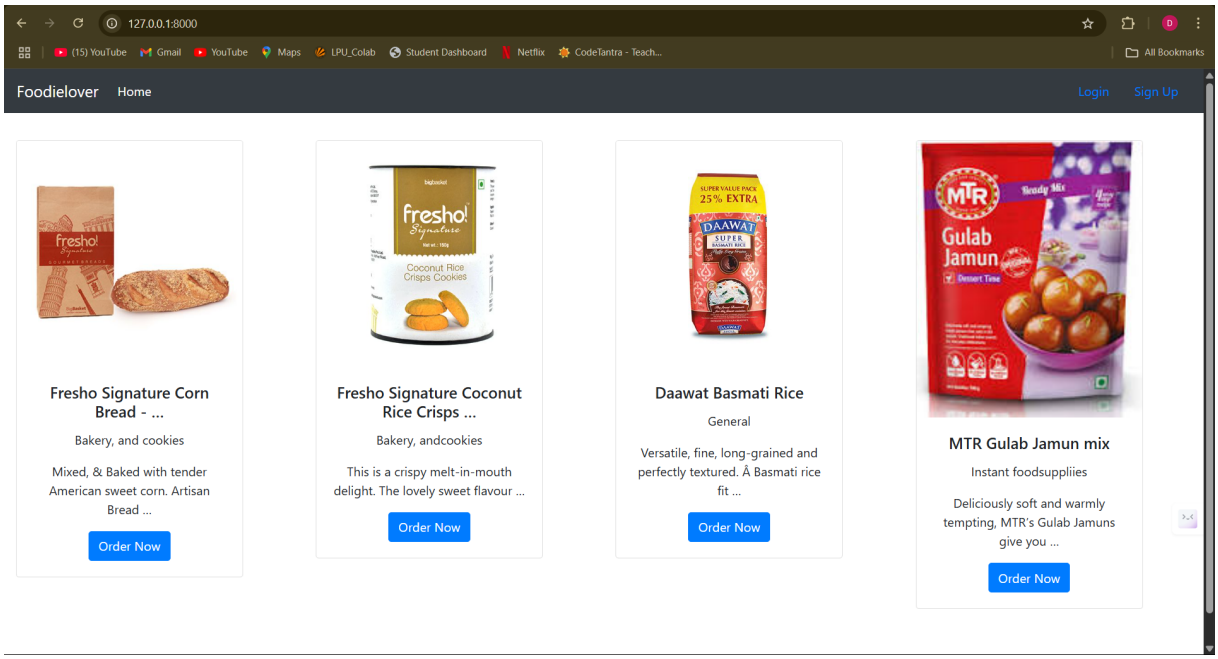
This approach provides a seamless user experience while keeping management easy for administrators.

# Screenshots

Below are some key UI screenshots:




Screenshot 1: Django project running in VS Code with server started.




Screenshot 2: Homepage displaying food products with 'Order Now' buttons.

## Feature Enhancements (Future Scope)

- Online Payment Gateway integration
- Real-time delivery tracking system
- Coupons and promotional discounts
- Customer ratings and reviews
- Mobile app integration with same backend

## Conclusion

The Online Food Delivery Web Application is a fully functional system that showcases real-world e-commerce workflows for food businesses. It leverages Django's robust backend, Bootstrap-based responsive UI, and SQLite database integration.

It provided hands-on experience with full-stack development, database modeling, authentication, and admin dashboards. The project can easily be extended into a production-ready system with advanced features.

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