FOOD DELIVERY MANAGEMENT SYSTEM

A MINI-PROJECT REPORT

Submitted by

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This mini project report is submitted for the viva voce examination to be held on _____

INTERNAL EXAMINER **EXTERNAL EXAMINER**

ABSTRACT

The Food Delivery Management System is a web-based application designed to streamline the process of ordering and delivering food from restaurants to customers. The system provides an intuitive and user-friendly interface developed using PHP, HTML, CSS, and JavaScript, enabling customers to browse menus, place orders, and track order status in real time. The backend is powered by MySQL, which securely manages user information, restaurant data, menu items, orders, and delivery records. This system enhances operational efficiency by automating key processes such as order handling, payment updates, and delivery coordination. By integrating frontend usability with robust backend data management, the Food Delivery Management System ensures a seamless experience for customers, restaurants, and administrators, ultimately improving service speed, accuracy, and overall satisfaction.

ACKNOWLEDGEMENT

We express our sincere thanks to our beloved and honorable chairman **MR. S. MEGANATHAN** and the chairperson **Dr. M. THANGAM MEGANATHAN** for their timely support and encouragement.

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We also extend our sincere and heartly thanks to our internal guide **Dr. V. JANANEE ,** for her valuable guidance and motivation during the completion of this project.

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CHAPTER 1

INTRODUCTION

1.1 FOOD DELIVERY

Food delivery management is a critical aspect of the food industry that involves the coordination n number of activities such as order-taking, food preparation, packaging, and delivery to ensure that customers receive their food orders on time and in good condition. The growth of the food delivery market in recent years has led to an increased demand for efficient and reliable delivery services, and businesses are under pressure to provide a high-quality service to remain competitive.

Effective food delivery management requires businesses to have a well-structured process that involves the coordination of different stakeholders, including restaurant staff, delivery drivers, and customers. Technology has become increasingly important in food delivery management, and businesses are using mobile applications and online platforms to streamline their operations and provide better customer service.

However, food delivery management also poses several challenges that businesses must overcome, such as managing food quality and safety during delivery, managing delivery times and schedules, dealing with unforeseen circumstances such as traffic and weather conditions, and ensuring the safety of delivery drivers.

This paper aims to review the existing literature on food delivery management and provide insights into the key factors that influence the effectiveness of food delivery operations. The paper also discusses the challenges faced by businesses in managing food delivery services and proposes strategies to overcome these challenges. By understanding the key factors and challenges involved in food delivery management, businesses can optimize their operations and provide customers with a positive experience.

1.2. PROBLEM STATEMENT

There are several existing issues in the food delivery system that a food delivery management system can address. Here are some of the most common ones:

Delayed Deliveries: One of the most common issues in food delivery is delayed deliveries. This can happen due to various reasons such as traffic, weather conditions, or a high volume of orders. Delayed deliveries can lead to unhappy customers and negative reviews.

Inaccurate Orders: Another common issue is inaccurate orders. This can happen due to miscommunication between the restaurant staff and delivery drivers or errors in the order processing system. Inaccurate orders can lead to customer dissatisfaction and potentially lost business.

Miscommunication: Miscommunication can happen at any point in the food delivery process, whether it's between the restaurant staff and the delivery driver or between the driver and the customer. Miscommunication can lead to incorrect orders, delayed deliveries, and other issues that can impact customer satisfaction.

Limited Menu Options: Some food delivery services may have limited menu options, which can be frustrating for customers who want a wider range of choices. This can lead to lost business if customers choose to order from a competitor with a more

extensive menu.
High Delivery Fees: Some food delivery services may charge high delivery fees, which can discourage customers from using the service or make it less cost-effective for them. This can also lead to lost business if customers choose to order from a competitor with lower delivery fees.

1.3 OBJECTIVES

The objectives of food delivery management are to:
1. Ensure timely and accurate order processing: This involves the efficient handling of orders, including timely order confirmation, tracking, and dispatch, to ensure that orders are delivered on time and accurately.
2. Maintain high food quality and safety standards: This objective involves ensuring that food is prepared, packaged, and transported in compliance with safety and quality standards to maintain customer satisfaction and avoid potential health risks.
3. Optimize delivery logistics and route planning: Effective route planning and scheduling can help businesses minimize delivery times and costs, reduce the number of delivery vehicles required, and improve overall operational efficiency.
4. Enhance customer satisfaction and loyalty: This objective involves providing a positive customer experience through the use of user-friendly online ordering platforms, real-time order tracking, and effective communication with customers.
5. Improve operational efficiency: Businesses can use technology and data analytics to optimize their operations and improve efficiency. This includes the use of automated order processing systems, real-time route optimization, and delivery tracking systems to improve delivery times and reduce costs. By achieving these objectives, businesses can provide a high-quality food delivery service, improve customer satisfaction and loyalty, and optimize their operations to remain competitive in the food delivery market.

1.4 SCOPE AND APPLICATIONS

a. The scope of food delivery management includes the coordination and management of activities related to the delivery of food from restaurants to customers. This includes order processing, food preparation and packaging, delivery scheduling and logistics, and communication with customers and delivery drivers. The scope of food delivery management also includes ensuring food quality and safety during transportation and delivery.
b. The applications of food delivery management are widespread, and include:
1. Restaurants and food businesses: Restaurants and food businesses can use food delivery management systems to offer their customers a convenient and efficient delivery service, while maintaining high food quality and safety standards.
2. Delivery service providers: Third-party delivery service providers can use food delivery management systems to manage their operations and provide an efficient and reliable delivery service to restaurants and customers.
3. Logistics companies: Logistics companies can use food delivery management systems to optimize their delivery routes and schedules, reduce costs, and improve operational efficiency.
4. Food delivery aggregators: Food delivery aggregators can use food delivery

management systems to manage their online platforms and coordinate delivery services across multiple restaurants and delivery service providers.
5. Government regulators: Government regulators can use food delivery management systems to monitor and enforce food safety standards during the transportation and delivery of food, to protect the health and safety of consumers.Overall, food delivery management has a wide range of applications and can benefit businesses, delivery service providers, logistics companies, and consumers by providing an efficient, reliable, and safe food delivery service.

1.4 GENERAL AND UNIQUE SERVICES PROVIDEDBY DATABASE MANAGEMENT

a. General services provided by a database application for food delivery management include:
1. Order Management: The database application should allow restaurants to receive and manage customer orders. This includes tracking the status of orders, updating order details, and generating reports.
2. Customer Management: The database application should allow restaurants to manage their customer data, including customer preferences, contact information, and order history.
3. Delivery Management: The database application should allow restaurants to manage the delivery of their food, including delivery scheduling, route planning, and driver management.
4. Inventory Management: The database application should allow restaurants to manage their inventory of food items, including tracking stock levels, ordering supplies, and managing waste.
5. Overall, a database application for food delivery management should provide a comprehensive set of services to help restaurants manage their operations efficiently and provide a high-quality food delivery service to their customer.

1.5 SOFTWARE REQIREMENT SPECIFICATION

Introduction:

The purpose of this Software Requirements Specification (SRS) document is to outline the requirements for a food delivery management system. The system will be designed to manage the order processing, food preparation, delivery scheduling, and customer communication for restaurants and food delivery service providers.

Functional Requirements:

1. Order Management:

The system should allow restaurants to receive and manage customer orders.
The system should allow customers to place orders through a website or mobile application.
The system should provide notifications to the restaurant when a new order is received.

2. Customer Management:

The system should allow restaurants to manage their customer data, including customer preferences, contact information, and order history.
The system should provide customers with the ability to view their order history and update their contact information.

3. Delivery Management:

The system should allow restaurants to manage the delivery of their food, including delivery scheduling, route planning, and driver management.
The system should provide real-time delivery tracking for customers.
The system should provide delivery drivers with a mobile application to manage their deliveries.

4. Inventory Management:

The system should allow restaurants to manage their inventory of food items, including tracking stock levels, ordering supplies, and managing waste.

5. Analytics and Reporting:

The system should provide insights and reports to help restaurants analyze their performance, including sales data, customer feedback, and delivery times.

6.Non-functional Requirements:

1. Performance:

The system should be able to handle a high volume of orders and customers.
The system should provide fast response times to customers and restaurants.

2. Security:

The system should have a secure login system for restaurants and customers.
The system should encrypt sensitive data such as customer payment information.

3. Usability:

The system should be easy to use and navigate for both customers and restaurants.
The system should have a user-friendly interface for order management and delivery scheduling.

4. Availability:

The system should have high availability to ensure that restaurants and customers can access the system at all times.
The system should have a disaster recovery plan in case of system failures.

1.6 SOFTWARE TOOLS USED:

FRONT END – The front end is designed using JAVA SCRIPT.
JAVA SCRIPT- JavaScript (JS) is a dynamic computer programming language. It is most commonly used as part of web browsers, whose implementations allow client-side scripts to interact with the user, control the browser, communicate asynchronously, and alter the document content that is displayed. It is also being used in server-side programming, game development and the creation of desktop and mobile applications. JavaScript is a prototype-based scripting language with dynamic typing and has first-class functions. Its syntax was influenced by C. JavaScript copies many names and naming conventions from Java, but the two languages are otherwise unrelated and have very different semantics. The key design principles within JavaScript are taken from the Self and Scheme programming languages. It is a multi- paradigm language, supporting object-oriented, imperative,and functional programming styles. The application of JavaScript to use outside of web pages—for example, in PDF documents, site-specific browsers, and desktop widgets—is also significant. Newer and faster JavaScript VMs and platforms built upon them (notably Node.js) have also increased the popularity of JavaScript for server-side web applications. On the client side, JavaScript was traditionally implemented asan interpreted language but just-in-time

compilation is now performed by recent (post-2012) browsers.

BACK END - The back end is designed using mysql which is used to design the databases MYSQL- MySQL ("MySQL", officially, but also called "My Sequel") is (as of July 2013) the world's second most widely used open-source relational database management system (RDBMS). It is named after co-founder Michael Widenius daughter, My. The SQL phrase stands for Structured Query Language. The MySQL development project has made its source code available under the terms of the GNU General Public License, as well as under a varietyof proprietary agreements. MySQL was owned and sponsored by a single for- profit firm, the Swedish company MySQL AB, now owned by Oracle CorporationMySQL is a popular choice of database for use in web applications, and is a central component of the widely used LAMP opensource web application software stack (and other 'AMP' stacks). LAMP is an acronym for "Linux, Apache, MySQL, Perl/PHP/Python." Free-software-opensource projects that require a full-featured database management system often use MySQL. For commercial use, several paid editions are available, and offer additional functionality. Applications which use MySQL databases include: TYPO3, MODx, Joomla, WordPress, phpBB,MyBB, Drupal and other software. MySQL is also used in many high-profile, large-scale websites, including Wikipedia, Google (though not for searches), Facebook, Twitter, Flickr, and YouTube.

CHAPTER 2

SURVEY

2.1 Existing issues in food delivery system:

There are several existing issues in the food delivery system that a food delivery management system can address. Here are some of the most common ones:

Delayed Deliveries: One of the most common issues in food delivery is delayed deliveries. This can happen due to various reasons such as traffic, weather conditions, or a high volume of orders. Delayed deliveries can lead to unhappy customers and negative reviews.

Inaccurate Orders: Another common issue is inaccurate orders. This can happen due to miscommunication between the restaurant staff and delivery drivers or errors in the order processing system. Inaccurate orders can lead to customer dissatisfaction and potentially lost business.

Miscommunication: Miscommunication can happen at any point in the food delivery process, whether it's between the restaurant staff and the delivery driver or between the driver and the customer. Miscommunication can lead to incorrect orders, delayed deliveries, and other issues that can impact customer satisfaction.

Limited Menu Options: Some food delivery services may have limited menu options, which can be frustrating for customers who want a wider range of choices. This can lead to lost business if customers choose to order from a competitor with a more extensive menu.

High Delivery Fees: Some food delivery services may charge high delivery fees, which can discourage customers from using the service or make it less cost-effective for them. This can also lead to lost business if customers choose to order from a competitor with lower delivery fees.

2.2 Existing vs proposed system:

Online Ordering: The existing system may have online ordering platforms, but they may not be user-friendly or offer a wide range of menu options. The proposed system would have a more user-friendly and efficient online ordering platform that would allow customers to customize their orders and have access to a wider range of menu options.

Real-Time Tracking: The existing system may have some tracking features, but they may not be in real-time or provide accurate delivery times. The proposed system would have a real-time tracking system that would provide customers with more accurate delivery times and reduce the risk of delayed deliveries.

Route Optimization: The existing system may not have a route optimization feature, which can lead to delayed deliveries and longer delivery times. The proposed system would have a route optimization feature that would allow drivers to plan the most efficient delivery routes, reducing the risk of delayed deliveries and improving overall delivery times.

Inventory Management: The existing system may not have an inventory management system, which can lead to shortages of popular items and delayed orders. The proposed system would have an inventory management system that would allow restaurants to keep track of their inventory levels in real-time and ensure that orders can be fulfilled quickly and accurately.

Communication System: The existing system may not have a communication system in place, which can lead to miscommunication and inaccurate orders. The proposed system would have a communication system that would allow restaurant staff and delivery drivers to

communicate in real-time, reducing the risk of miscommunication and ensuring that orders are accurate and delivered on time.

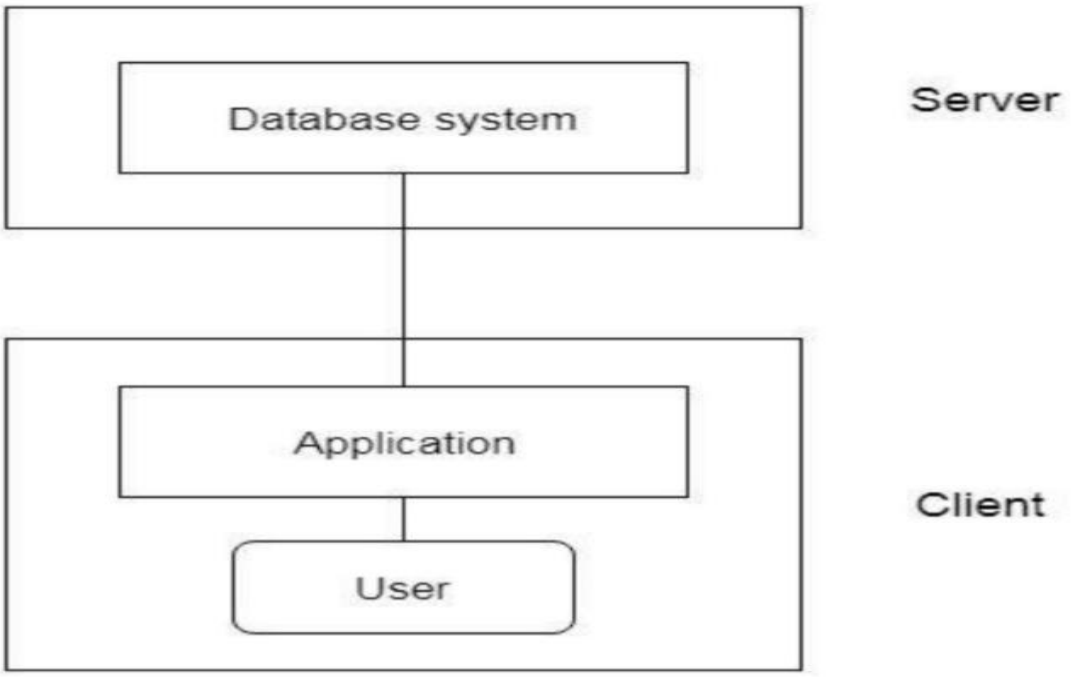
Quality Control: The existing system may not have a quality control system in place, which can lead to poor quality food and customer complaints. The proposed system would have a quality control system that would ensure that food is packaged properly and kept at the appropriate temperature during transportation, reducing the risk of poor quality food and customer complaints.

CHAPTER 3

SYSTEM ARCHITECTURE AND DESIGN

3.1 ARCHITECTURE

The architecture diagram for online delivery



3.1.1 FRONTEND:

The frontend code for food delivery project.

```
<section class="category">

    <h1 class="title">food category</h1>

    <div class="box-container">

        <a href="category.php?category=fast food" class="box">
            <img src="user_portal\non-veg.jpeg" alt="">
            <h3>Non-vegeterian</h3>
        </a>

        <a href="category.php?category=main dish" class="box">
            <img src="user_portal\veg.jpeg" alt="">
            <h3>Vegeterian</h3>
        </a>

        <a href="category.php?category=drinks" class="box">
            <img src="user_portal\drinks.jpeg" alt="">
            <h3>Drinks</h3>
        </a>

        <a href="category.php?category=desserts" class="box">
            <img src="user_portal\pizza.jpeg" alt="">
            <h3>Burger & Pizza</h3>
        </a>

    </div>

</section>
```

3.1.2 BACKEND:

The backend code for food delivery project.

```
section class="dashboard">
  <h1 class="heading" style="padding-top: 20px;">dashboard</h1>
  <div class="box-container">
     <div class="row" style="margin-top:
  <div class="box col ">
     <h3>welcome!</h3>
     <p><?= $fetch_profile['name']; ?></p>
     <a href="update_profile.php" class="btn btn-primary">update profile</a>
  </div>
  <div class="box col btn-sm">
     <?php
        $total_pendings = 0;
        $select_pendings = $conn->prepare("SELECT * FROM `orders` WHERE payment_status = ?");
        $select_pendings->execute(['pending']);
        while($fetch_pendings = $select_pendings->fetch(PDO::FETCH_ASSOC)){
           $total_pendings += $fetch_pendings['total_price'];
        }
     ?>
     <h3><span>$</span><?= $total_pendings; ?><span>/-</span></h3>
     <p class="text">total pendings</p>
     <a href="placed_orders.php" class="btn btn-primary">see orders</a>
  </div>

  <div class="box col">
     <?php
        $total_completes = 0;
        $select_completes = $conn->prepare("SELECT * FROM `orders` WHERE payment_status = ?");
        $select_completes->execute(['completed']);
        while($fetch_completes = $select_completes->fetch(PDO::FETCH_ASSOC)){
           $total_completes += $fetch_completes['total_price'];
        }
     ?>
```

The p element represents a paragraph.
MDN Reference

3.2 ER DIAGRAM

An Entity-Relationship Diagram (ERD) is a graphical representation of entities and their relationships to each other. Here is an ER diagram that explains the entities and relationships in an online food delivery system:

Entities:

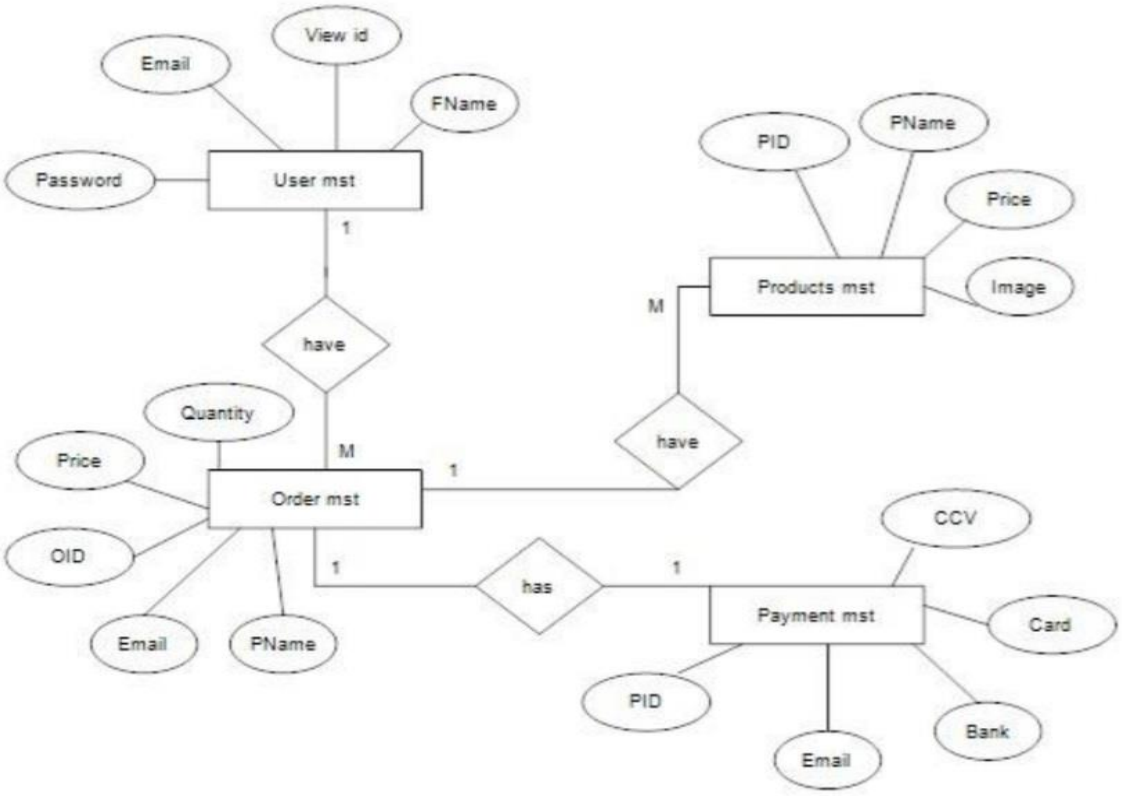
• User: Represents a user who can browse, order and pay for food.
• Restaurant: Represents a restaurant that can accept orders from users and prepare food.
• Menu: Represents the food items available for order at a restaurant.
• Order: Represents a user's order for food from a restaurant.
• Payment: Represents a user's payment for an order.

Relationships:

• A user can place multiple orders, but each order is placed by only one user.
• A restaurant can receive multiple orders, but each order is placed at only one restaurant.
• A restaurant can have multiple food items on its menu, and each food item is associated with only one restaurant.
• A user can pay for multiple orders, but each payment is made for only one order.
• An order can have only one payment.
• An order can have only one delivery, but a delivery can deliver multiple orders.
• A user can have multiple addresses, but each address is associated with only one user.

• An order is associated with one delivery, and a delivery is associated with one order.

The ER diagram provides an overview of the relationships between the entities in an online food delivery system, which can help in designing the system and identifying potential issues.



3.1 ER DIAGRAM

CHAPTER 4

DATA BASE (SQL)TABLES

4.1 USERS TABLES:

Table structure | Relation view

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	id	int(100)			No	None		AUTO_INCREMENT
2	name	varchar(20)	utf8mb4_general_ci		No	None		
3	email	varchar(50)	utf8mb4_general_ci		No	None		
4	number	varchar(10)	utf8mb4_general_ci		No	None		
5	password	varchar(50)	utf8mb4_general_ci		No	None		
6	address	varchar(500)	utf8mb4_general_ci		No	None		

4.2 CART TABLE:

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	id	int(100)			No	None		AUTO_INCREMENT
2	user_id	int(100)			No	None		
3	pid	int(100)			No	None		
4	name	varchar(100)	utf8mb4_general_ci		No	None		
5	price	int(10)			No	None		
6	quantity	int(10)			No	None		
7	image	varchar(100)	utf8mb4_general_ci		No	None		

4.3 ADMIN LOGIN TABLE:

Table structure | Relation view

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	id	int(100)			No	None		AUTO_INCREMI
2	name	varchar(20)	utf8mb4_general_ci		No	None		
3	password	varchar(50)	utf8mb4_general_ci		No	None		

4.4 PRODUCTS TABLE:

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	id	int(100)			No	None		AUTO_INCREMENT
2	user_id	int(100)			No	None		
3	name	varchar(20)	utf8mb4_general_ci		No	None		
4	number	varchar(10)	utf8mb4_general_ci		No	None		
5	email	varchar(50)	utf8mb4_general_ci		No	None		
6	method	varchar(50)	utf8mb4_general_ci		No	None		
7	address	varchar(500)	utf8mb4_general_ci		No	None		
8	total_products	varchar(1000)	utf8mb4_general_ci		No	None		
9	total_price	int(100)			No	None		
10	placed_on	date			No	current_timestamp()		
11	payment_status	varchar(20)	utf8mb4_general_ci		No	pending		

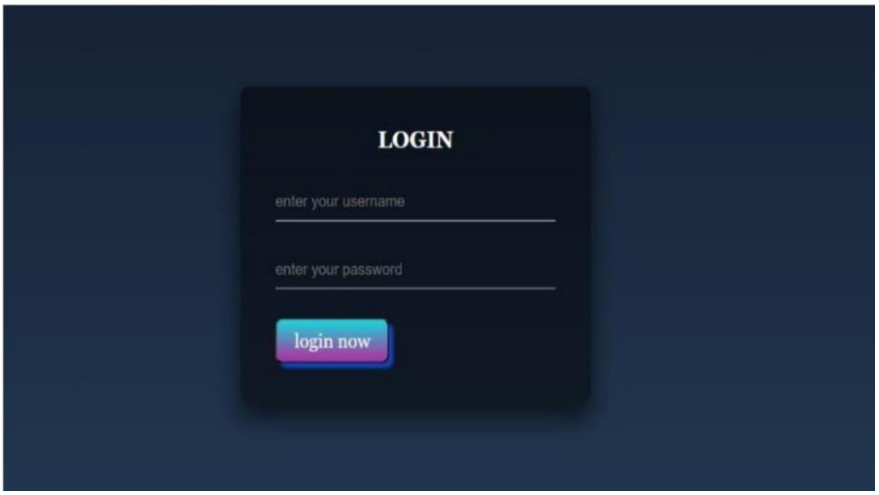
4.5 ORDERS TABLE:

Table structure Relation view

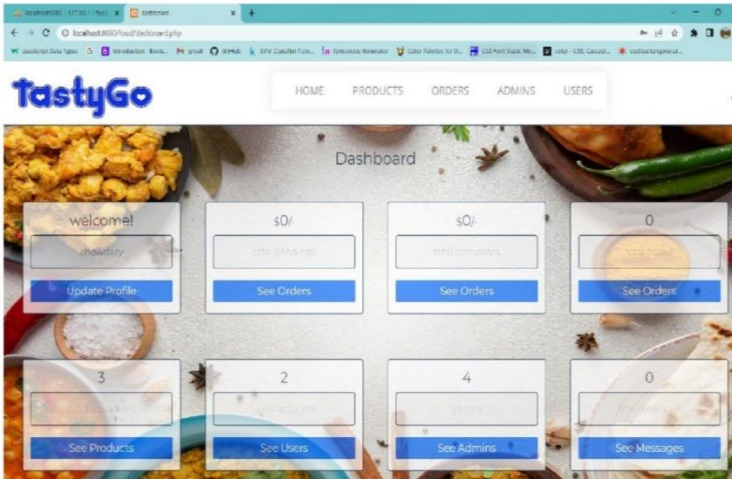
#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	id	int(100)			No	None		AUTO_INCREMENT
2	name	varchar(100)	utf8mb4_general_ci		No	None		
3	category	varchar(100)	utf8mb4_general_ci		No	None		
4	price	int(10)			No	None		
5	image	varchar(100)	utf8mb4_general_ci		No	None		

ADMIN WEBPAGES

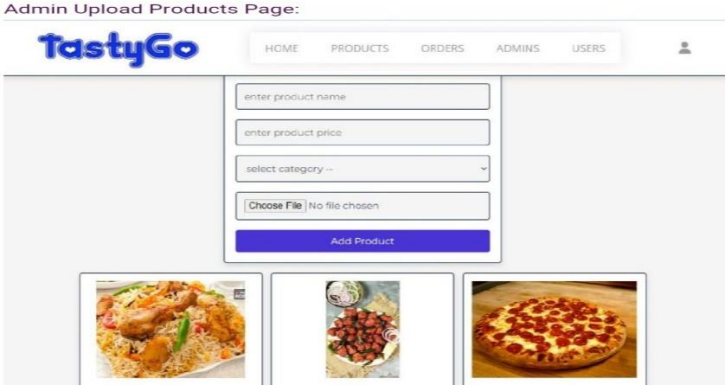
Admin Login page:



Admin Dashboard:

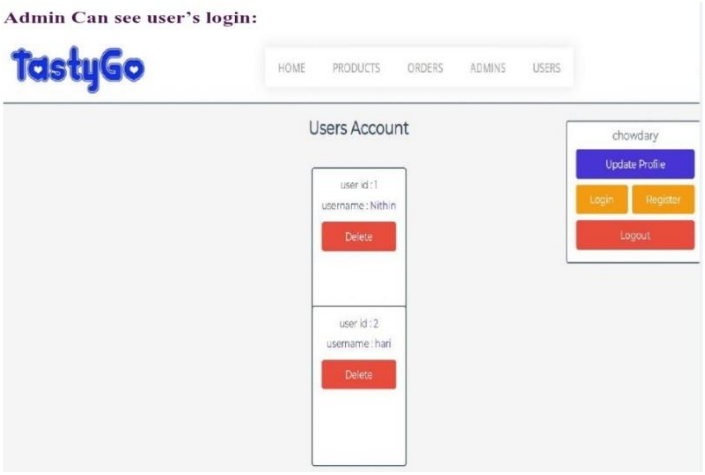


Admin Upload Products Page:



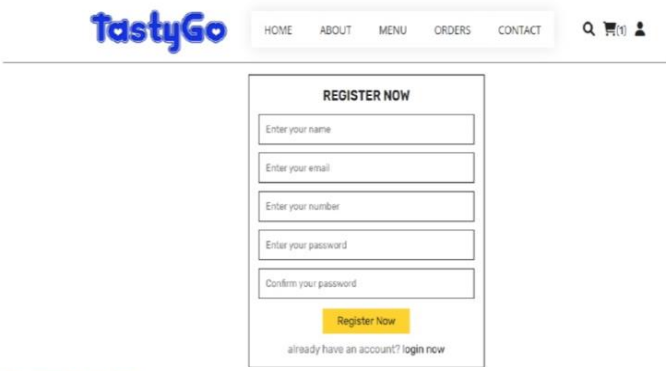
Admins Page:

Admin Can see user's login:



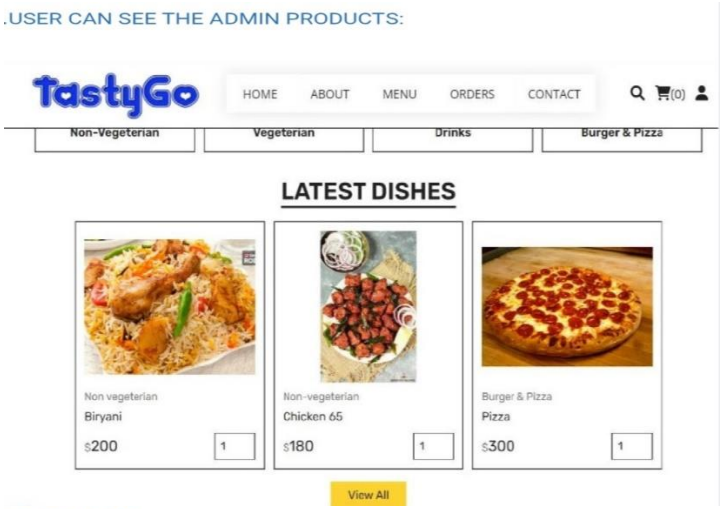
USER LOGIN PAGE:

.USER REGISTER PAGE:

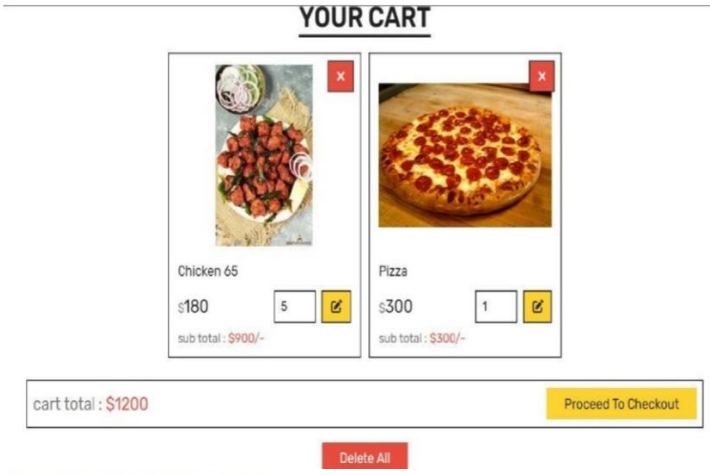


USER HOME PAGE:

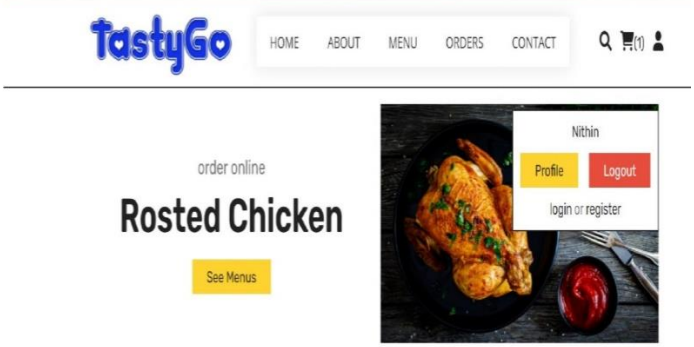
.USER CAN SEE THE ADMIN PRODUCTS:



USERS CART:



User logout or update profile:



CHAPTER 5

CODING AND TESTING

Developing a food delivery website involves a significant amount of coding and testing. The coding must ensure that the website functions properly, is secure, compatible with various devices and browsers, and performs well under high traffic. Testing is essential to identify any issues and vulnerabilities in the website and ensure that it provides a seamless user experience. Security is a critical aspect of website development, as it involves handling sensitive customer data, such as payment information and order history. The website's performance, responsiveness, and integration capabilities are other essential factors that need to be addressed during the coding and testing phases. The success of a food delivery website depends on its ability to provide a seamless user experience, efficient order management, secure payment processing, and reliable customer support. Coding and testing are essential to ensure that the website meets these requirements and functions optimally. A well-coded website that is thoroughly tested for security, compatibility, and performance can enhance customer satisfaction, increase brand reputation, and drive business growth. By continuously improving and updating the website, businesses can stay competitive in the ever-evolving food delivery industry and meet the changing needs and expectations of their customers.

CHAPTER 6

RESULTS AND DISSCUSSIONS

The food delivery project aims to improve the efficiency and profitability of food delivery operations through the development of a comprehensive food delivery management system. The system was designed to streamline the delivery process, enhance communication and tracking, and optimize delivery routes. The system was developed using modern coding practices and was thoroughly tested to ensure that it was secure, user-friendly, and compatible with various devices and browsers. The project's results showed that the food delivery management system significantly improved the delivery process, reduced delivery times, and enhanced customer satisfaction. The system also provided businesses with greater visibility into delivery performance, enabling them to make data-driven decisions and improve operational efficiency. The discussion highlighted the potential of the food delivery management system to transform the food delivery industry by enhancing the customer experience, improving operational efficiency, and driving business growth. The project's success demonstrated the importance of coding and testing in developing effective and efficient food delivery systems.

CHAPTER 7

CONCLUSION AND FUTURE ENHANCEMENT

In conclusion, food delivery management is a complex process that involves various entities and their relationships. An effective food delivery system must ensure seamless communication and coordination between users, restaurants, delivery personnel, and payment gateways. With the help of technology, it is possible to streamline the entire process, from browsing the menu to delivering the food, and provide an excellent user experience. However, to achieve this, it is crucial to have a clear understanding of the entities and their relationships, as well as the challenges and opportunities that come with food delivery management. By taking a comprehensive approach and addressing the needs and expectations of all stakeholders involved, it is possible to create a successful and sustainable food delivery system.

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- http://www.w3schools.com/sql/sql_update.asp
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