



Savitribai Phule Pune University, Pune

A PROJECT REPORT ON

"Cafe Billing System"

Submitted by

Mr. Gorde Roshan Somnath

Bachelor of business administration

(computer application)

Under the Guidance of

PROF. J a d h a v R.S.



S.B.V.P.SAMAJ'S

SAHAKAR MAHARSHI BHAUSAHEB SANTUJI THORAT COLLEGE OF
ARTS, SCIENCE & COMMERCE SANGAMNER, AHMEDNAGAR – 422605

2023 – 2024



S.B.V.P.SAMAJ'S

**SAHAKAR MAHARSHI BHAUSAHEB SANTUJI THORAT
COLLEGE OF SANGAMNER**

Department of Computer Science

Project Report

Academic Year

2023 - 2024

CERTIFICATE

This certificate is awarded to Mr. Roshan Somanth **Gorde** in appreciation of his meritorious performance in Project Title on “Cafe Billing System” as part of practical requirement of Savitribai Phule Pune University during Academic Year 2023-2024.

Mr. Jadhav R.S

(H.O.D)

Mr. Jadhav R.S

(Project Guide)

Internal Examiner

External Examiner



Certificate of Project Documentation

This is to certify that, has successfully completed and submitted the project documentation for the project titled Study Center Management System conducted for **Cafe billing System** as part of the requirements for the completion of the project at **S.M.B.S.T COMMERCE & SCIENCE COLLEGE (Autonomous), SANGMNER**

The project was conducted under the supervision of **Gorde roshan** Owner at **Cafe billing system System**, and has been found to be a comprehensive and well- documented representation of **Cafe billing system System**. The student's dedication and commitment to this project are commendable.

Gorde Roshan

Owner

Cafe Billing System

Signature

Stamp of

the company

DECLARATION

I , the under sign “**Mr. Gorde Roshan Somnath**” Here by declare that the project report entitled,”. Is there search work made for Department of BBA(CA) , S.M.B.S.T. College Sangamner. Genuine and bonafied work presented by me under he guidance of internal project guide

The empirical finding in the project is based on the data collected by me.The matter presented in the project is not copied from any source . I understand that any such copy is liable to the punishment in way the university authority deems fit .

The work is not submitted for award any degree or Diploma earlier to the university of Pune or any other University .

The project report is submitted to (College name affiliated to) Savitribai Phule Pune University in the Partial fulfillment of degree of Bachelor in Business Administration (Computer Application) .

ACKNOWLEDGEMENT

Lastly we would like to thanks all the staff member of all S.M.B.S.T. College Sangamner for their help to provide information to complete this project .

It given me great pleasure to present my project report on **“Cafe Billing System”** , for “S.M.B.S.T. College Sangamner” . As per requirement of the curriculum of the course of **“Bachelor of Business Administration (Computer Application)”** from the University of Pune .

Firstly, I amheartily thankful to project conductor and guide Prof.Jadhav R.S. For selecting this project

I am also thankful to our coordinator of our BBA(CA) . Of our college **Prof. Jadhav R.S. (H.O.D of BBA(CA) Department)**.

Your Sincerely,

Mr. Gorde Roshan Somnath

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1. INTRODUCTION

The Café Billing System is a comprehensive software solution designed to streamline and optimize the billing processes within a café environment.

This system is tailored to meet the specific needs of cafes, addressing challenges related to order management, menu customization, and payment processing. By leveraging advanced technology, the Cafe Billing System aims to enhance the overall efficiency of cafe operations, providing a user-friendly platform for both customers and staff.

From multilingual interfaces to robust reporting features, this system is crafted to offer a seamless and secure billing experience, contributing to improved customer satisfaction and operational effectiveness in the dynamic world of cafe management.

2. PROBLEM DEFINITION

1. Efficient Order Management:

- Streamline the order-taking process to reduce waiting times and enhance overall service efficiency.

2. Multilingual Support:

- Implement a user-friendly interface with multilingual capabilities to accommodate a diverse customer base and improve communication.

3. Menu Customization:

- Allow cafe owners to easily customize and update their menus, ensuring accuracy in item descriptions and prices.

4. Integration with Point of Sale (POS):

- Integrate seamlessly with POS systems for real-time synchronization of orders, inventory, and sales data, minimizing errors and delays.

5. Diverse Payment Options:

- Support a variety of payment methods to cater to customer preferences and ensure a smooth and flexible payment experience.

6. Reporting and Analytics:

- Provide robust reporting features to offer insights into sales trends, popular menu items, and customer preferences, aiding in strategic decision-making.

7. User Authentication and Security:

- Implement secure user authentication mechanisms to safeguard sensitive data, ensuring the integrity and confidentiality of billing information.

8. Scalability:

- Design the system to be scalable, accommodating the evolving needs of cafes, whether they are small establishments or large, high-traffic venues.

3. NEED FOR SYSTEM

1. Efficiency and Accuracy:

- Streamlines the billing process, reducing manual errors in order taking, invoicing, and payment processing, leading to increased accuracy and efficiency.

2. Customer Satisfaction:

- Enhances the overall customer experience by minimizing waiting times, providing clear and accurate billing information, and supporting diverse language preferences.

3. Operational Optimization:

- Optimizes internal operations, allowing staff to focus on delivering quality service rather than managing complex billing tasks, ultimately improving workflow efficiency.

4. Real-time Data Synchronization:

- Integrates with Point of Sale (POS) systems to ensure real-time synchronization of orders, inventory, and sales data, providing up-to-date insights for informed decision-making.

5. Menu Flexibility:

- Enables cafe owners to easily customize and update menus, accommodating changes in offerings, prices, and promotions with minimal effort.

6. Multilingual Support:

- Addresses the diverse linguistic preferences of customers, fostering clear communication and a welcoming atmosphere for a broader customer base.

7. Financial Transparency:

- Provides transparent and accurate financial records, aiding in financial management, tax compliance, and auditing processes.

8. Security and Data Protection:

- Implements robust user authentication mechanisms and security measures to safeguard sensitive customer and transaction data, ensuring privacy and compliance with data protection regulations.

4. SCOPE OF PROPOSED SYSTEM

1. User Interface:

Creation of an intuitive and user-friendly interface for both customers and cafe staff. Customers should be able to easily place orders, view menu items, and see their bills. Cafe staff should have access to features like adding items, modifying orders, and processing payments.

2. Menu Management:

Capability to create and manage the cafe's menu, including adding new items, updating prices, and categorizing items (e.g., beverages, snacks, desserts). Ability to handle variations such as sizes (small, medium, large) and options (e.g., toppings, flavors).

3. Order Management:

Functionality for cafe staff to input orders, modify them, and manage the order queue. Real-time updating of orders to ensure smooth kitchen operations and timely delivery of food and beverages.

4. Billing and Payment:

Generation of accurate bills reflecting ordered items, quantities, and prices. Integration with payment methods such as cash, credit/debit cards, mobile payments, etc. Handling of discounts, promotions, and loyalty programs if applicable.

5. FEASIBILITY STUDY & FACT FINDING TECHNIQUE

Feasibility Study:

1. Technical Feasibility:

- Examines whether the proposed system can be implemented with the available technology infrastructure.
- Assesses compatibility with existing hardware, software, and networking systems.

2. Operational Feasibility:

- Evaluates whether the proposed system will be accepted by end-users and integrated into the cafe's daily operations.
- Considers factors such as ease of use, training requirements, and potential disruptions to current workflows.

3. Economic Feasibility:

- Analyzes the cost-effectiveness of developing and implementing the system compared to the expected benefits.
- Considers initial development costs, ongoing maintenance expenses, and potential revenue or cost savings.

Fact-Finding Techniques:

1. Interviews:

- Conducting interviews with cafe owners, staff, and potential system users to gather requirements, preferences, and pain points.
- Asking open-ended questions and probing for detailed responses to uncover specific needs and expectations.

2. Surveys:

- Distributing surveys to a broader audience, including customers, to gather feedback on preferences, payment habits, and expectations regarding a billing system.
- Analyzing survey responses to identify common themes and priorities.

3. Observation:

- Observing cafe operations firsthand to understand current billing processes, customer interactions, and pain points.
- Noting inefficiencies, bottlenecks, and areas for improvement that a new billing system could address.

6. HARDWARE AND SOFTWARE REQUIREMENT

HARDWARE :

Hardware of Computer means all physical part consist of computer system
H/W consist of input devices , CPU & OUTPUT Devices. For This System

RAM	4GB or Above
SSD	256 GB
PROCESSOR	Intel I7

SOFTWARE :

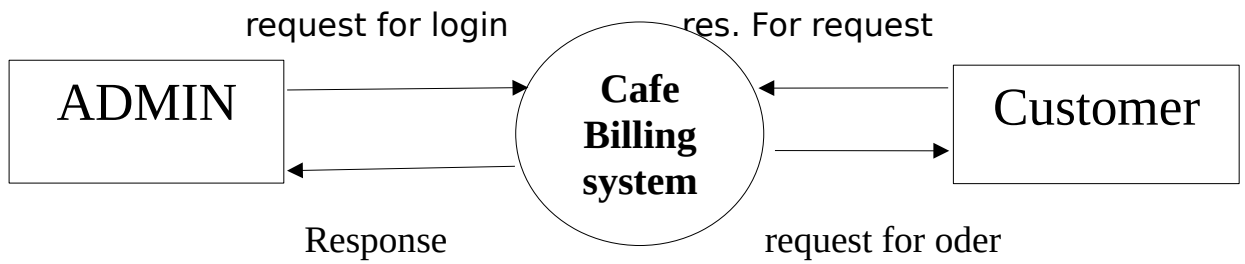
“Eclipse” provides a graphical environment. We design forms & control
that become building block of our website. “Postgresql “ provides much facility to store our
data safely

Operating System	Ubuntu 22.04 and Above
Language	HTML,CSS,PHP
IDE	VS Code
DataBase	MY Sql
Server	Appache

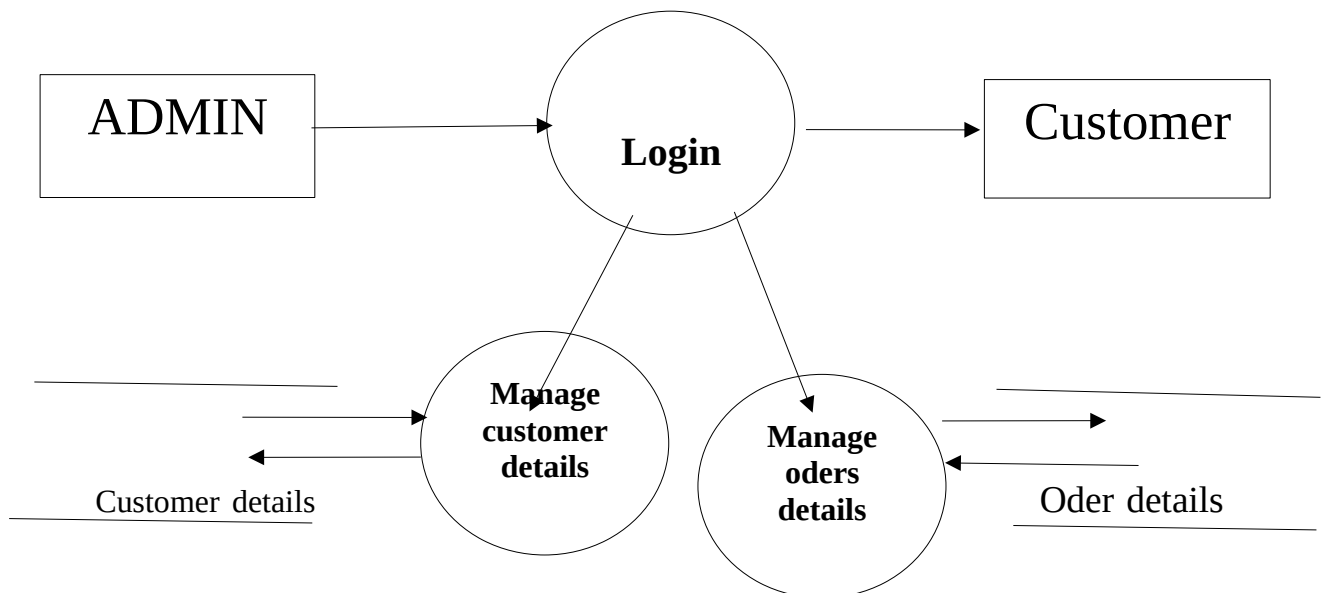
7. DESIGN SPECIFICATION

7.1 DATA FLOW DIGRAM

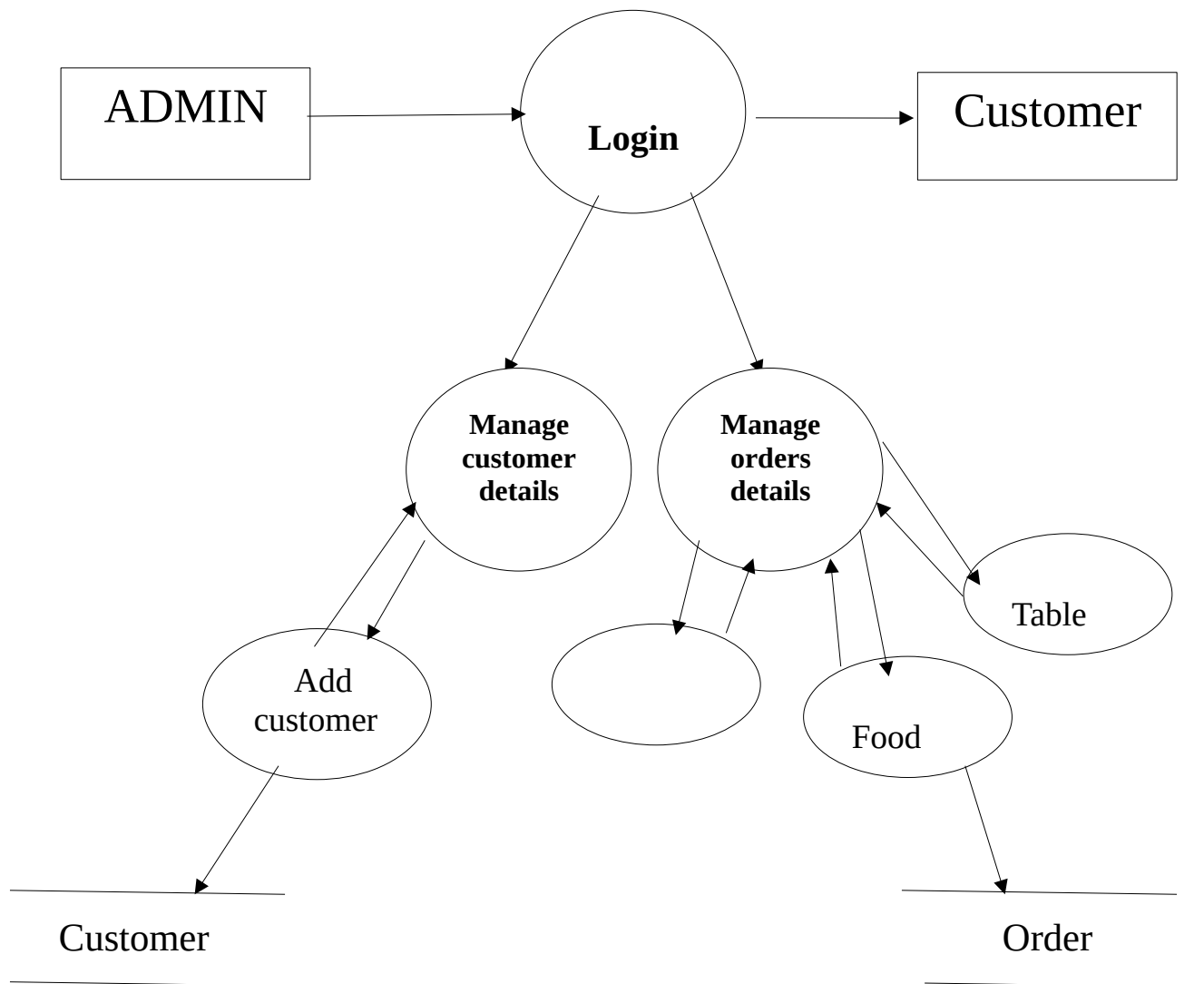
Level 0:



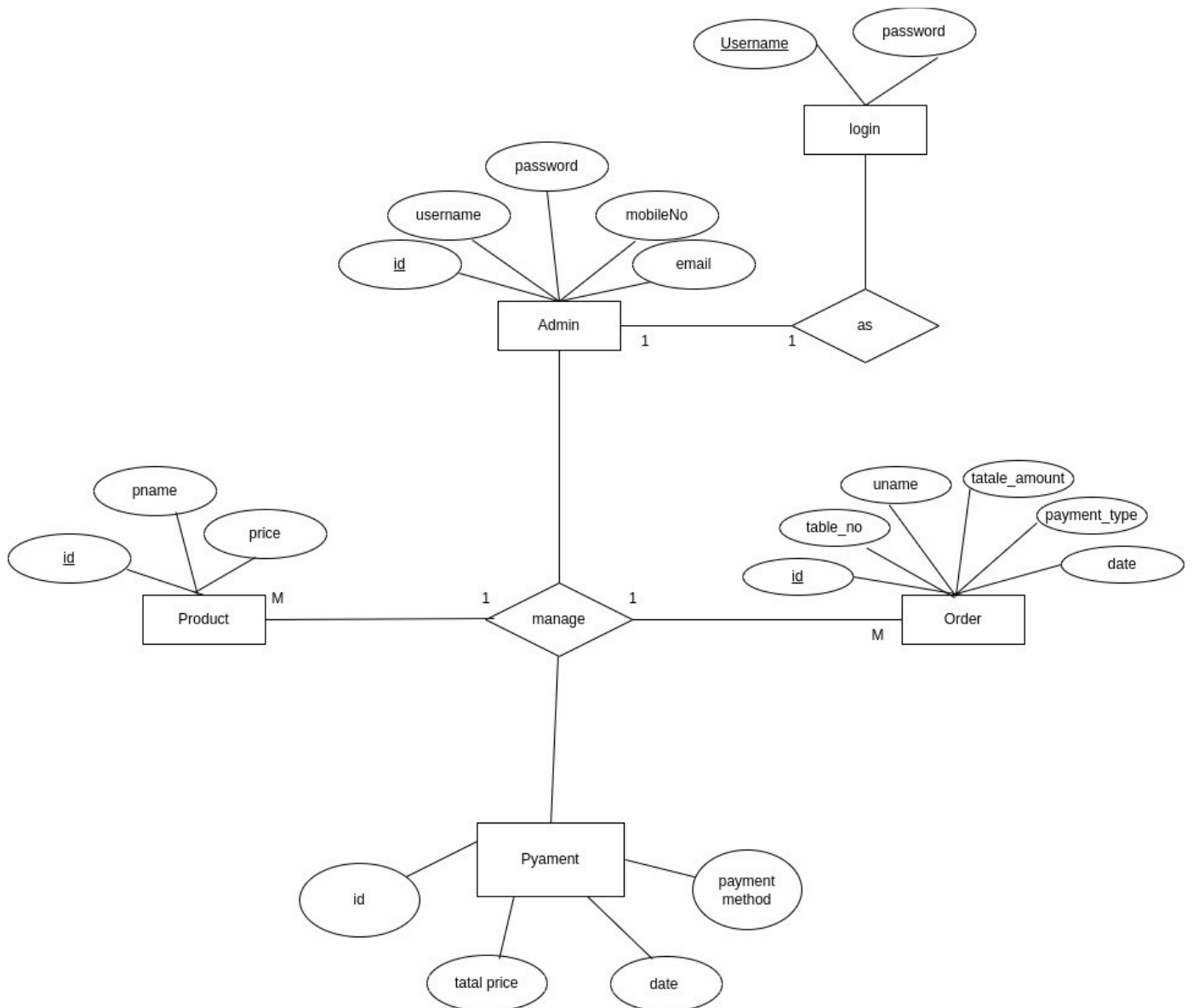
Level 1:



Level 2:



7.2 ER DIAGRAM



8. DATA DICTIONARY

Biling:

Orders

Column	Type	Null	Default
table_no	int	Yes	<i>NULL</i>
uname	varchar(255)	Yes	<i>NULL</i>
total_amount	varchar(255)	Yes	<i>NULL</i>
payment_type	varchar(255)	Yes	<i>NULL</i>
date	date	Yes	<i>NULL</i>
time	time	Yes	<i>NULL</i>

Product

Column	Type	Null	Default
id (<i>Primary</i>)	int	No	
pname	varchar(255)	Yes	<i>NULL</i>
price	varchar(255)	Yes	<i>NULL</i>

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	id	3	A	No	





UserData








Column	Type	Null	Default
UserName	varchar(255)	Yes	<i>NULL</i>
Password	varchar(255)	Yes	<i>NULL</i>
id (<i>Primary</i>)	bigint	No	
mobileNo	varchar(255)	Yes	<i>NULL</i>
email	varchar(255)	Yes	<i>NULL</i>









Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	id	2	A	No	
id	BTREE	Yes	No	id	2	A	No	

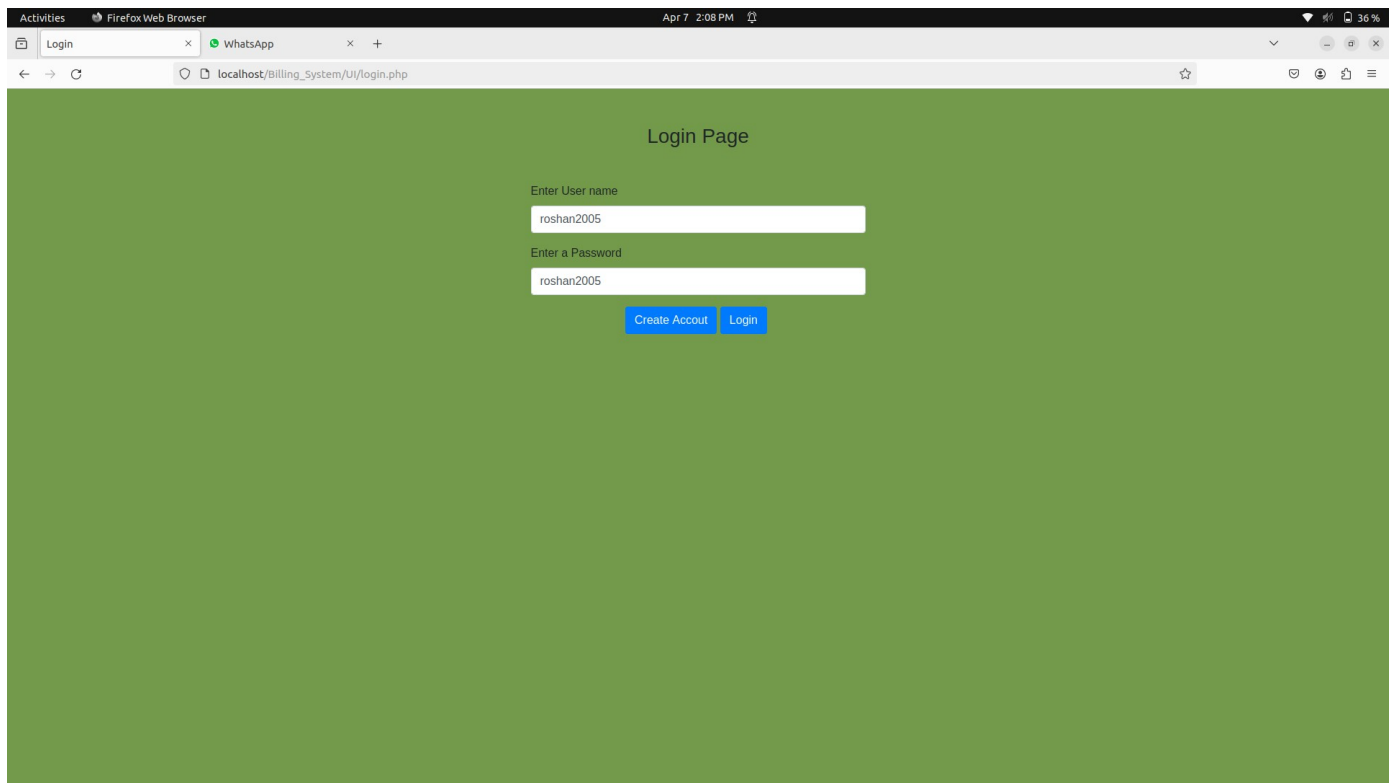
9. TABLE DESIGN

  Billing Product
 id : int
 pname : varchar(255)
 price : varchar(255)

  Billing UserData
 UserName : varchar(255)
 Password : varchar(255)
 id : bigint unsigned
 mobileNo : varchar(255)
 email : varchar(255)

  Billing orders
 table_no : int
 uname : varchar(255)
 total_amount : varchar(255)
 payment_type : varchar(255)
 date : date
 time : time

10. SAMPLE INPUTE & OUTPUTE SCREEN



Activities Firefox Web Browser Apr 7 2:08 PM

Login WhatsApp

localhost/billing_System/UI/login.php

Login Page

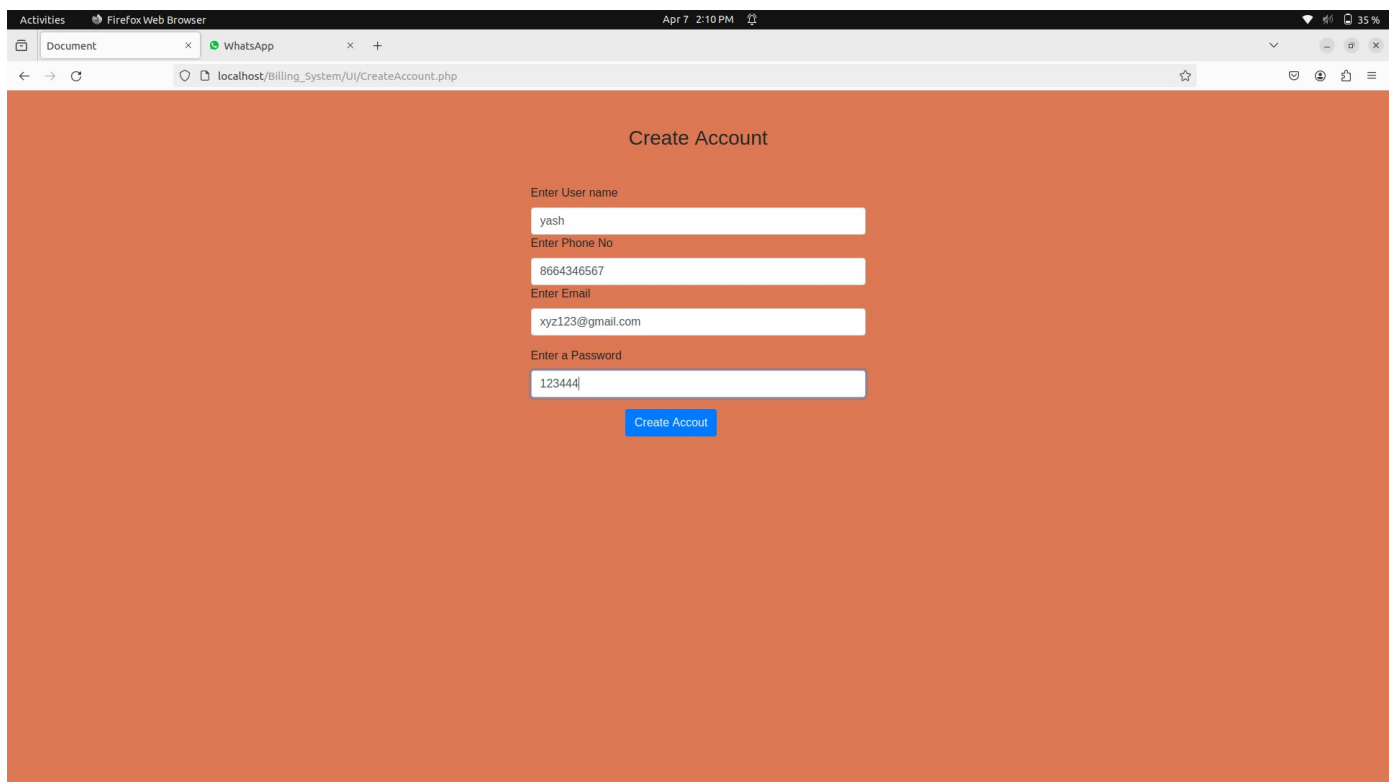
Enter User name

roshan2005

Enter a Password

roshan2005

Create Account Login



Activities Firefox Web Browser Apr 7 2:10 PM

Document WhatsApp

localhost/billing_System/UI/CreateAccount.php

Create Account

Enter User name

yash

Enter Phone No

8664346567

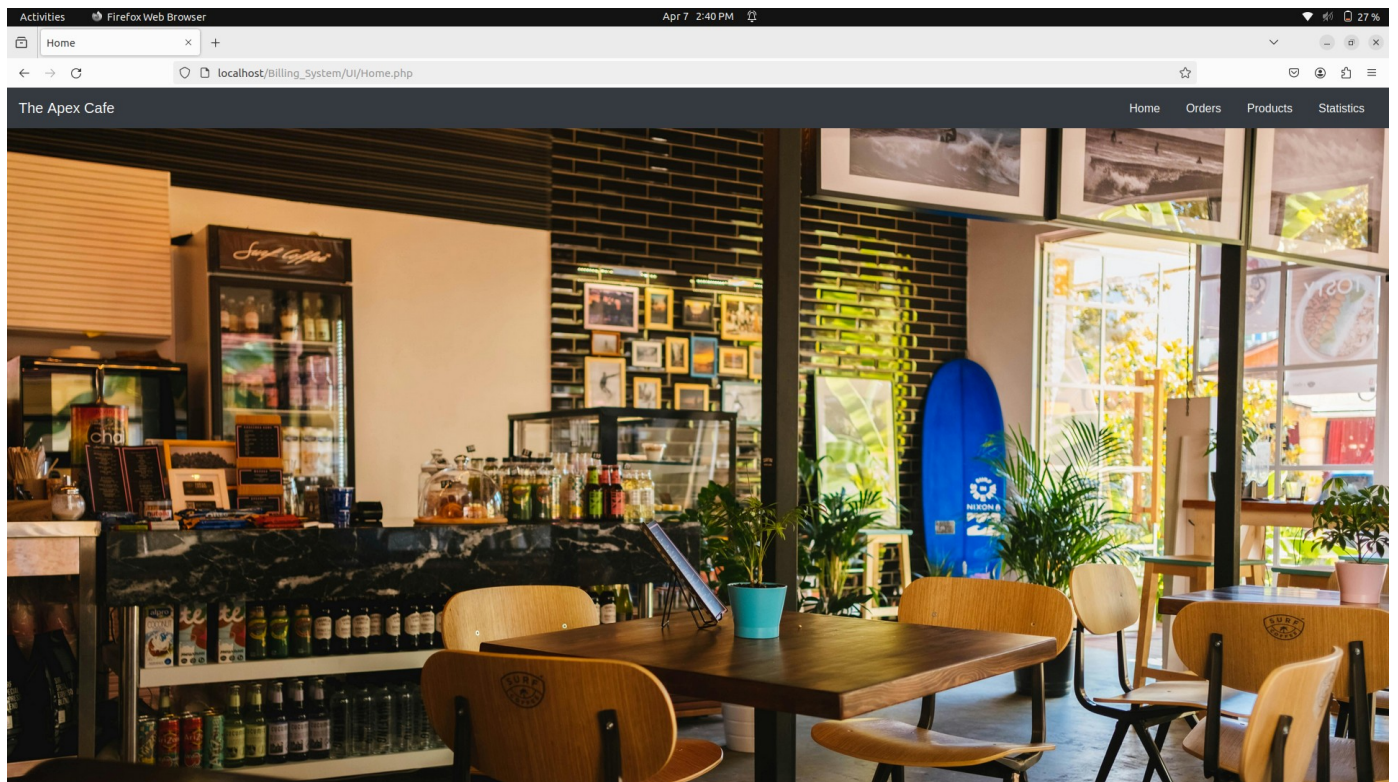
Enter Email

xyz123@gmail.com

Enter a Password

123444

Create Account



Activities Firefox Web Browser Apr 7 2:37 PM

Order localhost/Billing_System/UI/Order.php

The Apex Cafe Home Orders Products Statistics

User Orders

User Name
rushi

Table No
2

product Name
Cofee

Product Quantity
1

Add Cart

Product	Quantity	Price	Total Price	Operation
Pizza	2	150 rs	300 rs	Delete
cold coffee	4	50 rs	200 rs	Delete
Total			500 rs	payment

The Apex Cafe

07-04-2024 03:07:40 PM

Name : rushi
Table : 2

Name	Price	quantity	total
Pizza	150 rs	2	300 rs
cold coffee	50 rs	4	200 rs
Cofee	90 rs	1	90 rs
Total			590 rs
Payment			

The Apex Cafe

HomeOrdersProductsStatistics

Product Info

Enter Product name

blue beri

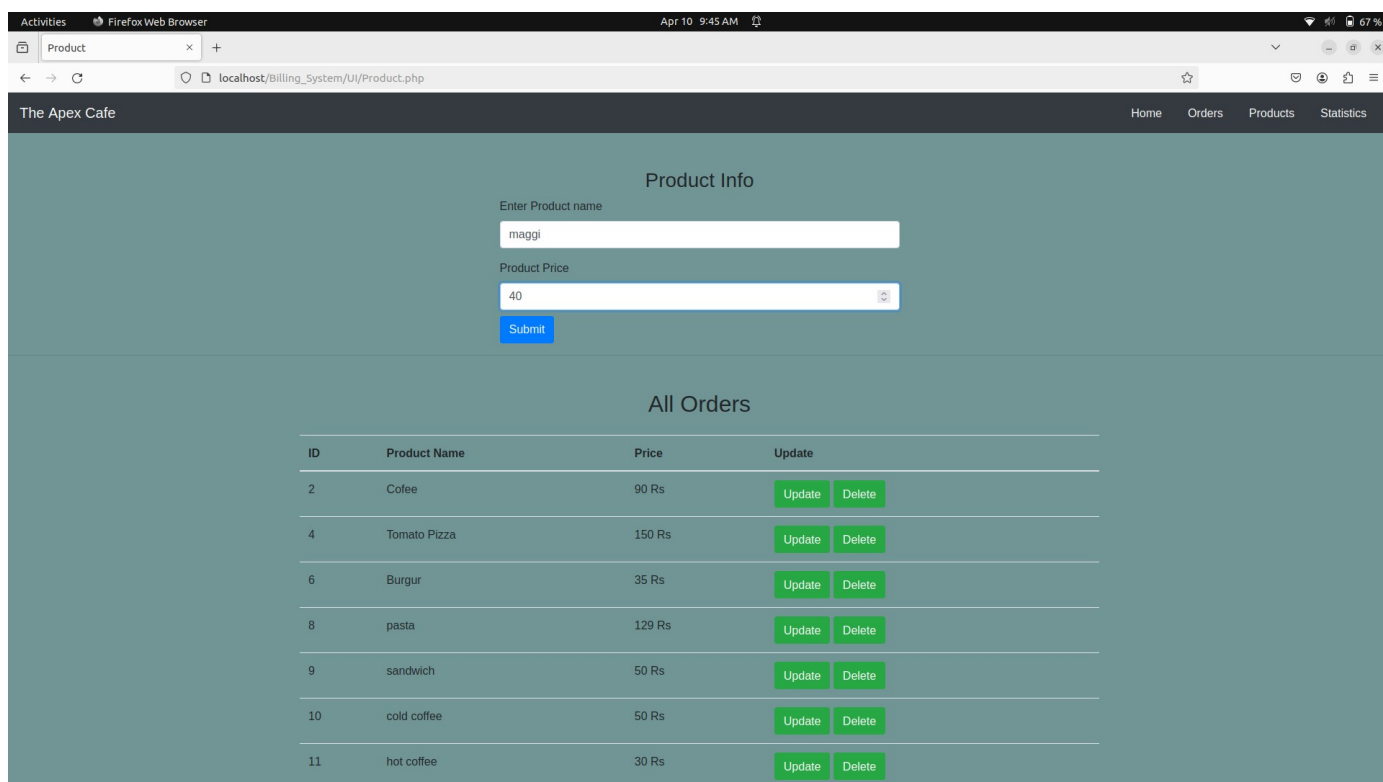
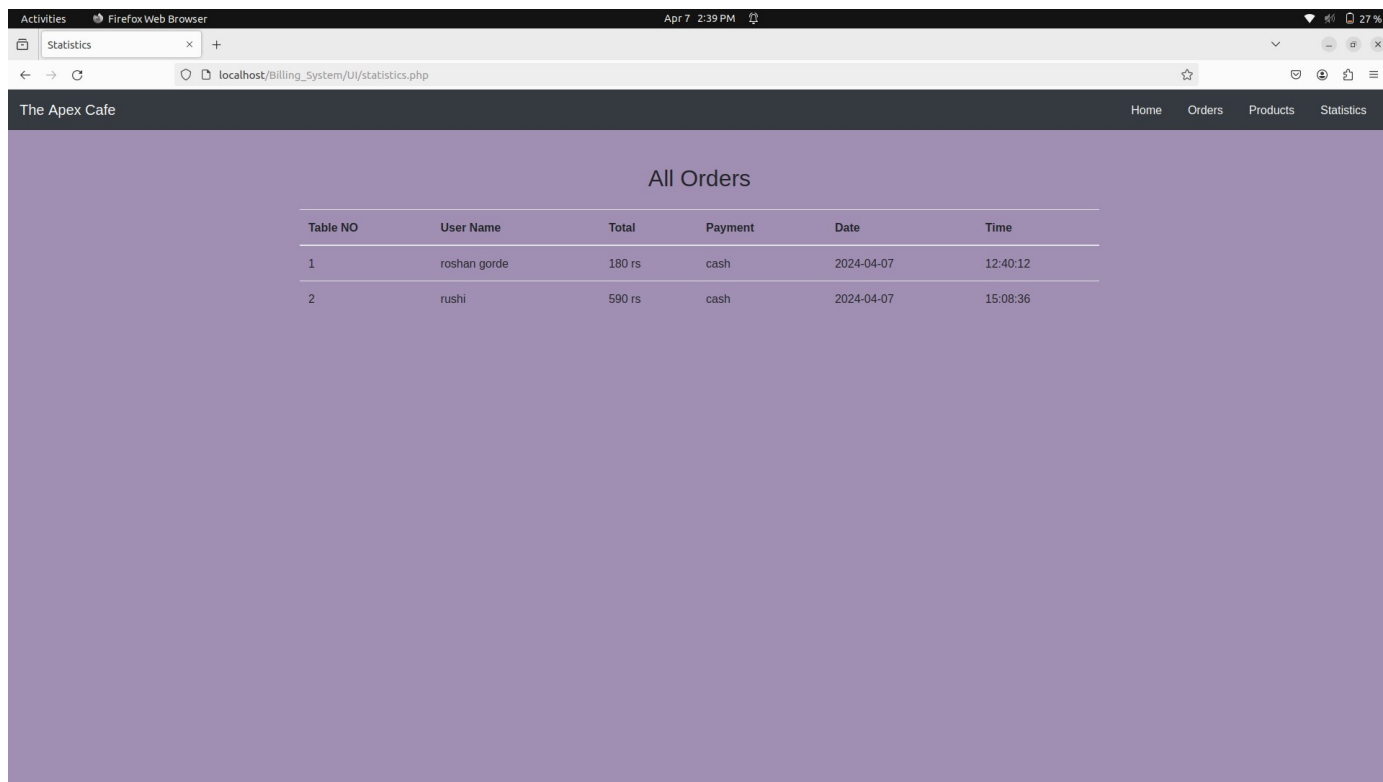
Product Price

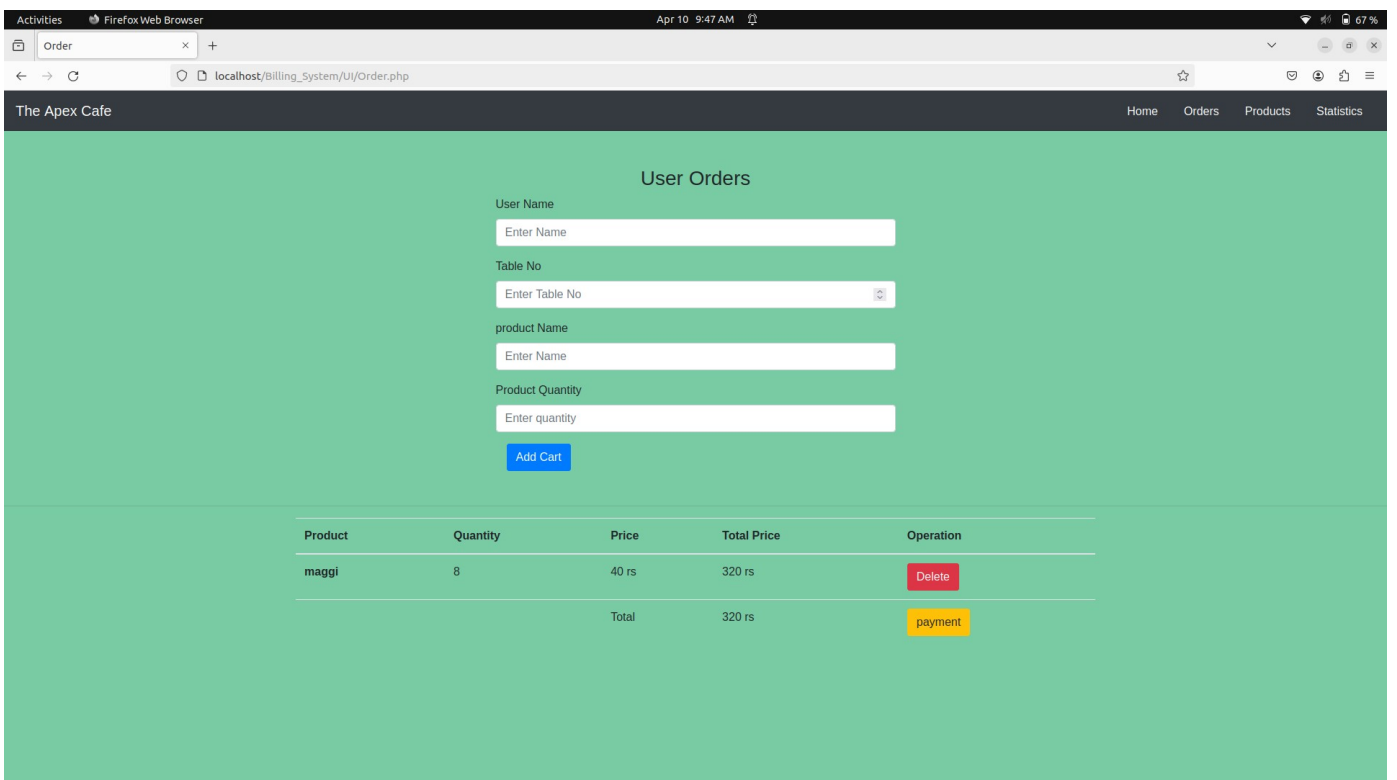
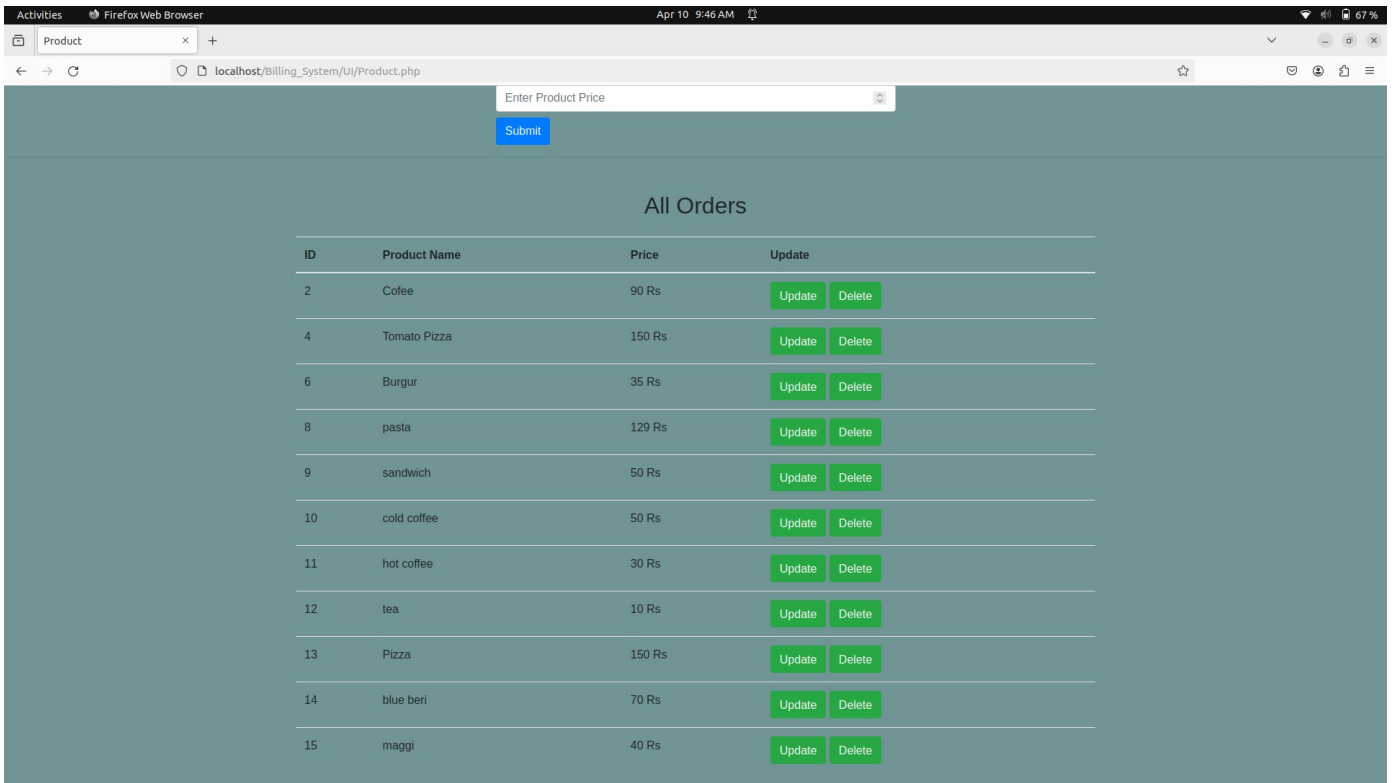
70

Submit

All Orders

ID	Product Name	Price	Update	
2	Cofee	90 Rs	Update	Delete
4	Tomato Pizza	150 Rs	Update	Delete
6	Burgur	35 Rs	Update	Delete
8	pasta	129 Rs	Update	Delete
9	sandwich	50 Rs	Update	Delete
10	cold coffee	50 Rs	Update	Delete
11	hot coffee	30 Rs	Update	Delete





The Apex Cafe

10-04-2024 10:17:26 AM

Name : rudra

Table : 5

Name	Price	quantity	total
maggi	40 rs	8	320 rs
Total			320 rs

Payment

The Apex Cafe

Home Orders Products Statistics

All Orders

Table NO	User Name	Total	Payment	Date	Time
1	roshan gorde	180 rs	cash	2024-04-07	12:40:12
2	rushi	590 rs	cash	2024-04-07	15:08:36
5	rudra	320 rs	cash	2024-04-10	10:17:41

11. TESTING STRATEGY

1. Unit Testing:

- Test individual components and modules of the billing system in isolation.
- Verify that each unit functions correctly according to its specifications.
- Use testing frameworks and tools to automate unit tests where possible.

2. Integration Testing:

- Test the integration of different modules and components to ensure they work together seamlessly.
- Verify data flow and communication between various parts of the system.
- Identify and address any compatibility issues between integrated components.

3. Functional Testing:

- Test the functionality of the cafe billing system based on predefined requirements and use cases.
- Verify that all features, such as menu management, order processing, and payment handling, work as expected.
- Include positive and negative test scenarios to validate system behavior under different conditions.

4. User Acceptance Testing (UAT):

- Involve end-users, including cafe staff and possibly customers, to perform UAT.
- Allow users to interact with the system in a realistic environment and provide feedback.
- Verify that the system meets user expectations, is intuitive to use, and effectively supports cafe operations.

5. Performance Testing:

- Assess the performance of the billing system under various load conditions.
- Conduct stress tests to evaluate system response times, throughput, and resource utilization.
- Identify performance bottlenecks and optimize system performance as needed.

12. LIMITATION

1. Hardware and Software Constraints:

The effectiveness of the billing system may be limited by the hardware and software available. Older hardware may not support advanced features, and software limitations may hinder scalability or integration with other systems.

2. Internet Dependency:

If the cafe billing system relies heavily on internet connectivity, interruptions or outages can disrupt operations and lead to downtime. This can affect order processing, payment acceptance, and customer service.

3. Training Requirements:

Staff members need to be trained on how to use the billing system effectively. High turnover rates or lack of sufficient training may result in errors, inefficiencies, and longer processing times.

4. Security Risks:

Storing sensitive customer data and processing payments electronically can expose the cafe to cybersecurity risks such as data breaches, hacking, or malware attacks. Implementing robust security measures is essential to mitigate these risks.

5. Customization Complexity:

Customizing the billing system to suit the cafe's specific needs and preferences may be complex and time-consuming. Off-the-shelf solutions may not always offer the desired level of customization, requiring additional development effort and resources.

13. FUTURE ENHANCEMENT

1. Integration with Online Ordering Platforms:

Enable integration with popular online food ordering platforms to allow customers to place orders remotely. This feature can enhance customer convenience and expand the cafe's reach beyond its physical location.

2. Mobile App:

Develop a dedicated mobile app for the cafe billing system, providing customers with a seamless ordering and payment experience on their smartphones. The app can also offer loyalty rewards, personalized recommendations, and order tracking functionalities.

3. Inventory Management:

Enhance inventory management capabilities by implementing features such as automated reordering of stock, real-time inventory tracking, and predictive analytics for demand forecasting. This can help optimize stock levels, reduce waste, and ensure availability of ingredients.

4. Customer Relationship Management (CRM):

Integrate CRM functionalities to better understand customer preferences, behavior, and feedback. This can enable targeted marketing campaigns, personalized promotions, and improved customer retention strategies.

5. Customization and Personalization:

Allow customers to customize their orders based on dietary preferences, allergies, or specific preferences. Implement recommendation engines to suggest relevant menu items based on past orders and customer profiles.

14. CONCLUSION

In conclusion, developing a cafe billing system requires careful consideration of its feasibility and thorough fact-finding techniques to ensure its success. Through a feasibility study, various aspects such as technical, operational, economic, schedule, legal, and ethical feasibility are evaluated to determine the viability of the proposed system. Fact-finding techniques such as interviews, surveys, observation, document analysis, and prototyping are employed to gather requirements and insights from stakeholders, ensuring that the system meets their needs and expectations.

By conducting a comprehensive feasibility study and employing effective fact-finding techniques, stakeholders can make informed decisions regarding the development and implementation of the cafe billing system. This approach helps mitigate risks, optimize resource allocation, and enhance the likelihood of achieving project objectives. With the right foundation established through feasibility analysis and requirements gathering, the cafe billing system can be developed, deployed, and utilized to streamline operations, improve customer satisfaction, and drive business success.

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Learning PHP and Mysql
Learn PHP 8