A

PROJECT REPORT

on

ABHIYANTH PRE-ORDER BOOKINGS

Submitted by

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Under the guidance of

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CERTIFICATE OF COMPLETION

This is to certify that the project work titled “ABHIYANTH PRE-ORDER BOOKINGS” is a bonafied project work submitted by MITTAPALLLI HINDU PRIYA-R190581 in the department of COMPUTER SCIENCE AND ENGINEERING in partial fulfillment of requirements for the award of degree of Bachelor of Technology in Computer Science and Engineering for the year 2023- 2024 carried out the work under the supervision

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R.K.Valley, Kadapa, Andhra Pradesh, 516 330

DECLARATION

I am MITTAPALLI HINDU PRIYA hereby declare that the project report entitled “” done by us under guidance of MR.A.MAHENDRA is submitted in partial fulfillment for the degree of Bachelor of Technology in Computer Science and Engineering during the academic session February 2023 – July 2024 at RGUKT-RK Valley.

I also declare that this project is a result of our own effort and has not been copied or imitated from any source. Citations from websites are mentioned in the references. To the best of my knowledge, the results embodied in this dissertation work have not been submitted to any university or institute for the award of any degree or diploma.

Date : MITTAPALLI HINDU PRIYA
Place : RGUKT,RK Valley R190581

ACKNOWLEDGEMENT

The satisfaction that accompanies the successful completion of any task would be incomplete without the mention of the people who made it possible and whose constant guidance and encouragement crown all the efforts success

I am extremely grateful to our respected Director, Dr. KUMARA SWAMI GUPTA, for fostering an excellent academic climate in our institution.

I also express my sincere gratitude to our respected Head of the Department,
Dr Ch Ratna Kumari, for her encouragement, overall guidance in viewing this project as a valuable asset, and effort in bringing out this project..

I would like to convey thanks to our guide at college, MR.A.MAHENDRA, for his guidance, encouragement, cooperation, and kindness during the entire duration of the course and academics.

My sincere thanks to all the members who helped me directly and indirectly in the completion of project work. I express my profound gratitude to all our friends and family members for their encouragement.

With Sincere Regards,

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ABSTRACT

ABHIYANTH PREORDER BOOKINGS

Abstract :

The Abhiyanth Pre-Order Bookings system is a comprehensive platform designed to streamline and simplify the tasks of students managing stalls, ensuring they can focus on their core responsibilities without the hassle of unnecessary complexity. By leveraging the powerful MERN stack (MongoDB, Express.js, React.js, Node.js) along with HTML and CSS, this project offers a robust and responsive solution tailored to the needs of student entrepreneurs..

The primary objective of Abhiyanth Pre-Order Bookings is to reduce the time and effort students spend on managing their stalls. Stall members can easily input their item names and prices into the system. As the admin, I ensure these food items are pushed to the webpage user interface from our database. This centralized management allows students to efficiently manage their stalls, update product information, handle orders, and communicate with customers through the system, without the need to visit each class individually to promote their products or services.

The backend of Abhiyanth Pre-Order Bookings, powered by Node.js and Express.js, ensures reliable and efficient handling of all server-side operations. MongoDB, a flexible and scalable NoSQL database, is employed to manage and store data securely.

In conclusion, the Abhiyanth Pre-Order Bookings system represents a significant advancement in how student-run stalls are managed. By integrating modern web technologies such as the MERN stack, HTML, and CSS, this project delivers a comprehensive, responsive, and user-friendly solution. Its primary goal of reducing complexity and saving time aligns perfectly with the needs of busy students, allowing them to manage their stalls more effectively and efficiently. With Abhiyanth Pre-Order Bookings, student entrepreneurs can focus on what truly matters – delivering exceptional products and services to their peers.

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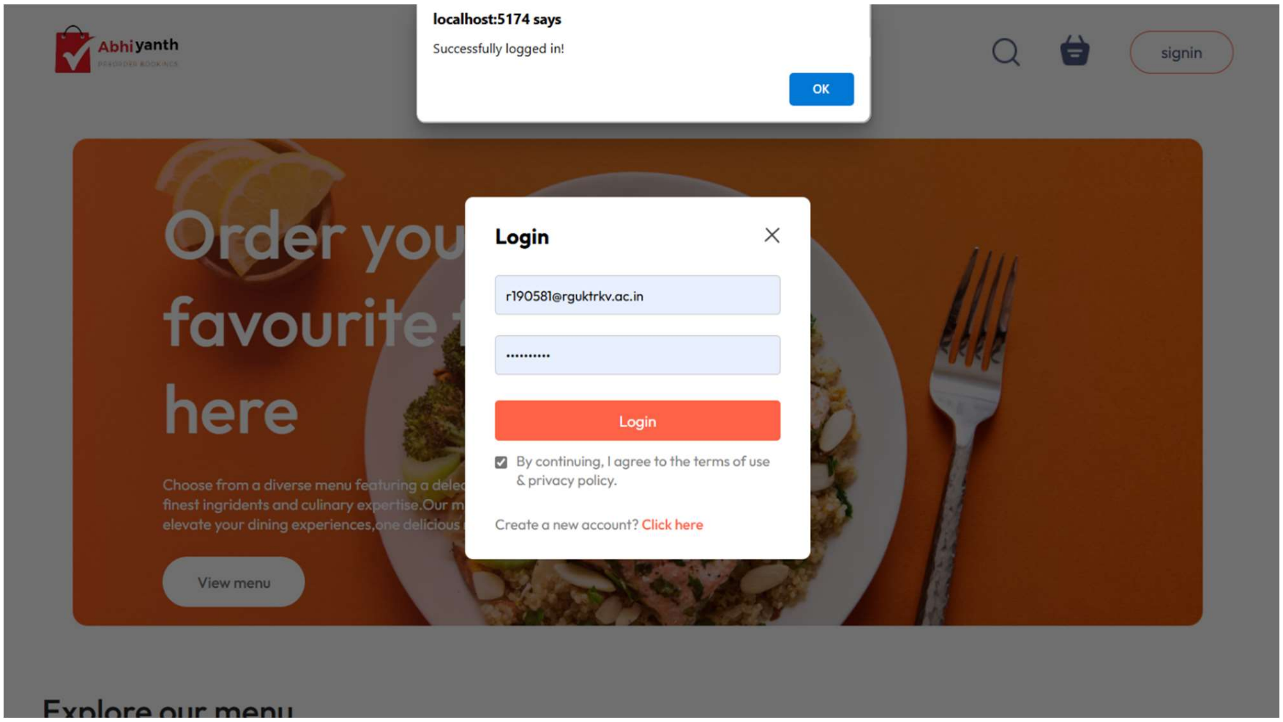
USER INTERFACE



localhost:5174 says

Successfully logged in!

OK

Login

r190581@rguktrkv.ac.in

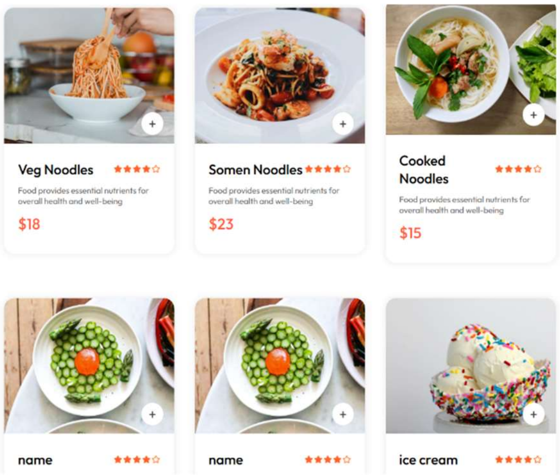
••••••••••

Login

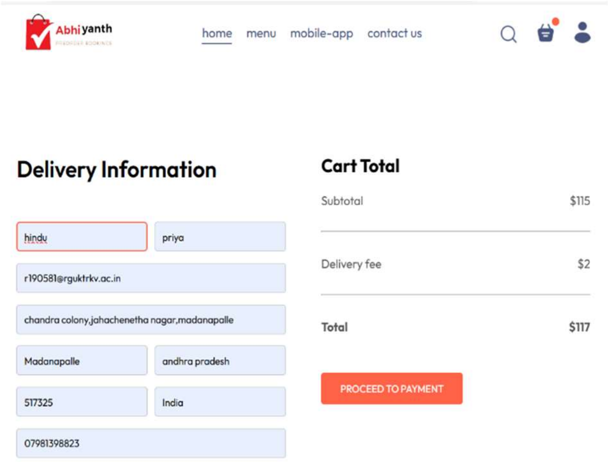
☑ By continuing, I agree to the terms of use & privacy policy.

Create a new account? Click here

Choose from a diverse menu featuring a delec... finest ingridents and culinary expertise.Our m... elevate your dining experiences,one delicious ...



Veg Noodles ★★★★☆ Food provides essential nutrients for overall health and well-being $18	Somen Noodles ★★★★☆ Food provides essential nutrients for overall health and well-being $23	Cooked Noodles ★★★★☆ Food provides essential nutrients for overall health and well-being $15
name ★★★★☆	name ★★★★☆	ice cream ★★★★☆



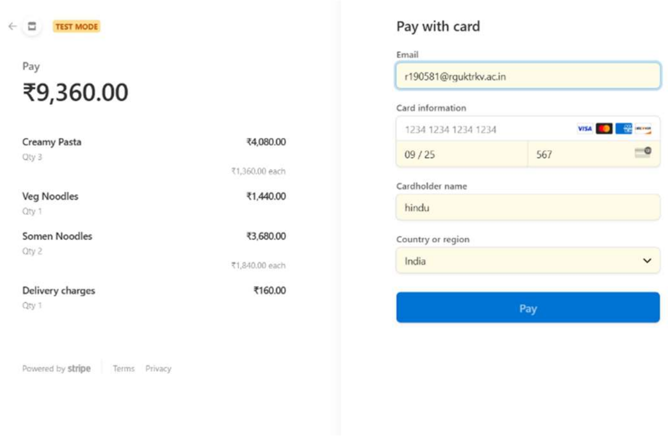
Delivery Information

hindu	priya
r190581@rguktrkv.ac.in	
chandra colony,jahachenetha nagar,madanapalle	
Madanapalle	andhra pradesh
517325	India
07981398823	

Cart Total

Subtotal	$115
Delivery fee	$2
Total	$117

PROCEED TO PAYMENT



Pay

₹9,360.00

Creamy Pasta Qty 3	₹4,080.00 ₹1,360.00 each
Veg Noodles Qty 1	₹1,440.00
Somen Noodles Qty 2	₹3,680.00 ₹1,840.00 each
Delivery charges Qty 1	₹160.00

Pay with card

Email: r190581@rguktrkv.ac.in

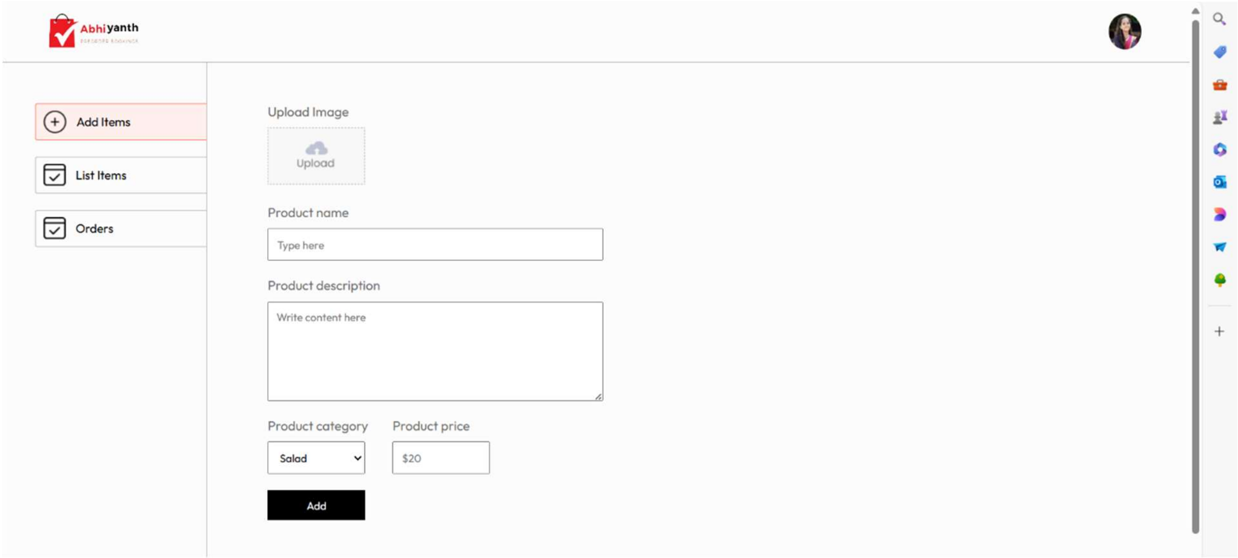
Card information: 1234 1234 1234 1234

09 / 25 567

Cardholder name: hindu

Country or region: India

ADMIN PAGES



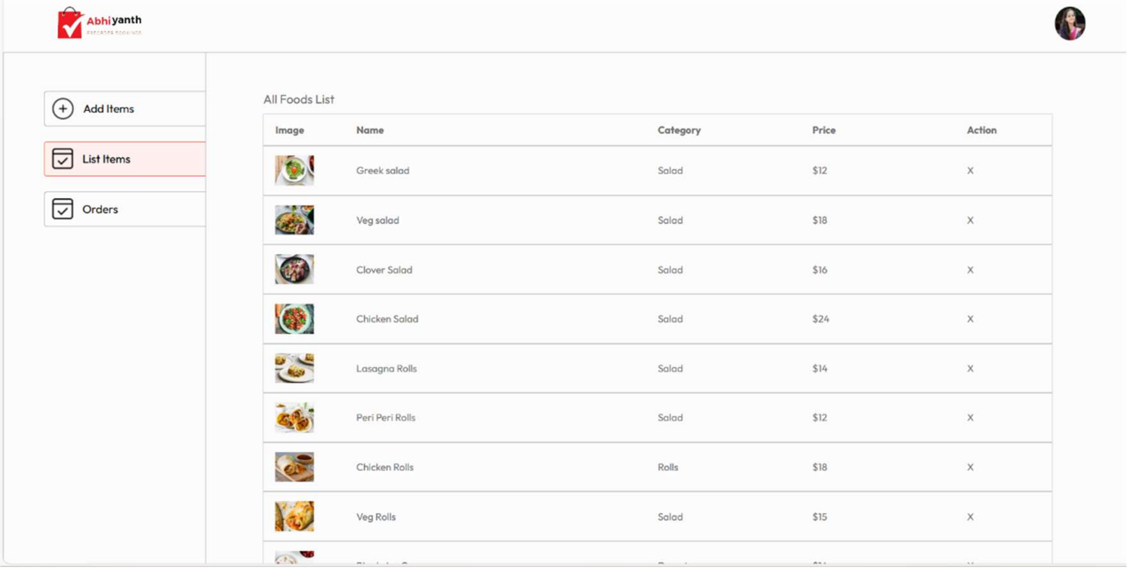
Upload Image

Product name: Type here

Product description: Write content here

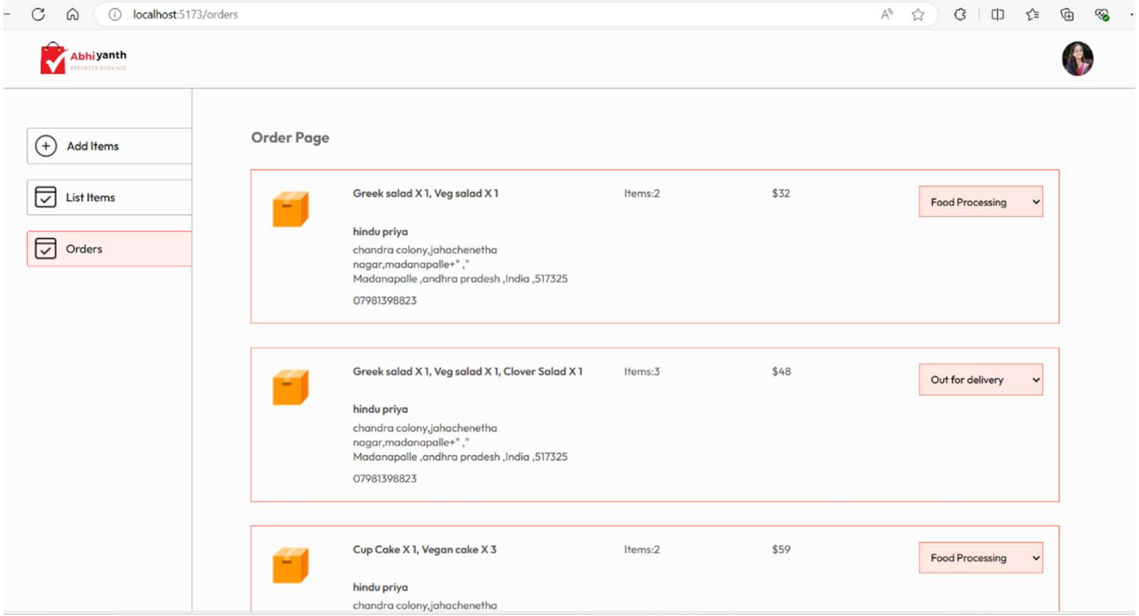
Product category: Salad

Product price: $20



All Foods List

Image	Name	Category	Price	Action
	Greek salad	Salad	$12	x
	Veg salad	Salad	$18	x
	Clover Salad	Salad	$16	x
	Chicken Salad	Salad	$24	x
	Lasagna Rolls	Salad	$14	x
	Peri Peri Rolls	Salad	$12	x
	Chicken Rolls	Rolls	$18	x
	Veg Rolls	Salad	$15	x



Order Page

Greek salad X 1, Veg salad X 1 Items:2 $32 Food Processing

hindu priya
chandra colony,jahachenetha
nagar,madanapalle+" ,"
Madanapalle ,andhra pradesh ,India ,517325
07981398823

Greek salad X 1, Veg salad X 1, Clover Salad X 1 Items:3 $48 Out for delivery

hindu priya
chandra colony,jahachenetha
nagar,madanapalle+" ,"
Madanapalle ,andhra pradesh ,India ,517325
07981398823

Cup Cake X 1, Vegan cake X 3 Items:2 $59 Food Processing

hindu priya
chandra colony,jahachenetha

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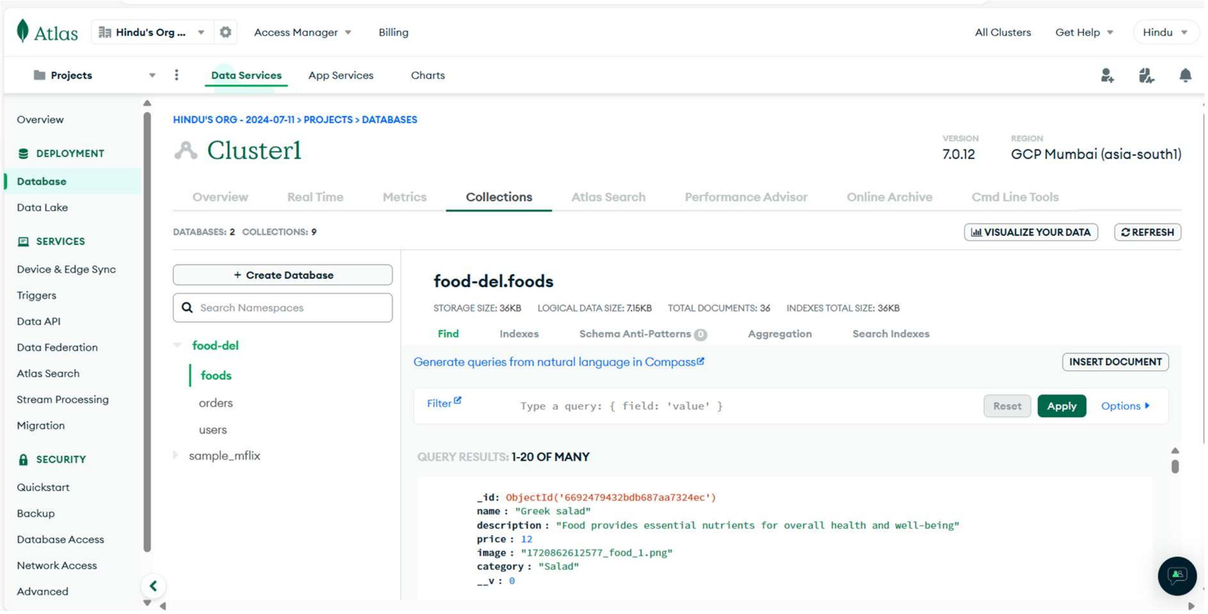
DATABASE



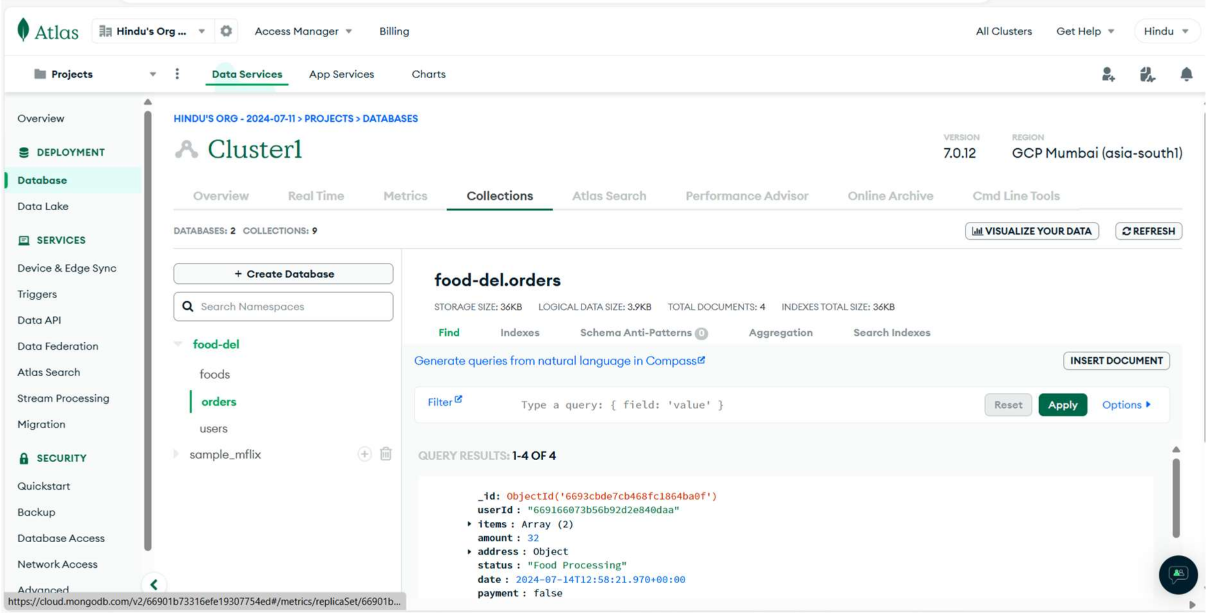
DATABASES: 2 COLLECTIONS: 9

food-del.foods

STORAGE SIZE: 36KB LOGICAL DATA SIZE: 7.15KB TOTAL DOCUMENTS: 36 INDEXES TOTAL SIZE: 36KB

QUERY RESULTS: 1-20 OF MANY

```
_id: ObjectId('6692479432bdb687aa7324ec')
name : "Greek salad"
description : "Food provides essential nutrients for overall health and well-being"
price : 12
image : "1720862612577_food_1.png"
category : "Salad"
__v : 0
```



DATABASES: 2 COLLECTIONS: 9

food-del.orders

STORAGE SIZE: 36KB LOGICAL DATA SIZE: 3.9KB TOTAL DOCUMENTS: 4 INDEXES TOTAL SIZE: 36KB

QUERY RESULTS: 1-4 OF 4

```
_id: ObjectId('6693cbde7cb468fc1864ba0f')
userId : "669166073b56b92d2e840daa"
▸ items : Array (2)
amount : 32
▸ address : Object
status : "Food Processing"
date : 2024-07-14T12:58:21.970+00:00
payment : false
```

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Chapter-1

INTRODUCTION

Introduction:

The Abhiyanth Preorder Moto is a pioneering platform aimed at revolutionizing the preordering process for students who run stalls. The primary goal of this project is to reduce the complexity of work for these students, saving time and eliminating the need to visit each class. By leveraging the MERN (MongoDB, Express.js, React.js, Node.js) stack along with HTML and CSS, the platform ensures a highly responsive and efficient system. The Abhiyanth Preorder Moto integrates various functionalities to enhance the overall quality of life and efficiency within the academic environment.

Streamlined Preordering Process

Purpose: The core purpose of the Abhiyanth Preorder Moto is to simplify and streamline the ordering process for students and vendors. Traditionally, managing orders manually is time-consuming and prone to errors, requiring students to physically visit each class to take orders and collect payments. This platform aims to automate and simplify this process.

Implementation:

1. **Order Management:**
   - Students can place orders in advance using the platform, selecting items from the available menu.
   - The platform provides an intuitive interface where students can view the menu, choose items, and specify quantities.
   - Orders are stored in a central database, ensuring that all information is accurate and up-to-date.
2. **Vendor Dashboard:**
   - Vendors have access to a dedicated dashboard where they can view and manage incoming orders.
   - The dashboard provides a comprehensive view of all orders, including details such as item names, quantities, and special requests.
   - Vendors can mark orders as prepared, ready for pickup, or delivered, ensuring clear communication with students.

Benefits:

1. **Time-Saving:**

-
- The platform significantly reduces the time required for students to place and manage orders, allowing them to focus on other academic responsibilities.
- Vendors can prepare orders more efficiently, minimizing wait times and improving customer satisfaction.

2. **Efficiency:**
    - The centralized order management system eliminates the need for manual tracking and reduces the risk of errors.
    - Both students and vendors benefit from a streamlined and organized process, enhancing overall efficiency.

Responsive Design:

Purpose: Ensuring that the Abhiyanth Preorder Moto is accessible and user-friendly across various devices is crucial for maximizing its impact. A responsive design allows the platform to adapt to different screen sizes and resolutions, providing a seamless experience for all users.

Implementation:

1. **Technology:**
    - The platform uses HTML, CSS, and React.js to create a responsive and intuitive user interface.
    - Media queries and flexible grid layouts are employed to ensure the platform looks and functions well on desktops, tablets, and smartphones.
2. **Testing**:
    - Extensive testing is conducted to ensure compatibility with different devices and screen sizes.
    - User feedback is collected and analyzed to make necessary adjustments and improvements.

Benefits:

1. **User Experience:**
    - A responsive design ensures that all users have a consistent and enjoyable experience, regardless of the device they use.
    - The platform is intuitive and easy to navigate, encouraging user engagement and satisfaction.
2. **Accessibility:**
    - The platform's accessibility is enhanced, allowing a wider audience to benefit from its features.
    - Students and vendors can access the platform from any device, making it convenient and versatile.

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Order Tracking and Notifications

Purpose: Keeping users informed about the status of their orders is essential for transparency and convenience. The Abhiyanth Preorder Moto provides real-time updates and notifications to ensure users are always aware of their order status.

Implementation:

1. **Real-Time Updates:**
   - The platform integrates with a notification system that provides real-time updates on order status.
   - Students receive notifications when their order is prepared, ready for pickup, or delivered.
2. **User Dashboard**:
   - Students have access to a user-friendly dashboard where they can track their orders.
   - The dashboard provides detailed information about each order, including status updates and estimated pickup times.

Benefits:

1. **Transparency:**
   - Real-time updates increase transparency, ensuring students are always aware of their order status.
   - Vendors can communicate more effectively with students, reducing uncertainty and enhancing trust.
2. **Convenience:**
   - Notifications and updates enhance convenience, allowing students to manage their orders efficiently.
   - The user dashboard provides a centralized location for tracking orders, making the process seamless and organized.

Secure Payment Processing

Purpose: Facilitating secure and efficient payment transactions is a critical aspect of the Abhiyanth Preorder Moto. The platform integrates with reliable payment gateways to ensure all financial transactions are safe and secure

Implementation:.

1. **Payment Gateway:**

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- The platform integrates with Stripe, a secure and reliable payment processing service.
- Students can make payments online, reducing the need for cash transactions and simplifying the payment process.

2. **Data Security:**
    - Robust security measures are implemented to protect user data and ensure the integrity of financial transactions.
    - Encryption and secure communication protocols are used to safeguard sensitive information.

Benefits:

1. **Security:**
    - Ensures the safety and security of financial transactions.
2. **Reliability:**
    - Provides a reliable payment solution for both students and vendors.

Order History and Analytics:

Purpose: Provides insights into order trends and user preferences.

Implementation:

1. **Data Analysis:** Utilizes MongoDB to store and analyze order data.
2. **Reports:** Generates detailed reports and analytics to help vendors understand customer behavior.

Benefits:

1. **Informed Decisions:** Empowers vendors to make informed decisions based on data insights.
2. **Optimization:** Helps optimize inventory and resource management

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Chapter-2

LITERATURE

Introduction

In order to effectively design and implement the Abhiyanth Preorder Moto, it is essential to understand the existing body of research and developments in related fields. This chapter reviews relevant literature on preordering systems, responsive web design, order tracking, secure payment processing, and data analytics. By examining these areas, we can identify best practices and technologies that will inform the development of our project.

Preordering Systems

Overview:

Preordering systems have been widely adopted across various industries to streamline the purchasing process and enhance user convenience. These systems allow customers to place orders in advance, ensuring availability and reducing wait times

Academic Settings:

In academic settings, preordering systems can significantly reduce the workload for students who manage stalls, as well as for vendors and administrators. Studies have shown that preordering can lead to increased efficiency, better inventory management, and improved customer satisfaction

Technological Integration:

Modern preordering systems often integrate with mobile applications and web platforms, utilizing technologies like the MERN stack (MongoDB, Express.js, React.js, Node.js) to offer a seamless and responsive user experience

Responsive Design

Importance

Responsive design ensures that web applications are accessible and functional across a range of devices, from desktops to smartphones. This is particularly important in academic environments where users may access the platform from various devices.

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Implementation

Responsive design utilizes HTML, CSS, and JavaScript frameworks like React.js to create interfaces that adapt to different screen sizes and resolutions. This approach enhances user experience by providing a consistent and intuitive interface

Benefits

Research indicates that responsive design improves user engagement, satisfaction, and accessibility, making it a crucial aspect of modern web development

Order Tracking and Notifications

Real-Time Updates

Real-time order tracking and notifications are essential for keeping users informed about the status of their orders. This feature enhances transparency and reduces uncertainty, which can improve overall user satisfaction.

User Experience

Studies have shown that real-time notifications and order tracking can significantly enhance the user experience by providing timely updates and reducing the need for manual status checks

Implementation

Technologies such as WebSockets and push notifications are commonly used to implement real-time updates, ensuring that users receive instant notifications about their orders

Secure Payment Processing

Security Concerns

Secure payment processing is critical for protecting user data and ensuring the integrity of financial transactions. Security breaches can lead to loss of trust and significant financial damage.

Payment Gateways

Payment gateways like Stripe offer robust security features, including encryption, tokenization, and fraud detection, to protect user data and facilitate secure transactions

Best Practices

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Best practices for secure payment processing include using HTTPS, implementing strong authentication methods, and regularly auditing security measures to identify and address vulnerabilities

Order History and Analytics

Data-Driven Insights

Order history and analytics provide valuable insights into user behavior and preferences, helping vendors optimize their operations and improve service quality.

Data Collection

Utilizing databases like MongoDB, platforms can store and analyze large volumes of order data to generate actionable insights (Patel & Kumar, 2019).

Benefits

Data analytics can inform inventory management, identify trends, and support decision-making processes, ultimately leading to better resource utilization and enhanced customer satisfaction

Conclusion

The literature review highlights the importance of integrating advanced technologies and best practices into the Abhiyanth Preorder Moto platform. By leveraging preordering systems, responsive design, real-time order tracking, secure payment processing, and data analytics, the project aims to create an efficient and user-friendly solution for managing student stalls in academic settings. This comprehensive approach ensures that the platform meets the needs of all stakeholders, providing a valuable tool for enhancing efficiency and improving the overall user experience.

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CHAPTER-3

Frontend Implementation

Introduction

The Abhiyanth Preorder Bookings platform provides a seamless and user-friendly interface for customers to browse menus, add items to their cart, place orders, make secure payments, and view their order history. This chapter details the frontend implementation of these features, describing the user journey from login and registration to placing an order and tracking it.

User Interface Design

Overview

The user interface (UI) of the Abhiyanth Preorder Bookings platform is designed to be intuitive and responsive, ensuring a smooth user experience across various devices. The key components of the UI include the menu page, cart functionality, order placement, payment interface, and order history.

Technology Stack

The frontend is built using modern web technologies:

- **React.js** for building interactive UIs
- **HTML5** for structuring content
- **CSS3** for styling
- **React Toastify** for notifications
- **Stripe** for secure payment processing
- **Mongodb atlas** for database connection

User Journey

1. Login and Registration

Login Page

- **Purpose:** Allows existing users to access their accounts.
- **Features:**
  - **Form:** Users enter their email and password
  - **Validation:** Ensures valid email format and non-empty fields.
  - **Error Handling:** Displays error messages for incorrect credentials.

Registration Page

- **Purpose:** Enables new users to create an account.

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- **Features:**
    - **Form:** Users provide their name, email, password, and confirm password.
    - **Validation:** Checks for valid email, password strength, and matching passwords.
    - **Success Message:** Confirms successful registration and prompts to log in.

2. Menu Page

Menu Display

- **Purpose:** Shows available food items for ordering
- **Features:**
    - **Categories:** Items are grouped into categories for easy browsing.
    - **Search Function:** Users can search for specific items.
    - **Item Details:** Each item displays a name, description, price, and image.

Adding Items to Cart

- **Purpose:** Allows users to select items they wish to order.
- **Features:**
    - **Add to Cart Button:** Users click to add items to their cart.
    - **Quantity Selector:** Users can choose the quantity of each item.
    - **Cart Icon:** Displays the number of items in the cart and updates in real-time.

3. Cart Functionality

Cart Page

- **Purpose:** Provides an overview of selected items before placing an order.
- **Features:**
    - **Item List:** Displays all items added to the cart with their quantities and prices.
    - **Edit Cart:** Users can adjust quantities or remove items.
    - **Total Price:** Shows the total cost of all items in the cart.
    - **Proceed to Checkout Button:** Moves users to the payment page.

4. Placing an Order

Checkout Page

- **Purpose:** Finalizes the order and handles payment.
- **Features:**
    - **Order Summary:** Lists items, quantities, and total price.
    - **Payment Form:** Securely collects payment information using Stripe.
    - **Address Details:** Users provide delivery or pickup address.
    - **Place Order Button:** Confirms the order and processes the payment.

5. Secure Payment Interface

Payment Processing

- **Purpose:** Ensures secure and efficient transaction handling.
- **Features:**
    - **Stripe Integration:** Uses Stripe's secure API for payment processing.

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    - **Card Details Form:** Collects credit/debit card information securely.
    - **Error Handling:** Displays errors for invalid payment details or failed transactions.
    - **Success Confirmation:** Confirms successful payment and order placement.

6. **Order History**

   Order History Page

   - **Purpose:** Allows users to track their past orders.
   - **Features:**
     - **Order List:** Displays a list of previous orders with dates, items, and status.
     - **Order Details:** Provides detailed information on each order, including items, quantities, prices, and total amount.
     - **Reorder Option:** Users can easily reorder previous items with a single click.

Conclusion

The frontend implementation of the Abhiyanth Preorder Bookings platform ensures a user-friendly and efficient ordering experience. By integrating features such as login and registration, menu browsing, cart management, secure payment processing, and order history tracking, the platform caters to the needs of students, vendors, and administrators. This comprehensive approach not only simplifies the preordering process but also enhances the overall user experience, making the Abhiyanth Preorder Bookings platform a valuable tool in the academic environment.

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Chapter-4

Backend Implementation

Introduction

The backend of the Abhiyanth Preorder Bookings platform is designed to handle data management, business logic, and secure transactions efficiently. This chapter provides an in-depth explanation of the backend implementation, detailing the technologies used, data flow, and key features that support the frontend functionalities.

Technology Stack

The backend of the Abhiyanth Preorder Bookings platform is built using the following technologies:

- **Express.js:** A web application framework for Node.js, providing a robust set of features for web and mobile applications.
- **MongoDB:** A NoSQL database that stores data in JSON-like documents, making it flexible and scalable.
- **Mongoose:** An ODM (Object Data Modeling) library for MongoDB and Node.js, providing a straightforward schema-based solution to model application data.
- **Stripe:** A payment processing platform that handles secure transactions.

Architecture

The backend architecture follows the Model-View-Controller (MVC) pattern, ensuring a clean separation of concerns:

- **Models:** Define the data structure and interact with the database.
- **Controllers:** Handle the business logic and communication between models and views.
- **Routes:** Define the endpoints for the application and map HTTP requests to the appropriate controller functions.

Key Components

1. User Authentication

Registration and Login

- **Purpose:** Securely manage user accounts and provide access control.
- **Implementation:**
  - **JWT (JSON Web Token):** Used for creating secure tokens that are sent to the client upon successful login and used for subsequent authentication.
  - **Password Hashing:** Passwords are hashed using bcrypt to enhance security.
  - **Endpoints:**
    1. `` `/api/users/register` ``: Handles user registration.
    2. `` '/api/users/login` ``: Handles user login and returns a JWT.
- **Flow:**

-
    - **Registration:** Users submit their details, which are validated and stored in the MongoDB database after password hashing.
    - **Login:** Users submit their credentials, which are validated, and a JWT is generated and sent to the client.

2. Menu Management

Menu and Items

- **Purpose:** Manage the menu items available for preorder.
- **Implementation:**
    - **Menu Schema:** Defines the structure of menu items, including name, description, price, and category.
    - **Endpoints:**
        - `` `/api/menu` ``: Retrieves the list of menu items
        - `` `/api/menu/`:id ``: Retrieves, updates, or deletes a specific menu item
- **Flow:**
    - **Create Item:** Vendors add new items to the menu through the admin interface.
    - **Retrieve Items:** The frontend retrieves menu items for display.
    - **Update/Delete Item:** Vendors can update or delete items as needed.

3. Cart and Order Management

Cart

- **Purpose:** Manage items added to the user's cart.
- **Implementation:**
    - **Cart Schema:** Stores the items selected by the user.
    - Endpoints:
        - `` `/api/cart` ``: Retrieves or updates the user's cart
- **Flow:**
    - _**Add to Cart:** Users add items to their cart, which are stored in the database.
    - **Retrieve Cart:** The cart is retrieved and displayed to the user.

Orders

- **Purpose:** Handle order placement, processing, and history.
- **Implementation:**
    - **Order Schema:** Defines the structure of an order, including user details, items, total price, and status.
    - **Endpoints:**
        - `` `/api/orders` ``: Creates a new order.
        - `` `/api/orders/:id` ``: Retrieves, updates, or deletes a specific order.
        - `` `/api/orders/user/`:userId ``: Retrieves orders for a specific user.
    - **Flow:**
        - **Place Order:** Users place an order, which is stored in the database and associated with the user.

-
        - **Retrieve Orders:** Users and vendors can retrieve order details for tracking and management.

4. Payment Processing

Secure Payments

- **Purpose:** Process payments securely using Stripe.
- **Implementation:**
    - **Stripe Integration:** Stripe's API is used to handle payment processing.
    - Endpoints:
        - `` `/api/payments` ``: Handles payment creation and confirmation
- **Flow:**
    - **Create Payment Intent:** When an order is placed, a payment intent is created through Stripe.
    - **Process Payment:** Users complete the payment on the frontend, and the backend confirms the payment with Stripe.
    - **Confirm Order:** Once payment is confirmed, the order status is updated

Data Flow

1. User Authentication:
    - User registers or logs in.
    - Credentials are validated, and a JWT is generated.
    - JWT is used for subsequent requests.
2. Menu Retrieval:
    - Frontend requests menu items.
    - Backend retrieves items from the database and sends them to the frontend.
3. Cart Management:
    - User adds items to the cart.
    - Cart details are stored and retrieved as needed.
4. Order Placement:
    - User places an order.
    - Order details and payment are processed.
    - Order status is updated and tracked

Conclusion

The backend implementation of the Abhiyanth Preorder Bookings platform ensures robust data management, secure transactions, and efficient handling of business logic. By utilizing Node.js, Express.js, MongoDB, Mongoose, and Stripe, the platform provides a scalable and secure solution for managing preorders, payments, and user interactions. This solid backend foundation supports the comprehensive frontend features, ensuring a seamless and reliable user experience for students, vendors, and administrators.

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Chapter-5

Admin Page Implementation

Introduction

The admin page of the Abhiyanth Preorder Bookings platform provides a centralized interface for managing menu items and monitoring orders. This chapter details the implementation of the admin functionalities, focusing on adding and listing menu items and fetching orders from the database. The admin page ensures that vendors can efficiently manage their offerings and maintain an up-to-date menu for users.

Adding Menu Items

Purpose:

The purpose of adding menu items is to ensure that the menu remains current and diverse, catering to the needs and preferences of users.

Implementation:

Admins can add new items to the menu through a user-friendly form on the admin page. The form includes fields for item name, description, price, category, and an image URL. Once the admin fills out the form and submits it, the data is sent to the backend, where a new menu item is created in the database.

This functionality is crucial for maintaining an updated and appealing menu. By allowing admins to add items quickly and easily, the platform can offer a dynamic and engaging menu to its users.

Listing Menu Items

Purpose:

Listing menu items allows admins to view all the items currently available on the menu, facilitating easy management and updates.

Implementation

The admin page displays a list of all current menu items, including their details such as name, description, price, category, and image. This list is fetched from the database and presented in a clear and organized manner, enabling admins to quickly review and manage the menu offerings.

By having a comprehensive view of the menu items, admins can identify items that need to be updated, removed, or promoted, ensuring the menu remains relevant and attractive to users.

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Fetching Orders from the Database

Purpose:

Fetching orders from the database allows admins to monitor and manage user orders efficiently, ensuring timely fulfillment and maintaining high service standards.

Implementation:

The admin page provides a functionality to fetch and display all user orders from the database. This includes order details such as items ordered, quantities, total cost, user information, and order status. This data is retrieved from the backend and presented in a structured format.

Having access to order information enables admins to track order statuses, identify any issues, and ensure that orders are processed and delivered promptly. This functionality is essential for maintaining user satisfaction and operational efficiency.

Data Flow

1. **User Authentication:**
   - Admins log in to access the admin page.
   - Credentials are validated, and access is granted.
2. **Menu Management:**
   - Admins add new items to the menu using a form.
   - Menu items are listed, allowing for easy management and updates.
3. **Order Management:**
   - Admins fetch orders from the database.
   - Orders are displayed with all relevant details for monitoring and management.

Conclusion

The admin page implementation of the Abhiyanth Preorder Bookings platform ensures efficient management of menu items and orders. By providing functionalities to add and list menu items and fetch orders from the database, the platform enables vendors to maintain an up-to-date menu and ensure timely order processing. This robust admin interface contributes to the overall efficiency and reliability of the platform, supporting the goal of providing a seamless preorder experience for users.

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CHAPTER-6

Result and Discussion

Introduction

The Abhiyanth Preorder Bookings platform has been designed and implemented to provide a seamless and efficient ordering experience for students and vendors. This chapter discusses the results of the implementation, the impact on the user experience, and the overall effectiveness of the system.

Results

User Interface and User Experience

The frontend implementation of the Abhiyanth Preorder Bookings platform has achieved its goal of providing a user-friendly interface. Key features include:

1. **Login and Registration:**
    - Users can easily register and log in to their accounts.
    - Secure authentication ensures user data is protected.
2. **Menu Browsing:**
    - Users can browse through a well-organized menu.
    - Detailed item descriptions and images enhance the browsing experience.
3. **Cart Management:**
    - Users can add items to their cart and view the total cost.
    - The cart interface is intuitive and easy to navigate.
4. **Order Placement:**
    - The process of placing an order is straightforward and quick.
    - Users receive real-time updates on their order status
5. **Payment Processing:**
    - Secure and user-friendly payment interface using Stripe.
    - Users can make payments confidently, knowing their information is secure.
6. **Order History**:
    - Users can view their past orders and track their current orders.
    - This feature helps users keep track of their purchases and reorder easily.

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Admin Page Functionality

The admin page provides a comprehensive interface for managing menu items and orders:

1. **Adding Menu Items:**
   - Admins can add new items to the menu efficiently.
   - The form validation ensures that all necessary information is provided.
2. **Listing Menu Items:**
   - Admins can view all current menu items and their details
   - This functionality helps in maintaining an updated and relevant menu
3. **Fetching Orders:**
   - Admins can fetch and monitor all user orders from the database.
   - Order details are presented in an organized manner, facilitating efficient order management.

Discussion

User Experience

The platform has significantly improved the preorder experience for users. The intuitive user interface and smooth navigation have made it easy for students to browse the menu, add items to their cart, and place orders. The secure payment gateway and order history feature have further enhanced user confidence and satisfaction.

Vendor Experience

For vendors, the admin page has simplified menu management and order processing. The ability to add and list menu items efficiently ensures that the menu remains current and appealing. Fetching orders from the database allows vendors to track and fulfill orders promptly, improving operational efficiency.

System Performance

The backend implementation using Node.js, Express.js, and MongoDB has proven to be robust and scalable. The APIs for adding, listing, and fetching data perform efficiently, ensuring a smooth and responsive user experience. The use of JWT for user authentication and Stripe for payment processing has enhanced the security and reliability of the platform.

Challenges and Solutions

Several challenges were encountered during the implementation, including:

1. **Form Validation:**
   - Ensuring that all fields are correctly filled out was crucial for adding menu items.
   - Solution: Implemented robust form validation on both frontend and backend.
2. **Data Consistency:**
   - Maintaining data consistency between the frontend and backend was essential.

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- Solution: Regular synchronization and validation checks were implemented.

3. **Security:**
   - Ensuring the security of user data and payment information was a top priority
   - Solution: Used JWT for secure user authentication and Stripe for secure payment processing.

Impact

The implementation of the Abhiyanth Preorder Bookings platform has had a positive impact on both students and vendors. Students now have a convenient and efficient way to preorder food, reducing wait times and improving their overall experience. Vendors benefit from a streamlined order management process, allowing them to serve customers more effectively.

Conclusion

The Abhiyanth Preorder Bookings platform has successfully achieved its objectives of providing a user-friendly and efficient ordering experience. The robust frontend and backend implementations ensure a seamless interaction for both users and admins. By integrating essential features like login and registration, menu browsing, cart management, secure payment processing, and order history tracking, the platform meets the needs of students, vendors, and administrators, making it a valuable tool in the academic environment.

Chapter-7

Conclusion and Future Enhancements

Conclusion

The Abhiyanth Preorder Bookings platform has been successfully implemented to provide a seamless and efficient preorder experience for students and vendors. The comprehensive frontend and backend development ensures a user-friendly interface and reliable functionality. Key features such as login and registration, menu browsing, cart management, secure payment processing, and order history tracking have been integrated to cater to the needs of all users. This project has significantly improved the preorder process, reducing wait times and enhancing user satisfaction.

The admin interface allows for efficient management of menu items and orders, ensuring that vendors can maintain an up-to-date menu and process orders promptly. The use of modern technologies like React.js, Node.js, Express.js, MongoDB, and Stripe has ensured a robust, scalable, and secure platform.

Future Enhancements

The Abhiyanth Preorder Bookings platform will be further enhanced to broaden its functionality and user engagement. One key enhancement will be the integration of a registration system for cultural events, allowing students to easily sign up for various activities and performances. This addition will include detailed event information and provide confirmation notifications upon registration.

Additionally, a registration feature for horror room activities will be introduced, offering students a thrilling experience. This feature will allow students to book time slots and receive reminders, ensuring smooth participation.

Furthermore, the platform will support registration for various games and sports activities, encouraging active student involvement in recreational events. This section will list available games, rules, and allow for individual or team registrations.

To complement these new features, a notification system will be implemented to keep users informed about upcoming events, order updates, and new menu items. Enhanced analytics will be provided for admins to track user engagement and trends, while a feedback system will enable users to rate their experiences and offer suggestions for improvement.

These enhancements aim to make the Abhiyanth Preorder Bookings platform more dynamic and interactive, fostering greater student engagement and providing a comprehensive solution for managing preorders and event registrations in the academic community.

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