MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR
(A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to RGPV, Bhopal)

Project Report

on

FoodZone: Online Food Ordering system

Submitted By:

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
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MAY-JUNE 2022

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A project report submitted in partial fulfilment of the requirement for the degree of

BACHELOR OF TECHNOLOGY

in

COMPUTER SCIENCE AND ENGINEERING

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CERTIFICATE

This is certified that **Rishabh Gupta** (0901CS191095) has submitted the project report titled **FoodZone: Online Food Ordering system** under the mentorship of **Prof. Khushboo Agrawal,** in partial fulfilment of the requirement for the award of degree of Bachelor of Technology in Computer Science and Engineering from Madhav Institute of Technology and Science, Gwalior.

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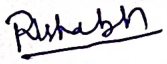
DECLARATION

We hereby declare that the work being presented in this project report, for the partial fulfilment of requirement for the award of the degree of Bachelor of Technology in Computer Science and Engineering at Madhav Institute of Technology & Science, Gwalior is an authenticated and original record of my work under the mentorship of **Prof. Khushboo Agrawal,** Computer Science and Engineering.

We declare that we have not submitted the matter embodied in this report for the award of any degree or diploma anywhere else.



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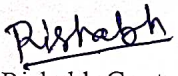

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Abstract

With the improvement of technology, online food ordering systems are becoming a popular topic. That's because they are serving the ever increasing demand for convince. The main purpose of an online ordering system is to provide customers for a way to place an order at a restaurant over the internet. The main reason is that it benefits both the customer and the business. With a website or mobile app, customers can easily browse all the dishes the restaurant has available, customize dishes to their requirements and place an order. It can also save their favourite orders allowing them to easily re-order that in the future. From the restaurants perspective, they no longer spend time taking the customers order, stop worrying about communication errors and streamline their order management workflow. With the online ordering system , a restaurant can start accepting orders online.

Keywords: website or mobile app, online ordering system

सार:

प्रौद्योगिकी के सुधार के साथ, ऑनलाइन खाद्य आदेश प्रणाली एक लोकप्रिय विषय बन रही है। ऐसा इसलिए है क्योंकि वे समझाने के लिए बढ़ती मांग की सेवा कर रहे हैं। एक ऑनलाइन आदेश प्रणाली का मुख्य उद्देश्य ग्राहकों को इंटरनेट पर रेस्तरां में ऑर्डर देने के तरीके के लिए प्रदान करना है। इसका मुख्य कारण यह है कि इससे ग्राहक और व्यवसाय दोनों को लाभ होता है।

एक वेबसाइट या मोबाइल ऐप के साथ, ग्राहक आसानी से रेस्तरां में उपलब्ध सभी व्यंजनों को ब्राउज़ कर सकते हैं, व्यंजनों को अपनी आवश्यकताओं के अनुसार अनुकूलित कर सकते हैं और ऑर्डर दे सकते हैं। यह उनके पसंदीदा आदेशों को भी बचा सकता है जिससे उन्हें भविष्य में आसानी से फिर से ऑर्डर करने की अनुमति मिलती है। रेस्तरां के परिप्रेक्ष्य से, वे अब ग्राहकों को ऑर्डर लेने में समय नहीं बिताते हैं, संचार त्रुटियों के बारे में चिंता करना बंद कर देते हैं और अपने ऑर्डर प्रबंधन वर्कफ़्लो को सुव्यवस्थित करते हैं। ऑनलाइन ऑर्डरिंग सिस्टम के साथ, एक रेस्तरां ऑनलाइन ऑर्डर स्वीकार करना शुरू कर सकता है।

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CHAPTER 1: PROJECT OVERVIEW

1.1 Introduction

Online food ordering is the process of ordering food, for delivery or pickup, from a website or other application. The product can be either ready-to-eat food (e.g., direct from a home-kitchen, restaurant, or a ghost kitchen) or food that has not been specially prepared for direct consumption (e.g., vegetables direct from a farm/garden, fruits, frozen meats. etc). The customers of today are not only attracted because placing an order online is very convenient but also because they have visibility into the items offered, price and extremely simplified navigation for the order. System presents an interactive and up-to-date list of product with all available options in an easy to use manner. Customers can choose one or more items to place an order which will land in the Cart. Customers can view all the order details in the cart before checking out. At the end, the customer gets order confirmation details. Once the order is placed it is entered in the database and retrieved in pretty much real time. This allows restaurant owner to quickly go through the orders as they are received and process all orders efficiently and effectively with minimal delays and confusion.

1.2 Objective and Scope

Our proposed system is an online food ordering system that enables ease for the customers. It overcomes the disadvantages of the traditional queueing system. Our proposed system is a medium to order online food hassle free from restaurants as well as mess service. This system improves the method of taking the order from customer. The online food ordering system sets up a food menu online and customers can easily place the order as per their wish. Also with a food menu, customers can easily track the orders. This system also provides a feedback system in which user can rate the food items. Also, the proposed system can recommend hotels, food, based on the ratings given by the user, the hotel staff will be informed for the improvements along with the quality. The payment can be made online or pay-on-delivery system. For more secured ordering separate accounts are maintained for each user by providing them an ID and a password.

1.3 Project Features

It manages the information of food, Shows the information and description of the Item Category, Delivery Address, Integration of all records of shopping cart , Login ,Signup for Users for security purpose , payment gateway.

1.4 Feasibility

1.4.1 Operational Feasibility

In Operational Feasibility the degree of providing service to requirements is analyzed along with how easy the product will be to operate and maintain after deployment. Along with this other operational scopes are determining usability of product, Determining suggested solution by software development team is acceptable or not etc. The project is feasible in terms of operations as it can be implemented anywhere with internet connectivity and system to process

1.4.2 Economic Feasibility

In the Economic Feasibility study, the cost and benefit of the project are analyzed. This means under this feasibility study a detailed analysis is carried out of what will be the cost of the project for development which includes all required costs for final development like hardware and software resources required, design and development cost and operational cost and so on. After that, it is analyzed whether the project will be beneficial in terms of finance for the organization or not.
The project has an economical constraint as the API with more number of request and good internet connectivity require more budget.

1.4.3 Technical Feasibility

This involves questions such as whether the technology needed for the system exists, how difficult it will be to build, and whether the firm has enough experience using that technology. The assessment is based on outline design of system requirements in terms of input, processes, output, fields, programs and procedures. This can be qualified in terms of volume of data, trends, frequency of updating in order to give an introduction to the technical system. The application is the fact that it has been developed on windows 10 platform and a high configuration of 4GB RAM on AMDA Ryzen 3 processor. This is technically feasible . The technical feasibility assessment is focused on gaining an understanding of the present technical resources of the organization and their applicability to the expected needs of the proposed system. It is an evaluation of the hardware and software and how it meets the need of the proposed system.

1.5 System Requirements

Windows Based Requirements:

Computers running Microsoft Windows must meet the following minimum hardware and software requirements.

Microsoft Windows: 7/8/10/11

4 GB RAM minimum, 8 GB RAM recommended

1GB of available disk space minimum

1280 * 800 minimum screen resolution

Software Requirement: visual studio code, a cross-platform code editor

Hardware Requirement: Laptop/Computer

Internet Connectivity

CHAPTER 2: LITERATURE REVIEW

2.1 Problem Analysis

2.1.1 BENEFITS OF THIS PROJECT

2.1.1.1 Contact-less orders

The COVID-19 pandemic has forced everyone too maintain social distancing and personal hygiene. Form working from home, education and schooling of online apps to the restriction in purchasing groceries and other items from malls or shops, it had made everyone's lifestyle completely different. Let as accept the fact that the majority of the audience having fine access to technology and internet today, rely only of the demand delivery services to avail contactless orders.

2.1.1.2 Global Access

You can provide their products and services globally without having any kind of restrictions to serve only locally. The deliveries can be carried out 24 hours a day and 7 days a week as per the customizable schedule set by the businesses. Moreover, the Food sector is hot the whole year, thus seeking more demands.

2.1.1.3 Convenient Payments

You make your customers pay the way they want to. Online payments or Cash On Delivery, allow your customers to pay as per their convenience. Online platforms would also allow you to facilitate cashless transactions and track daily transactions too.

2.1.1.4 Saving Consumer Time

Customers no need to stand in the queue and wait for their turn, thus saving a lot of their time. Now no more returning customers from your store due to a big line. Take in all customers orders without any loss and take your sales to an exponential number.

2.1.1.5 Better ROI and Analysis

Online platforms come with a convenient piece of analytics section wherein you can easily access and analyze your customers, vendors, sales, orders, and many more. With graphs and tables, it makes it easy for businesses to compare the statistics and work on the gaps for improvements as and when required.

2.1.1.6 Effortless promotions

Businesses can earn maximum profits with potential & repeating customer base through multiple mediums like discounts, promo codes, Food occasional sales, etc. This drives the customers more towards your online store, thus increasing profits in business.

2.1.1.7 Stock & Inventory Management

You can efficiently manage your stock and inventory of the Food you deliver, thus reducing the manual work. The online system self-updates the inventory when an order is placed by the customer. You need not allocate humans to the systems to update each inch of information, let your online platform do that for you.

2.1.1.8 Improved customer support

While giving the best Foods to your customers, you surely want to have their feedback and even complaints entertained. The online platform makes it easier for you to check the customer queries and respond to them in very less time.

2.2 System Analysis :-

The Online Food delivering System deals with placing orders of Foods from various restaurant. This system involves the following functionalities :

2.2.1 Collecting data:

The data is collected from the customer through the application.

2.2.2 Verification of data:

The data collected(Food ordered) from the customer is cross verified with the restaurant for availability.

2.2.3 Order confirmation:

The order is confirmed by sending a confirmation text to the customer.

2.2.4 Mode of Payments:

Multiple modes of payment will be provided while ensuring safe and secure online transactions.

CHAPTER 3: PRELIMINARY DESIGN

3.1 Software Development Life Cycle Model

3.1.1 Rapid Application Development

Reason: since the software size was not much large and there was a time-bound and the project was made in modules therefore in this project, I used Rapid Application Development. A software project can be implemented using this model if the project can be broken down into small modules wherein each module can be assigned independently to separate teams. These modules can finally be combined to form the final product.

3.2 Data Flow Diagram

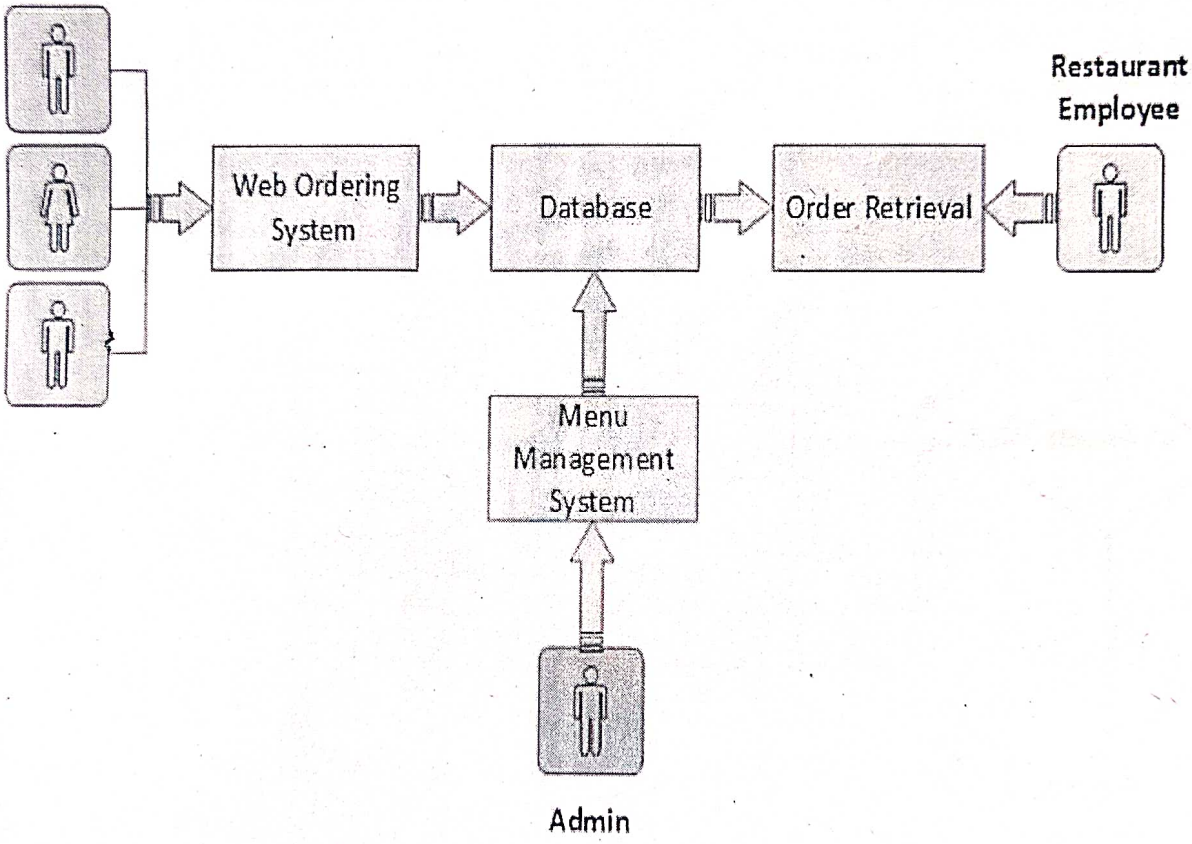

Fig 3.2.1 Data flow diagram

3.3 ER – Diagram –

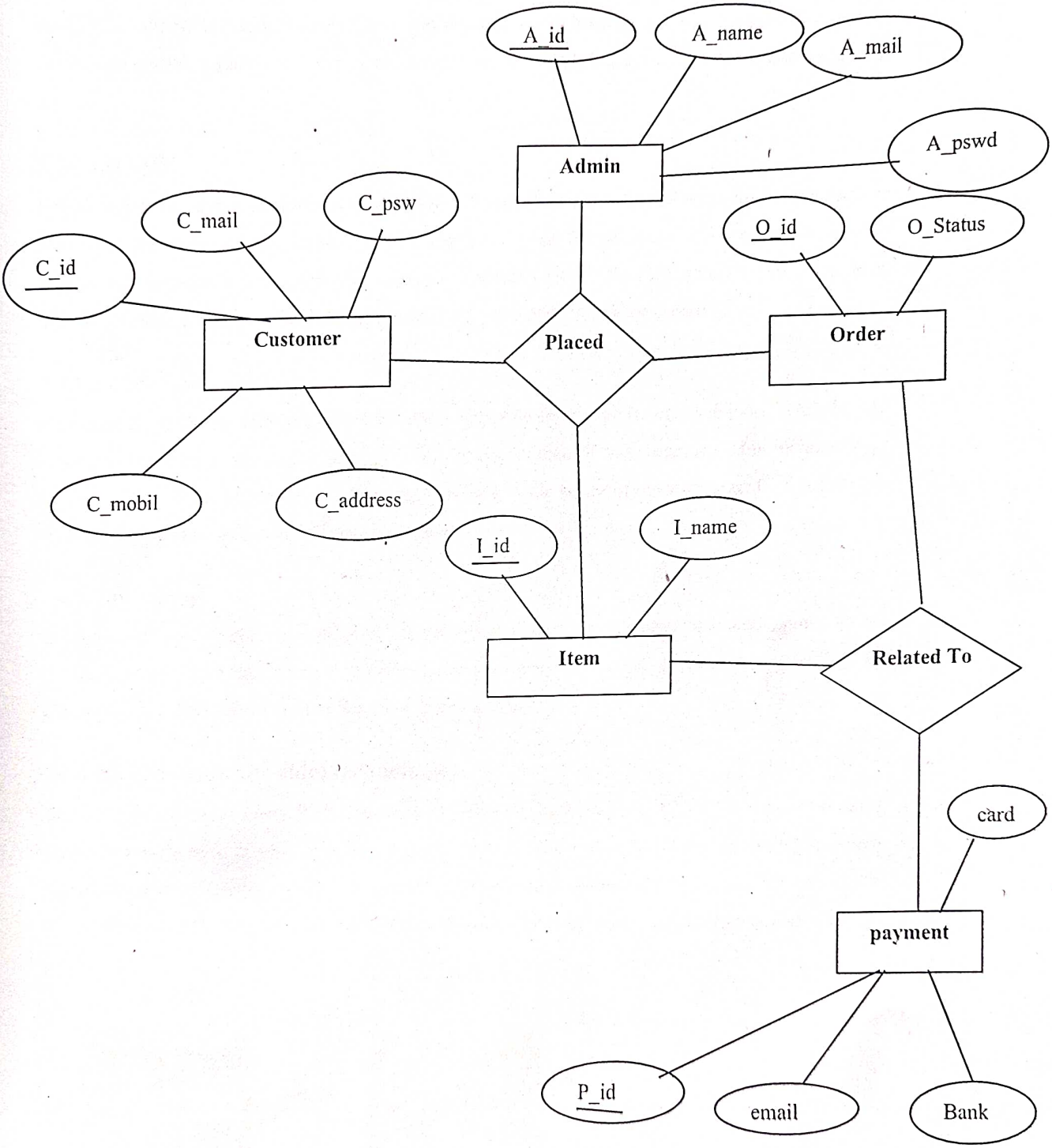

Fig 3.3.1 E-R Diagram

3.4 Tools & Technologies

3.4.1 A web browser (or client)Services

A client is a user-friendly representation of a web app's functionality that a user interacts with. Written in HTML, JavaScript and CSS, it exists within the user's web browser and doesn't need any specific OS/device-related adjustments.This includes text colour and styles, images, buttons, and navigation menus.

3.4.1.1 HTML

HTML stands for Hyper Text Markup Language. It's one of the fundamental technologies required for web development. It provides the base structure for a web page. HTML code ensures that all the content on a website is properly formatted. This is so your Internet browser can display the content as intended. Without HTML, a browser couldn't display text or load images and other elements.

3.4.1.2 CSS

Cascading Style Sheets, abbreviated as CSS, define the style and aesthetics of a web page. While HTML is used to structure a web page, CSS specifies the appearance of that structure. This includes page layouts, colors, fonts and element positioning. If HTML is the bones of the web page, CSS is the skin. It makes the Internet, and your website, look good.

3.4.1.3 JavaScript

JavaScript is a lightweight, cross-platform, and interpreted scripting language. It is well-known for the development of web pages, many non-browser environments also use it. JavaScript can be used for Client-side developments as well as Server-side developments.

3.4.2 Back-end (server-side) technologies.

To build a server side you need PHP, Java, .NET, Python, Ruby on Rails or Node.js development skills. This side usually consists of at least two more parts: web server with app logic (or the main control center) and database (storage of all persistent data). If you scale up this side, it means that you increase the number of web servers and databases to boost your web app's performance and stability.

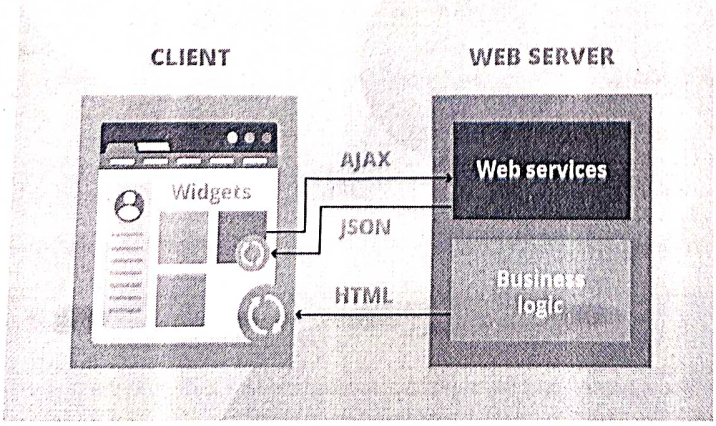

Figure 3.4.2.1 web application architecture

3.4.3 Databases

3.4.3.1 Storage Option in Web browser

While working with Web browser. There are many options where the user data can be stored. The option are –

- MySQL: An open-source SQL database. MySQL is used in WordPress websites.
- MongoDB: An open source NoSQL database.
- Oracle: Oracle Database is a proprietary database management system. It's commonly used for running online transaction processing, data warehousing and mixed database workloads

HTML web storage provides two objects for storing data on the client:

– window. Local Storage - stores data with no expiration date.

– window. Session Storage - stores data for one session (data is lost when the browser tab is closed)

The user can using any of the option depending on the need of the application as well as critically of the data.

3.4.4 Visual Studio Code

Visual Studio Code is a source-code editor made by Microsoft for Windows, Linux and macOS. Features include support for debugging, syntax highlighting, intelligent code completion, snippets, code refactoring, and embedded Git. Users can change the theme, keyboard shortcuts, preferences, and install extensions that add additional functionality.

3.4.5 Dependencies Used

3.4.5.1 Express

Express is the most popular Node web framework, and is the underlying library for a number of other popular Node web frameworks. It provides mechanisms to: Write handlers for requests with different HTTP verbs at different URL paths (routes).

3.4.5.2 Multer

Multer is a node.js middleware for handling multipart/form-data , which is primarily used for uploading files.

3.5 What is API & how does it work?

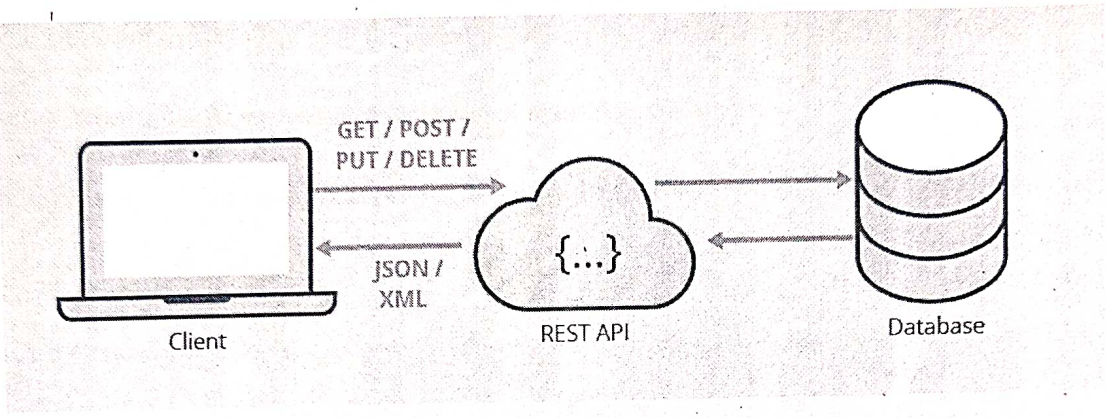

Fig 3.5.1 how API works

API is an acronym for Application Programming Interface that software uses to access data, server software or other applications and have been around for quite some time.APIs communicate through a set of rules that define how computers, applications or machines can talk to each other. The API acts as a middleman between any two machines that want to connect with each other for a specified task. We have used various APIs in the Backend of this application such as food items, food types etc.

CHAPTER 4: Project Implementation

4.1 Modules

There are the main modules of the projects:

4.1.1 Order Module: we can create, read, update and delete order from this module

4.1.2 Food Item Module: All the operations related to Food Item, is managed by this module.

4.1.3 Admin Module: Admin Module is used to manage the item.

4.1.4 Module: It has been developed for managing the Delivery.

4.1.5 Payment Module: It manages the payment.

4.1.6 Customer Module: Customer operations will be managed by Customer module .

4.2 Screenshot for Homepage

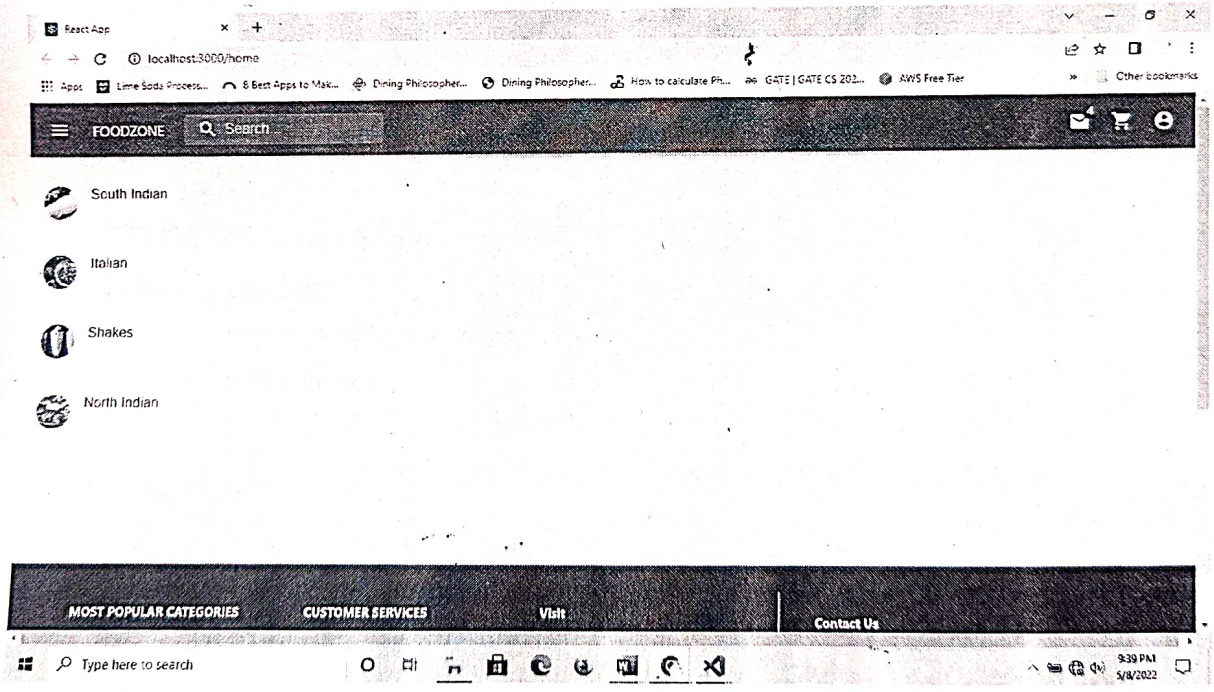

Fig 4.2.1 Homepage

4.3 Screenshot for Cart

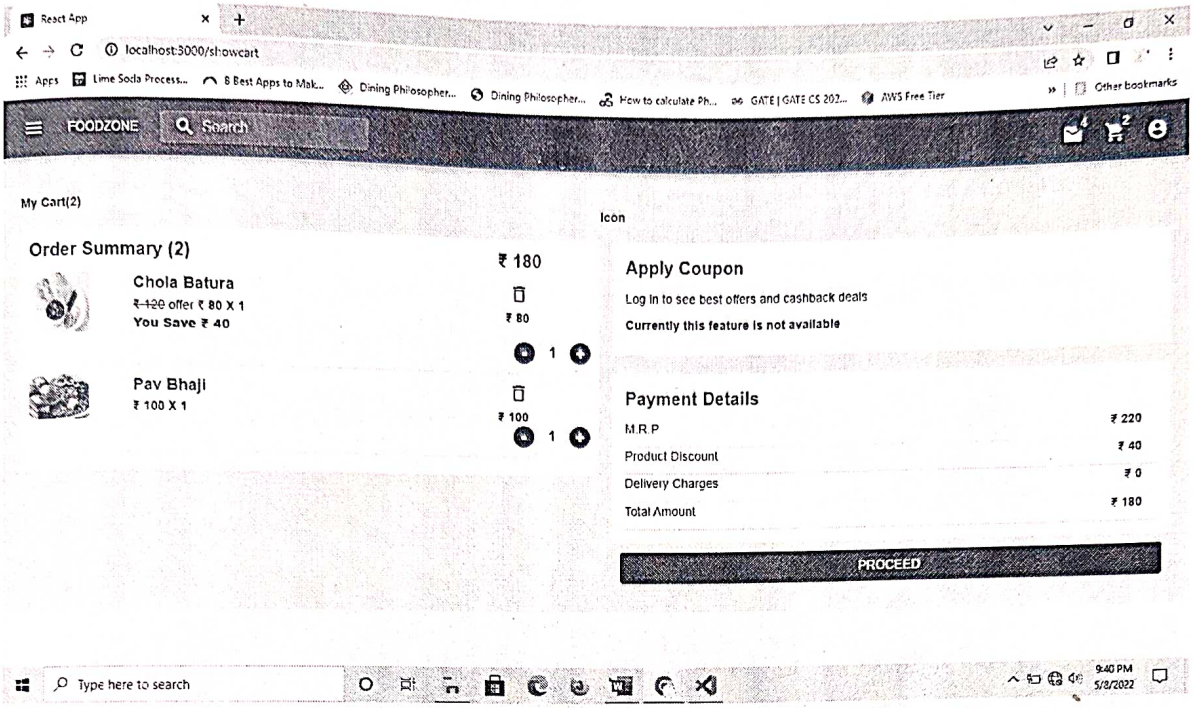

Fig. 4.3.1 Cart

4.4 ADVANTAGES

- It's fast, easy and comfortable.
- Less hassle for you.
- An online menu is simpler to manage.
- It's just one click away.

CHAPTER 5: CONCLUSION

5.1 Conclusion

Finally, in Online Food Ordering system, we have developed secure, user-friendly food ordering Management System. This System can take care of each member whether it is an Administrator or Customer. This System will help them to properly manage the meals of the customers, the delivery boy's data and help in growth without creating any hassle. This System is completely secure since every user is provided with user ID and Password so there is no chance of any unauthorized access. Online Payment, Registration and cancellation make it easier to use. So, using this system will help in reducing the labour and provide more facility for Customer to like the services.

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