MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

(A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to RGPV, Bhopal)

Project Report on

Food Ordering Web-App

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Computer Science and Engineering

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

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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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MAY-JUNE 2022

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CERTIFICATE

This is certified that **Pratik Patel** (0901CS191084) has submitted the project report titled **Food Ordering Web-App** under the mentorship of **Mr. Mir Shahnawaz Ahmed,** 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.

09/05/22

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This is certified that **Prince Kumar Gupta** (0901CS191086) has submitted the project report titled **Food Ordering Web-App** under the mentorship of **Mr. Mir Shahnawaz Ahmed,** 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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MADHAV INSTITUTE OF TECHNOLOGY & 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 **Mr. Mir Shahnawaz Ahmed** 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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ACKNOWLEDGEMENT

The full semester project has proved to be pivotal to my career. I am thankful to my institute, **Madhav Institute of Technology and Science,** for allowing me to continue my disciplinary project as a curriculum requirement, under the provisions of the Flexible Curriculum Scheme (based on the AICTE Model Curriculum 2018), approved by the Academic Council of the institute. I extend my gratitude to the Director of the institute, **Dr. R. K. Pandit** and Dean Academics, **Dr. Manjaree Pandit** for this.

I would sincerely like to thank my department, **Department of Computer Science and Engineering, for allowing** me to explore this project. I humbly thank **Dr. Manish Dixit**, Professor and Head, Department of Computer Science and Engineering, for his continued support during the course of this engagement, which eased the process and formalities involved.

I am sincerely thankful to my faculty mentors. I am grateful to the guidance of **Mr. Mir Shahnawaz Ahmed,** Computer Science and Engineering for their continued support and guidance throughout the project. I am also very thankful to the faculty and staff of the department.

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ABSTRACT

The main objective of the Online Food Ordering System is to manage the details of Item Category, Food ,Delivery Address, Order, Shopping Cart. It manages all the information about Item Category, Customer, Shopping Cart, Item Category. The project is totally built at administrative end and thus only the administrator is guaranteed the access. The purpose of the project is to build an application program to reduce the manual work for managing the Item Category, Food, Customer, Delivery Address. It tracks all the details about the Delivery Address, Order, Shopping Cart.

सार:

ऑनलाइन फूड ऑर्डरिंग सिस्टम का मुख्य उद्देश्य आइटम कैटेगरी, फूड, डिलीवरी एड्रेस, ऑर्डर, शॉपिंग कार्ट के विवरण का प्रबंधन करना है। यह आइटम श्रेणी, ग्राहक, शॉपिंग कार्ट, आइटम श्रेणी के बारे में सभी जानकारी का प्रबंधन करता है। परियोजना पूरी तरह से प्रशासनिक अंत में बनाई गई है और इस प्रकार केवल व्यवस्थापक को ही पहुंच की गारंटी है। परियोजना का उद्देश्य आइटम श्रेणी, भोजन, ग्राहक, वितरण पते के प्रबंधन के लिए मैन्युअल कार्य को कम करने के लिए एक एप्लिकेशन प्रोग्राम बनाना है। यह डिलीवरी एड्रेस, ऑर्डर, शॉपिंग कार्ट के बारे में सभी विवरणों को ट्रैक करता है।

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Chapter 1: Project Overview

1.1 Introduction

The project Online Food ordering system is a web based application that allows the administrator to handle all the activities online quickly and safely. Using Interactive GUI anyone can quickly learn to use the complete system. ONLINE FOOD DELIVERY SYSTEM: – Are you looking for Online Food Delivery system .The project Online Food delivery system is a web based application that allows the administrator to handle all the activities online quickly and safely. Using Interactive GUI anyone can quickly learn to use the complete system. This system will give him power and flexibility to manage the entire system from a single online portal.

1.2 Objective

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.

1.3 Project Features

With the rapid growth of online meal ordering, it's understandable to have many food delivery apps on your phone. Sending push notifications is the best approach to gain visibility and remain ahead of your rivals. Accordingly, it assists businesses in keeping in touch with their customers. These messages can be used to send various information, including discounts, special offers, and location-based order drop messages, among other things.

Another thing to keep in mind in your on-demand ordering food app is that your notifications should provide value to customers rather than just be a sales pitch. Attempt to manage push notifications in such a way that they aid in the considerable growth of your business app. Notify prospective

consumers about discounts, special deals, and loyalty programs regularly. Accordingly, you can immediately attract a customer's attention and engage them this way.

Customers may track the location of their food using real-time GPS, which is one of the essential features of food delivery apps. The goal of GPS is to provide two-way tracking and operation. Accordingly, it assists in determining the user's location to deliver the food. Users may simply follow the status and movements of the delivery people once the site has been confirmed.

It is used by the main meal delivery applications to provide the most outstanding client experience. Accordingly, Google Maps, MapKit, and Waze's Navigation are just a few of the fantastic APIs for this functionality. Uber eats, for instance, uses Google Maps across all platforms.

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 Legal Feasibility

In Legal Feasibility study project is analyzed from a legal point of view. This includes analyzing barriers of legal implementation of project, data protection acts or social media laws, project certificate, license, copyright etc. Overall it can be said that Legal Feasibility Study is a study to

know if proposed project conform to legal and ethical requirements. The project is feasible legally.

The data and their respective data sources that are helpful for our is discussed below,

- Delhi city's major areas and neighbourhoods are provided by the Wikipedia web page.
- Geographical coordinates of the areas are provided by Python's geocoder library.
- Venues in each locality of Delhi city are provided by Foursquare API. The coordinate information is used by the Foursquare API to fetch the venues within the specified radius and venue limits.

1.5 System Requirements :

Table 1 Hardware Requirements

Number	Description
1	PC with 250 GB or more Hard disk.
2	PC with 2 GB RAM.

Table 2 Software Requirements

Number	Description	Type
1	Operating System	Windows XP / Windows
2	Language	ReactJS
3	Database	Firebase
4	IDE	Visual Code
5	Browser	Google Chrome

CHAPTER 2: LITERATURE REVIEW

2.1. Past Works on This Domain

A computerised restaurant system is "an integrated IT system that supervises, manages and facilitates the planning operations in restaurant" (Tan, 2013). Before the automated system has been introduced, the orders and payments were managed manually using register books etc. The Point-of-Sales (POS) was introduced in the era of 1990. After the system got popularity, it started being used in restaurant industry. After 1990, the internet and wireless technology moved on so much fast. Restaurants also started using different technology based system to increase the efficiency of the system (Sullivan, 2015). Researchers also started introducing different types of solutions for restaurants. Lots of work have been done for automating the operations of the restaurants. Every researcher chose an aspect or problem and tried to make good solution for that. The solutions provided by researchers can be categorised in different categories. The following sections will discuss about those systems.

2.2 Web Application Based System

To overcome the device and operating system centric approach for automating restaurant operation, Ketal. (2016) proposed an online web application which can be accessed through internet. For using this application, computer screen will be placed on each table of restaurant for customers to order. Customers can order food for take away and make payment through the application. However, the idea is innovative, but a little bit weird as computers need to be installed in every table. Sometimes it may create complex problem rather than making a solution. Patel (2015) developed an online food ordering system with Java in backend system and HTML with CSS in frontend. It was a robust and nice application. But the responsive development method was not used in the application. Hence, the application cannot viewed properly with a smart phone. Tan (2013) developed a web based application with ASP .Net and Bootstrap to automate the ordering process of the restaurant and make it paperless. But the system is only focused on the management of the restaurant. There is no option for customers to order food online. The system was responsive.

CHAPTER 3: PRELIMINARY DESIGN

3.1 Software Development Life Cycle Model

3.1.1 Waterfall Model

The waterfall model was selected as the SDLC model due to the following reasons:

- Requirements were very well documented, clear and fixed.
- Technology was adequately understood.
- Simple and easy to understand and use.
- There were no ambiguous requirements.
- Easy to manage due to the rigidity of the model. Each phase has specific deliverables and a review process.
- Clearly defined stages.
- Well understood milestones. Easy to arrange tasks.

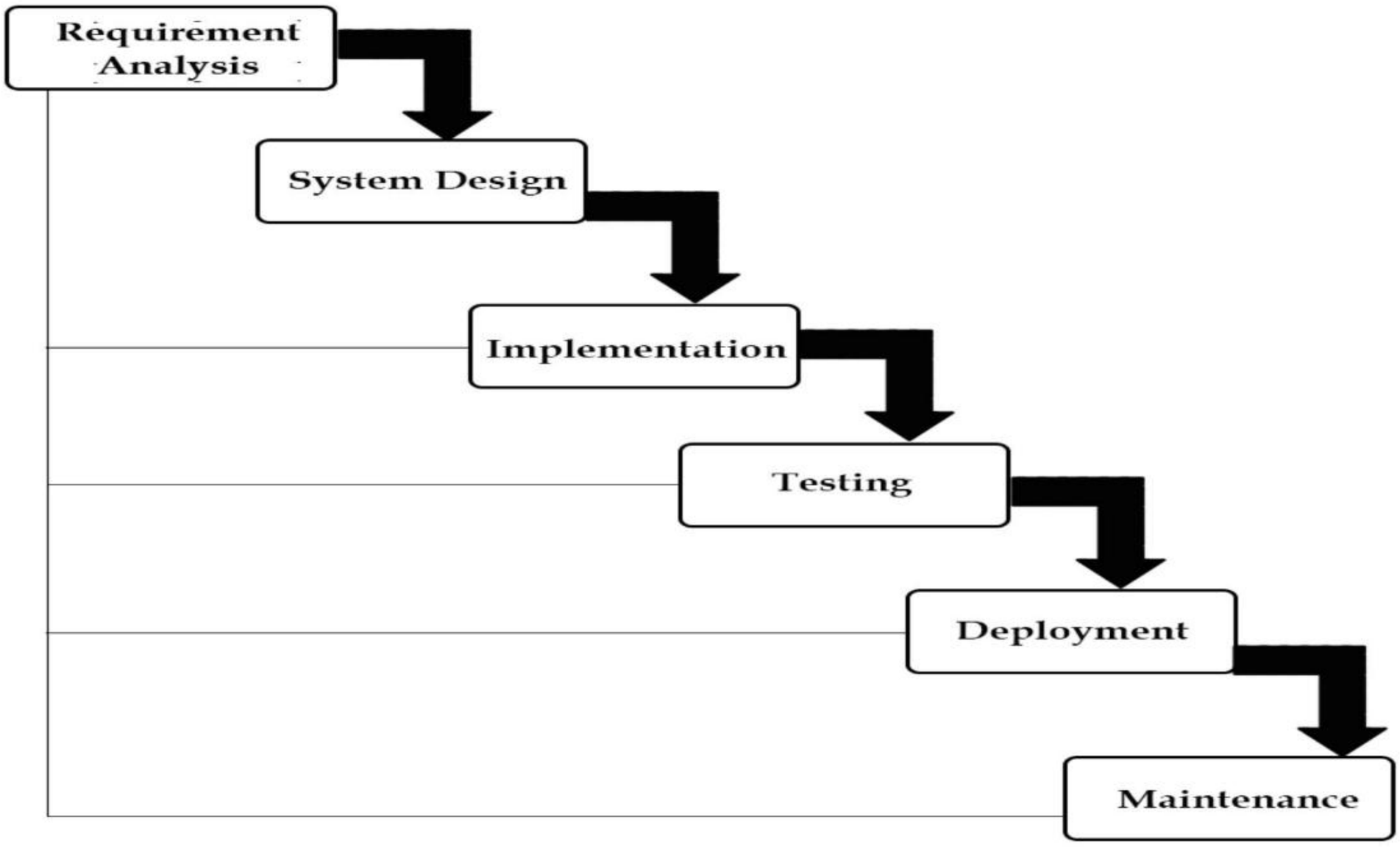

Figure 1. Waterfall Model

3.2 Tools and Technologies used

3.2.1 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.

3.3 What is API & how does it work?

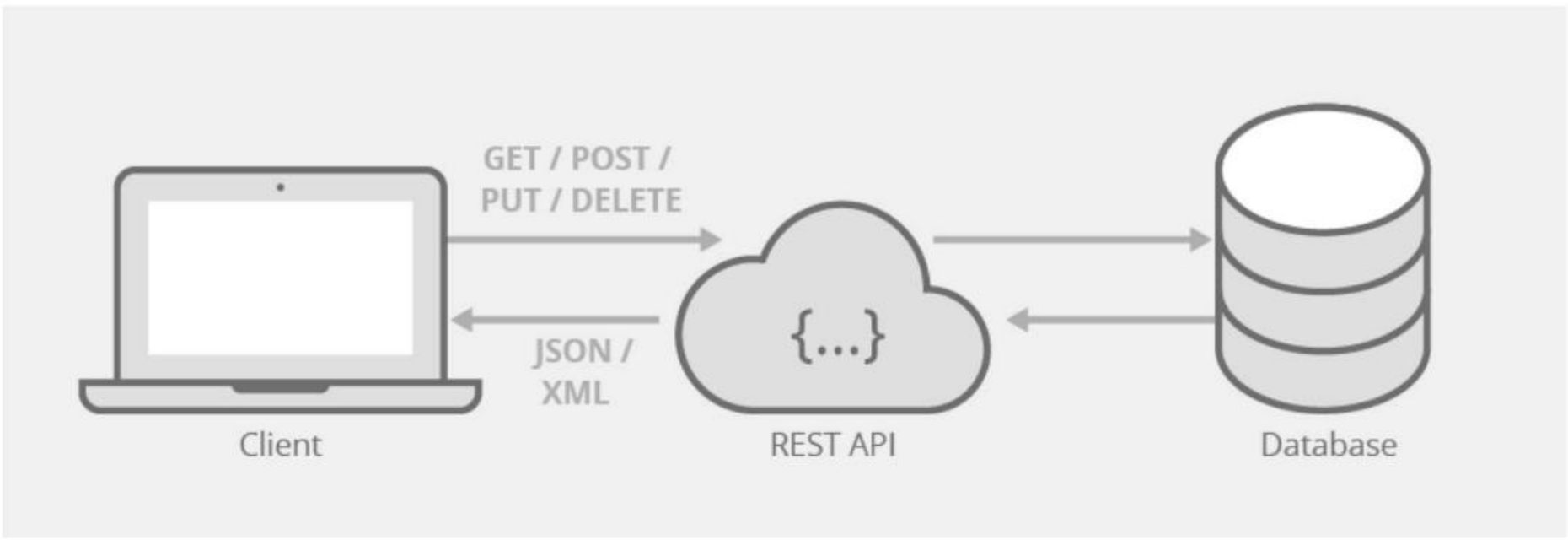

Figure 2. Database Working

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.

3.4.1 Mapquest API

The core technology of online mapping is a process called geocoding, in which the street address of a location is converted into specific geographic coordinates (longitude and latitude). Once a location is geocoded, it can be pinned to a precise location on an online map.

3.4.2 Foursquare API

The Foursquare Places API provides location-based experiences with diverse information about venues, users, photos, and check-ins. The API supports real-time access to places, Snap-to-Place that assigns users

to specific locations, and Geo-tag. Additionally, Foursquare allows developers to build audience segments for analysis and measurement. JSON is the preferred response format.

Foursquare allows users to input both a city and keywords related to what they're looking for there into its search bar. Users can then filter their search results — and read reviews on them — to choose a place to go. It will also start to recommend places to you based on your searches.

CHAPTER 4 : IMPLEMENTATION DETAILS

In this Section we will do Analysis of Technologies to use for implementing the project.

4.1: FRONT END

4.1.1 HTML

Hypertext Markup Language (HTML) is the standard markup language for documents designed to be displayed in a web browser. It can be assisted by technologies such as Cascading Style Sheets (CSS) and scripting languages such as JavaScript. 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. HTML elements are delineated by tags, written using angle brackets. Tags such as <img /> and <input /> directly introduce content into the page. Other tags such as <p> surround and provide information about document text and may include other tags as sub-elements. Browsers do not display the HTML tags, but use them to interpret the content of the page.

HTML can embed programs written in a scripting language such as JavaScript, which affects the behaviour and content of web pages. Inclusion of CSS defines the look and layout of content. The World Wide Web Consortium (W3C), former maintainer of the HTML and current maintainer of the CSS standards, has encouraged the use of CSS over explicit presentational HTML since 1997.

4.1.2 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.

CSS information can be provided from various sources. These sources can be the web browser, the user and the author. The information from the author can be further classified into inline, media type, importance, selector specificity, rule order, inheritance and property definition. CSS style information can be in a separate document or it can be embedded into an HTML document. Multiple style sheets can be imported. Different styles can be applied depending on the output device being used; for example, the screen version can be quite different from the printed version, so that authors can tailor the presentation appropriately for each medium. The style sheet with the highest priority controls the content display. Declarations not set in the highest priority source are passed on to a source of lower priority, such as the user agent style. The process is called cascading.

One of the goals of CSS is to allow users greater control over presentation. Someone who finds red italic headings difficult to read may apply a different style sheet. Depending on the browser and the web site, a user may choose from various style sheets provided by the designers, or may remove all added styles and view the site using the browser's default styling, or may override just the red italic heading style without altering other attributes.

4.1.3 JavaScript

JavaScript s a high-level, interpreted scripting language that conforms to the ECMAScript specification. JavaScript has curly-bracket syntax, dynamic typing, prototype-based object-orientation, and first-class functions. Alongside HTML and CSS, JavaScript is one of the core technologies of the World Wide Web. JavaScript enables interactive web pages and is an essential part of web applications. The vast majority of websites use it, and major web browsers have a dedicated JavaScript engine to execute it. As a multi-paradigm language, JavaScript supports event-driven, functional, and imperative (including object-oriented and prototype-based) programming styles. It has APIs for working with text, arrays, dates, regular expressions, and the DOM, but the language itself does not include any I/O, such as networking, storage, or graphics facilities. It relies upon the host environment in which it is embedded to provide these features.

Initially only implemented client-side in web browsers, JavaScript engines are now embedded in many other types of host software, including server-side in web servers and databases, and in non-web programs such as word processors and PDF software, and in runtime environments that make JavaScript available for writing mobile and desktop applications, including desktop widgets.

The terms Vanilla JavaScript and Vanilla JS refer to JavaScript not extended by any frameworks or additional libraries. Scripts written in Vanilla JS are plain JavaScript code. Google Chrome extensions, Opera's extensions, Apple's Safari 5 extensions, Apple's Dashboard Widgets, Microsoft's Gadgets, Yahoo! Widgets, Google Desktop Gadgets, and Serence Klipfolio are implemented using JavaScript.

4.1.4 ReactJS

React.js is an open-source JavaScript library that is used for building user interfaces specifically for single-page applications. It's used for handling the view layer for web and mobile apps. React also allows us to create reusable UI components. React was first created by Jordan Walke, a software engineer working for Facebook. React first deployed on Facebook's newsfeed in 2011 and on Instagram.com in 2012.

React allows developers to create large web applications that can change data, without reloading the page. The main purpose of React is to be fast, scalable, and simple. It works only on user interfaces in the application. This corresponds to the view in the MVC template. It can be used with a combination of other JavaScript libraries or frameworks, such as Angular JS in MVC.

React JS is also called simply to React or React.js.

React.js properties includes the following

- React.js is declarative
- React.js is simple
- React.js is component based
- React.js supports server side
- React.js is extensive
- React.js is fast
- React.js is easy to learn

4.1.5 JSX

In React, instead of using regular JavaScript for templating, it uses JSX. JSX is a simple JavaScript that allows HTML quoting and uses these HTML tag syntax to render subcomponents. HTML syntax is processed into JavaScript calls of React Framework. We can also write in pure old JavaScript. As we have already seen that, all of the React components have a **render** function. The render function specifies the HTML output of a React

component. JSX(JavaScript Extension), is a React extension which allows writing JavaScript code that looks like HTML. In other words, JSX is an HTML-like syntax used by React that extends ECMAScript so that **HTML-like** syntax can co-exist with JavaScript/React code. The syntax is used by **preprocessors** (i.e., transpilers like babel) to transform HTML-like syntax into standard JavaScript objects that a JavaScript engine will parse.

4.2 : BACK END

4.2.1 Firebase :

Google Firebase is a Google-backed application development software that enables developers to develop iOS, Android and Web apps. Firebase provides tools for tracking analytics, reporting and fixing app crashes, creating marketing and product experiment.

Firebase offers a number of services, including:

- Analytics – Google Analytics for Firebase offers free, unlimited reporting on as many as 500 separate events. Analytics presents data about user behaviour in iOS and Android apps, enabling better decision-making about improving performance and app marketing.
- Authentication – Firebase Authentication makes it easy for developers to build secure authentication systems and enhances the sign-in and onboarding experience for users. This feature offers a complete identity solution, supporting email and password accounts, phone auth, as well as Google, Facebook, GitHub, Twitter login and more.
- Realtime database – the Firebase Realtime Database is a cloud-hosted NoSQL database that enables data to be stored and synced between users in real time. The data is synced across all clients in real time and is still available when an app goes offline.
- Performance – Firebase Performance Monitoring service gives developers insight into the performance characteristics of their iOS and Android apps to help them determine where and when the performance of their apps can be improved.

CHAPTER 5 : Conclusion & Future Scope

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 unauthorised 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.

5.2 Future Scope

5.2.1: Authentication

Authentication is the process of verifying identity. A unique identifier is associated with a user which is the username or userid. Traditionally, we use a combination of username and password to authenticate a user.In this Project we will use Firebase Authentication .

5.2.1.1: Firebase Authentication

Firebase Authentication aims to make building secure authentication systems easy, while improving the sign-in and onboarding experience for end users. It provides an end-to-end identity solution, supporting email and password accounts, phone auth, and Google, Twitter, Facebook, and GitHub login, and more.

5.2.2: GOOGLE MAP

Later on we will going to add a feature of **google map** through which a user can track his/her order. He /She can track real time status of his /her order .

Google Maps is a Webased service that provides detailed information about geographical regions and sites around the world. In addition to conventional road maps, Google Maps offers aerial and satellite views of many places. In some cities, Google Maps offers street views comprising photographs taken from vehicles.

5.2.3: PAYMENT GATEWAY

A payment gateway is **a technology used by merchants to accept debit or credit card , UPI , Net Banking purchases from customers**. The term includes not only the physical card-reading devices found in brick-and-mortar retail stores but also the payment processing portals found in online store.

References

1. **Software Engineering 1st Edition by Udit Agarwal**
Is a useful book for students or professionals learning Software Requirement and Analysis. The book comprises previous years question papers, and important questions and answers to help readers understand the subject.

2. **Learning React JavaScript Library From Scratch Kindle Edition**
It will walk you step by step through the process of setting up a development environment and learning Reactive programming from start to finish.

3. **The Road to React with Firebase**
The Road to React with Firebase is your personal journey to master advanced React for business web applications in JavaScript whereas Firebase is used to replace everything that you would want from a backend application.