A

MINI PROJECT PROPOSAL

on

Web Based platform for pre-ordering food at various food outlets

for

T.Y. in Computer Science and Engineering

Submitted to

Department of Computer Science and Engineering,
Annasaheb Dange College of Engineering & Technology,
Ashta, Sangli.
(An Autonomous Institute Affiliated to Shivaji University Kolhapur)

by

Mr. Rohit Gawas

Mr. Shivam Nimbalkar

Mr. Aditya Vyavahare

Mr. Aryan Magdum

Under the Guidance of

Asst. Prof. Vishal Kamble

Academic Year

2021-22

Abstract

A fast food restaurant also known as quick service restaurant (QSR) within the food service industry is a specific type of restaurant characterized both by its fast food cuisine and by minimal table service. Food served in fast food restaurants is offered from a limited menu, cooked in bulk in advance and kept hot, is finished and packaged for order and is usually available ready for pickup or to be delivered though seating may also be provided.

The customers presently spend an average of 60 minutes per day going to the restaurant, selecting their meals and paying. Some restaurants have the provision of customers making a call to the restaurant in advance to order a meal to be ready for them for pick or to be delivered to them.

Some of the customers don't always get the selection they want because the restaurants run out of certain items or because there is no provision of ordering custom meals. This project is aimed at developing a complete online ordering system for use in the food service industry which will allow the restaurants to quickly and easily manage an online menu which customer can browse and use to place orders with just a few clicks. The customers will have to choose whether they want the food to be delivered to them or it will be packaged for pick up and the payment method will be upon delivery or pick up. There will be a system administrator who will have the right to add and manage user accounts, a manager who will be managing product and orders and last but not least a meal deliverer who will be dealing specifically with pending deliveries. The customer will be in a position to view the products,register and place an order. There will be a confirmation receipt for each and every order made by the customer which can be printed.

The development of this system will be based on CSS and HTML as the programming languages while local database as the database of the system. HTML language is advantageous due to its easy to use and learn validation properties while Mongo db has better advanced features and properties, has good security, is open source and has cross platform operability.

Keywords: Food Ordering, Pre-Order Restaurant.

Contents

1 Introduction

Computers have become part of the life for accessing almost any kind of information. Life in the 21st century is full of technological advancement and in this technological age it is very difficult for any organization to survive without utilizing technology. The World Wide Web contributes greatly to the creation of an ever-increasing global information database. It could also be used as a mechanism to share information within an enterprise.

In today's age of fast food and take-out, many restaurants have chosen to focus on quick preparation, offering a rich dining experience. Until very recently, all of these, but there are many disadvantages to this system, including the inconvenience of the customer needing to have a physical copy of the menu, lack of a visual confirmation that the order was placed correctly, and the necessity for the restaurant to have an employee answering the phone and taking orders.

1.1 Background and Context

It will lighten the load on the restaurant's end to a much greater extent, as the entire process of taking orders is automated. Once an order is placed on the webpage, it is entered into the database and then retrieved, in pretty much real-time, by a desktop application on the restaurant's end. Within this application, all items in the order will be displayed, along with their corresponding options, in a concise and easy to read manner. This allows restaurant employees to quickly go through the orders as they are placed and produce the necessary items with minimal delay and confusion.

1.2 Purpose

To increase efficiency and improve services provided to the customers in the restaurant through better application of technology in daily operations.

2 Literature Survey

In the paper by Bhandge. K, et al [1.] The advancement in information and communication technology has greatly influenced the business transactions. In earlier days, food industry traditionally has lagged behind other industries in adopting new technology. However rapid advances in computer Technology and heightened expectations of consumers have forced the food industry to bring automation in the process. Nowadays, the adoption of wireless technology and emergence of mobile devices has led to automation in the food industry. The business and services in restaurants can be improved with the combination of wireless and mobile technologies. The competition in restaurants with respect to business has increased with the advancements in food ordering techniques .

According to the work of Bhargave A., et al [2.], nowadays web services technology is widely used to integrate heterogeneous systems and develop new applications. Here an application of integration of hotel management systems by web services technology is presented. Digital Hotel Management integrates lots of systems of hotel industry such as Ordering System Kitchen Order Ticket (KOT), Billing System, Customer Relationship Management system (CRM) together. This integration solution can add or expand hotel software system in any size of hotel chains environment. This system increases quality and speed of service. This system also increases attraction of place for large range of customers. Implementing this system gives a cost-efficient opportunity to give your customers a personalized service experience where they are in control choosing what they want, when they want it – from dining to ordering to payment and feedback .

By Patel Krishna, et al [3.], the research work aims to automate the food ordering process in restaurant and also improve the dining experience of customers. Design implementation of food ordering system for restaurants were discuss in this paper. This system implements wireless data access to servers. The android application on user's mobile will have all the menu details. Kitchen and cashier receives the order details from the customer mobile wirelessly. These order details are updated in the central database. The restaurant owner can manage the menu modifications easily.

In the paper by Shinde R., et al [4.] there was an attempt to design and implementation of digital dining in restaurants using android technology. This system was a basic dynamic database utility system which fetches all information from a centralized database. This application improved the accuracy and efficiency of restaurants as well as human errors. Earlier drawbacks of automated food ordering systems were overcome by this system and it requires a onetime investment for gadgets.

According to the work of Mayur, et al [5.] he proposed the low cost touch screen based Restaurant Management System using an android Smartphone or tablet as a solution against the conventional paper based and Personal Digital Assistant (PDA) based food ordering system. The system consists of a Smartphone/tablet at the customer table contains the android application with all the menu details. The customer tablet, kitchen display connects directly with each other through Wi-Fi. Orders made by the customers will be instantly reach the kitchen module. This wireless application is user-friendly, improves efficiency and accuracy for restaurants by saving time, reduces human errors and provides customer feedback. This system successfully overcomes the drawbacks in earlier automated food ordering systems and is less expensive as it requires a one-time investment for gadgets.

Table 1 shows the Comparison of the selected approaches

Paper/year	**Approach Used**	**Limitations**
[1]/2015	Java for software development JSP/SERVLET is used for Remote Database Access. SQLite for BackEnd	Cannot accept different types of , payments methods like credit cards, debit cards
[2]/2015	HTML, CSS, JavaScript	Cannot register and link multiple restaurants to enhance the dining experience of customers.
[3]/2015	Android Application	Gadgets are costlier, regular maintenance is needed,
[4]/2015	Android Application	Technical assistance would be needed.
[5]/2015	Android Application	Conventional paper based and PDA-based food ordering system, proposed the low-cost touch screen-based Restaurant Management System

Table 1: Comparison of selected approaches

3 Problem Statement

- IDEAL: Fast food business in a very competitive business and one way to stand out from competitors is through improving the business process where business process automation can assist business improvement. The customer will be able to order the food conveniently and pay efficiently via online transaction.
- REALITY: The challenges encountered by the existing system serve as a major drawback to the realization of efficiency and customer satisfaction. Gadgets are costlier, Technical assistance is needed regularly. The other problem with the current system is that the customers are not able to see the ingredients of the meals.
- CONSEQUENCES: If the problem is not fixed or improved food industry will be impacted with the loss in productivity, profits.

4 Objectives

1. To create an interactive UI.
2. To design and create database .
3. To Design registration form, login form, Dashboard, form for getting food orders.
4. To Establish connection between frontend and backend of the system.
5. To Test the entire system.

5 Scope

- Requires internet connection and also the user must be computer literate.
- The set back of the system is that the customers targeted are adults with access to computer systems / Mobile Devices while the minors might have to go physically to the restaurant to purchase the food that they want or order food the food with the help of an adult.
- The other limitation is that the system will only be convenient to people with a small geographical region, basically just around the restaurant i.e. can only help a small area.

6 Proposed Work

6.1 Methodology

- Development of computerized systems requires analysis of the process to be digitized inorder to enable a correct system, a system that functions as required and to assist the potential users of the system understand the general functionality of the system. The analysis specifies the system's objectives and constraints to which designers have to comply. The purpose of doing analysis is to transform the system's major inputs into structured specification.
- This is a brief structure which depicts the environment in which a software system exists and helps in communicating about what lies outside the system boundary.
- Figure 1 shows how the data will flow into the system.

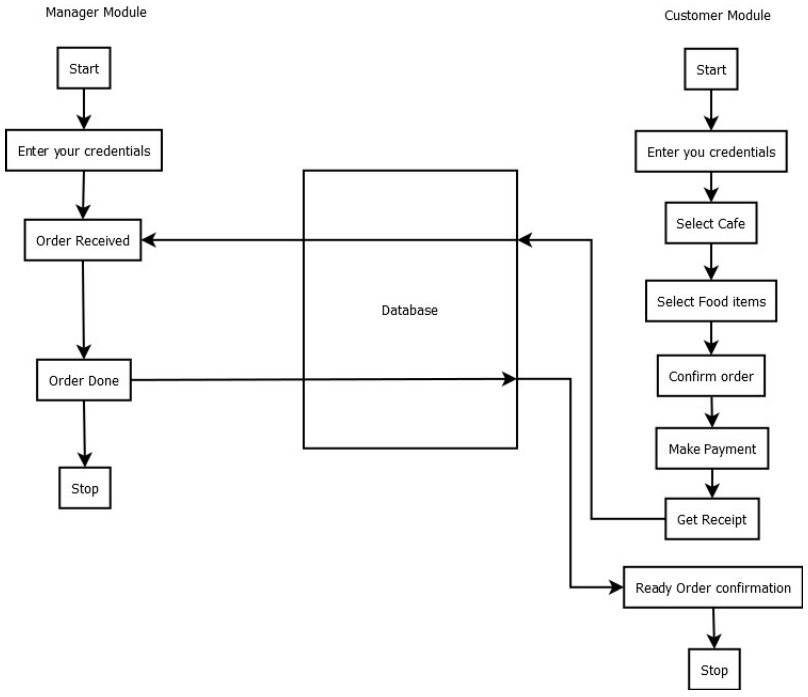

Figure 1: A Block Diagram showing order management

It is a two-dimensional diagram that explains how data is processed and transferred in a system. The graphical depiction identifies each source of data and how it interacts with other data sources to reach a common output.

Figure 2 shows the ER diagram of the system

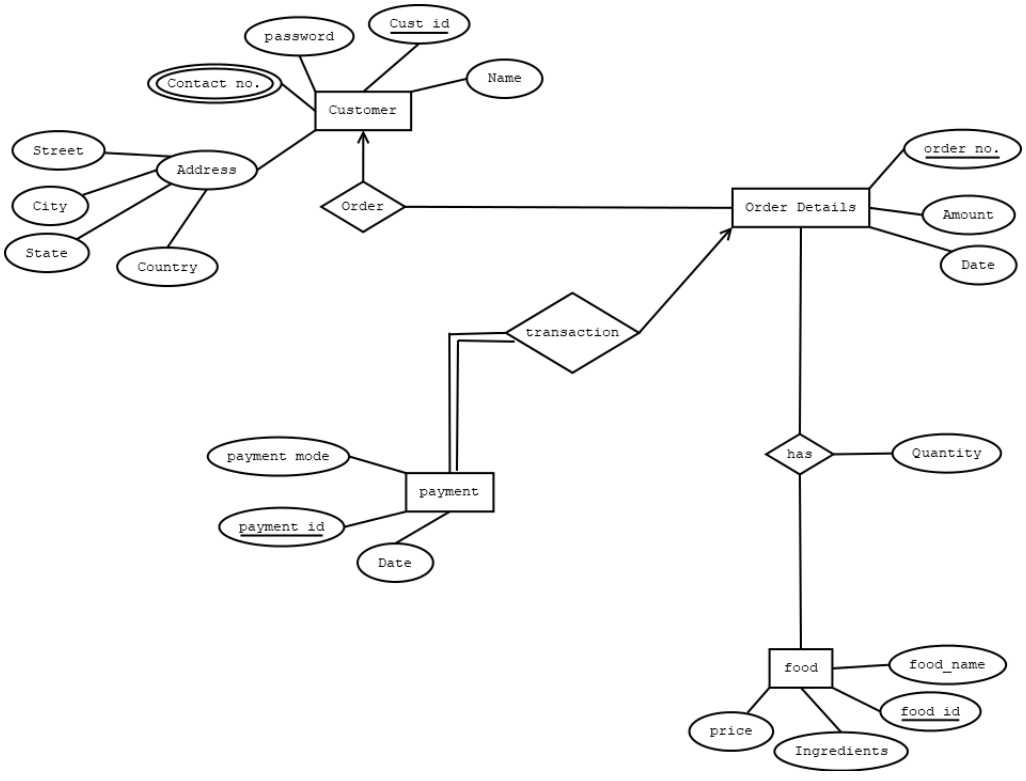

Figure 2: Project ER diagram

The simulation first starts with the customer entering his/her credentials (name, ID and password). Once that has been verified, the customer can place an order specifying the quantity of the food required. 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 redirected to the payment window where the total price is displayed and the customer can select the payment method of their choice and then the customer gets a message of confirmation of order.

The above mentioned simulation flow is with respect to the customer's point of view. Now if you are an admin, you can select the normal login option and enter the admin credentials (email ID and password). 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.

Functionalities provided:

- Create usernames and passwords
- View user / admin accounts

  Customer module:
- Add items to cart
- View final checkout cart
- Confirm order and proceed for payment

  Manager module:
- Create product categories and functionalities
- Edit / delete product categories and descriptions

6.2 Software and Hardware requirements and availability

6.2.1 Software Requirement

- Operating system: Win 7 / Win 8 / Win 10 / Win 11 / macOS 10 and later
- Technology : HTML, CSS, PHP
- Database : MySQL
- Antivirus software

6.2.2 Hardware Requirement

- Processor: Intel dual core and above
- Processor Speed: 1.0GHZ and above
- RAM: 1 GB RAM and above
- Hard Disk: 20 GB hard disk and above
- Printer for printing reports
- Uninterruptible power supply

7 Schedule

- Split entire work into subtasks such as literature survey, planning, development, installation, testing, writing reports or articles
- Prepare Gantt Chart

Figure 3 shows the project schedule to be used to implement the project.

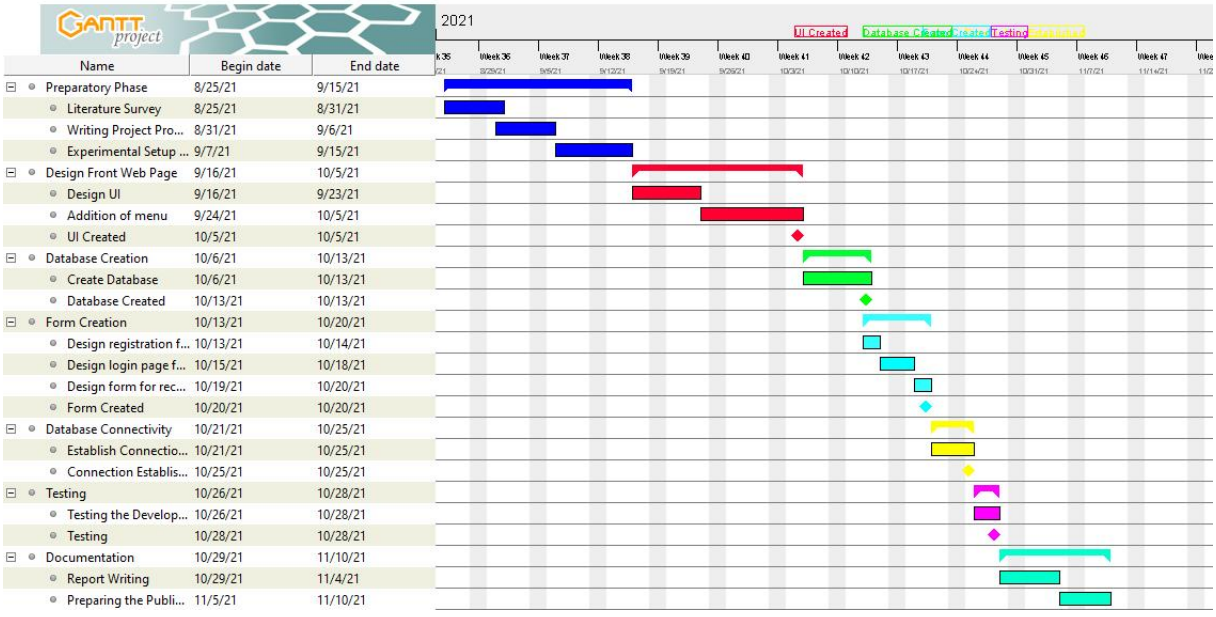

Figure 3: Project Schedule

References

[1] Bhandge. K, Shinde. T, Ingale .D, Solanki .N, Totare .R, 2015 *"A Proposed System for Touchpad Based Food Ordering System Using Android Application"*, International Journal of Advanced Research in Computer Science Technology (IJARCST) 2015.

[2] Bhargave A., Jadhav N, Joshi A., Oke. P, Lahane S. R, 2013 *"Digital Ordering System for Restaurant Using Android"*, International Journal of Scientific and Research Publications, Volume 3, Issue 4, 1 ISSN 2250-3153

[3] Patel Krishna, Patel Palak, Raj Nirali, Patel Lalit,*"Automated Food Ordering System"*, International Journal of Engineering Research and Development (IJERD) 2015.

[4] Shinde R., Thakare P., Dhomne N. and Sarkar S., 2014 *"Design and Implementation of Digital dining in Restaurants using Android"*, International Journal of Advance Research in Computer Science and Management Studies. Volume 2, Issue 1.

[5] Mayur D. Jakhete, Piyush C. Mankar, *"Implementation of Smart Restaurant with e-menu Card"*, International Journal of Computer Applications 2015 of Smart Restaurant with e-menu Card, International Journal of Computer Applications 2015.

Group Members

Sr.NO	Name of the Student	Contact No.	Email ID	Signature
1	Rohit Gawas	8839867653	19131084_cse@adcet.in	
2	Shivam Nimbalkar	8830854483	19131035_cse@adcet.in	
3	Aditya Vyavahare	9561648317	19131076_cse@adcet.in	
4	Aryan Magdum	8308992976	19131079_cse@adcet.in	

Date: September 4, 2022

Place: Ashta

Mr.Vishal Kamble
GUIDE

Mrs. Ashwini Patil
Project Coordinator

Dr. Srmiti H. Bhandari
HoD, CSE