**Sarvajanik Education Society**

Sarvajanik College of Engineering & Technology, Surat. Master of Computer Application Departments

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**CERTIFICATE**

This is to certify that the project entitled “FF\_Snaki” has been Submitted by HIMANSU KUMAR JENA(032), BIKASH BISHNUCHARAN PRADHAN(005),IRYAN DESAI(016) towards the fulfillment of the degree of Master of Computer Applications (M.C.A.) in (2ndSemester) of Sarvajanik University, Surat during the academic year 2022-23.

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**3.**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**Thanking You**

YOUR FAITHFULLY

* Himansu Kumar Jena
* Bikash Bishnucharan Pradhan
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|  |  |  |  |
| --- | --- | --- | --- |
|  |  | TABLE OF CONTENTS |  |
| Sr No. |  | Definations | Page No. |
| 1 |  | **Introduction** |  |
|  | 1.1 | Proposed system and its objective |  |
|  | 1.2 | Core component |  |
|  | 1.3 | Minimum and maximum software /hardware requirement |  |
|  | 1.4 | Advantage and limitations of proposed system |  |
| 2 |  | **Requirement Determination and analysis** |  |
|  | 2.1 | Requirement Determination |  |
|  | 2.2 | Targeted Users |  |
| 3 |  | **System Design** |  |
|  | 3.1 | Use Case Diagram |  |
|  | 3.2 | Activity Diagram |  |
|  | 3.4 | Data Dictionary |  |
| 4 |  | **Agile Documentation** |  |
|  | 4.1 | Agile Project Charter |  |
|  | 4.2 | Agile Roadmap / Schedule |  |
|  | 4.3 | Agile Project Plan |  |
|  | 4.4 | Agile User Story ( Minimum 3 Tasks) |  |
|  | 4.5 | Agile Release Plan |  |
|  | 4.6 | Agile Sprint Backlog |  |
|  | 4.7 | Agile Test Plan |  |
|  | 4.8 | Earned-value and burn charts |  |
| 5 |  | **Proposed Enhancements** |  |
| 6 |  | **Conclusion** |  |
| 7 |  | **Bibliography** |  |

**Introduction**

The "Online Food Ordering System" has been developed to override the problem prevailing in the practising manual system. This software is supported to eliminate and,in some cases, reduce the hardships faced by this existing system. Moreover, This system is designed for the particular need of the company to carry out operations in a smooth and effective manner.The application is reduced as much as possible to avoid errors while entering the data.It also provides error messages while entering invalid data. No formal knowledge is needed for the user to use this system. Thus, by this all it proves it is user-friendly.Online Food Ordering System, as described above, can lead to error free, secure,reliable and fast management system.

It can assist the user to concentrate on their other activities rather than concentrating on the record keeping. Thus, it will help organisation in better utilisation of resources.Every organisation, whether big or small, has challenges to overcome and manage the information of Category, Food Item, Order, Payment, Confirm Order. Every OnlineFood Ordering System has different Food Item needs; therefore, we design exclusive employee management systems that are adapted to your managerial requirements.

This is designed to assist in strategic planning and will help you ensure that your organisation is equipped with the right level of information and details for your future goals. Also, for those busy executives who are always on the go, our systems come with remote access features, which will allow you to manage your workforce anytime, at all times. These systems will ultimately allow you to better manage resources.

**1.1. Proposed system and its Objectives**

**OBJECTIVE:-**

The main objective of the Project on Online Food Ordering System is to manage the details of Food Item, Category, Customer, Order, Confirm Order. It manages all the information about Food Items, Payment, Confirm Order, Food Items. The project is totally built at the administrative end and thus only the administrator is guaranteed access.

The Purpose of the project is to build an application program to reduce the manual work for managing the Food Item, Category, Payment, Customer. It tracks all the details about the Customer, Order, Confirm Order.

**1.2. Core Components**

**Core component:-**

* **User interface:** The user interface is the front-end component that allows customers to browse menus, select items, and place orders.
* It should be intuitive and easy to use, and provide clear information about prices, availability, and delivery options.
* **Menu management system:** The menu management system allows restaurant owners or managers to create, update, and publish their menus online.
* **It should provide a user-friendly interface for managing items, prices, descriptions, and photos.Ordering and payment processing:** The ordering and payment processing system should enable customers to place orders and pay securely online. It should integrate with popular payment gateways and provide real-time notifications of new orders.Order management: The order management system should allow restaurant staff to view and manage incoming orders, assign delivery drivers, and track order status.
* **It should also provide tools for managing customer inquiries and resolving issues.Delivery management:** The delivery management system should enable restaurants to manage their delivery fleet, track drivers' locations, estimate delivery times, and optimise delivery routes. It should also provide drivers with the information they need to complete deliveries efficiently.Analytics and reporting: The analytics and reporting system should provide insights into customer behaviour, order patterns, and sales performance. It should also provide tools for analysing delivery performance, driver efficiency, and customer feedback.

**1.3. Minimum and Maximum Software/Hardware requirements**

The minimum and maximum software/hardware requirements for an online food ordering website can vary depending on factors such as the expected traffic, the complexity of the website, and the underlying technology used. However, here are some general guidelines:

**Minimum Software Requirements:**

|  |
| --- |
| * Operating System: Windows 7 or later, macOS, or Linux |
| * Web Server: Apache or Tomcat |
| * Programming Language: C# or a similar language |
| * Database: Microsoft SQL Server or Access another relational database management system (RDBMS) |
| * Content Management System (CMS): WordPress, Power point presentaion , or another CMS |

**Minimum Hardware Requirements:**

|  |  |
| --- | --- |
| * Processor: Dual-core 1.6 GHz-2GHz or faster | * RAM: 4 GB or higher |
| * Storage: 50 GB or higher | * Network components |

Note that these are very basic requirements and the actual requirements may be higher depending on the size and complexity of the website.

**Maximum Software Requirements:**

|  |
| --- |
| * Operating System: Windows Server 2016 or later(7 to 11), or a Linux distribution such as Ubuntu Server |
| * Web Server:kestrel server and HTTP Server |
| * Programming Language: C#,VB ,F# or later |
| * Database: SQL Server |
| * Content Management System (CMS): WordPress 5.x,Drupal or later |

**Maximum Hardware Requirements:**

|  |
| --- |
| * + Processor: Quad-core 2.4 GHz or faster |
| * + RAM: 16 GB or higher |
| * + Storage: 100 GB or higher, with SSD recommended |

**1.4. Advantages and Limitations of the Proposed System**

**1. Increased Efficiency:** With an online food ordering system, customers can place their orders quickly and easily, without the need for phone calls or in-person visits. This can help to reduce wait times, increase order accuracy, and improve customer satisfaction.

**2.Improved Customer Experience:** An online food ordering system can provide customers with a convenient and user-friendly interface for browsing menus, selecting items, and placing orders. This can help to enhance the overall customer experience and lead to repeat business.

**3. Enhanced Order Management:** The proposed system can streamline the order management process, allowing restaurant staff to view and manage incoming orders in real-time. This can help to reduce errors, improve efficiency, and provide a better experience for both customers and staff.

**4. Increased Revenue:** By offering online ordering, restaurants can potentially reach a larger customer base, increase order volumes, and generate more revenue. This is especially true for customers who prefer the convenience of online ordering.

**5. Improved Marketing Opportunities:** An online food ordering system can provide restaurants with new opportunities for marketing and promotion. For example, restaurants can use email and SMS marketing to promote special offers, new menu items, or upcoming events.

**Limitations of the Proposed Online Food Ordering System:**

**1. Technical Limitations:** The proposed system requires a stable internet connection and suitable hardware and software to function properly. This can be a limitation in areas with poor internet connectivity or limited access to technology.

**2. Cost:** Developing and maintaining an online food ordering system can be expensive, especially for small or independent restaurants. This can be a barrier to entry for some businesses, who may prefer to rely on traditional ordering methods.

**3. Staff Training:** Introducing a new system can require staff training and support, which can be time-consuming and costly. Restaurants need to ensure that their staff is trained to use the system effectively, and that any issues or concerns are addressed promptly.

**4. Security and Privacy:** Online food ordering systems must be secure and protect customer data and payment information. Restaurants need to ensure that they are complying with applicable data protection and privacy laws, and that their systems are properly secured against cyber threats and attacks.

**5. Dependence on Third-party Providers:** Many online food ordering systems rely on third-party providers for payment processing, delivery, and other services. This can limit the control that restaurants have over the customer experience and introduce additional costs and complexity.

**2. Requirement Determination & Analysis**

**2.1. Requirement Determination:-**

* Requirement determination is the process of identifying and defining the needs and goals of a project. Here are some key requirements for an online food ordering system website:
* User-Friendly Interface: The website should have a clean, user-friendly interface that allows customers to easily browse menus, select items, and place orders.

**Menu Management:** The website should allow restaurant owners to easily manage and update their menus, including prices, descriptions, and images.

**Order Management:** The website should allow restaurant staff to view and manage incoming orders in real-time, including order details, payment processing, and delivery tracking.

**Payment Processing:** The website should securely process payments from customers, including credit cards, debit cards, and other payment methods.

**Delivery Management:** The website should provide options for delivery management, including delivery scheduling, tracking, and notifications.

**Customer Management:** The website should allow restaurant owners to manage customer accounts, including order history, payment information, and preferences.

**Integration with Existing Systems:** The website should integrate with existing restaurant systems, such as point-of-sale (POS) systems and inventory management software.

**Security and Privacy:** The website should be secure and protect customer data and payment information, including compliance with data protection and privacy laws.

**Mobile-Friendly:** The website should be mobile-friendly, allowing customers to place orders using their smartphones and other mobile devices.

**Marketing and Promotions**:The website should provide opportunities for marketing and promotions, including email and SMS marketing, loyalty programs, and special offers.

**2.2. Targeted Users**

**Customers:** The primary target users for an online food ordering system website are customers who want to order food online. These may include busy professionals, families, and individuals who prefer the convenience of online ordering.

**Restaurant Owners:** The website should also target restaurant owners who want to offer online ordering to their customers. These may include small and medium-sized restaurants, fast food chains, and other food establishments.

**Delivery Personnel:** Delivery personnel may also be targeted users for the website project, as they will need access to the website to manage and track deliveries.

**Administrators:** Administrators who manage the online food ordering system website may also be targeted users. These may include IT staff, customer service representatives, and other support personnel.

**3. System Design**

**3.1. Use Case Diagram**

**3.2. Class Diagram**

**3.3. Activity Diagram**

**3.4. Data Dictionary**

**Categories:-**

|  |  |  |
| --- | --- | --- |
| Filed name | Data Type | Size |
| CategoryId | Int | 5 |
| Name | Varchar | 30 |
| Image | Varchar |  |
| IsActive | Varchar | 10 |
| Create Date | Date |  |

**Products :-**

|  |  |  |
| --- | --- | --- |
| Field name | Data type | Size |
| Pid | Int | 10 |
| Pname | varchar | 30 |
| Description | varchar | 50 |
| Price | Int | 5 |
| Quantity | varchar | 4 |
| Image | varchar |  |
| CategoryId | Int | 5 |
| IsActive | varchar | 10 |
| Createdate | date |  |

**Carts:-**

|  |  |  |
| --- | --- | --- |
| Filed name | Data Type | Size |
| cartId | Int | 10 |
| productId | Int | 10 |
| Quantity | Int | 7 |
| UserId | Int |  |

**USERS :-**

|  |  |  |
| --- | --- | --- |
| Filed name | Data Type | Size |
| userId | Int | 10 |
| username | Varchar | 50 |
| Mobile | Int | 12 |
| Email | Varchar | 30 |
| Address | Varchar | 50 |
| postcode | Int | 10 |
| password | Varchar | 20 |
| image | Varchar |  |
| Createdate | Date |  |

**Orders:-**

|  |  |  |
| --- | --- | --- |
| Filed name | Data Type | Size |
| orderDetailsId | varchar | 50 |
| orderNo | int | 10 |
| Productid | Int | 15 |
| Quantity | Int | 5 |
| Userid | Int | 10 |
| Status | varchar | 5 |
| paymentid | Int | 20 |
| orderdate | date |  |

**CONTACT:-**

|  |  |  |
| --- | --- | --- |
| Filed name | Data Type | Size |
| ContactId | Int | 10 |
| Name | Varchar | 30 |
| Email | Varchar | 20 |
| Subject | Varchar | 30 |
| Message | Varchar | 50 |
| CreatedDate | date |  |

**PAYMENT:-**

|  |  |  |
| --- | --- | --- |
| Filed name | Data Type | Size |
| paymentId | Number | 10 |
| Name | Varchar | 30 |
| CardNo | Number | 12 |
| ExpityDate | Date |  |
| CVVno | Number | 3 |
| Address | Varchar | 50 |
| PaymentMode | Varchar | 10 |

**4. Agile Documentation**

**4.1. Agile Project Charter**

**Defination:-**

An agile project chater is a living ,updateable document that servers as a roadmap the Agile process.

* **User stories:** We could begin by discussing the different user stories that are important for the online food ordering system, such as placing an order, tracking an order, and leaving reviews.
* **Sprint planning:** We could plan out the sprints for the project, breaking down the larger tasks into smaller, more manageable ones.
* **Backlog grooming:** We could discuss how we can keep the backlog up-to-date and prioritize the tasks based on their importance and urgency.
* **Daily meeting:** We could establish a regular schedule for daily stand-ups to keep everyone informed about the progress and any issues that need to be addressed.
* **Responding to changes:** We could plan retrospectives after each sprint to review what worked well and what needs improvement, and adjust our approach accordingly.
* **Testing and QA:** We could discuss the importance of testing and quality assurance throughout the project, and how we can ensure that the system is functioning properly before launch.
* **Implementation and deployment**: We could plan out how the system will be implemented and deployed, including any necessary integrations with other systems or technologies.

**4.2. Agile Roadmap / Schedule**

**Defination :**Agile product roadmap is a plan of action for how a product or solution will evolve over time.

* **Sprint 1: Establishing the Foundation**
  + User story: As a business owner, I want to establish the basic structure and design of the website so that customers can easily navigate and find the items they want to order.
  + Conduct user research to identify key features and design elements.
  + Develop wireframes and prototypes of the website's structure and layout.
  + Design the website's logo, color scheme, and overall branding.
  + Establish a content management system (CMS) for easy content updates.
* **Sprint 2: Building the Ordering System**
  + User story: As a customer, I want to be able to easily place my order and customize it to my preferences.
  + Tasks:
  + Develop the ordering system with a clear and simple process.
  + Allow customers to customize their orders with specific requests, such as extra cheese or no onions.
  + Integrate multiple payment options for customers to choose from.
  + Implement a loyalty program to incentivize repeat customers.
* **Sprint 3: Enhancing User Experience**
  + User story: As a customer, I want to have a seamless and enjoyable experience when using the website.
  + Optimize the website for mobile devices to ensure a smooth and responsive experience.
  + Incorporate social media into the website by allowing customers to share their orders on platforms like Facebook or Twitter.
  + Provide customer reviews and ratings to build trust and credibility.
  + Conduct usability testing to identify and address any issues or areas for improvement.
* **Sprint 4: Testing and Deployment**
  + User story: As a business owner, I want to ensure that the website is fully functional and ready for launch.
  + Conduct thorough testing and quality assurance to ensure that the website is functioning properly.
  + Address any issues or bugs that arise during testing.
  + Monitor and track performance metrics to identify areas for further improvement.

**4.3. Agile Project Plan**

* Establish the project vision and goals
  + Define the purpose and scope of the online food ordering website.
  + Identify the target audience and their needs and preferences.
  + Establish clear project goals and objectives.
* Plan the sprints and backlog
  + Break down the project into sprints, typically two to four weeks in length.
  + Create and prioritize a product backlog that includes all the features and user stories that need to be implemented.
  + Estimate the time and resources needed for each task and assign them to the appropriate sprint.
* Conduct sprint planning meetings
  + Meet with the development team to discuss and plan out the upcoming sprint.
  + Review the product backlog and determine which items will be included in the sprint.
  + Assign tasks to team members based on their skills and availability.
  + Set realistic goals and establish a timeline for the sprint.
* Conduct daily stand-up meetings
  + Meet with the development team on a daily basis to review progress and discuss any issues or obstacles.
  + Each team member should provide a brief update on their progress, what they plan to work on that day, and any challenges they are facing.
* Conduct sprint reviews and retrospectives
  + At the end of each sprint, conduct a review of the work completed and gather feedback from stakeholders.
  + Analyze what worked well and what didn't, and identify areas for improvement.
  + Use this feedback to make adjustments to the product backlog and refine the development process.
* Conduct testing and quality assurance
  + Test the website throughout the development process to ensure that it functions properly and meets user requirements.
  + Conduct both automated and manual testing to identify and address any bugs or issues.
  + Prioritize testing for critical features and areas of the website.
* Deploy the website and monitor performance
  + Once the website has been fully tested and is ready for launch, deploy it to a production environment.
  + Monitor the website's performance and gather data on user behavior and usage patterns.
  + Use this data to identify areas for further improvement and make adjustments to the website as needed.

**4.4. Agile User Story ( Minimum 3 Tasks)**

**Story defination:-**A user story is the smallest unit of work in an agile framework.It is an infromal,general explanaion of a software feature written from the perspective of the end user of customer

* "As a customer, I want to be able to easily track the status of my order so that I know when to expect it."
* This user story can be broken down into smaller tasks, such as:
  + Develop a system for updating the status of orders in real-time, such as "order received," "preparing," "out for delivery," and "delivered."
  + Display the order status prominently on the customer's account page, as well as in email and text message notifications.
  + Provide an estimated delivery time based on the customer's location and the current status of the order.
  + Allow customers to cancel or modify their order before it has been marked as "out for delivery."

**4.5. Agile Release Plan**

**4.6. Agile Sprint Backlog**

**4.7. Agile Test Plan**

**4.8. Earned-value and burn charts**

**5. Proposed Enhancements**

* **Improve the User Interface (UI) and User Experience (UX):** Make sure the website is easy to navigate, has clear and concise information, and offers an intuitive ordering process. Users should be able to find what they're looking for quickly and easily.
* **Optimize for mobile:** With more and more people accessing the internet through their mobile devices, it's important to have a mobile-friendly website. Ensure the website is responsive and easy to use on a small screen.
* **Offer personalization:** Allow customers to customize their orders with specific requests, such as extra cheese or no onions. This helps to create a more personalized experience and can lead to repeat business.
* **Integrate social media:** Incorporate social media into the website by allowing customers to share their orders on platforms like Facebook or Twitter. This can help increase brand awareness and attract new customers.
* **Provide customer reviews and ratings:** Including customer reviews and ratings can help build trust and credibility with potential customers. It also allows for feedback that can be used to improve the ordering process and overall customer experience.
* **Offer multiple payment options:** Make it easy for customers to pay by offering multiple payment options, such as credit card, PayPal, or Apple Pay.
* **Implement a loyalty program:** A loyalty program can incentivize customers to order more frequently by offering rewards, such as discounts or free items.
* By implementing these enhancements, an online food ordering website can become more user-friendly, personalized, and trustworthy, leading to increased customer satisfaction and loyalty

**6. Conclusion**

In conclusion, an online food ordering website can be an effective tool for both customers and businesses. With the increasing popularity of online food ordering, it is important for businesses to provide a user-friendly and personalized experience to stand out in the market. By incorporating enhancements such as an easy-to-use interface, mobile optimization, personalization, social media integration, customer reviews, multiple payment options, and loyalty programs, businesses can attract and retain customers, leading to increased sales and success. As technology continues to evolve, it is important for businesses to stay up-to-date with the latest trends and innovations to remain competitive in the online food ordering industry.

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