A Project Report on

RESTAURANT MANAGEMENT WEBSITE

Submitted in partial fulfilment of the

requirement for the award of the degree of

BACHELOR IN COMPUTER APPLICATION

GALGOTIAS UNIVERSITY

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INDIA

MAY, 2022

CANDIDATE'S DECLARATION

I/We hereby certify that the work which is being presented in the Project entitled "Restaurant Management System" in partial fulfillment of the requirements for the award of the Bachelor in Computer Application submitted in the School of Computing Science and Engineering of Galgotias University, Greater Noida, is an original work carried out during the period of February, 2022 to May,2022, under the supervision of Ms**.**SudhritiSen(Assistant Professor) Department of Computer Science and Engineering/Computer Application and Information and Science, of School of Computing Science and Engineering , Galgotias University, Greater Noida The matter presented in the thesis/project/dissertation has not been submitted by us for the award of any other degree of this or any other places.

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This is to certify that the above statement made by the candidates is correct to the best of my knowledge.

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<u>CERTIFICATE</u>

The Final Project Viva-Voce examination of Praveen Singh(19SCSE1040102) has been held on
_____ and his/her work is recommended for the award of Bachelor In Computer
Application

Signature of Examiner(s)   **Signature of Supervisor(s)**

Signature of Project Coordinator   **Signature of Dean**

Date: May, 2021
Place: Greater Noida

<u>CERTIFICATE</u>

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Signature of Project Coordinator   Signature of se Dean

Date: May, 2021

Place: Greater Noida

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Abstract

The Restaurant Management website provide convince for the customer. The restaurant management system is there to help communication between all teams within a restaurant by minimizing the probability of human error and getting a more efficient and effective information. This System set up menu online and the customers easily places the order with a simple mouse click. By using the food menu online anyone can easily track the orders, maintain customer's database and improve food delivery service.

Contents

Chapter 1 INTRODUCTION

1.1 Introduction

"Restaurant Management Website" is a web developing . This system is developed to automate day to day activity of a restaurant. Restaurant is a kind of business that serves people all over world with ready made food. This system is developed to provide service facility to restaurant and also to the customer.

This restaurant management system can be used by employees in a restaurant to handle the clients, their orders and can help them easily find free tables or place orders. The services that are provided is food ordering and reservation table management by the customer through the system online, customer information management and waiter information management, menu information management and report. The restaurant menu is organized by categories (appetizers, soups, salads, entrees, sides and drinks) of menu items. Main objective build the system this is to provide ordering and reservation service by online to the customer. Each menu item has a name, price and associated recipe.

A recipe for a menu item has a chef, preparation instruction sand associated ingredients. With this system online, ordering and reservation management will become easier and systematic to replace traditional system where are still using paper. To resister a meal online, the customer has to become a member first then he can access the later part of the site. this project to facilitate customer for make online ordering and reservation. The option of becoming member was only an attempt to avoid (to some extent) placing the fake bookings.

Online Restaurant management system is the system for manage the restaurant business. After successful login the customer can access the menu page with the items listed according to the desired time. The main point of developing this system is to help restaurant administrator manage the restaurant business and help customer for online ordering and reserve table. In proposed system user can search for a menu according to his choice i.e. according to price range and category of food and later he can order a meal.

The project is developing because; many restaurants have a lot difficult to manage the business such as customer ordering and reservation table. If the customer book an order and later wants to cancel the order, he is permitted to do this only within a specific time period. By using manual customer ordering is difficult to waiter keep the correct customer information and maybe loss the customer information. The customer is also given with the facility to view the status of the order and if the order is ready then he can go and get it

1.2 Formulation of Problem

Restaurant is a kind of business that serves people all over world with ready made food. Currently this industry is going on with lot of flare. People feel more comfortable with lot of variations in the selection and consumption of their food in their busy life.

One can see lot more restaurant in the world. Even in Denmark one can see thousands of restaurants with dishes from all over the world like from India, Pakistan, Mexican, etc fulfilling the needs of people with nourishments and enjoyments.

Let's concentrate on booking area in a restaurant. In traditional booking system, a customer has to make a phone call in order to get his meal reserved. If luckily the phone gets connected, then the customer does some formal conversation like hello, hi, etc. Than he demands for today's menu and do some discussion over menu items then he orders and he has to give some of this identification specifications. This process takes 5-8 minutes to complete. On the receiver side there is hardly one phone line and one operator. So he can cover around 15-20 orders maximum in an hour

For each booking he has to register manually on paper and puts the order in a queue with specific priority according to time and quantity, and than a cook is assigned for the specific order to complete it.

There are lots of areas to be solved for current restaurants using modern IT World. Many areas come like human resource management, accounts management, etc. But our problem lies within domain of end customer and restaurant "Meal Reservation".

As discussed earlier our main problem area focuses on the "Meal reservation/booking system", there are lot of problems in that area which are associated with both the customer and the restaurant staff.

We would like to analyze some of the problems here:

a. Initial problem is that the customer has to get connected over the phone, it would be harder if the restaurant is very popular and busy.

b. As customer won't have the menu list with him, it would be harder for him to remember the entire list (with price as well...!) and come to a decision, i.e. customer is provided with less time to make decision.

c. The chances of committing mistakes at the restaurant side in providing a menu list for a specific time would be more.

d. There might be some communication problems or sometimes language might be a barrier.

e. As entire booking has to be done manually at the restaurant end, the chances of occurrence of mistakes is high as well.

f. Most of restaurants have single phone line and a single operator to handle incoming calls, so they can accept limited orders.

g. If the restaurant is of busy type, than the operator is left with no time to decide over the priority of the order fulfillment.

h. Even assigning orders (or some menu from the order) to a specific cook can be cumbersome if it is done parallel with the bookings of the order.

i. All the calls will not by intended for booking, as some calls might be for canceling the order or to fetch the status as well, this eats up the productive time at the restaurant side.

Still there might be many other problems associated with the traditional system of booking through telephone. So what should be the solution for these problems..?

The solution for the above problems, so far we have thought, is client-server system that listen the requests online. We have the intensions to make the system that takes the customer reservations through the browser.

But how to make it..?

To resister a meal online, the customer has to become a member first then he can access the later part of the site. The option of becoming member was only an attempt to avoid (to some extent) placing the fake bookings.

During login the user as to enter his emailed/UserID, password and desired time of order delivery. After successful login the customer can access the menu page with the items listed according to the desired time. Later within the available items he can search for a menu according to his choice i.e. according to price range and category of food and later he can order a meal.

If the customer later wants to cancel the order, he is permitted to do this only within a specific time period. The customer is also given with the facility to view the status of the order and if the order is ready then he can go and get it.

At Management side, initially the staff member has to login, and according to his designation the privileges are set. If the staff member is a cook, then he is allowed to edit only the order items status, indicating which menu items he has prepared.

If suppose the member is an administrator then, he is allowed to reassign the cook according to his priority, he can edit the menu information such as its price, items available currently, etc. He can also change the status of the order (in some special cases), and can also block (if any customer exists)/Edit any customer's order according to his priority

1.2.1 TOOLS AND TECHNOLOGY USE

Tools

A. Visual Studio Code

B. Microsoft Mysql

Technologys

   A. HTML

Hypertext Markup Language (HTML) is the standard markup language for creating web pages and web applications. With Cascading Style Sheets (CSS) and JavaScript, it forms a triad of cornerstone technologies for the World Wide Web.

Web browsers receive HTML documents from a web server or from local storage and render the documents into multimedia web pages. HTML describes the structure of a web page semantically and originally included cues for the appearance of the document.

HTML elements are the building blocks of HTML pages. With HTML constructs, images and other objects such as interactive forms may be embedded into the rendered page. HTML provides a means to create structured documents by denoting structural semantics for text such as headings, paragraphs, lists, links, quotes and other items

   B. CSS

Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation of a document written in a markup language like HTML. CSS is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript.

CSS is designed to enable the separation of presentation and content, including layout, colors, and fonts. This separation can improve content accessibility, provide more flexibility and control in the specification of presentation characteristics, enable multiple web pages to share formatting by specifying the relevant CSS in a separate css file, and reduce complexity and repetition in the structural content.

C. JS

JavaScript often abbreviated as JS, is a high-level, interpreted programming language. It is a language which is also characterized as dynamic, weakly typed, prototype-based and multi-paradigm.

Alongside HTML and CSS, JavaScript is one of the three core technologies of the World Wide Web. JavaScript enables interactive web pages and thus is an essential part of web applications. The vast majority of websites use it, and all major web browsers have a dedicated JavaScript engine to execute it.

During the development of this project, there are several techniques that had been applied to get as much as information as a guide in develop this system, Sources are collected from journals, books, electronic resource and observation. Besides, most observation is done through internet.

Observation to the existing system is also done to get the reality of ordering management environment. There were some reviews of other management system as references. From the review, there is a lot of information and data that is useful.

D.Bootstrap

Bootstrap is a free and open-source tool collection for creating responsive websites and web applications. It is the most popular HTML, CSS, and JavaScript framework for developing responsive, mobile first web sites. Bootstrap is a framework to help

you design websites faster and easier. It includes HTML and CSS based design templates for typography, forms, buttons, tables, navigation, modals, image carousels, etc.

E.Mysql

MySQL Workbench is a unified visual tool for database architects, developers, and DBAs. MySQL workbench provides data modeling, SQL development, and comprehensive administration tools for server configuration, user administration, backup, and much more. MySQL Workbench is available on Windows, Linux and Mac OS X

CHAPTER-2 LITRATURE SURVEY

The traditional paper based system was one of the most extensively used systems worldwide. In this system all records need to be stored on paper. However, this system is associated with various problems. Some of the problems are mentioned below:

1.Therious common stumble is that waiters may make mistakes with customer's orders. At times, a waiter can forget to add a specific item ordered by the customers and make changes and forget to give the order to the kitchen.

2.In order to determine whether the food is ready or not the waiters need to constantly check with the chefs. Conversely, chef needs to make sure waiters know that food is ready. This can cause the food to get cold over time and lead to potential food poisoning.

3.Customers must rely on the waiter to remember order and specific food details provided by them. In addition to that the food ordered by the customers may take much time to be prepared and served if the waiter has multiple tables.

4. Customers also call over the waiters/waitress frequently to find out the status of their order several times during their visit, wasting the waiter's service time. O Keeping track of empty, clean and reserved tables within a restaurant.

5.They also require re-printing of menus when food is not available or a price needs to be changed. This can be costly and time-consuming.

Customer Satisfaction: Customer satisfaction is regarded as the heart of all marketing activities. According to Machleit and Mantel (2001), the principal

purpose of marketing in services is to satisfy customer needs and wants. The ability to satisfy customer is essential in service industry due to the fact that satisfied customer will reward the firms with favourable behaviours. In particular, Sresearchers have found that enhancing customer satisfaction will drive to higher future profitability (Anderson et al., 1994), increase consumers' willingness to pay a higher price, make a good recommendation and use the products or services frequently (Reichheld, 1996) and develop customer loyalty (Fornell, 1992). In other words, all these empirical evidences have suggested that customer satisfaction plays a significant role in generating long-term benefits for companies in terms of sustained customer loyalty and profitability (Homburg et al., 2006). 27 There have been many attempts to clarify and define customer satisfaction in the service and marketing literature. Consequently, many definitions of customer satisfaction have been given by researchers. Oliver (1997) links customer satisfaction to the consumer's fulfillment response in which the level of consumption-related fulfillment is pleasant or unpleasant. Day (1984) describes customer satisfaction as a post purchase evaluation on the purchase decision, while Hunt (1977) views satisfaction as an assessment made when the product or experience was as good as it was supposed to be. In a study by Ha and Jang (2010) to examine customer satisfaction in an ethnic restaurant segment, customer satisfaction is viewed as a cognitive assessment of service or food quality and affective elements created by consumption experiences. Due to its importance in marketing, researchers from both the academia and the industry have developed distinct theories to explain the concept of customer satisfaction. These theories are Expectancy-Disconfirmation Theory (Lewin, 1938), Contrast Theory (Howard and Sheth, 1969), Assimilation or Cognitive Dissonance Theory (Anderson, 1973),

Equity Theory (Oliver and Swan, 1989) and Value-Percept Theory (Westbrook and Reilly, 1983). Among all the theories, the expectancy-disconfirmation theory is the

most widely accepted theory to explain customer satisfaction. Based on this theory, customers have expectations about products and services before consumption. This theory is based on the cognitive process of confirmation of expectation (Oliver 1980, 1989) in which customers evaluate their satisfaction level by comparing perceived performance with their pre-consumption expectation. 28 Although the expectancy-disconfirmation theory is widely accepted, many scholars have argued that it is insufficient to evaluate customer satisfaction by considering only cognitive aspects. In these challenging circumstances, many researchers have gone beyond these cognitively toned model formulation. According to the performancebased approach, they have suggested assessing customer satisfaction by incorporating cognitive judgments and affective reaction during consumption (Mano and Oliver, 1993; Oliver, 1992; Westbrook and Oliver, 1991). In other words, customer satisfaction is described as the total consumption perception of consumers when using a service or product. Consistent with the suggestion, Westbrook (1987) note that satisfaction is an assessment of the consumption emotions resulted from the product usage, while Yi (1990) argues that satisfaction judgment is the result of processing affective element of consumption experience. There is some controversy in explaining the relationship between service quality and customer satisfaction (Anderson et al., 1994; Spreng and Mackoy, 1996). Their relationship has sparked keen academic interest among researchers over the years (Bitner, 1990). Although researchers generally agree regarding the positive relationship between service quality and customer satisfaction, their causal relationship, whether service quality causes customer satisfaction (Bolton and Drew, 1991; Parasuraman at al.,, 1994; Spreng and Mackoy, 1996) or customer satisfaction causes service quality (Bitner, 1990) is still an argument (Shemwell et al., 1998). Dabholkar (1995) find that the causal relationship is subjected to the service situation, while on the other hand,

Parasuraman et al. (1985) and Hellier et al. (2003) argue that there is no relationship in specific situations.

Chapter 3 Functionality /Working of Project

PROJECT SIGNIFICANCE

This system will be going to help customer and administrator in restaurant especially part of online ordering and reservation table. Most of restaurant has a problem of the ordering and reservation table. The result of online ordering and reservation table will give customer easy to make ordering and reservation table online and hopefully can smoothen up the job of administrator and waiter. This system also produces a computerized system in defining the best solution in each ordering and reservation problem faces by customer and administrator.

EXPECTED OUTPUT

The expected output from this project is a system-- that will be able to store customer's information, waiter's information, menu's information, store customer information of online ordering and reservation information and customer's suggestion and generate profit business report. Otherwise this system will change form manual system to computerized system.

TECHNIQUE

During the development of this project, there are several techniques that had been applied to get as much as information as a guide in develop this system, Sources are collected from journals, books, electronic resource and observation. Besides, most observation is done through internet.

Observation to the existing system is also done to get the reality of ordering management environment. There were some reviews of other management system as references. From the review, there is a lot of information and data that is useful.

PROJECT METHEDOLOGY

To develop this system, I had been identified a suitable methodology to be followed during the implementation of Restaurant Management System .Prototyping model explains detail in this section.

PLANNING PHASE

The project planning starts in this phase. First, the information is gathered from the restaurant and the end users about the manual system. Before starting built the system, problem must be analyse in manual system then try to solve the problem. At the same time, element that is in the database should be known.

ANALYSING PHASE

During this phase, the manual system is investigated and improvement opportunities are identified based on the information gathered in the Planning phase. The user requirements are gathered, analysed and reviewed. The final deliverables from this phase are Analysis Report. Output from this phase is Context Diagram, Data Flow Diagram (DFD) and Entity Relationship Diagram (ERD).

DESIGN PHASE

The output produced in the Analysis phase is used to guide the design process of this system. During this phase, database will be designed. It is design based on requirement needed by this system. Besides that, an interface will also be designed. It is based on output of analysis phase which had been gathered from the organization.

IMPLEMENTATION PHASE

During this phase, the system actually built by using HTML and CSS.

TESTING PHASE

After complete develop the system, testing phases will be done. This is important to test whether code which had been implemented is correct or not. If there is error occurred, a solution will be finding to overcome the problem. If there is an error, a modifying code will be done from the beginning phase of development.
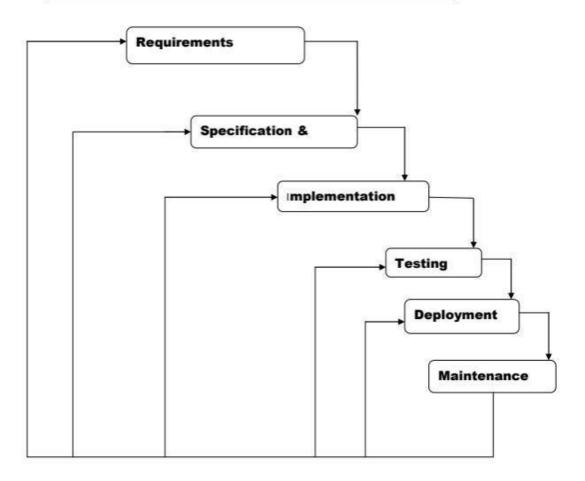
DATABASELIFE CYCLE

According to Rob and Coronel(2004), Database Life Cycle (DBLC) contains six phases which are; database initial study, database design, implementation and loading, testing and evaluation, operation, and maintenance and evaluation. Figure 2.6 shows the mechanism of DBLC and explanation for each of the phases.

DATABASE INITIAL STUDY

Database initial study must discover part of:-

1) Company's operational components such as their nature, function and so on.

2) Define the problem and constraints which affected the business of the company

3) Define the objective to solve the company problem

SOFTWARE REQUIREMENT SPECIFICATION

4) Define scope and boundaries which exist through the application.

The database initial study phase leads to the development of the database system objectives. From this also, let us examine each of its components is greater detail.
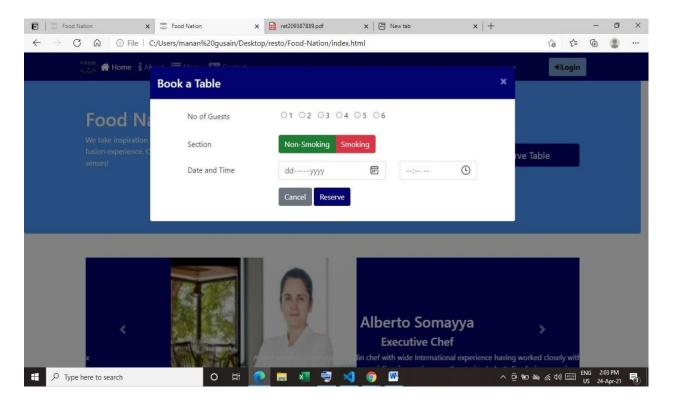
Chapter 4 Results and Discussion

Customer Registration Module

Customer registration module contains customer's information such as customer personal information and other information related to that customer. Then, all of this information recorded into database.
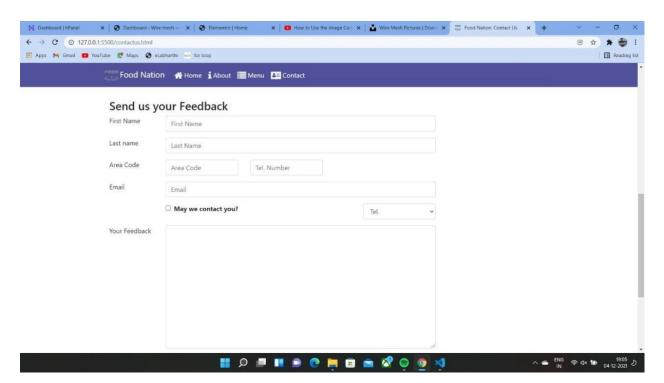
Customer Online Ordering And Reservation Module

Customer online ordering and reservation module provides a form that needs to be fulfilling in term of ordering food and reservation table via online.
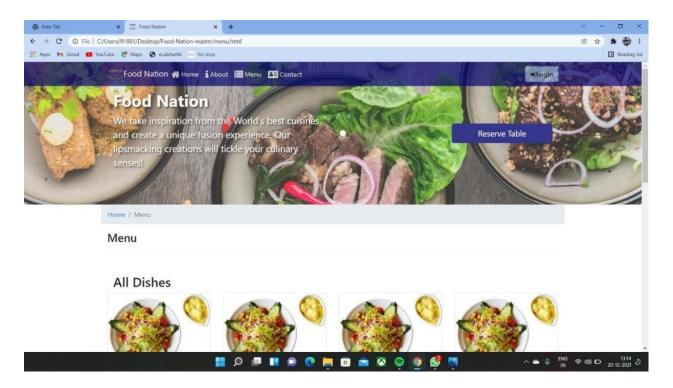
Feedback Module

Based on food or everything about the restaurant, customer can send any suggestion or comment to the restaurant with feedback form. From this form, side of restaurant will know their weaknesses and strengths.
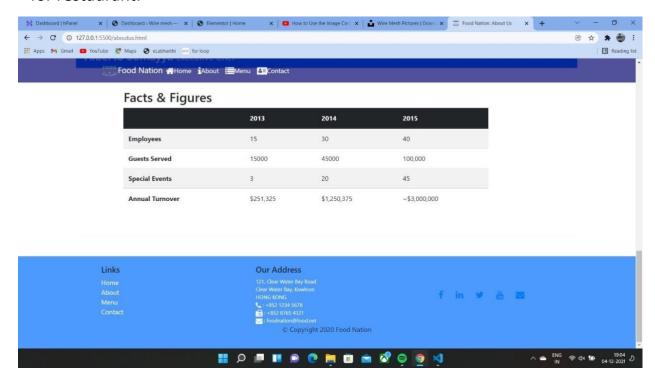
Menu Module

Menu module is food that restaurant prepared for customer. This module, customer can view the menu and make decision for order.

Generate Report Module

System provides an option for generate a report. The contents of the report as the following:

1. The report of customer ordering and reservation table.

2. Customer's information and waiter information.

3. Suggestion or comment that customer insert at feedback form 4. Profit business for restaurant.

Chapter 5 Conclusion and Future Scope

The Restaurant Management System is utilized to foster the café's business to give orders. It works with us to manage the client and diminishes the work exertion what's more less time being used. There are no deferrals for the client. There is a principle screen containing a table of food varieties that permits the client to pick the food and show him the last expense of the request and associate with the principle program, Making it simple so that the client might see the kinds of food sources and coordinates with a wide range of pictures for the food. This program can be introduced to add new clients and individual profile to you working in the café and managing them effectively without compensations. Each drum is taken care of by the request picked by the client in the primary screen Each month we are furnished with a report on the measure of deals, the amount of the materials and the measure of benefits. The data set can likewise be handily adjusted. The product was utilized in the plan and information base incorporation (HTML, JS, CSS).

The following sections describe the work that will be implemented with future release of the software:

1.Tablet on table: there will be a tablet on each table, this will allow the customers to browse the food item for the time they wish, and food item that customer wish.

2. Customer feedback:- Customer can enter the feedback about the service and the food served. This helps the restaurant owner to analyses the service and makes necessary changes if needed.

3. Offers for customer: The restaurant owner can post various offers on tablet.

4. Time to serve: The menu includes the approximate time to be served of a particular food item. This will help the customer to select the food item accordingly.

5. Sorting an item: The food item will be sorted according to price, Season, and user ratings; this helps the customer to select a food item which has a good rating and which is liked by a many customers

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