Online Food Ordering Management System

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Abstract: The main purpose of the Online Food Ordering Management System is to use it in the food-service industry. This feature helps hotels and restaurants to increase their online food ordering systems. Customers can choose from a wide range of food menu items within just a few minutes. In today’s modern food business, it’s also able to deliver fast and easily to a customer’s place. The work presented as Online Food Ordering Management System simplifies the ordering process. The proposed solution presents a user interface and changes the menu to include all available options, creating customer work easier. Allows customers to order any item that they like and adjust the quantity of the food item. The order confirmation is displayed to the customer on the Homepage of the website. The order is put to the queue, updated across both the database and the admin panel, and provided in real-time. This system aids the staff with checking over orders in real-time and executing them effectively and easily with few errors. Here, the customer can also reserve a table at a restaurant of his/her choice and will get the confirmation of their reserved table on the homepage of our website.

Keywords: Food, Online, Management, DBMS (Database Management System), Use Case Diagram, Entity Relationship Diagram, Flowchart, Statechart, Gantt Chart, Sequence Diagram.

I. INTRODUCTION

The food industry is highly labour intensive and the biggest expense in the food industry is the cost of employing the right kind of people to do the work. Labour rates are steadily rising year in and year out, making it difficult to hire labour. One of the ways to reduce this expense is to use modern technology to replace some of the jobs done by human beings and make machines do the work. Here we propose an “Online Food Ordering Management System” that has been designed for Fast Food restaurants, Take-Out or College Cafeterias. The system may well be implemented in any organization that distributes foodstuff. Because the whole process of accepting orders is automated, the meal ordering experience for both the client and the restaurant is optimized. Online food real-time ordering management system’s objective is to give customers a way to order food and drinks over the internet. The primary reason for all of this is because it is beneficial to both the client and vendor.

II. PROPOSED SYSTEM

The simulation first starts with the admin entering his/her credentials (ID and password). Once that has been verified, the admin can access the main admin panel where he/she can edit the categories, the food items as well can view the orders placed and reservations made. Now we get a window that displays the order number, customer ID, food name, price and quantity. Once the customer finalizes his/her order, they are asked to enter their name, address and other contact details where the total price is displayed and the customer can click the ‘order now’ button to get a message of confirmation of order. Once you enter the admin portal, you get the option of adding food, deleting food or updating food. Any option of choice leads you to the food menu. Once the selected operation is carried out, the end result, i.e, the added food or the updated food list is displayed and if you have deleted a food, that particular food disappears from the main menu on the website which will be visible to the customer.

III. DESIGN AND IMPLEMENTATION

The implementation of the website is done in PHP, HTML CSS and the datasets are stored in the PhpMyAdmin SQL database as well as in the Admin Panel which can only be accessed by the registered Admin. We have developed a web-based data management system. A PC or laptop with a browser and internet connection, and the XAMPP control panel, is required for our website. For the initial implementation of the website we have considered a few restaurants in our datasets. Implementation of our system consists of a real time feedback system where once the customer places an order or makes a reservation at a home restaurant, the admin will be able to see the order or reservation that the customer has made on the food ordering website and can manage them easily. The entire programming of the website is done on Sublime Text Editor and Microsoft Visual Studio Code, and for that we have used Google Chrome as the browser of choice. For creating the database, we have used PhpMyAdmin, which was possible only because of the xampp control panel installed on our systems.
First, we created the front-end of the website where we have given our own logo which was designed on Canva and we have focused more on the CSS to make our website stand out. Then we created the database in PhpMyAdmin to get started with the backend of our website which was very much necessary as it would help us store all the details from the front-end into the backend of our website and also help with the responsiveness of our project. And last but not the least, we created the Admin Panel of our management system which was the most important part as it would store all the details that were being entered into the website by the customer and also help the admin to manage the food items, categories, orders and reservations made.

Fig. 3.1: Use Case Diagram

Fig. 3.2: Entity Relationship Diagram
Fig. 3.3: Flowchart
**FOOD ORDERING MANAGEMENT SYSTEM**

| ROLL NO: B-28 & B-31 |
|----------------------|
| **TASK TITLE** | **START DATE** | **END DATE** |
| PHASE 1 | | |
| VISION DOCUMENT | 1/2/21 | 5/2/21 |
| PROJECT PLAN | 6/2/21 | 12/2/21 |
| SQA PLAN | 13/2/21 | 19/2/21 |
| PRESENTATION 1 | 20/2/21 | 26/2/21 |
| PHASE 2 | | |
| VISION DOCUMENT | 1/3/21 | 10/3/21 |
| PROJECT PLAN | 11/3/21 | 17/3/21 |
| FORMAL REQUIREMENTS | 18/3/21 | 23/3/21 |
| PRESENTATION 2 | 24/3/21 | 31/3/21 |
| PHASE 3 | | |
| DEVELOP CODE | 1/4/21 | 5/5/21 |
| ADD DATABASE | 11/4/21 | 18/4/21 |
| TESTING | 19/4/21 | 22/4/21 |
| FINAL DOCUMENTATION | 23/4/21 | 26/4/21 |
| PRESENTATION 3 | 27/4/21 | 1/5/21 |
| PROJECT END | 2/5/21 | 5/5/21 |

**Fig. 3.4: Admin Panel State Chart**

**Fig. 3.5: Customer State Chart**

**Fig. 3.6: Gantt Chart**
IV. LITERATURE SURVEY

Various studies have identified the problems they faced when setting up a restaurant. During the assessment of the current system, the following concerns were discovered:

A. Putting orders for customers who come to the restaurant, reviewing the menu items available, picking the appropriate things, placing the order, and paying. This method requires manual labour and time for the customer.

B. When a customer wants to order by phone, the customer is unable to see a visual copy of the menu available at the restaurant, this also has no guarantee that the order has been placed on the appropriate menu items. Every restaurant needs someone or someone to take the order in person or by phone, to give the customer a rich feel and even consider payment.

C. The main difference between the online ordering of food and dining at the environmental restaurant around us. If one person eats at home or does not feel the change in nature and relaxes. But comfort is the highest level of online food that is removed. When eating out — a luxury restaurant with good design and bright music that place offers better relaxation than anything else.

V. SCOPE AND FEATURES

A. The suggested method allows people to properly order meals.

B. There will be fewer employees needed at the rear desk.

C. The method will aid in the reduction of labour costs as well as the space necessary to set up cafeterias in the restricted region.

D. Mistakes are less probable to occur since it is an admin-controlled system.

E. Customers can prevent long lines at the counter by executing tasks at an acceptable speed and throughput.

VI. DESIGN AND CONNECTIVITY

User experience or design (UI) is a process in which designers create integrations on software or electronic devices with an emphasis on aesthetic or style. Designers strive to improve both easy-to-use connectors and to the delight of users. The graphical user interface and the various types of the user interface are examples of UI design. To create a System Layout Architecture we need to have a UI and Database and connect the two using a PHP connection.

VII. DATABASE DESIGN

Databases can be compared to a complex digital cabinet. That is what can help us organize all or most of the information throughout our app. We completely control the installation, modification, and deletion of our database. Tables, which can be viewed as file references, generate details. Tables are lines of information that can be considered as separate pages within a file folder. We will add new entries to that database each time a fee is charged, just as we can add other pieces of paper to our file folder. Our database contains the amount of data, such as an item of food, category, and customer id, customer name, placed order, etc. We will be able to collect, store, modify and evaluate data in our web application because of the database. We have the ability to access the information stored in our database.

VIII. DATABASE CONNECTIVITY

```php
<?php
$host = "localhost";
$user = "root";
$pass = ""
$db_name = "foodorder";
$con = new mysqli($host,$user,$pass,$db_name);
function formatDate($date)
{
    return date('g:i a',strtotime($date));
}
?>
```
Fig. 6.1: Xampp Control Panel

Fig. 8.1: Login Sequence Diagram
IX. RESULTS

Fig. 8.2: Order Sequence Diagram

Fig 9.1: Homepage
Fig 9.2: Food Search Page

Fig 9.3: Category Page
Fig 9.4: Order Form

Fig 9.5: Reservation Form

Fig 9.6: Database
Fig 9.7: Admin Panel

Fig 9.8: Manage Admin Page

Fig 9.9: Manage Category Page
Fig 9.10: Manage Food Page

Fig 9.11: Manage Order Page

Fig 9.12: Manage Reservation Page
X. CONCLUSIONS

Finally, an online food ordering system is presented that may be used in small family-run eateries as well as locations such as college canteens, etc. This project has the potential to be scaled up in the future. It is designed for restaurants to help them reduce their everyday management and operational tasks while also improving their customers' eating satisfaction. By offering relatively quality services, restaurant operators may also build strong customer connections. The technology also allows the restaurant to see what foods are on sale in real-time and make modifications to their food and beverage inventory depending on orders submitted and orders processed.

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