CHANDIGARH UNIVERSITY FOOD ORDERING SERVICE

Report

Submitted by

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BONAFIDE CERTIFICATE

Certified that this project report "**Chandigarh University Food Ordering Website**
"is the bonafide work of "**Aman Prakash Sharma ,Himanshu Kumar ,Ravi
Shankar Singh , Shalap Pandotra ,Suraj Kumar**" who carried out the project
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INTERNAL EXAMINER   **EXTERNAL EXAMINER**

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Abstract

The Food Ordering Website is an innovative online platform that aims to redefine the way people order and enjoy their favourite meals. With a user-friendly interface and an extensive selection of restaurants and cuisines, the website offers a convenient and personalized food ordering experience. The platform prioritizes customer satisfaction by providing a seamless browsing, ordering, and delivery process. By collaborating with local restaurants, the Food Ordering Website ensures a diverse range of culinary options to cater to various tastes and preferences. Customers can easily explore menus, customize their orders, and track deliveries in real-time, ensuring a hassle-free and enjoyable dining experience. The website places a strong emphasis on maintaining the privacy and security of customer information, implementing robust security measures. The success of the Food Ordering Website lies in its continuous efforts to enhance customer satisfaction, build a strong brand reputation, and drive revenue growth. By actively seeking customer feedback and analysing market trends, the platform remains adaptable to changing consumer preferences. Future plans include introducing personalized recommendations, expanding restaurant partnerships, and optimizing delivery processes for enhanced efficiency. The Food Ordering Website aims to revolutionize the food ordering industry by providing a seamless and delightful experience for customers while supporting local businesses. With its commitment to excellence and innovation, the platform strives to become the preferred destination for individuals seeking convenience, variety, and quality in their food ordering endeavours.

Graphical Abstract
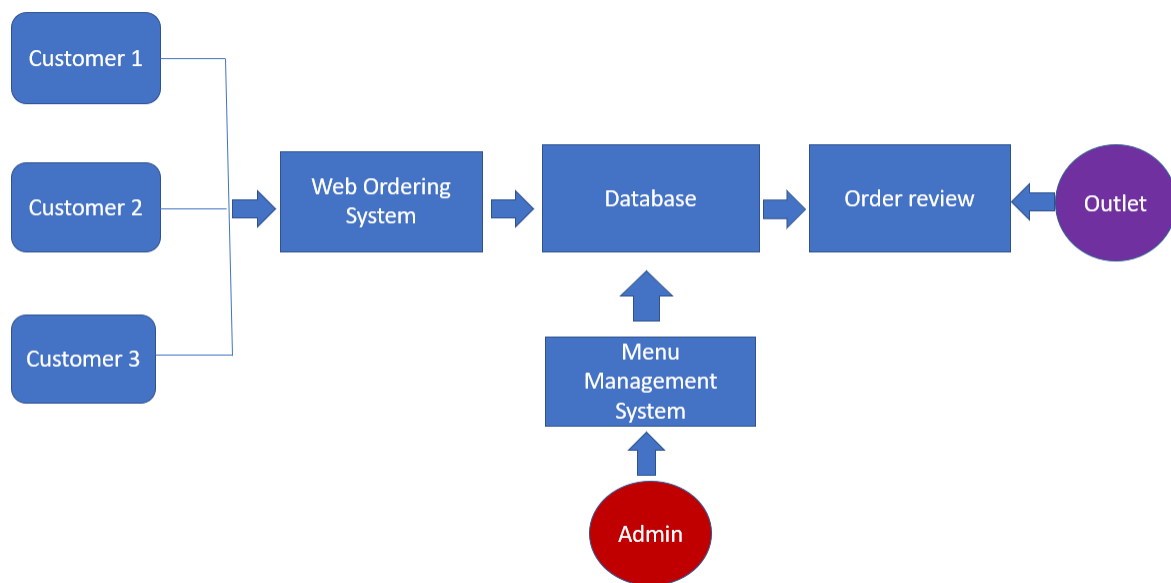
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GRAPHICAL ABSTRACT

INTRODUCTION

Identification of Client /Need / Relevant Contemporary issue

In recent years, there has been an increasing trend of ordering food through online food delivery services. This is because people continue to value convenience and easy access to food on Time. When hundreds of students congregate outside campus outlet, some waiting for order, while others waiting to order. It is exceedingly challenging for both students and the outlet owner to manage the rush during the lunch hour. So, We need a solution that manage the crowd, save time while ordering and a smooth payment gateway for those wo don't have cash or any payment method. A less crowded area not only gives you more space but also reduces noise. This is also beneficial for workers as they can be overwhelmed doing their job in the noise.

1.2. Identification of Problem

1.) Long queues and wait times: During lunch time in college, the demand for food increases significantly, which results in long queues and wait times for students, leading to frustration and reduced satisfaction.

2.) Limited seating capacity: The college cafeteria may not have enough seating space to accommodate all the student's ordering food, which results in students having to eat their food outside or in classrooms, which may not be convenient or comfortable.

3.) Inefficient order processing: Due to the high volume of orders during lunch time, the cafeteria staff may struggle to process orders efficiently, resulting in delays and errors in food preparation, which can lead to customer dissatisfaction.

4.) Limited payment options: Cafeterias may only accept cash payments, which is inconvenient for students who do not have cash on hand or who prefer to pay with digital payment methods.

5.) Health and Hygiene Concerns: Large orders and limited cooking times can impact canteen hygiene and health standards, increasing the risk of food contamination and illness among students.

1.3. Identification of Tasks

Define project scope and requirements: Clearly define the scope of the project and gather requirements from stakeholders to ensure the website meets their needs.

Design website architecture: Create an architecture for your website that defines the layout of the pages, menus, and features that you want to include.

Develop user interface (UI) design: Design a user-friendly interface that allows users to easily navigate and use the website.

Develop database: Build a database to store and manage customer information, food menu, order history, payment details, and other relevant data.

Build website backend: Develop the website's backend functionality that allows users to place orders, track their orders, and make payments.

Implement payment gateway: Integrate a payment gateway to allow customers to make secure online payments.

Perform testing and debugging: Test the website for bugs and errors and fix any issues that are identified.

Deploy the website: Deploy the website to a hosting server and ensure it is accessible to users over the internet.

1.4. Timeline
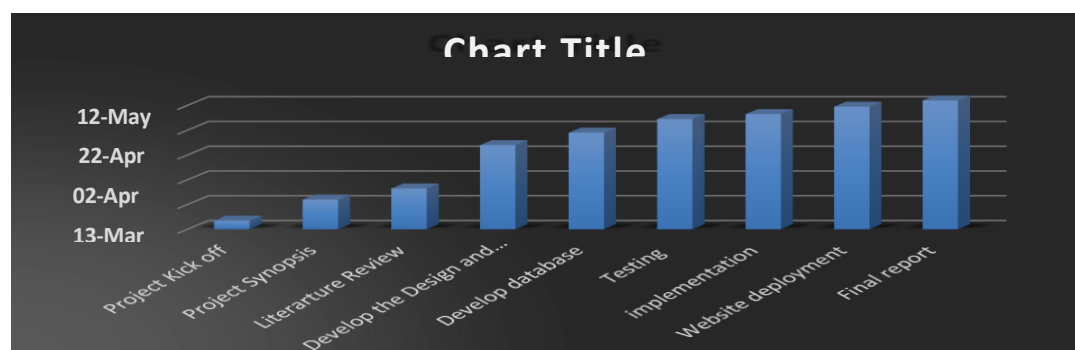
Timeline

1.5. Organization of the Report

1. Chapter 1: Introduction: • Identify the client, issue, task, along with timeline of the report.

• In this chapter you will understand the issue of the client.

2. Chapter 2: Literature review: • In this chapter we will explain the background history of the problem.

• Existing solution

• A review Summary along with goals and objective

3. Chapter 3: Design and flow chart: • We will explain how our website is going to be functional

• Design constrains along with design selection.

• Implementation and the methodology used.

4. Chapter 4: Result analysis and validation: • By deploying our website we can manage the crowd at cafeteria area.

• Feedback of the users will be mentioned here.

5. Chapter 5: Conclusion and future work: • In this chapter conclusion of the report will be there along with the work that can be extended in the future.

At the end, we will provide User manual so it would be easy to understand the steps to use our website.

CHAPTER 2.

LITERATURE REVIEW/BACKGROUND STUDY

2.1. Timeline of the reported problem

When was problem identified:

Websites for ordering meals online have been available for a while, but during the past ten years they have grown dramatically in popularity and usage. Pizza chain Pizza Hut introduced its online ordering system in 1995, which is when the first food ordering website appeared online. Unfortunately, the idea of online food ordering did not really take off until the middle of the 2000s. Some of the first websites for ordering food online were Grub Hub, created in 2004, and Seamless, introduced in 2005. Initially, the main goal of these websites was to give users a way to order food from eateries in their neighbourhood. Online meal ordering has changed over time, and many companies now provide a variety of extra features including delivery monitoring, user ratings, and loyalty programmes. These days, there are a tonne of websites where you can order meals online, such Door Dash, Uber Eats, Postmates, and many others. These websites have completely changed how people order food, making it easier and more accessible than ever.

Websites for ordering meals online fill a variety of needs and offer advantages to both customers and eateries. Some of the main needs that online meal ordering services fill are listed below:

Convenience: Customers may place orders from their preferred restaurants considerably more easily thanks to online meal ordering platforms. Instead of going to the restaurant or having to wait on hold, they may do it from the convenience of their own homes or places of employment.

Accessibility: Customers may more easily access menus, reviews, and other restaurant-related information thanks to online meal ordering websites. People can locate eateries that satisfy their dietary preferences or limits by rapidly comparing costs and options.

Efficiency: Internet meal delivery services decrease wait times and errors by streamlining the ordering procedure. They also assist in lightening the workload of restaurant staff members so that they can concentrate on preparing and delivering food rather than receiving phone orders.

Integration: A number of well-known services, including delivery services and loyalty programmes, are integrated into online food ordering websites. Customers can order and receive their meals more easily as a result, and businesses can better manage their business. Overall, online food ordering websites offer clients a more effective and practical way to place orders while also providing substantial advantages for restaurants and other people working in the food sector.

How this problem identified

Traditional meal ordering procedures, such as phone orders and in-person orders, have long been plagued by the issues of annoyance and inefficiency. Long phone hold times, language hurdles, background noise, and the inconvenience of having to go to the restaurant to place their order were common problems encountered by customers. As technology developed, more individuals became aware of how the internet could enhance the process of ordering food. In order to solve these issues, online food ordering platforms were developed that let users browse menus, place orders, and make payments online. This streamlined and improved the ordering procedure while also making the overall process quicker and more convenient. The potential advantages of online meal ordering were also noted by restaurant owners and other professionals in the food sector. Restaurants might potentially boost their revenues and reach a larger audience by providing online ordering. Also, by streamlining their ordering and delivery procedures, they might lower the possibility of mistakes and improve client satisfaction. As a result, business owners and start-ups started to create and introduce online meal ordering systems, which over time developed into some of the most well-liked and widely-used services on the internet.

Documentary proof of online food ordering:

Here are some examples of documentary proof that may be used to document online food ordering:

Order confirmation emails: When a customer places an order through an online food ordering website, they will typically receive an order confirmation email. This email can be used as proof that the order was placed and provides details of the order, such as the items ordered, the delivery address, and the order total.

Receipts: Online food ordering websites often provide digital receipts for orders, which can be used as proof of payment. These receipts typically include details of the order, the date and time of the order, and the amount paid.

Delivery tracking information: Many online food ordering websites provide delivery tracking information, which can be used to document the delivery of the order. This may include details such as the time of delivery, the name of the delivery driver, and a signature or other confirmation of delivery.

User reviews: User reviews on online food ordering websites can provide documentation of the quality of the food, the accuracy of orders, and the overall customer experience. These reviews can be used as proof of the customer's experience with the restaurant and the online ordering process.

Restaurant agreements: Online food ordering websites may require restaurants to sign agreements outlining the terms and conditions of the partnership. These agreements can be used as documentary proof of the relationship between the restaurant and the online food ordering website. Overall, these forms of documentary proof can be used to document online food ordering transactions, provide evidence of payments and deliveries, and support customer reviews and feedback.

2.2. Existing solutions

Existing options for internet food delivery services include the following:

Third-party platforms: A variety of third-party platforms are available for customers to use in order to place online meal orders from different restaurants. These websites include Uber Eats, Grub hub, Door Dash, and Postmates as examples.

Systems for placing orders exclusive to restaurants: Some restaurants have created their own online ordering processes, either as a component of their websites or through a separate mobile application. These systems enable customers to place orders directly with restaurants and may also include extra features like rewards and loyalty programmes.

Ordering platforms tailored to restaurants: Some eateries have created their own online ordering platforms, either as a component of their websites or through a specialised mobile app. Customers can place orders straight from the restaurant using these systems, which may also include extra features like rewards and loyalty programmes.

Online ordering software: is readily available, allowing eateries to create their own online ordering platforms. These systems might have options for managing menus, accepting payments, and tracking orders.

White-label solutions: White-label solutions free restaurants from having to build their own infrastructure or software in order to construct their own branded online ordering systems. These services could be provided by independent vendors or internet ordering systems.

Ordering through chat interfaces: Like Facebook Messenger or WhatsApp is now possible on several online meal delivery services thanks to the use of chatbot-based ordering systems.

In general, there are numerous options for online meal ordering, each with a unique set of features and advantages. Customers and restaurants can choose the solution that best meets their needs and preferences.

2.3. Bibliometric Analysis:

| Ref	Author and year	Aim	Result/Purpose
[1]	Kirti Bhandge, Tejas Shinde, Dheeraj Ingale, Neeraj Solanki, Reshma Totare (2015)	A Proposed System for Touchpad Based Food Ordering System Using Android Application	A suggested automated meal ordering system will intelligently track user orders. They essentially created a food ordering system for several types of eateries, allowing users to place orders or create custom meals with just one click. This technique was created using an Android application for tablet computers. Android and Java were utilised to construct the front end, and MySQL was the database of choice for the back end.
[2]	Varsha Chavan, Priya Jadhav, Snehal Korade, Priyanka Teli. (2015)	Implementing Customizable Online Food Ordering System Using Web Based Application	A customer using a smartphone is taken as the system. The saved order can be verified by tapping the smartphone as the consumer approaches the establishment. The list of the chosen reordered items will be displayed on the kitchen screen, and after confirmation, an order sheet will be printed to

			proceed with the order. The solution offers a simple and practical approach to choose customers for pre-order transaction forms.
[3]	Resham Shinde, Priyanka Thakare, Neha Dhomne, Sushmita Sarkar. (2014).	Design and Implementation of Digital dining in Restaurants using Android	An attempt was made to use Android technology to create and deploy digital dining in restaurants. This solution was a straightforward dynamic database tool that retrieved all the data from a single database. This user-friendly programme helped eateries operate more efficiently and accurately while reducing human error. This technology was developed to address the previous shortcomings of automated food ordering systems and just requires a one-time investment in devices.
[4]	Ashutosh Bhargave, Niranjan Jadhav, Apurva Joshi, Prachi Oke, S. R Lahane.(2013)	Digital Ordering System for Restaurant Using Android	The integration of hotel management systems using web services technology is applied in this case. The Digital Hotel Management holds the ordering system, billing system, and customer relationship management system (CRM) together. This approach made it possible to add or expand hotel software systems in environments with any size hotel chains.
[5]	Khairunnisa K., Ayob J., Mohd.	The Application of	A wireless meal ordering system for the restaurant is the focus of

	Helmy A. Wahab, M. Erdi Ayob, M. Izwan Ayob, M. Afif Ayob. (2009).	Wireless Food Ordering System	research. This system detailed the technical operations of the Wireless Ordering System (WOS), including the systems architecture, function, restrictions, and suggestions. Pervasive applications were thought to be a key tool for restaurants to improve management by reducing human error and by offering higher-quality customer service as a result of the growing use of handheld devices like PDAs in dining establishments.
[6]	Noor Azah Samsudin, Shamsul Kamal Ahmad Khalid, Mohd Fikry Akmal Mohd Kohar, Zulkifli Senin, Mohd nor Ihkasan. (2011).	A customizable wireless food ordering system with real time customer feedback	A wireless meal ordering system was designed and implemented along with consumer feedback for a restaurant. It makes it simple for restaurant operators to change menu presentations and set up the system in a Wi-Fi setting. In order to enable real-time communication between patrons of restaurants and proprietors of those establishments, smart phones have been linked into the configurable wireless food ordering system with implementation of real-time consumer feedback.
[7]	Serhat Murat Alagoza, Haluk Hekimoglub. (2012)	A study on tam: analysis of customer attitudes in online food	The aim of this study was to look into the variables that affect internet users' perceptions of online meal ordering among university students in Turkey. The adoption of the

|		ordering system	Online environment for meal ordering was studied using a Technological Acceptance Model (TAM) created by Davis in 1986. Together with TAM, the model now includes key components such as trust, innovation, and external influences.
[8]	Patel Krishna, Patel Palak, Raj Nirali, Patel Lalit. (2015)	Automated Food Ordering System	The goal of the project is to streamline the restaurant patrons' dining experience by automating the ordering of meals. In this study, the design and implementation of a restaurant food ordering system were covered. The wireless data access to servers is implemented by this system. All the menu information will be available on the user's mobile Android application. Wirelessly, the kitchen and cashier receive the order information from the customer's mobile device. The central database is updated with these order specifics. The proprietor of the restaurant can quickly handle menu changes.
[9]	MayurD. Jakhete, PiyushC. Mankar. (2015)	Implementation of Smart Restaurant with e-menu Card	In order to improve the eating experience, restaurant owners are making efforts to adopt information and communication technology like PDAs, wireless LANs, pricey multi-touch screens, etc. This paper examines those initiatives. This

			study identifies a few drawbacks of the traditional paper-based and PDA-based food ordering systems and suggests a low-cost touch screen-based restaurant management system employing an android smartphone or tablet as a potential remedy.

2.4 GRAPHS
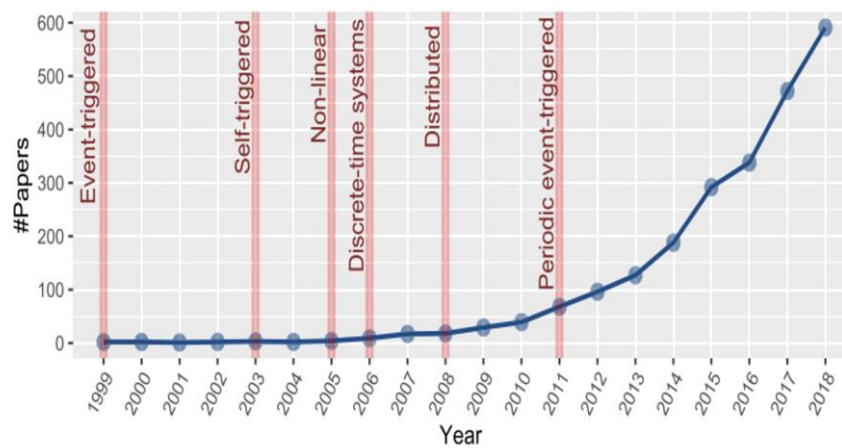
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Fig1.1: Graph on papers published throughout the year
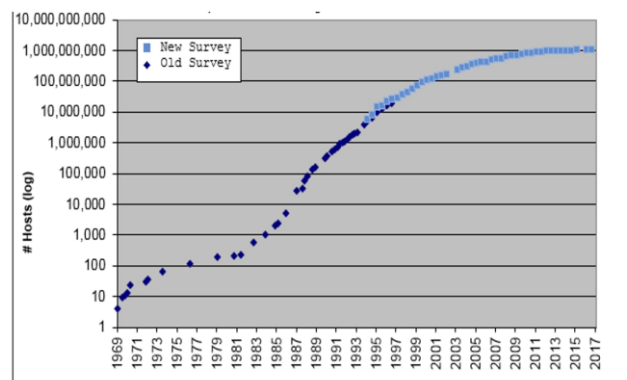
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Fig1.2: Survey report of papers published

2.5. Review Summary

The convenience of online food delivery services for students is one of their main benefits. They save time and effort for students by making it simple for them to place orders from their dormitories or classes. Students with busy schedules who can't afford to waste time standing in line at cafeterias or food courts would especially benefit from this convenience. Also, a number of meal selections are available on online food websites to accommodate various dietary requirements and preferences. This is especially helpful for students who have food allergies or follow a certain diet. They don't have to go to the trouble of reading labels or requesting special accommodations because it's simple for them to locate and order food that complies with their dietary needs. Notwithstanding these advantages, online meal ordering services in colleges have also been linked to various difficulties. Order and delivery accuracy is one frequent problem. It can be irritating and inconvenient when students report getting faulty items or suffering delivery delays. The expense of using food ordering websites is an additional issue. For students who are on a tight budget, certain websites' exorbitant delivery fees or minimum order requirements can be a hurdle. Furthermore, according to several students, the cost of meals on these websites is more expensive than what they would pay in person. Generally, university meal ordering experiences could be enhanced by the use of online food ordering services. To make sure that these websites are useful and accessible to all students, it is crucial to solve the issues related to them.

Certainly, based on earlier study articles, here are a few important bullet points outlining the advantages and difficulties of online food websites in colleges:

Benefits:
Convenience: Allows students to easily place orders from their dorms or classrooms
Variety: Offers a wide range of food options to cater to different dietary needs and preferences
Saves time: Reduces the time and effort required to order food on campus
Challenges:
Accuracy of orders: Some students have reported receiving incorrect orders or experiencing delays in delivery
Delivery fees and minimum order requirements: Some websites charge high delivery fees or require minimum orders, which can be a barrier for students on a tight budget
Higher prices: Some students have reported that the prices of food on these websites are higher than what they would pay in person. Overall, while online food websites in universities offer

several benefits for students, there are also some challenges that need to be addressed to optimize the experience.

2.6. Problem Definition

The problem at hand is to make a website to pre-order the food in the university from the various outlets within the campus. With the help of this website students as well as teachers can pre-order their foods on their preferred time so that they can avoid the excessive crowd during some specific times when many classes have their breaks on the same time. This website will also help different outlets to monitor their payments and the amount of food they will need to prepare, and improve their services via feedback received on the website.

What is to be done:

- Designing a website to order the food online in the university via various outlets in the campus.
- Creating the website to control the over rush at cafeteria during breaks.
- Implementing the payment gateways in our website ensure that customer as well as the merchant have ease to handle the payments.
- Provide token number system so that customer know when their food gets prepared.

How it is to be done:

- First, we create our website then we tie up with the various food outlets in the campus and make them agree to take orders from our website.
- Mainly our customers are students and teachers from the university so they have to login in our webpage by their id's.
- Testing and optimize the performance of the website to ensure that none of the merchants getting loss or less order than the physical food ordering system.
- Conducting user testing to ensure ease of use and a positive user experience.
- Always take feedbacks from the customer so that we can improve.

2.7. Goals/Objectives Statements

- Improved customer experience: The primary goal of an online food ordering system is to improve the customer experience by providing a convenient and hassle-free way to order food. This can be achieved by ensuring the system is easy to use, responsive, and provides customers with a seamless ordering and checkout process.

- Improved sales: Giving clients the freedom to place food orders whenever and wherever they want is another goal of an online meal ordering system. This can be done by linking the system with well-known payment gateways, offering clients a number of payment alternatives, and running specials and discounts to entice them to come back.

- Effective order management: A method for ordering food online should be created to make managing orders for the restaurant as simple as possible. This can be done by integrating the system with the restaurant's current point-of-sale software and giving customers real-time updates on the status of their orders.

- Improved data analytics: The system should be able to offer insightful information about customer behaviour, order history, and sales patterns. Making educated decisions regarding menu options, pricing schemes, and marketing initiatives is possible with this data.

- Better marketing and branding: By offering customers a seamless ordering experience and a consistent brand message across all digital platforms, an online food ordering system can enhance the restaurant's marketing and branding efforts. This can be done by linking the system with the restaurant's websites, email marketing campaigns, and social media accounts.

- In general, an online meal ordering system's goals and objectives should centre on expanding the dining establishment's marketing and branding initiatives, boosting revenues, streamlining order management, and improving customer satisfaction.

CHAPTER 3

DESIGN FLOW/PROCESS.

3.1 Designing a food ordering website requires a systematic approach to ensure a seamless user experience. The design process involves several stages, starting from conceptualization to the final delivery of the website. To build a user-friendly and responsive website, a combination of different technologies such as HTML, CSS, JavaScript, and Django are used. The design flow entails understanding the user's needs, creating wireframes and prototypes, selecting appropriate color schemes and typography, designing the user interface and user experience, and testing the website's functionality before launch. The final product should provide users with an easy and enjoyable experience while ordering food.

Evaluation & Selection of Specifications/Features

Evaluation and selection of specifications/features for a food ordering website requires careful consideration to ensure the website meets the user's needs and provides a seamless experience. Some critical features to evaluate and select include:

1. Responsive Design: A responsive design ensures that the website adapts to different screen sizes and resolutions, allowing users to access the website on any device.

2. User-Friendly Interface: The website's interface should be easy to navigate, with clear call-to-action buttons that allow users to order food quickly.

3. Menu Management: The website should provide a clear and comprehensive menu that allows users to view available dishes, customize orders, and add items to their cart.

4. Payment Processing: The website should have a secure payment processing system that allows users to pay for their orders online.

5. Order Tracking: The website should have a feature that allows users to track their orders and receive notifications on the status of their orders.

6. User Authentication: The website should have a secure user authentication system that allows users to create accounts, log in, and manage their orders.

7. SEO Optimization: The website should be optimized for search engines to improve its visibility on search engine results pages.

In summary, the evaluation and selection of specifications/features for a food ordering website require careful consideration of the user's needs and the website's functionality to ensure a seamless experience.

Design constraints

Design constraints are factors that limit the design and development process of a food ordering website. These constraints may include budget, time, compatibility, security, content, and user experience. Budget constraints can limit the design and development of the website by restricting the available funds for features and design elements. This can result in a website that is not fully optimized for user experience or lacks certain essential features. Time constraints can limit the design and development process of the website. A tight deadline may result in rushed design and development, which can lead to a website that is not optimized for user experience or lacks necessary features. Compatibility constraints may limit the design and development process of the website. The website must be compatible with different devices, operating systems, and web browsers. This can result in design limitations as certain design elements may not be compatible with all devices. Security constraints can limit the design process of the website. A secure website must be designed with features that protect user data and prevent cyber-attacks. This can result in design limitations as certain design elements may not be secure or may pose a security risk.

Content constraints can limit the design process of the website. The website must comply with legal regulations related to food ordering and may require specific content that must be included. This can result in design limitations as certain design elements may not be compliant with legal regulations. User experience constraints can limit the design and development process of the website. The website must provide an enjoyable and easy user experience. This can result in design limitations as certain design elements may not be intuitive or user-friendly.

In conclusion, design constraints are essential to consider while designing and developing a food ordering website. The constraints can limit the design process, but by considering them, the website can be designed to meet the project's objectives and deliver a seamless user experience.

## 3.4 Analysis and Feature finalization subject to constraints

Designing a food ordering website requires careful consideration of various factors, including user experience, functionality, and technical constraints. Here are some points to consider for analysis and feature finalization subject to constraints:

1. User requirements: The website will cater to the user's requirements, providing easy navigation and a seamless ordering process. The website will also have features to personalize the user's experience, such as storing user preferences and suggesting relevant dishes based on their order history.

2. Payment: The website will provide you ease of payment mode via cash.

3. Inventory Management: The website has a feature to manage inventory, ensuring that the dishes are available, and the ingredients are in stock. The system should also have an automatic notification system for updating inventory levels and alerting the admin when ingredients are running low.

4. Order Management: The website has a robust order management system, allowing users to view their order status and providing timely updates about order processing and delivery.

5. Menu Management: The website has a user-friendly menu management system that allows admins to add, remove, and update dishes, prices, descriptions, and images.

6. Constraints: While designing the website, it's essential to consider the constraints, such as budget, time, and technical limitations. Ensure that the website design and features are feasible within the budget and time constraints. Additionally, ensure that the website design and features are compatible with the technology stack you have chosen.

7. Security: The website will be secure, protecting user data, payment information, and website functionality. Implementing secure protocols such as SSL, firewalls, and encryption can help protect the website from potential cyber-attacks.

8. Marketing and Promotion: The website have features to promote the business, such as discount codes, loyalty programs, and referral programs. These features can help attract and retain customers while increasing the revenue of the business.

9. Feedback and Review: The website have features to collect user feedback and reviews, enabling admins to improve their services and products. Positive reviews can help attract new customers and improve the overall reputation of the business.

In summary, analysing user requirements, integrating secure payment gateways, inventory management, order management, delivery management, menu management, constraints, security, marketing, feedback and review are essential considerations while finalizing features for a food ordering website.

Design flow:
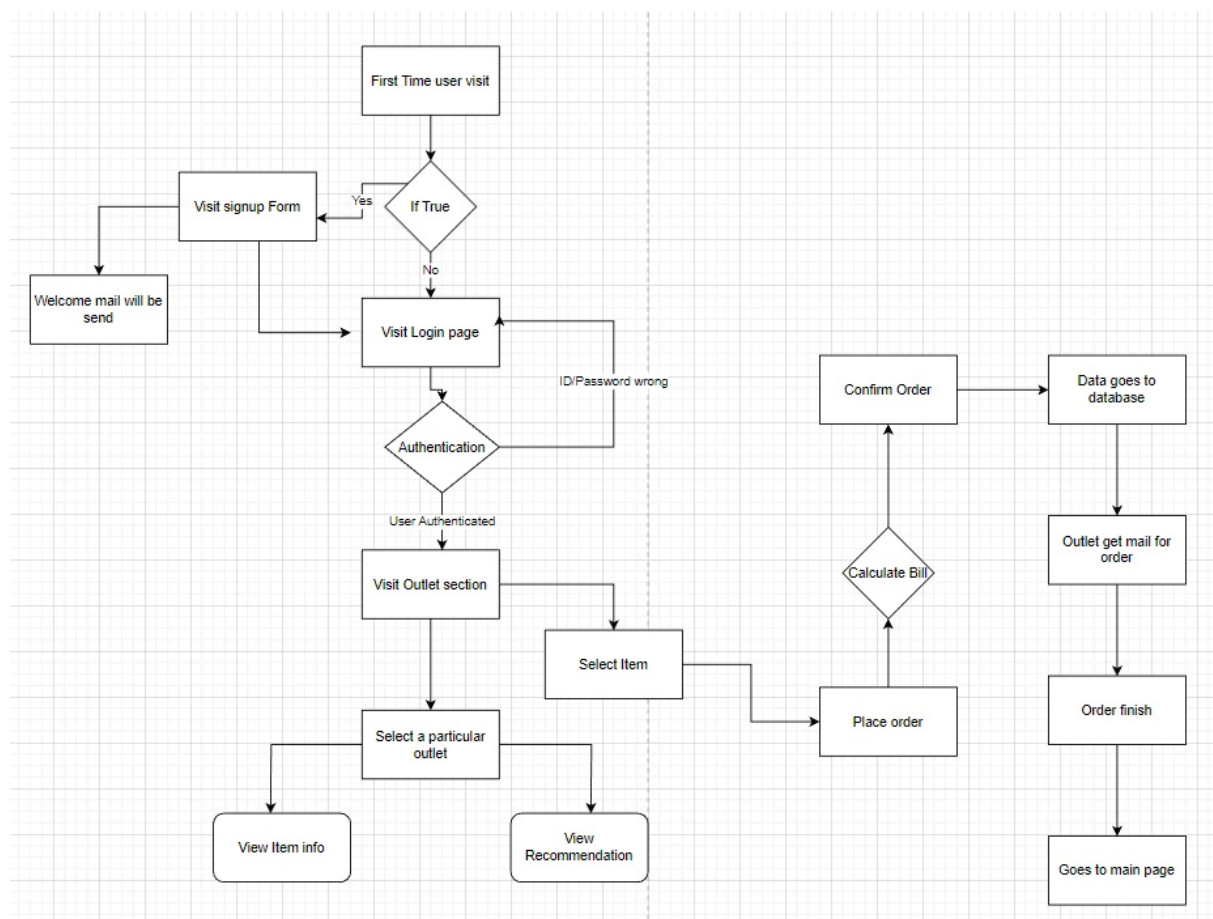
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The design flow for a food ordering website using HTML, CSS, JavaScript, and Django typically involves several stages, including planning, wireframing, design, development, and testing.

1. Planning: This stage involves defining the project's goals and objectives, identifying the target audience, and creating a plan for the website's design and functionality. The planning stage includes determining the website's features, design constraints, and requirements.

2. Wireframing: In this stage, a low-fidelity wireframe of the website is created. This involves sketching the layout, user interface, and key features of the website. Wireframing helps to visualize the website's structure and flow and provides a blueprint for the design and development process.

3. Design: In this stage, the website's visual elements are created. This includes designing the website's colour scheme, typography, and graphic elements. The design should be consistent with the website's branding and provide an enjoyable user experience.

4. Development: In this stage, the website's functionality is developed. This involves coding the website's features, such as user authentication, payment processing, menu management, and order tracking. HTML, CSS, JavaScript, and Django are used to develop the website's functionality.

5. Testing: In this stage, the website is tested to ensure that it meets the design constraints and requirements. This includes testing the website's functionality, compatibility with different devices and web browsers, security, and user experience. The testing stage ensures that the website is ready for launch.

6. Launch: In this stage, the website is launched and made available to the public. This involves deploying the website on a web server and ensuring that it is optimized for search engines.

Alternative Solution 1:
1. Agile Development: Agile development is a flexible and iterative approach to website design and development. This approach involves breaking the design and development process into small, manageable tasks or sprints. The sprints are completed in short cycles, with each cycle building on the previous one. This approach allows for more flexibility and adaptability to changing requirements and constraints throughout the design process.

2. Rapid Prototyping: Rapid prototyping involves creating a functional prototype of the website quickly. This involves building a basic version of the website's functionality, such as menu management, payment processing, and order tracking. The prototype can be used to test the website's functionality and user experience before proceeding with the full design and

development process. This approach allows for quick testing and validation of the website's functionality, leading to faster design and development.

Alternative Solution 2:
1. User-Centred Design: User-centred design involves placing the user's needs and preferences at the center of the design process. This approach involves conducting user research, such as surveys and user testing, to understand the user's needs and preferences. The design and development process are then based on the user's feedback and requirements. This approach ensures that the website provides a user-friendly interface and an enjoyable user experience.

2. Mobile-First Design: Mobile-first design involves designing the website for mobile devices first and then adapting it to larger screens. This approach ensures that the website is optimized for mobile devices, which are becoming increasingly popular for online food ordering. The website's features and functionality are designed to provide a seamless experience on mobile devices, such as easy navigation and a responsive design. This approach ensures that the website is accessible and usable on all devices, leading to higher user engagement and satisfaction.

In conclusion, the design flow for a food ordering website using HTML, CSS, JavaScript, and Django involves planning, wireframing, design, development, testing, and launch. By following this design flow, the website can be designed and developed to meet the project's objectives and provide a seamless user experience.

3.5 Design selection

By considering all the points in mind we are selecting solution 1 for our project, we will be working on Agile Development and Rapid development model for the smooth and user-friendly website.

Implementation plan/methodology
1)   **Install PYTHON** To these steps should follow:

1. Visit the official Python website (https://www.python.org/downloads/).

2. Select the appropriate version of Python for your operating system (Windows, macOS, or Linux).

3. Download the Python installer for your system.

4. Run the installer and follow the on-screen instructions.

5. In the installer, select the option to add Python to the PATH variable (this will allow you to use Python from the command line).

6. Choose the installation directory (or leave the default).

7. Choose the components to install (typically you'll want to install everything).

8. Click "Install" and wait for the installation to complete.

9. After the installation is complete, open a command prompt (Windows) or terminal (macOS/Linux).

10. Type "python" and press Enter. If Python is installed correctly, you should see the Python interpreter start up and display the version number. That's it! Once Python is installed, you can start using it to develop Python applications, run Python scripts, and much more.

2) **Installation of Django:**

Ensure that Python is installed on your system (see the previous response for instructions on how to install Python).

Open a command prompt (Windows) or terminal (macOS/Linux). Type the following command and press Enter to install Django using pip (Python's package manager):

pip install Django

Wait for pip to download and install the latest version of Django.

Verify that Django is installed correctly by typing the following command and pressing

Enter: **Django-admin –version** If Django is installed correctly, you should see the version number displayed in the terminal.

3) **Creating Virtual environment for the project**:

Open a command prompt (Windows) or terminal (macOS/Linux).
Navigate to the directory where you want to create the virtual environment.
Type the following command and press Enter to create a new virtual environment using Python's built-in venv module:
 python -m venv environment name

4): To start our project in our local host we will run a command in our CMD

PYTHON MANAGE.PY RUNSERVER

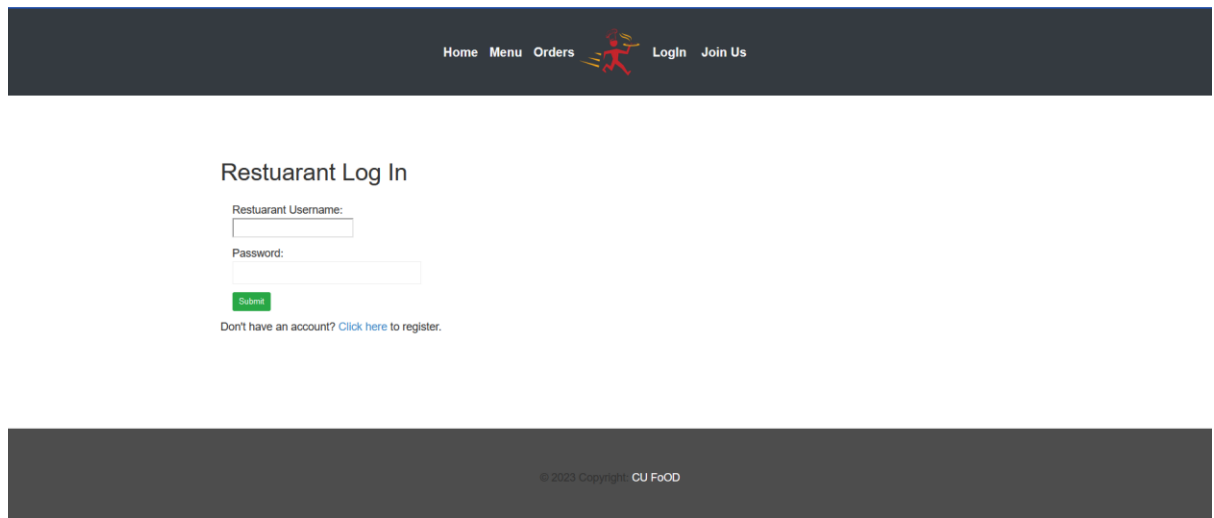After running successfully, we will get a development server.
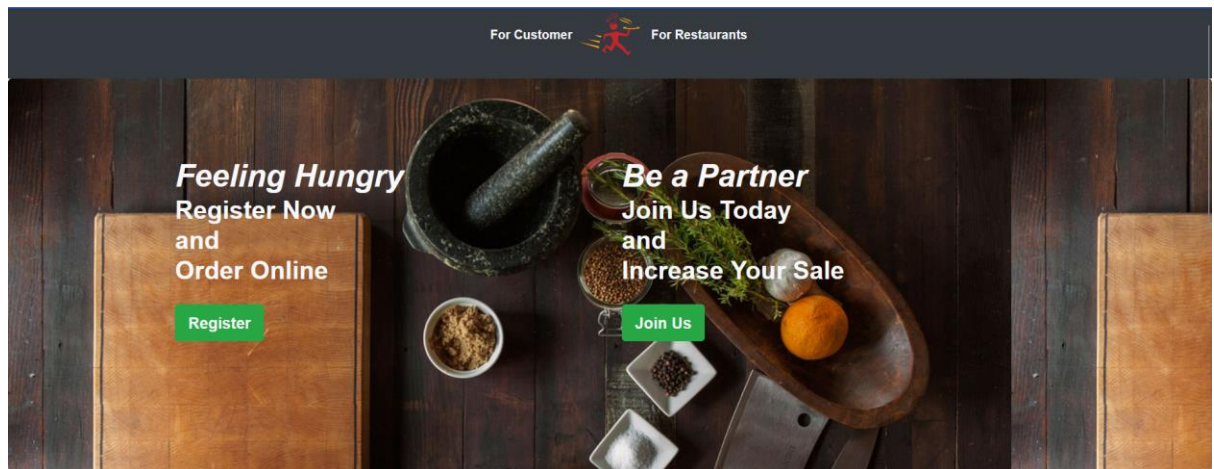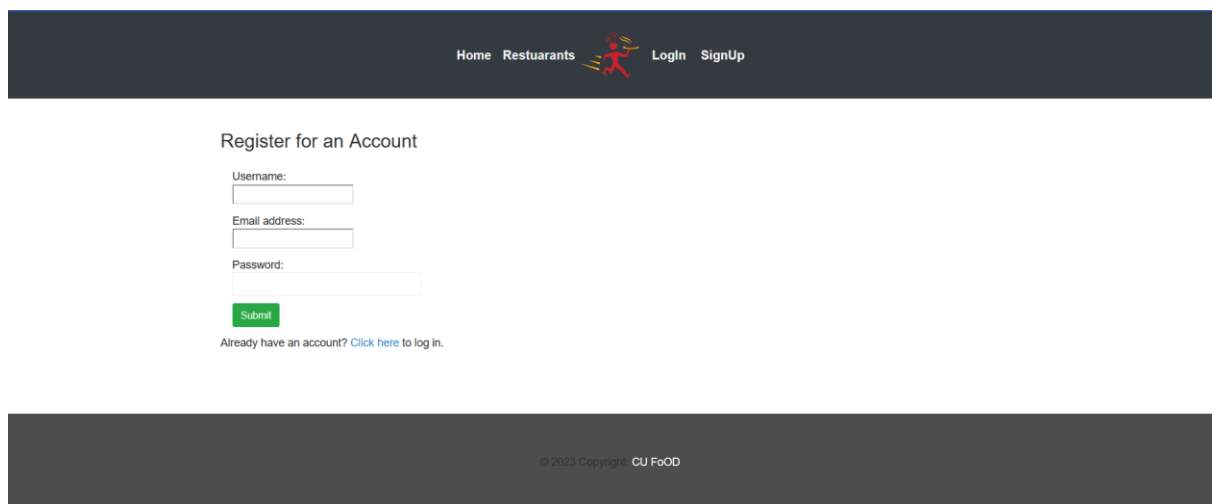

5

Fig1: Main Landing page

If someone doesn't have an account on your website, they will need to create one before they can access certain features or services. This typically involves providing their name, email address, and creating a username and password. Once they create an account, they can log in and start using your website.

6

Fig2: Creating Restaurant account

7

Fig.2.1 Creating User Account

If a user already has an account on your website, they can log in using the login page. This typically involves entering their username and password. If the user enters the correct credentials, they will be granted access to the features and services available to them on your website. If the user enters incorrect credentials, they may be prompted to try again or may be directed to reset their password if they have forgotten it.

Log In

Username:

Password:

Submit

Don't have an account? Click here to register.
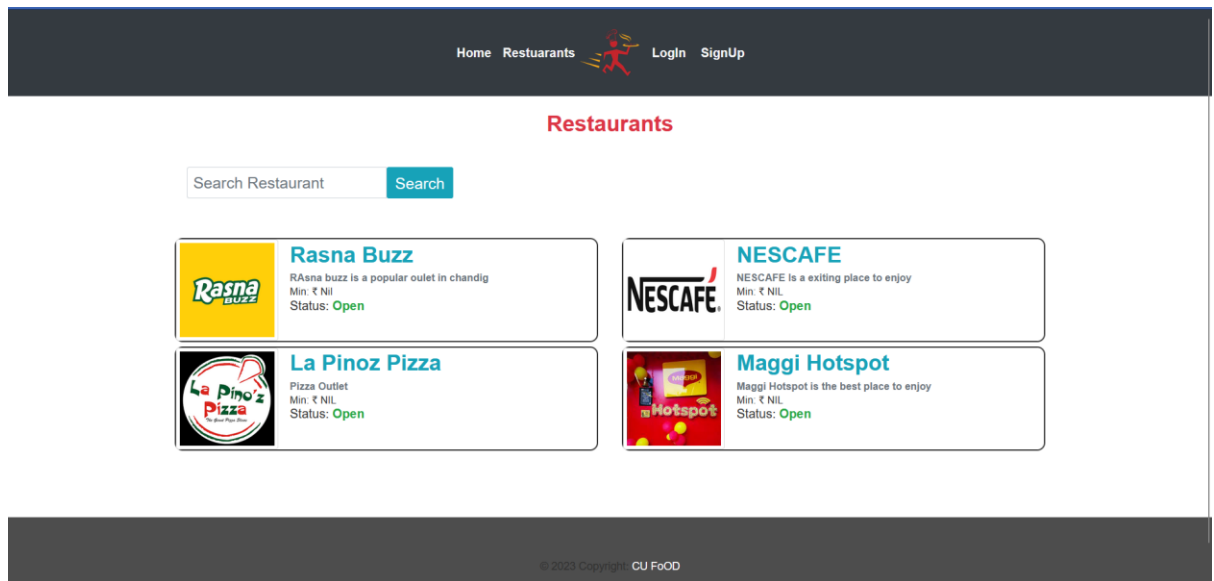
8

Fig3: Customer Login page

Restuarant Log In

Restuarant Username:

Password:

Submit

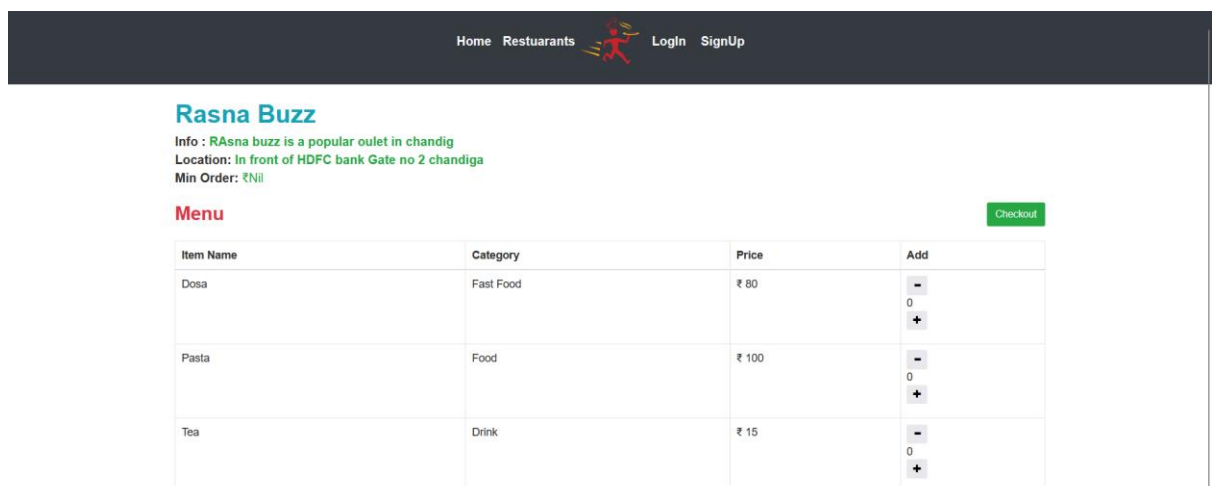Don't have an account? Click here to register.

9

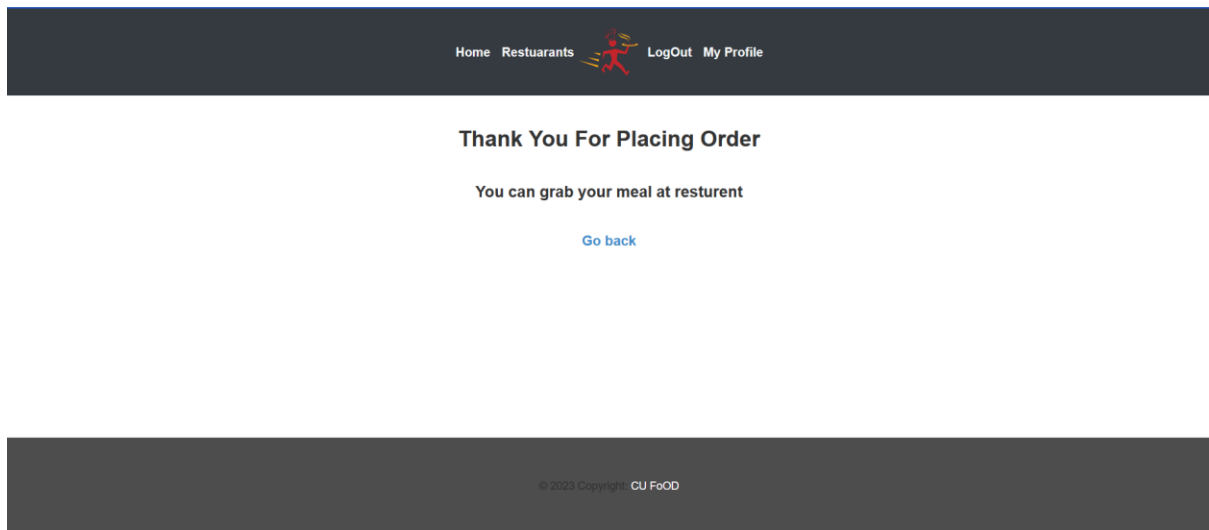Fig3.1: Restaurant Login page

10

Fig.4 Restaurant Outlet Page

11

Fig.5 Specific outlet Menu page

12

Fig.6 Order place

Django provides a powerful administrative panel that allows website administrators to manage the content and functionality of their website. The Django administrative panel is highly customizable and allows administrators to create, read, update, and delete data from the website's database. The administrative panel also allows administrators to manage users, groups, permissions, and other important settings for the website. The Django administrative panel is a valuable tool for managing the back-end of a website and can help streamline administrative tasks and workflows.
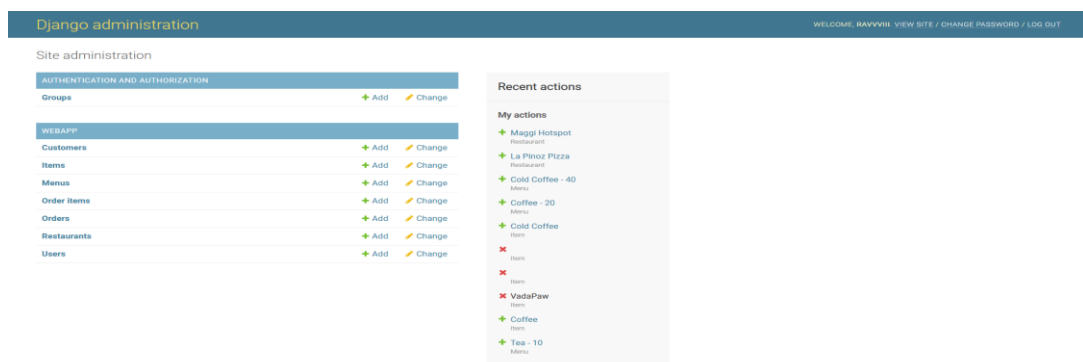
13

Fig:7 Administrative Panel

CHAPTER 4

RESULT ANALYSIS AND VALIDATION

4.1 Implementation of the solution

In this chapter, we present the results and validation of the CU-Food website. The website was developed to provide a platform for CU members to order Food online, manage, and help cafeteria owners to manage the rush at break hour. This section outlines the outcomes of the project, including the achievement of project objectives and the validation of the website's functionality and usability.

The implementation of the CU-Food website involved several key steps to ensure the successful development and deployment of the platform. This subchapter provides an overview of the implementation process, including the technologies used, development stages, and integration of essential features.

4.1.1 Technology Selection:

The choice of appropriate technologies was crucial to develop a robust and scalable event management website. After careful consideration, the following technologies were selected:

1. **Front-End Development:** HTML, CSS, and JavaScript were utilized for the website's front-end development. These technologies provided a solid foundation for creating an interactive and visually appealing user interface.

2. This is the Front-End of CU-Food Implemented using HTML, CSS, and JavaScript where user can have attractive interaction with website where they can traverse the food which they want to order from the various outlets out there in the university.

2. Back-End Development: The website's back-end was built using a combination of technologies, including NodeJS server-side scripting, Express's for creating different routes, and Mongo DB database to store event and user information. This stack ensured efficient data management and high-performance capabilities.

3. Hosting and Deployment: As of now our website is not hosted as still it is in development phase but we will ensure the best platform to get it up and running so that user will have smooth experience using the site.

For instance, cloud platform, such as Amazon Web Services (AWS) or Microsoft Azure, to ensure scalability and availability. Continuous integration and deployment (CI/CD) pipelines to automate the deployment process and ensure smooth updates and bug fixes.

4.1.2 Development Stages:

The implementation of the CU-Food website involved several development stages, including:

1. Requirement Analysis: Detailed requirements were gathered from stakeholders, including event organizers and potential attendees. These requirements served as the foundation for defining the website's features and functionality.

2. User Interface Design: A team of UI/UX designers created wireframes and mock-ups to visualize the website's layout, navigation, and overall design.

3. Front-End Development: The front-end development team translated the design mock-ups into HTML, CSS, and JavaScript code. They focused on creating an intuitive and responsive user interface that would provide a seamless experience across different devices and screen sizes.

4. Back-End Development: The back-end development team implemented the website's functionality using NodeJS. They built the event creation and management system, user authentication.

5. Testing and Quality Assurance: Rigorous testing was conducted at various stages of development to identify and resolve any bugs or performance issues. This included unit testing, integration testing, and user acceptance testing to ensure the website met the specified requirements.

4.1.3 Integration of Essential Features:

The CU-Food website incorporated a variety of options and provide arranged food menus for students as well as all the faculty members in CU.

CHAPTER 5.

CONCLUSION AND FUTURE WORK

5.1. Conclusion

To sum up, Cu Food Ordering is a comprehensive online platform designed to meet the growing demands of individuals and businesses in the digital age. Our team has dedicated countless hours to ensure that we provide a food ordering service that is convenient, reliable, secure, and able to accommodate customers of all preferences and needs.

Throughout the development of this project, we have introduced several crucial features to offer the best food ordering experience to our clients. We have focused on developing a user-friendly interface, making it easy for customers to browse menus, customize orders, and track deliveries. Whether a customer is looking for a quick bite or a gourmet meal, our flexible food ordering options are designed to match their preferences. Additionally, we have implemented robust security measures to safeguard customer information and ensure a safe and trustworthy platform for food orders.

5.2 Results/Outcome:

1. Enhanced customer satisfaction: Increasing customer satisfaction is one of the primary outcomes of Cu Food Ordering. We strive to provide a seamless and enjoyable food ordering experience, resulting in positive reviews and improved customer loyalty. By offering a convenient and reliable platform, we aim to exceed customer expectations and ensure their satisfaction.

2. Increased revenue: Cu Food Ordering also leads to an increase in revenue. By attracting new customers and offering a wide range of food options, we can generate more orders and increase sales. Additionally, we may partner with local restaurants and charge a commission fee for each successful order placed through our platform.

3. Improved brand reputation: As Cu Food Ordering gains popularity, we anticipate an improvement in our brand reputation. By delivering high-quality food ordering services and

exceptional customer support, we can establish ourselves as a reputable and trusted platform in the food industry.

5.3 Deviation from Expected Results:

Customer dissatisfaction: While we strive for high customer satisfaction, there may be instances where customers are not entirely satisfied with our service. This could be due to issues such as late deliveries, incorrect orders, or unsatisfactory customer support. In such cases, it is crucial to address the root cause of the problem and take appropriate measures to rectify the situation, ensuring that customer satisfaction is restored.

Lower-than-anticipated revenue: There may be situations where revenue is lower than expected. Factors such as intense competition, customer preferences, or economic conditions can influence the demand for food ordering services. To mitigate this, we need to conduct market analysis, identify customer needs, and adapt our pricing strategies or promotional activities accordingly to boost revenue.

5.4 Reasons for Deviations:

Delivery and logistical challenges: Ensuring timely and accurate deliveries can be a challenge in the food ordering industry. Issues such as traffic, weather conditions, or unforeseen circumstances can lead to delays or mistakes in deliveries. It is essential to establish efficient delivery systems, collaborate with reliable partners, and implement effective tracking mechanisms to overcome these challenges.

Changing customer preferences: Customer preferences and trends in the food industry may evolve over time. New competitors, changing dietary habits, or emerging food delivery models can impact customer choices. By staying updated with market trends and conducting customer surveys, we can adapt our offerings and introduce new features to align with customer preferences.

5.5. Future work

Although we are pleased with the progress made so far, there is still significant work to be done to further enhance our food ordering platform. Here are some potential future research areas:

1. Integration of personalized recommendations: To provide a more tailored experience, we aim to develop algorithms that analyse customer preferences and offer personalized food recommendations based on their past orders and preferences.

2. Expansion of restaurant partnerships: We plan to expand our network of partner restaurants to offer a wider selection of cuisines and cater to diverse customer preferences. This would involve forging collaborations with popular local restaurants and ensuring seamless integration with our platform.

3. Enhancing delivery efficiency: We will continue to optimize our delivery processes, leveraging technologies such as

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