

A Project Report
On
'Sweet Shop Management System '

Submitted By

NIKITA KHOT
MSC (CA) – II SEM -II
2023-2024

Submitted to
Progressive Education Society's
Modern College of Arts, Science and Commerce
(Autonomous)
Shivajinagar, Pune 411 005



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Dr. R. S. Zunjarrao
M.Sc, Ph.D.
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- Jr. College Permission No. HSC/1077/31029/XII-HS dt/ 4-5-77, HSC College Code No. J-11.11.005.

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Department of Computer Science

M.Sc. Computer Application, Part-II, Sem-IV
2023-2024

IT Project Certificate

This is to certify that Mr. / Miss _____

Roll No. _____, Seat No. _____ has successfully completed the
IT Project entitled _____

towards the partial fulfillment of M.Sc. (Computer Application) curriculum
during the academic year 2023 - 2024. The College has provided Training for
this academic Project from 2nd Jan 2024 to 30th May 2024.

Date:

Prof. Dr. K.R. Salla
M.Sc. CA, Course
Coordinator

Prof. M.S. Suryawanshi
Placement Coordinator

Prof. S.S. Deshmukh
Vice-Principal &
Head, Dept. of Comp.
Sc.



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2023-2024

IT Project Certificate

This is to certify that Mr. / Miss _____

Roll No. _____, Seat No. _____ of class, M.Sc. Computer Application, Part-II, Sem-IV has successfully completed the IT Project entitled:

_____ under Course Name: Industrial Training Project, Course Code: 19CsCmaP401, towards the partial fulfillment of the M.Sc. (Computer Application) curriculum during the academic year 2023 - 2024.

Name & Address of the Company/Institute:

_____ He/ She has been evaluated on date _____

Project Guide

Prof. Dr. K.R. Salla
M.Sc. Comp. Appln.,
Course Coordinator

Prof. S.S. Deshmukh
Vice-Principal & Head,
Dept. of Comp. Sc.

Name & Signature of Examiners with date

Industrial training schedule/calender

Month	Week	Particulars
January - 2024	I	-
	II	Searching for topics
	III	Finalization of topic
	IV	Learning about Technology
February - 2024	I	Information Gathering
	II	Information Gathering
	III	Initial documentation(synopsis)
	IV	ERD and UML Diagrams
March - 2024	I	Installation of Software and Editor.
	II	Started working on some topics about the project.
	III	Had Reference of some videos
	IV	Created UI designs.
April - 2024	I	Started development of inner pages.
	II	Development of inner pages.
	III	Worked in multiple functions
	IV	Installation related to backend.
May - 2024	I	Created Database
	II	Database connectivity, authentication.
	III	Final testing of project.
	IV	Created project report and ppt.
June - 2024	I	Final review and approval.
	II	-
	III	-
	IV	-

Declaration by the student

I Ms. NIKITA SHANKAR KHOT, of MSC (CA) – II, hereby declare that the Project work titled "**Sweet Shop Management System**" which has been submitted to Progressive Education Society's Modern College of Arts, Science and Commerce (Autonomous) Shivajinagar, Pune 411005, is an original work of the undersigned and has not been reproduced from any other source.

Date :

Signature

Place : PUNE

Name : NIKITA SHANKAR KHOT

Roll No :

ACKNOWLEDGEMENT

It gives me a great pleasure to acknowledge the contribution of all the people who have directly or indirectly helped me in the development of my project for the MSC(CA) - II.

I would like to express a deep sense of gratitude to our faculty members for their continuous encouragement and guidance which shaped my efforts.

I would like to express my sincere regards to Prof. Shamkant Deshmukh sir, Vice Principal and Head, Dept of Computer Science at Modern College, Pune. I am great thankful to my project guide Prof. Dr.Pallawi Bulakh madam for guiding me and constant encouragement for this project.

I also thank all respected faculty members of Modern College of Arts, Science and Commerce.

MISS. NIKITA SHANKAR KHOT

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Introduction

The Sweet Shop Management system is a comprehensive web application designed to manage an online Sweet Shop. It allows customers to browse and purchase a variety of sweets, while providing an interface for administrators to manage products, orders, and customer information. The application is built using Django, Python web framework.

Features

- User Registration:
 - Users can create accounts, log in, and log out.
 - Password management and recovery.
- Product Catalog:
 - Display of products with details such as name, description, price, and image.
 - Search and filter products.
- Shopping Cart:
 - Add, update, and remove items.
 - View total price.
- Order Placement and Tracking:
 - Place orders and receive confirmation.
 - Track order status.
- User Profile Management:
 - Update personal information and view order history.
- Admin Panel:
 - Manage products (add, update, delete).
 - Manage orders (view, update status).
 - Manage users (view, update, delete accounts)

Problem definition

The Sweet Shop is a traditional retail business specializing in the sale of various Sweets. With the growing trend of online shopping and the need to expand the business reach beyond the local community, there is a need to develop a web-based platform to facilitate online sales and streamline business operations. This platform will allow customers to browse the product catalog, place orders online, and manage their profiles, while also enabling administrators to manage inventory, orders, and customer information efficiently.

The primary objective of this project is to develop an online sweet shop web application that addresses the following needs:

Technical Requirements:

- Scalability: Design the application to handle a growing number of users and transactions as the business expands.
- Performance: Ensure the application performs efficiently, with fast loading times and minimal downtime.
- Maintainability: Develop the application using best practices and clean code to facilitate easy maintenance and future enhancements.

Existing system

Manual Systems: Many sweet shops still rely on traditional manual methods for inventory management, sales tracking, and customer management. These systems involve handwritten records, manual calculations, and paper-based processes.

Basic Digital Systems: Some sweet shops utilize basic digital tools such as spreadsheets (e.g., Excel) or simple software applications for inventory tracking and sales management. These systems offer limited automation and may lack advanced features like integration with POS systems or CRM functionalities.

Need for Computerization

Computerizing a sweet shop management system offers numerous benefits that streamline operations, enhance efficiency, and improve customer experience. Here are some key points highlighting the need for computerization:

- Real-Time Tracking: Automated systems allow real-time tracking of inventory, preventing stockouts or overstock situations.
- Accurate Records: Keeps accurate records of ingredients, products, and materials, reducing wastage and ensuring freshness.
- Automated Accounting: Keeps track of expenses, revenues, and profits with minimal manual intervention.
- Online Ordering: Integration with online ordering platforms to cater to the growing demand for online shopping.
- Convenient Shopping: Allow customers to browse a wide range of sweet products, view details, and make purchases from the comfort of their homes.

Computerizing a sweet shop management system transforms the way the business operates, leading to enhanced efficiency, better financial management, improved customer satisfaction, and scalability for future growth. Implementing such a system is a strategic investment that can drive long-term success

Scope of the proposed System

The scope of the proposed computerized sweet shop management system includes:

- Inventory Management: Real-time tracking, automatic reordering, and expiry date management.
- Sales and Billing: Efficient POS system, detailed sales reporting, and management of discounts and promotions.

- Customer Relationship Management (CRM): Customer database, loyalty programs, and feedback collection.
- Order Management: Integration with online ordering, real-time order tracking, and handling custom orders.
- Financial Management: Expense tracking, revenue management, and generating financial reports.
- User Interface and Experience: User-friendly interface, multi-device compatibility, and multi-language support.

This system aims to enhance efficiency, improve customer satisfaction, and support business growth.

TECHNOLOGY

Technology used

- Python 3.12.3 or later
- Django 3.0 or later
- SQLite (default database for Django projects)
- pip (Python package installer)

Tools used

- Programming Languages:
 - Backend: Python, Java, PHP for server-side logic.
 - Frontend : HTML, CSS, JavaScript for building user interfaces.
- Frameworks and Libraries:
 - Backend: Django, Flask (Python),
 - Frontend: React, Angular, Vue.js for dynamic and responsive front-end development.
- Database Management Systems:
 - Relational Databases: SQLite
- Development Environment:

- IDEs: Visual Studio Code, PyCharm, IntelliJ IDEA for coding and debugging.

- Security Tools:
 - Encryption: SSL/TLS for secure data transmission.

These technical tools collectively support the development, deployment, and maintenance of the computerized Sweet Shop management system, ensuring it is robust, scalable, and efficient.

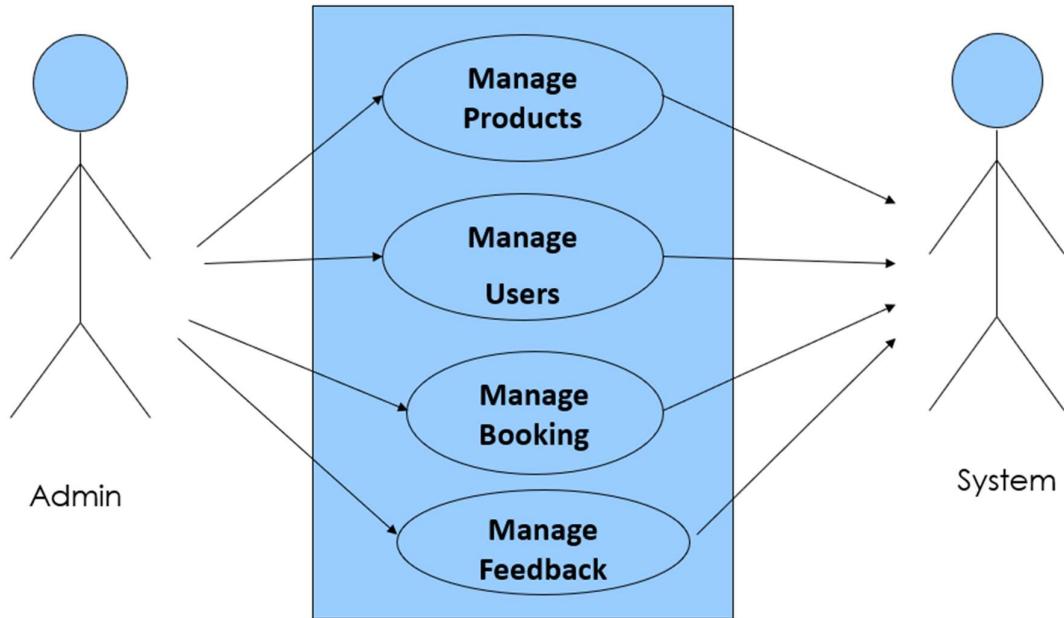
ANALYSIS & DESIGN

Contents:

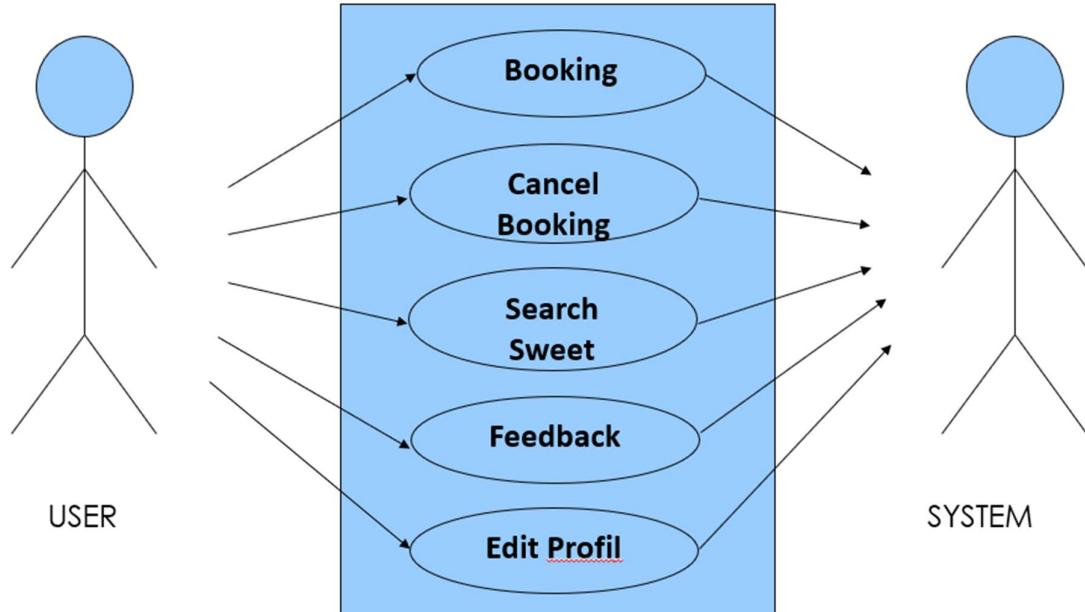
- Use case diagram
- Sequence Diagram
- Data flow diagram
- ER diagram

Use Case Diagram:

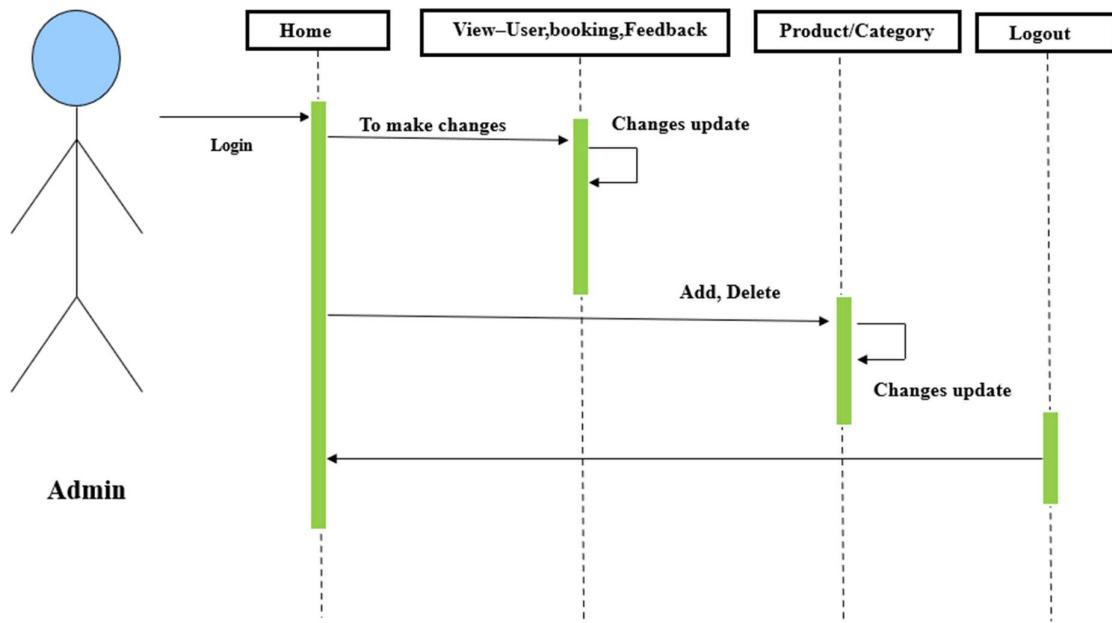
Use Case Diagram between ADMIN and SYSTEM



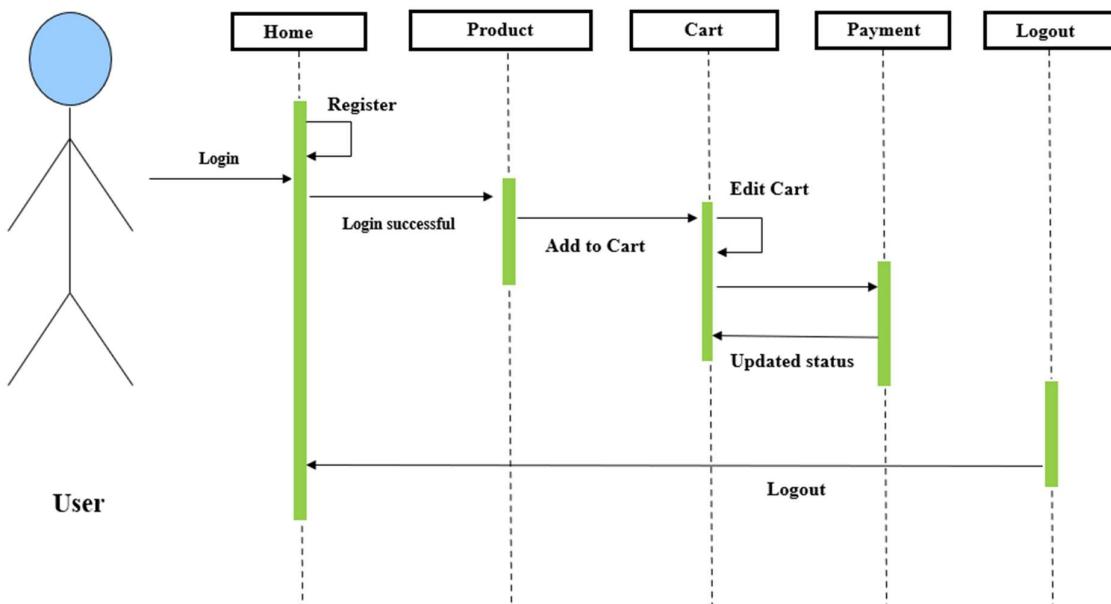
Use Case Diagram between USER and SYSTEM:



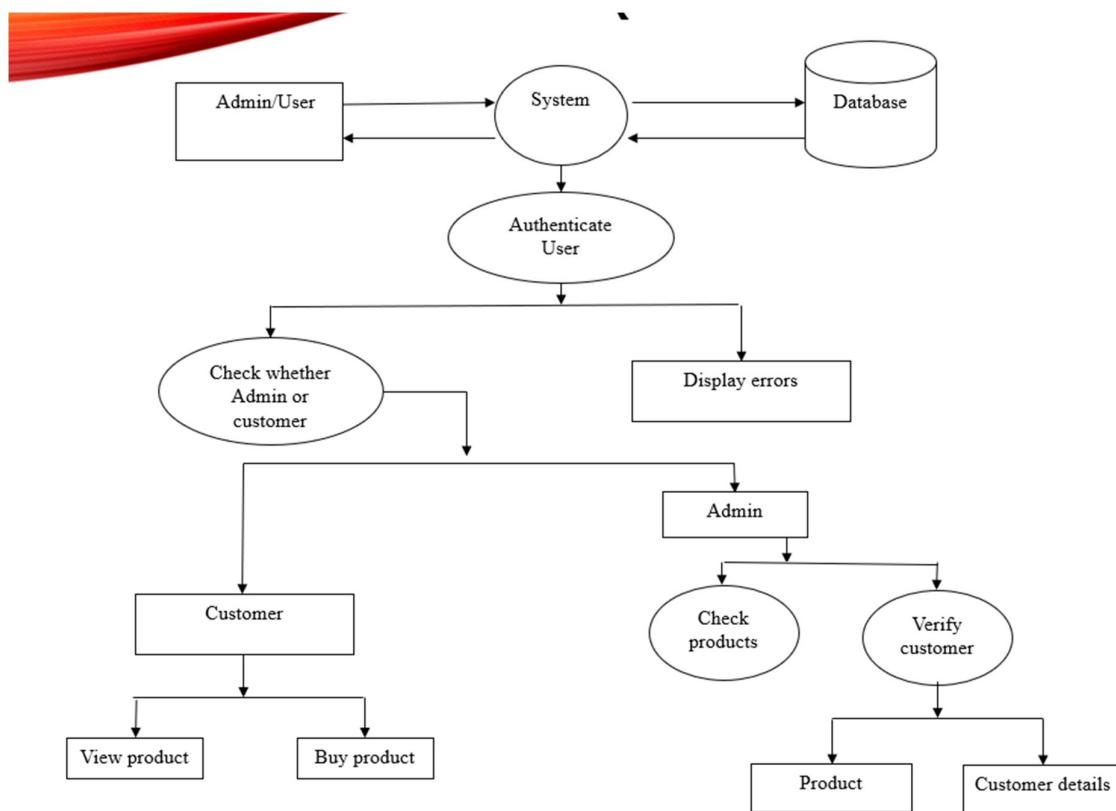
Sequence Diagram (Admin)



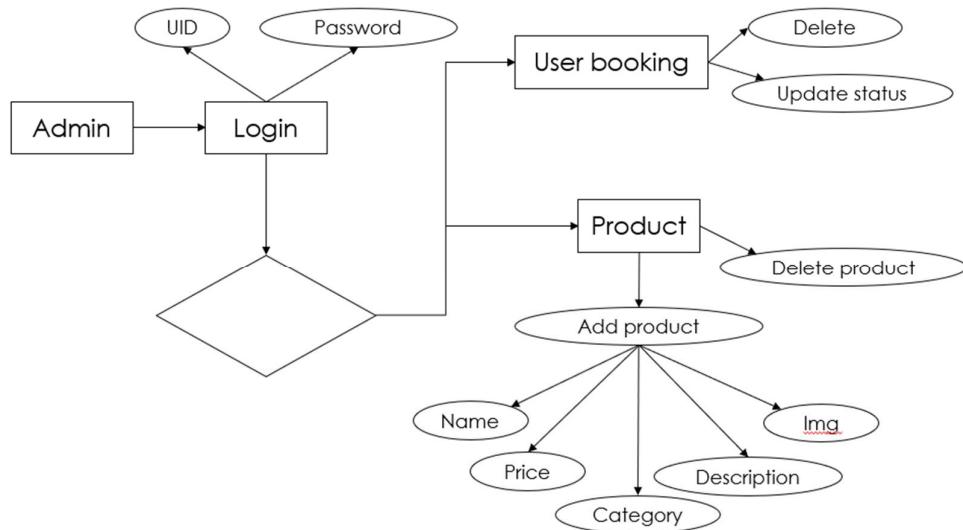
Sequence Diagram (User)



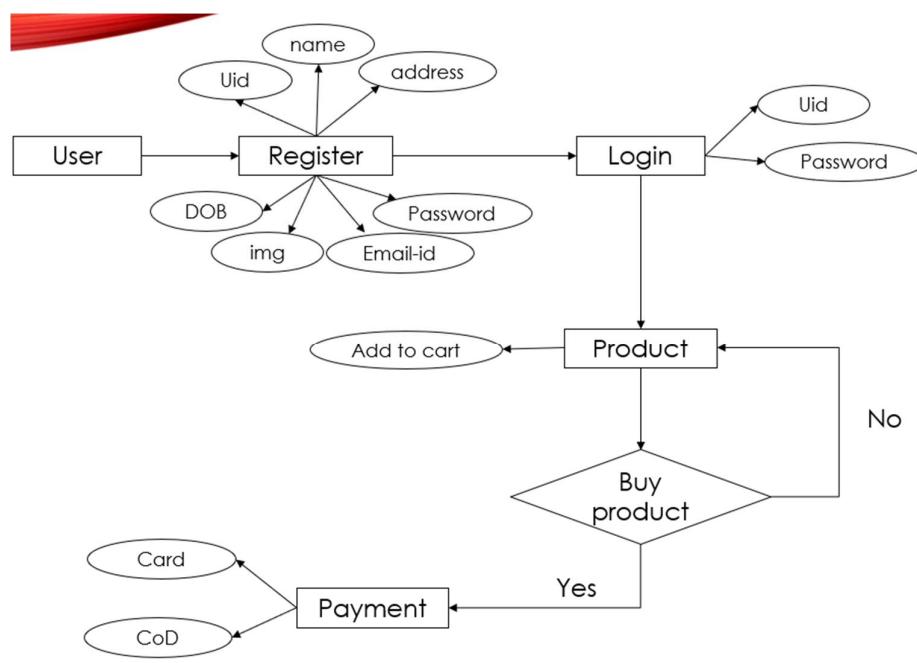
Data Flow Diagram



Entity Relationship Diagrams (ER-Diagrams) (Admin):



Entity Relationship Diagrams (ER-Diagrams) (User):



Output screens

HOME PAGE

Online Sweets Shop

Sweets Store Home About Contact User Login Admin Login

Gulab Jamun Rs.578
Gulab Jamun 500gm
Add to Cart

White Burfi Rs.648
White Burfi 500gm
Add to Cart

Chandrakala Rs.628
Chandrakala 500gm
Add to Cart

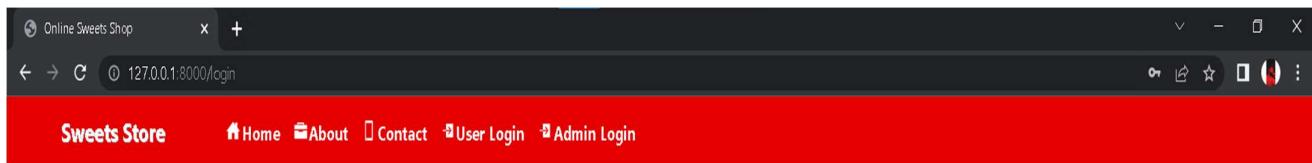
Badam Halwa Rs.1128
Badam Halwa 400gm
Add to Cart

127.0.0.1:8000/#demo

Type here to search

21:30 ENG 27-12-2022

User LOGIN PAGE



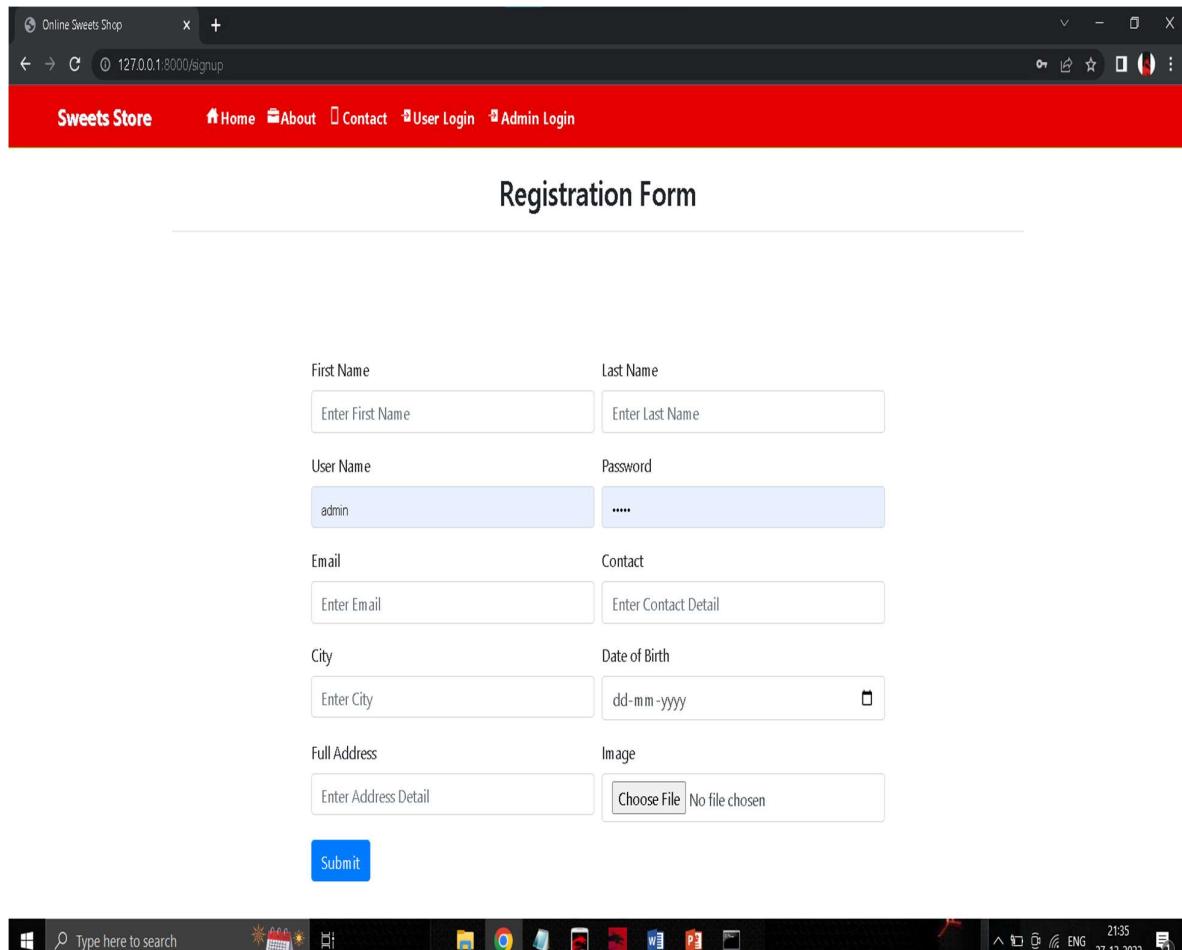
User Login Form

Username

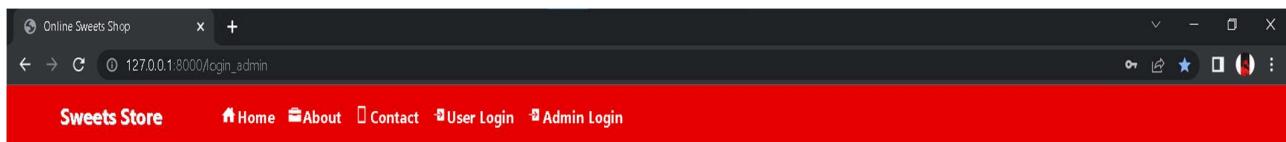
Password



SIGNUP PAGE



ADMIN LOGIN PAGE



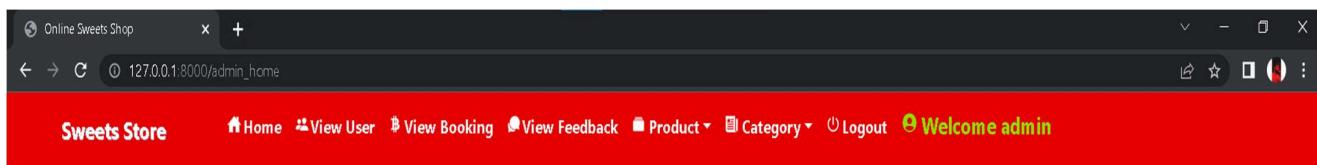
Admin Login Form

Username

Password



ADMIN HOME PAGE



Total Customer

1

Total Booking

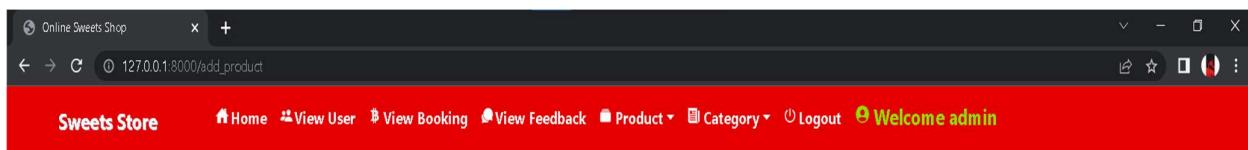
1

Total Product

53



ADD PRODUCT PAGE



Add Product

Product Name Product Image

No file chosen

Category Product Price

Description



VIEW PRODUCT PAGE

Screenshot of a web browser displaying the 'View Product' page for an online sweets shop. The page has a red header with navigation links like Home, View User, View Booking, View Feedback, Product, Category, Logout, and a welcome message for 'admin'. The main content area is titled 'View Product' and shows a table of products.

The table has the following data:

Product Name	Image	Category	Price	Description	Action
Adhirasam		TRADITIONAL SWEETS	598	Adhirasam 500gm	<button>Delete</button>
Angoor Peda		MILK SWEETS	648	Angoor Peda 500gm	<button>Delete</button>
Anjeer Halwa		HALWA	1128	Anjeer Halwa 500gm	<button>Delete</button>
Apple Rasagulla		MILK SWEETS	628	Apple Rasagulla 500gm	<button>Delete</button>
Badam Halwa		GHEE SWEETS	1128	Badam Halwa 400gm	<button>Delete</button>
Badam Strawberry		DRY FRUIT SWEETS	1278	Badam Strawberry 500gm	<button>Delete</button>

The browser's taskbar at the bottom shows various pinned icons and the date/time as 27-12-2022 21:39.

ADD CATEGORY PAGE

The screenshot shows a web browser window titled "Online Sweets Shop". The URL in the address bar is "127.0.0.1:8000/add_category". The page has a red header bar with the text "Sweets Store" and navigation links: Home, View User, View Booking, View Feedback, Product, Category, Logout, and a welcome message "Welcome admin". Below the header, the main content area has a title "Add Category". It contains a form with a label "Category Name" and a text input field with placeholder text "Enter Category". A blue "Submit" button is located below the input field. At the bottom of the screen, there is a Windows taskbar with icons for search, calendar, file explorer, and various applications. The date and time on the taskbar are "27-12-2022 21:40".

VIEW CATEGORY PAGE

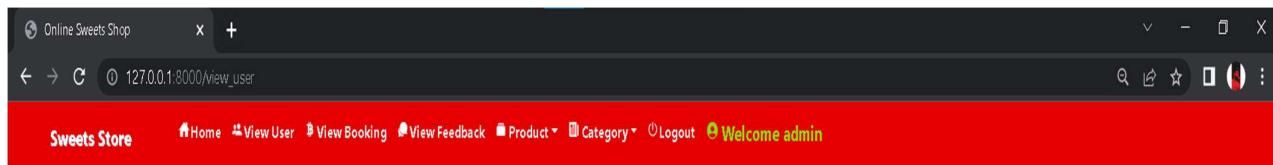
The screenshot shows a web browser window titled "Online Sweets Shop" with the URL "127.0.0.1:8000/view_category/". The header bar includes links for Home, View User, View Booking, View Feedback, Product, Category, Logout, and a welcome message for the admin. The main content area has a red header "View Category". Below it is a table with the following data:

Product Name	Delete
DRY FRUIT SWEETS	
GHEE SWEETS	
HALWA	
MILK SWEETS	
SAVOURIES	
SUGAR FREE SWEETS	
TRADITIONAL SWEETS	

At the bottom, there is a search bar, a page number indicator "Showing 1 to 7 of 7 entries", and navigation buttons for "Previous" and "Next".



VIEW USER DETAIL PAGE



View User Detail

View User Detail						
User Details						
User Details						
Image	First Name	Last Name	Contact	City	Email Id	Delete
	Ganesh	Bagde	Pune	Pune	ganeshrbagde@gmail.com	<button style="background-color: orange; color: white; border: none; padding: 2px 5px;">Delete</button>

Showing 1 to 1 of 1 entries

Previous 1 Next



VIEW PRODUCT PAGE (customer)

Sweets Store [Home](#) [View Booking](#) [Send Feedback](#) [View Product](#) [Change Password](#) [Logout](#) [Customer Support](#) [Cart](#)

Start Filtering

All Product

GHEE SWEETS

DRY FRUIT SWEETS

MILK SWEETS

HALWA

SUGAR FREE SWEETS

SAVOURIES

TRADITIONAL SWEETS

View Product



Mixed Ghee Sweets Rs.648

Mixed Ghee Sweets 500gm

[Add to Cart](#)



Jangri Rs.598

Jangri 500gm

[Add to Cart](#)



Mysore Pak Rs.628

Mysore Pak 500gm

[Add to Cart](#)



Soan Papdi Rs.578

Soan Papdi 500gm

[Add to Cart](#)



Gulab Jamun Rs.578

Gulab Jamun 500gm

[Add to Cart](#)



White Burfi Rs.648

White Burfi 500gm

[Add to Cart](#)



Chandrakala Rs.628

Chandrakala 500gm

[Add to Cart](#)



Badam Halwa Rs.1128

Badam Halwa 400gm

[Add to Cart](#)



VIEW CART PAGE

Screenshot of a web browser displaying the 'View Cart' page for an online sweets shop.

The browser window title is "Online Sweets Shop". The address bar shows the URL "127.0.0.1:8000/cart". The page header includes a navigation menu with links: Home, View Booking, Send Feedback, View Product, Change Password, Logout, and a "View Cart" button.

The main content area is titled "View Cart". It features three buttons: "Continue Shopping", "Buy Now", and a box showing the "Total: 1226".

The cart contains two items:

- Jangri**: An image of a red, textured sweet. Details: Price: Rs.598, Jangri 500gm. Includes a "Remove" button.
- Mysore Pak**: An image of a white, layered sweet. Details: Price: Rs.628, Mysore Pak 500gm. Includes a "Remove" button.

At the bottom of the page, there is a search bar with placeholder text "Type here to search", and a taskbar with various application icons and system status indicators.

CONFIRM BOOKING PAGE

Online Sweets Shop

127.0.0.1:8000/booking(%3FPGanesh.205.206)

Sweets Store [Home](#) [View Booking](#) [Send Feedback](#) [View Product](#) [Change Password](#) [Logout](#)

Cart

Confirm Booking Detail

Booking Id	Customer Name
Ganesh.205.206	Ganesh
Booking Date	Email
Dec 27, 2022	ganeshrbagde@gmail.com
City	Contact
Pune	Pune
Address	
	780 Raviwar Peth, Ganesh road, Subhadra Apartment, near RCM COLLEGE, Subhadra Apartment, near I
Total	
	1226

confirm

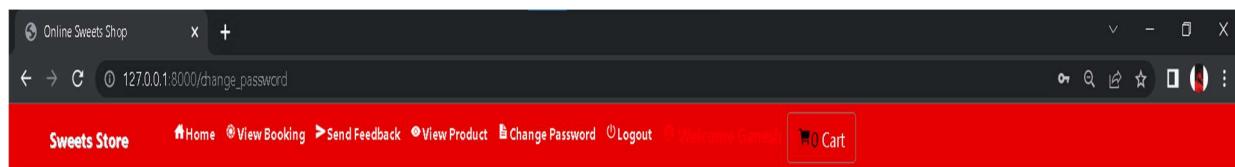


PAYMENT DETAIL PAGE

The screenshot shows a web browser window titled "Online Sweets Shop" with the URL "127.0.0.1:8000/payment(%3FP1226%5B0-9%5D+)". The page has a red header bar with the text "Sweets Store" and navigation links: Home, View Booking, Send Feedback, View Product, Change Password, Logout, and a Cart icon. Below the header is a section titled "PAYMENT DETAIL" in red. This section contains fields for card information: three placeholder images for card icons, a "CARD NUMBER" input field containing "Valid Card Number", an "EXPIRY DATE" input field containing "MM / YY", a "CVC CODE" input field containing "CVC", a "Card Holder Name" input field containing "Card Holder Name", and an "Amount In Rs." input field containing "1226". At the bottom are two green buttons: "payment" and "Cash On Delivery".



CHANGE PASSWORD PAGE



Change Password

Old Password

New Password

Confirm Password

Submit



SEND FEEDBACK PAGE

The screenshot shows a web browser window with the following details:

- Title Bar:** Online Sweets Shop
- URL:** 127.0.0.1:8000/send_feedback/(%3FP10%5B0-9%5D+)
- Header:** Sweets Store, Home, View Booking, >Send Feedback, View Product, Change Password, Logout, Welcome Ganesh, 0 Cart
- Section Title:** Send Feedback
- Form Fields:**
 - Date: Dec 27, 2022
 - Username: Ganesh
 - Email: ganeshrbagde@gmail.com
 - Contact: (empty field)
 - Description: (empty text area)
- Buttons:** Submit

The taskbar at the bottom of the screen includes the following icons and information:

- Windows Start button
- Type here to search
- Calendar icon
- File Explorer icon
- Google Chrome icon
- Microsoft Edge icon
- PowerPoint icon
- Word icon
- Task View icon
- File icon
- Network icon
- User profile icon
- Language: ENG
- Date: 27-12-2022
- Time: 21:52
- Battery icon

Testing Strategies

Effective testing strategies ensure that the sweet shop management system is reliable, functional, and user-friendly. Here's a comprehensive overview of the testing strategies to be employed:

- Testing Tools:
 - Unit Testing: JUnit (Java), PyTest (Python) for automated testing.
- System Testing
 - Scope: Test the complete system as a whole.
 - Focus: Validate end-to-end functionalities such as processing sales, managing inventory, and generating reports.
 - Environment: Mimic the production environment as closely as possible.
- Acceptance Testing
 - Scope: Validate the system against user requirements.
 - Tools: Cucumber for behaviour-driven development (BDD).
 - Focus: Ensure the system meets the business needs and user expectations.
- Implementation Approach
 - Test Planning: Define the objectives, resources, scope, and schedule of testing activities.
 - Test Case Development: Create detailed test cases based on the system requirements and use cases.
 - Environment Setup: Prepare the testing environment to closely resemble the production environment.
 - Test Execution: Run the tests as per the test plan, recording the outcomes and any defects.
 - Defect Tracking: Use tools like JIRA or Bugzilla to log and manage defects.

- Review and Feedback: Regularly review test results with the development team and stakeholders to ensure continuous improvement.

By employing these testing strategies, the Sweet Shop management system can be thoroughly vetted for functionality, performance, security, and user satisfaction, leading to a robust and reliable product.

DRAWBACKS

- Initial Cost and Complexity:
 - High Implementation Cost: Setting up the system can be expensive, including hardware, software, and training expenses.
 - Complexity: Implementing and maintaining the system requires technical expertise, which may be challenging for small businesses.
- Dependence on Technology:
 - System Downtime: Reliance on technology means that system failures or downtimes can disrupt business operations.
 - Technical Issues: Potential technical glitches or bugs may require ongoing support and maintenance.
- Data Security Concerns:
 - Cybersecurity Risks: Storing sensitive customer and business data online increases the risk of cyberattacks and data breaches.
- Scalability and Flexibility:
 - Scalability Issues: The system may require significant upgrades or replacements as the business grows.
 - Customization Limitations: Off-the-shelf solutions might not fully meet the unique needs of the sweet shop, requiring custom development.

These drawbacks need to be carefully considered and mitigated through strategic planning, investment in training, robust cybersecurity measures, and choosing scalable solutions.

CONCLUSION

In conclusion, while the computerized sweet shop management system offers numerous benefits such as improved efficiency, enhanced customer experience, and streamlined operations, it also presents several drawbacks. These include dependency on technology, the need for extensive training, initial investment and maintenance costs, security risks, and potential resistance to change among employees. Despite these challenges, with careful planning, implementation, and ongoing management, the system can significantly enhance the overall effectiveness and competitiveness of the sweet shop business.

REFERENCE

- <https://docs.python.org/3/tutorial/index.html>
- <https://docs.djangoproject.com/en/5.0/>
- <https://www.w3schools.com/python/>
- <https://www.w3schools.com/django/>
- https://www.youtube.com/watch?v=_uQrJ0TkZlc

THANK YOU