A Project Report

on

Foody : Web Application

Submitted in partial fulfillment of the
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CANDIDATE'S DECLARATION

I/We hereby certify that the work which is being presented in the project, entitled **"FOODY: Web Application "** in partial fulfillment of the requirements for the award of the **BACHELOR OF TECHNOLOGY IN COMPUTER SCIENCE AND ENGINEERING**
submitted in the **School of Computing Science and Engineering** of Galgotias University, Greater Noida, is an original work carried out during the period of **JULY-2021 to DECEMBER-2021**, under the supervision of **Mr. Sudeept Singh Yadav, Associate Professor**, **Department of Computer Science and Engineering** of School of Computing Science and Engineering , Galgotias University, Greater Noida

The matter presented in the project has not been submitted by me/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.

Supervisor

(Mr. Sudeept Singh Yadav, Associate Professor)

CERTIFICATE

The Final Thesis/Project/ Dissertation Viva-Voce examination of **18SCSE1140066 – MRIGANK MATHUR , 18SCSE1140058–MOHD AZEEM KHAN** has been held on_____and his/her work is recommended for the award of **BACHELOR OF TECHNOLOGY IN COMPUTER SCIENCE AND ENGINEERING**.

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

Signature of Project Coordinator **Signature of Dean**

Date:

Place:

ABSTRACT

Foody is an online ordering system that simplifies the process of ordering foods. The suggested system displays a user interface and updates the menu to simplify customer work using all the options available. Customers can select several items for ordering and view order information before logging out. The consumer receivesan order confirmation. The order is placed in the queue and updated to the database. This technology helps the employees to process orders in real time and efficiently with minimal errors. Sometimes you don't feel like cooking or do not feel like going to the restaurants, so here is an online meal System of order management to support customers in immediately getting meals supplied. It is developed mostly for each restaurant with different products for a affordable food price. It offers an effective means of ordering your food and delivers food almost in no time. Customer, using a password, is able to select his/her favourite foods to secure their information and then place an order, also specify the amount and can then pay for it. If the order is placed, it is kept in the restaurant database and subsequently the personnel handle it effectively. In order to increase sales, the internet also provided the same benefits to traditional restaurants. The internet has also led to the creation of "intermediaries" for restaurant companies, such as food ordering and delivery companies. Such intermediaries create partnerships with restaurants and list on their online platform the associated restaurants (i.e. mobile application websites). In the online platform, customers can then position their orders. These intermediaries ‘income is generated either through restaurant commission fees, customer delivery fees, or both. Foody website enable customers to create a food delivery platform by expanding their choice and convenience witha single tap of their mobile phones to order from a wide range of restaurants. Restaurant businesses that have focused primarily on local customers now try to maximize their business output by offering their services to a large number of customers around the world through a single web application. It is therefore not possible to underestimate the role of online web applications as it allows users / customers to access it in a single touch. Online food ordering system provides the restaurants with a great platform by stabilizing their sales and sustaining their business. Whether the restaurants are big or small, theyall try to get a piece of cake.

Keywords: Effectiveness, Intermediaries , Online food apps, Made to offer

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CHAPTER-1

Introduction

Today, every branch of technology is aiming to make human existence easy. Interneteateries have grown enormously in the last few years. The "online food ordering system" can basically becharacterized as a simple, convenient way for clients to buyonline meals without having to visit their business. This approach is particularly helpful for people who are very busy at work and/or in their homes and have no timeto cook or leave. Customers truly do not require technical expertise to operate it.

Because of its extremely modestly designed. It contains full dashboard details on menus, orders, etc. In any online food sector, this system can be applied. In summary, the food software and the consumer pleasant online ordering system are simple, convenient and entirely open-ended. For marketers, one of the most significant impacts has been the emergence of virtual stores that sell products and services online. Consumers can now purchase goods and services virtually anywhere, 24*7 anytime, without geographical and temporal boundaries. The IndianHospitality industry has emerged as one of the main industry that drives the growth of Indian service sector. Hospitality industry has evolved sensitive towards the needsand desires of the people. Customer loyalty and Customer satisfaction is a term frequently used in hospitality marketing. It measures how products and services supplied by a company meet customer expectation. Customer satisfaction is definedas "the number of customers, or percentage of total customers, whose reported experience with a firm, its products or its services exceeds satisfaction goals. The loyal customers give free word of the mouth judgment. There are extrinsicand intrinsic components of the food service decision making process. The extrinsic influence includes culture, socio economic, reference group, and household and intrinsic influence covers needs, experience, personality and self-image, and perception and attitudes. Young generation even donate to charities and use their mobile devices for the same. In fact, among those who donate, nearly 50% do it by phone. A shopping habit that sets millennial apart from no millennialis their tendency to shop in groups and seek the opinion of others. When youngsters dine out, they're often in search of something exotic, adventuresome, memorable or new to explore duringtheir dining experience. In short, it's easy, convenient, completely transparent food system and also customer-friendly online ordering system.

CHAPTER-2

Literature Survey

Industries that were lagging behind online orders will be left behind by increasingrestaurants. The implementation of modern technologies not only benefits our consumers but confirms thatthe company stands high.

Here are some of the real advantages of the ordering system online:

- Most of us rely on comfort with busy lifestyles. If you can order dinners faster, simpler andmore comfortable from your favourite restaurants, you aremore inclining towards the systembecause your wants are met.

- Online ordering of meals enables clients to place their order virtually fromanywhere at any time. This helps to ultimately save customers time that may undoubtedly be squandered on the road.

- This application does not take much time to order or the delivery of food. It isvery simple to use and it gives an efficient way also.

- It reduces the labor work. By ordering over an application, it can eventually reduce the staff work because it is replaced by the machine.

- While the order is being taken over phones or in person there might be some misunderstandingsand orders might not be that accurate. But by placing it online,it can be more precise and customers have the controls, they can customize the orders again and again and make their order crystal clear.

An ordering system is referred to as a set of detail methods that is being used in handling the ordering process. Food ordering can be computerized or done manually.Thos helps the customer to order their food themselves which is known as the customer self-ordering system. The customer self-ordering system can be defined as a computerized system that is being used by customers to place their own orders in the restaurant and allow the orders to be tracked, in order to prepare and deliver the food to the computers.

SELF-SERVICE/SELF-ORDERING IN RESTAURANT

Self-service or self-ordering in restaurant industry refers to the restaurant taking orders from customers through applying various types of technologies such as internet and many others. Self-service or self-ordering is successful when it is applied at restaurants in many other countries. The usage of the self-service or self- ordering technology is proven to benefit most of the investors. The implementation of alternative ordering can increase check size, free up counter staff that need to serve customers and take money handling out of service .The internet also takes orders and receives credit cards or debit cards payment. As a result, wrong order andlong queue can be avoided, order staff can be arranged to somewhere else and focusto speed up on delivery orders. On the other hand, a table-top touch screen order system can take customer orders as well as handle other customer requests such as refill drinks, call a waiter and make payment by credit card and debit card. Bytes, a restaurant located at Canterbury has been successfully standing apart from the competitors because of applying online self-service ordering and the payment concepts. The system used in Bytes allows the customers make an order through thetouch screen, and the order will be directed to bar or kitchen. The system also offersgames after a customer placed the orders while internet access will be provided to customers in the future. Touch screen ordering reduces the need of the waiter. The system also provides database for customers' habits and preferences, generate automatically.

In addition, the system should be supported by the food origin taste and services to maintain the customers' loyalty and satisfaction. However, widely implementing the food ordering system may cause the influx of labor due to theelimination of waiters in restaurant industry.

Even the system is important to be

implemented, yet there is still some risk in other factors such as a direct interaction and restaurant design concept, which need to be considered for ensuring the successof the system. develop an online fast food restaurant ordering system that allows customers to place orders anytime at any place.

The system helps to manage order from customer as well as advertise promotion. kitchen staff to view ordering information, management to manage fast food raw materials and staff to search customer delivery and profile information. This systemhelps to reduce queue issues during peak hours, speed up food preparation and increase customer volumes.

As a result, market share of fast food restaurant can be boosted up and increases return of investment for the investor. there are several aspects that should be includedin a good online food ordering system. System should be simple to navigate, not clustered and easy to make an order. The system should also have a secure payment gateway to protect their customers' credit cards information, fast and keep track on orders and sales history easily as well as generate a comprehensive sales report

HISTORY OF FAST FOOD/RESTAURANT

A fast food restaurant is a restaurant characterized both by food ready to eat quickly after ordering and by minimal service. One trait shared by all fast food establishments is that the customer pays for the food prior to consuming it. Often thisfood is referred to as fast food. The food in these restaurants is often cooked in bulk and in advance and kept warm or reheated on order. Although fast food restaurants are often viewed as a representation of modern technology, the concept of "ready cooked food to go" is as old as cities themselves, unique variations are historical in various cultures. Fast food industry still grows although there are indications that it is losing its share of the market to fast casual dining restaurants. McDonald's is, for instance, present in 126 countries on 6 continents and has around 31,000 restaurants worldwide. Some criticize fast food industry and its influence on humanity. They claim that its food is not healthy if consumed often, that they are cruel to the animals, that they exploit their workers, that they degrade local cultures because they shift taste of people from traditional cuisines, and that fast food habits are related to the increase of overweight and obesity among people.

CHAPTER 3

METHODOLOGY AND SYSTEM ANALYSIS

ANALYSIS OF EXISTING SYSTEM

Throughout the system analysis, an in-depth, study of end-user information is conducted, for producing functional requirement of the proposed system. Data about the existing ordering system is collected through several fact-finding techniques such as website visit and document review, at the beginning of this stage. The data collected facilities information required during detailed analysis. Astudy on the current system is performed based on the collected data. As a result, user requirement of the proposed system are determined. At the end of this stage, requirement specification is produced as deliverable.

THE EXISTING SYSTEM

The existing system happens to be a non computerized operating system were alloperations are done manually by the waiter carrying paper and to take down the order of the customer or making an order over the counter. This leads to mistakesbecause the waiter might not understand what the customer had ordered there forserving him/her a different menu. This could be so embarrassing because the customer might not take it lightly with the waiter which may lead to misunderstanding.

PROBLEMS OF EXISTING SYSTEM

Due to manual means being employed by the fast food restaurants, it is very difficult to satisfy the wants and needs of the customers. Most of the problemsinclude:

1. Mistakes are made when taking the orders of the customers
2. The process of collecting customers’ purchases order is verytedious. This makes it impossible to deliver goods on time.
3. It leads to lack of understanding between the customers and theemployees.
4. The record keeping system is poor. Losses of vital records have been reported in the past consequently. Besides, protecting the file system fromunauthorized access is a problem that has defiled solution.
5. Unnecessary time is wasted conveying information through the ladder of authority. Management at times seeks to get a copy of the customer’s orderform and this may take a lot of time to obtain it.

6. It causes reduction of production flow. These are the major problems facingthe existing system and would be corrected with the help of the proposed system.

OBJECTIVES OF THE PROPOSED SYSTEM

The proposed system is developed to manage ordering activities in fast food restaurant. It helps to record customer submitted orders. The system should coverthe following functions in order to support the restaurant's business process for achieving the objectives:

1. To allow the customer to make order, view order and make changes beforesubmitting their order and allow them make payment through prepayment card or credit card or debit card.

2. To provide interface that allows promotion and menu.

3. To prevent interface that shows customers’ orders detail to front-end andkitchen staffs for delivering customers’ orders

4. Tools that generate reports that can be used for decision making
5. A tool that allows the management to modify the food information such asprice, add a new menu and many others as well as tools for managing user,system menu and promotion records.

JUSTIFICATION FOR THE NEW SYSTEM

It is the purpose of the new system to address all the problems plaguing the presentsystem. This system will do the analyzing and storing of information either automatically or interactively. It will make use of REACT and MONGODB. This will be like this: a report is generated conforming to particular information neededby the management via the monitor. This will require the input of necessary data and record of fast food ordering and delivery and then a report is generated. The proposed system will also have some other features such as:

1. Accuracy in handling of data
2. The volume of paper work will be greatly reduced.

3. Fast rate of operation as in making the ordered food available and deliveredon time.

4. Flexibility (i.e. it can be accessed at any time)

5. Easy way to back up or duplicating data in CD’s in case of data loss

6. Better storage and faster retrieval system.

7. Errors in the reports will be greatly minimized.

CHAPTER 4

SYSTEM REQUIREMENTS

SOFTWARE REQUIREMENTS SPECIFICATION

Hardware Requirements

Number	Description
1	PC with 250 GB or more Hard disk.
2	PC with 2 GB RAM.
3	PC with Pentium 1 and Above.

Software Requirements

Number	Description	Type
1	Operating System	Windows XP / Windows
2	Language	React , HTML, CSS, JS
3	Database	MongoDB
4	IDE	Visual Code
5	Browser	Google Chrome

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

FRONT END

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 asJavaScript. 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 forthe 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 denotingstructural 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 usethem to interpret the content of the page.

HTML can embed programs written in a scripting language such as JavaScript, which affects the behavior and content of web pages. Inclusion of CSS defines thelook 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.

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 lowerpriority, 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 variousstyle sheets provided by the designers, or may remove all added styles and view thesite using the browser's default styling, or may override just the red italic heading style without altering other attributes.

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 andCSS, JavaScript is one of the core technologies of the World Wide Web. JavaScriptenables interactive web pages and is an essential part of web applications. The vastmajority 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. Ithas 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 nowembedded 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 PDFsoftware, 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'sChrome extensions, Opera's extensions, Apple's Safari 5 extensions, Apple's Dashboard Widgets, Microsoft's Gadgets, Yahoo! Widgets, Google Desktop Gadgets are implemented using JavaScript.

React JS

React is a declarative, efficient, and flexible JavaScript library for building user interfaces. It’s ‘V’ in MVC. React JS is an open-source, component-based front-end library responsible only for the view layer of the application. It is maintained by Facebook. React uses a declarative paradigm that makes it easier to reason about your application and aims to be both efficient and flexible. It designs simple views for eachstate in your application, and React will efficiently update and render just the right component when your data changes. The declarative view makes your code more predictable and easier to debug.

Features of React.js: There are unique features are available on React because that itis widely popular.

- **Use JSX:** It is faster than normal JavaScript as it performs optimizations whiletranslating to regular JavaScript. It makes it easier for us to create templates.

- **Virtual DOM:** Virtual DOM exists which is like a lightweight copy of the actual DOM. So for every object that exists in the original DOM, there is anobject for that in React Virtual DOM. It is exactly the same, but it does not have the power to directly change the layout of the document. Manipulating

DOM is slow, but manipulating Virtual DOM is fast as nothing gets drawn onthe screen.

- **One-way Data Binding:** This feature gives you better control over yourapplication.

- **Component:** A Component is one of the core building blocks of React. In otherwords, we can say that every application you will develop in React will be made up of pieces called components. Components make the task of building UIs much easier. You can see a UI broken down into multiple individual piecescalled components and work on them independently and merge them all in a parent component which will be your final UI.
- **Performance:** React.js use JSX, which is faster compared to normal JavaScriptand HTML. Virtual DOM is a less time taking procedure to update webpages content.

BOOTSTRAP

Bootstrap is a free and open-source CSS framework directed at responsive, mobile-first front-end web development. It contains CSS- and JavaScript-based design templates for typography, forms, buttons, navigation, and other interface components.

Why we use Bootstrap ?

- It is Faster and Easier way for Web-Development.
- It creates Platform-independent web-pages.

- It creates Responsive Web-pages.
- It designs the responsive web pages for mobile devices too.
- It is Free and open-source framework available on www.getbootstrap.com

: BACK END

Node Js –

Node.js is an open-source and cross-platform runtime environment for executing JavaScript code outside a browser. You need to remember that **NodeJSis not a framework and it's not a programming language**. Most people are confused and understand it's a framework or a programming language. We often use Node.js for building back-end services like APIs like Web App or Mobile App. It's used in production by large companies such as Paypal, Uber, Netflix, Walmart, and so on.

Features of NodeJS: There are other programming languages also which we canuse to build back-end services so what makes Node.js different I am going to explain.

1. It's easy to get started and can be used for prototyping and agile development
2. It provides fast and highly scalable services
3. It uses JavaScript everywhere, so it's easy for a JavaScript programmer to buildback-end services using Node.js
4. Source code cleaner and consistent.
5. Large ecosystem for open source library.

6. It has Asynchronous or Non-blocking nature.

EXPRESS –

Express is a small framework that sits on top of Node.js’s web server functionalityto simplify its APIs and add helpful new features.It makes it easier to organize your application’s functionality with middle ware and routing; it adds helpful utilities to Node.js’s HTTP objects;it facilitates the rendering of dynamic HTTP objects.

Express is a part of **MEAN** stack, a full stack JavaScript solution used in buildingfast, robust, and maintainable production web applications.
MongoDB(Database)
ExpressJS(Web Framework)

AWS S3 - AWS Storage Services:

AWS offers a wide range of storage services that can be provisioned depending onyour project requirements and use case. AWS storage services have different provisions for highly confidential data, frequently accessed data, and the not so frequently accessed data. You can choose from various storage types
namely, *object storage, file storage, block storage services, backups,* and *datamigration* options. All of which fall under the AWS Storage Services list.

AWS Simple Storage Service (S3): From the aforementioned list, S3, is the object storage service provided by AWS. It is probably the most commonly used, go-to storage service for AWS users given the features like extremely high availability, security, and simple connection to other AWS Services. AWS S3 can be used by people with all kinds of use cases like mobile/web applications, bigdata, machine learning and many more.

AWS S3 Terminology:

- **Bucket:** Data, in S3, is stored in containers called *buckets*.
    - Each bucket will have its own set of policies and configuration. Thisenables users to have more control over their data.
    - Bucket Names must be unique.
    - Can be thought of as a parent folder of data.
    - There is a limit of 100 buckets per AWS accounts. But it can beincreased if requested from AWS support.
- **Bucket Owner:** The person or organization that owns a particular bucket isits *bucket owner*.
- **Import/Export Station:** A machine that uploads or downloads data to/fromS3.
- **Key:** Key, in S3, is a unique identifier for an object in a bucket. For example ina bucket 'ABC' your *GFG.java* file is stored at *javaPrograms/GFG.java* then *'javaPrograms/GFG.java'* is your object keyfor *GFG.java*.
    - It is important to note that 'bucketName+key' is unique for all objects.
    - This also means that there can be only one object for a key in a bucket. If you upload 2 files with the same key. The file uploadedlatest will overwrite the previously contained file.
- **Versioning:** Versioning means to always keep a record of previously uploadedfiles in S3. Points to note:
    - Versioning is not enabled by default. Once enabled, it is enabled forall objects in a bucket.

  - Versioning keeps all the copies of your file, so, it adds cost for storingmultiple copies of your data. For example, 10 copies of a file of size 1GB will have you charged for using 10GBs for S3 space.
  - Versioning is helpful to prevent unintended overwrites and deletions.
  - Note that objects with the same key can be stored in a bucket ifversioning is enabled (since they have a unique version ID).

- **Bucket Policies:** A document for verifying the access to S3 buckets from within your AWS account, this controls which services and users have whatkind of access to your S3 bucket. Each bucket has its own Bucket Policies.
- **Lifecycle Rules:** This is a cost-saving practice that can move your files to AWS Glacier (The AWS Data Archive Service) or to some other S3 storageclass for cheaper storage of old data or completely delete the data after the specified time.

Features of AWS S3:

- **Durability:** AWS claims Amazon S3 to have a 99.999999999% of durability (11 9's). This means the possibility of losing your data stored on S3 is one in abillion.
- **Availability:** AWS ensures that the up-time of AWS S3 is 99.99% for standardaccess.
  - Note that availability is related to being able to access data anddurability is related to losing data altogether.
- **Server-Side-Encryption (SSE):** AWS S3 supports three types of SSE models:
  - **SSE-S3:** AWS S3 manages encryption keys.
  - **SSE-C:** The customer manages encryption keys.

    - **SSE-KMS:** The AWS Key Management Service (KMS) manages theencryption keys.

- **File Size support:** AWS S3 can hold files of size ranging from 0 bytes to 5terabytes. A 5TB limit on file size should not be a blocker for most of the applications in the world.
- **Infinite storage space:** Theoretically AWS S3 is supposed to have infinitestorage space. This makes S3 infinitely scalable for all kinds of use cases.
- **Pay as you use:** The users are charged according to the S3 storage they hold.
- **AWS-S3** is region-specific.

S3 storage classes:

AWS S3 provides multiple storage types that offer different performance andfeatures and different cost structure.

- **Standard:** Suitable for frequently accessed data, that needs to be highlyavailable and durable.
- **Standard Infrequent Access (Standard IA):** This is a cheaper data-storage class and as the name suggests, this class is best suited for storing infrequentlyaccessed data like log files or data archives. Note that there may be a per GB data retrieval fee associated with Standard IA class.
- **Intelligent Tiering:** This service class classifies your files automatically intofrequently accessed and infrequently accessed and stores the infrequently accessed data in infrequent access storage to save costs. This is useful for unpredictable data access to an S3 bucket.
- **One Zone Infrequent Access (One Zone IA):** All the files on your S3 have their copies stored in a minimum of 3 Availability Zones. One Zone IA storesthis data in a single availability zone. It is only recommended to use this storage class for infrequently accessed, non-essential data. There may be a per GB cost for data retrieval.

- **Reduced Redundancy Storage (RRS):** All the other S3 classes ensure the durability of 99.999999999%. RRS only ensures a 99.99% durability. AWS nolonger recommends RRS due to its less durability. However, it can be used to store non-essential data.

MONGO DB

MongoDB, the most popular NoSQL database, is an open-source document- oriented database. The term 'NoSQL' means 'non-relational'. It means that MongoDB isn't based on the table-like relational database structure but provides an altogether different mechanism for storage and retrieval of data. This format ofstorage is called BSON (similar to JSON format).

Features of MongoDB:

- **Document Oriented**: MongoDB stores the main subject in the minimal number of documents and not by breaking it up into multiple relational structures like RDBMS. For example, it stores all the information of a computer in a single document called Computer and not in distinct relationalstructures like CPU, RAM, Hard disk, etc.

- **Indexing**: Without indexing, a database would have to scan every document ofa collection to select those that match the query which would be inefficient. So, for efficient searching Indexing is a must and MongoDB uses it to process huge volumes of data in very less time.

- **Scalability**: MongoDB scales horizontally using sharding (partitioning data across various servers). Data is partitioned into data chunks using the shard key, and these data chunks are evenly distributed across shards that resides across many physical servers. Also, new machines can be added to a runningdatabase.
- **Replication and High Availability**: MongoDB increases the data availability with multiple copies of data on different servers. By providing redundancy, it protects the database from hardware failures. If one server goes down, the datacan be retrieved easily from other active servers which also had the data storedon them.
- **Aggregation**: Aggregation operations process data records and return thecomputed results. It is similar to the GROUPBY clause in SQL. A few aggregation expressions are sum, avg, min, max, etc

4.2.4 GIT –

- Git is a free open source **distributed version control system** designed to handle everything from small to very large projects with speed and efficiency.
- Git relies on the **basis of distributed development** of a software where more than one developer may have access to the source code of a specific application and can modify changes to it which may be seen by other developers..
- Every git working directory is **a full-fledged repository** with complete history and full version-tracking capabilities, independent of network access or a central server.

- Git **allows a team of people to work together**, all using the same files. And it helps **the team cope up with the confusion** that tends to happen **when multiple people are editing the same files**.

Characteristics of Git

1. Strong support for non-linear development

- Git supports rapid branching and merging, and includes specific tools forvisualizing and navigating a non-linear development history.
- A major assumption in Git is that a change will be merged more often than it iswritten.
- **Branches** in Git **are very lightweight**.

2. Distributed development

- Git **provides** each developer **a local copy** of the entire development history,and changes are copied from one such repository to another.
- The changes can be merged in the same way as a locally developed branch veryefficiently and effectively.

3. Compatibility with existing systems/protocol

- Git has a CVS server emulation, which enables the use of existing CVS clientsand IDE plugins to access Git repositories.

OPEN STREET MAP –

Maps have become an integral part of our everyday lives. From driving to a location to finding some restaurants or stores nearby or while planning travel, almost every type of app uses maps. Using maps helps us to add location-basedservices in our application.

One way to add maps in a web application is using Leaflet JS. Leaflet JS is an open-source JavaScript library for adding simple and interactive web maps. It can add the map data to the map layers and has features like panning, zooming, etc thatmost of the applications require. Though leaflet provides some core features required in any map application, an easy way to increase the functionality of maps is using third-party plugins. As leaflet is an open-source library i.e. its source code is available on GitHub, there have been a lot of contributions and there are a lot of plugins available.

So, Leaflet is a map API and it helps us to interact with the map data but it is not providing any data. Nor does it provide the map itself as it is not a mapping service. So how do we get the map? The answer is that Leaflet depends on third parties to provide the basemap i.e Leaflet is built in such a way that it can be used with multiple base map layers. Generally, Leaflet is used with OpenStreetMaps butwe can even use other map providers like Mapbox, Ersi, Bing Map Layers, etc.

CHAPTER 5
APPLICATION DESIGN / IMLEMENTATION

DESIGN STANDARD

The system is designed with several interaction cues on each web page that makes up the web application . These cues are well-defined such as to make several functionality that the application exposes to collect, process and output data. Accessto these functionalities is made possible by the well designed user interface which embodies several technologies such as AJAX (Asynchronous JavaScript and XML)to process data. The application is built in a modular form where these functionalities are built into modules. Some of the modules are as follows:

1. Main.jsx
2. Payment.js
3. User.js
4. Items.js

OUTPUT SPECIFICATION

The system is designed in such a way that it efficiently provides output to the user promptly and in a well organized manner. The format for the several output are make available on the output web pages. Output can be relayed using the followingpage modules:

1. Product_list.jsx: This display output information for the list of food delicacieswhich are currently available

2. Search_result.jsx: This displays output information for the order report

3. Home_page.jsx: This displays output information for the home page items details

INPUT SPECIFICATION.

The system is designed to accept several input details efficiently through input forms and user clicks. The data captured through the user keystrokes and clicks arereceived by specific modules on the system and relayed to the back-end of the system for processing.

DATABASE SPECIFICATION

The database system used to implement the back-end of the system is MongoDB.Access to the system was made possible by a graphical interface with an ISAM engine. The database name is foody and the structure of the database are as follows:1. User

2. Payment

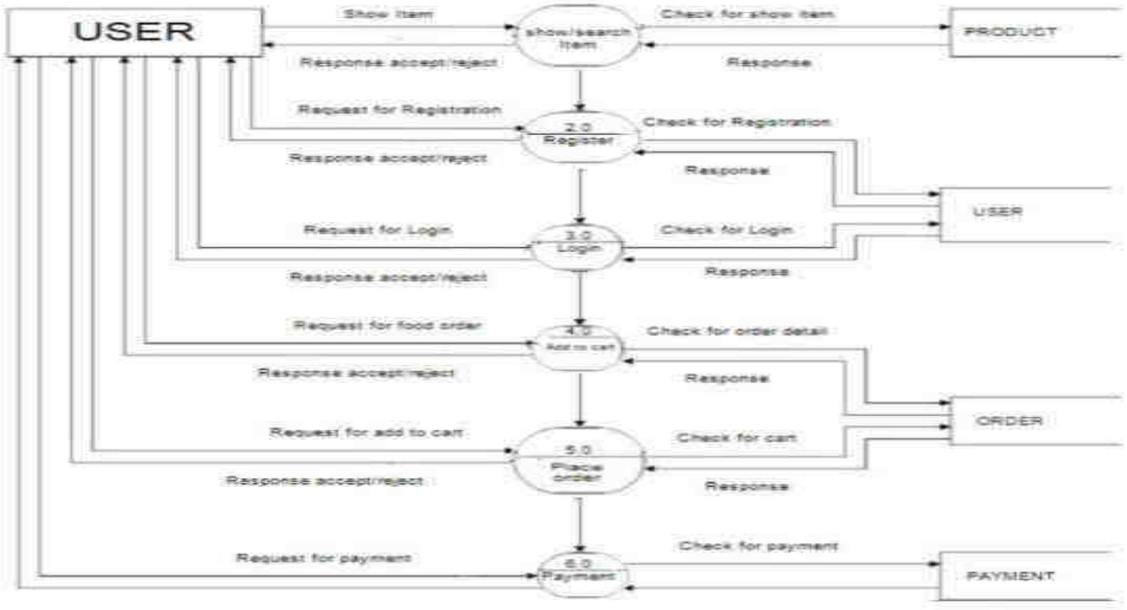
3. Products

4. order

DFD -1

1-level DFD:

In 1-level DFD, the context diagram is decomposed into multiple bubbles/processes. In this level, we highlight the main functions of the systemand breakdown the high-level process of 0-level DFD into subprocesses.



ER Diagram

An Entity may be an object with a physical existence – a particular person, car,house, or employee – or it may be an object with a conceptual existence – a company, a job, or a university course.

An Entity is an object of Entity Type and set of all entities is called as entity set.e.g.; E1 is an entity having Entity Type Student and set of all students is called Entity Set. In ER diagram, Entity Type is represented as:

Below shown are the ER diagrams that are used to construct this application Fig-1. This abovesimulation flow is with respect to customer point of view. And the restaurant manager or staff can keep on track of the orders by viewing the databaseor by the notification

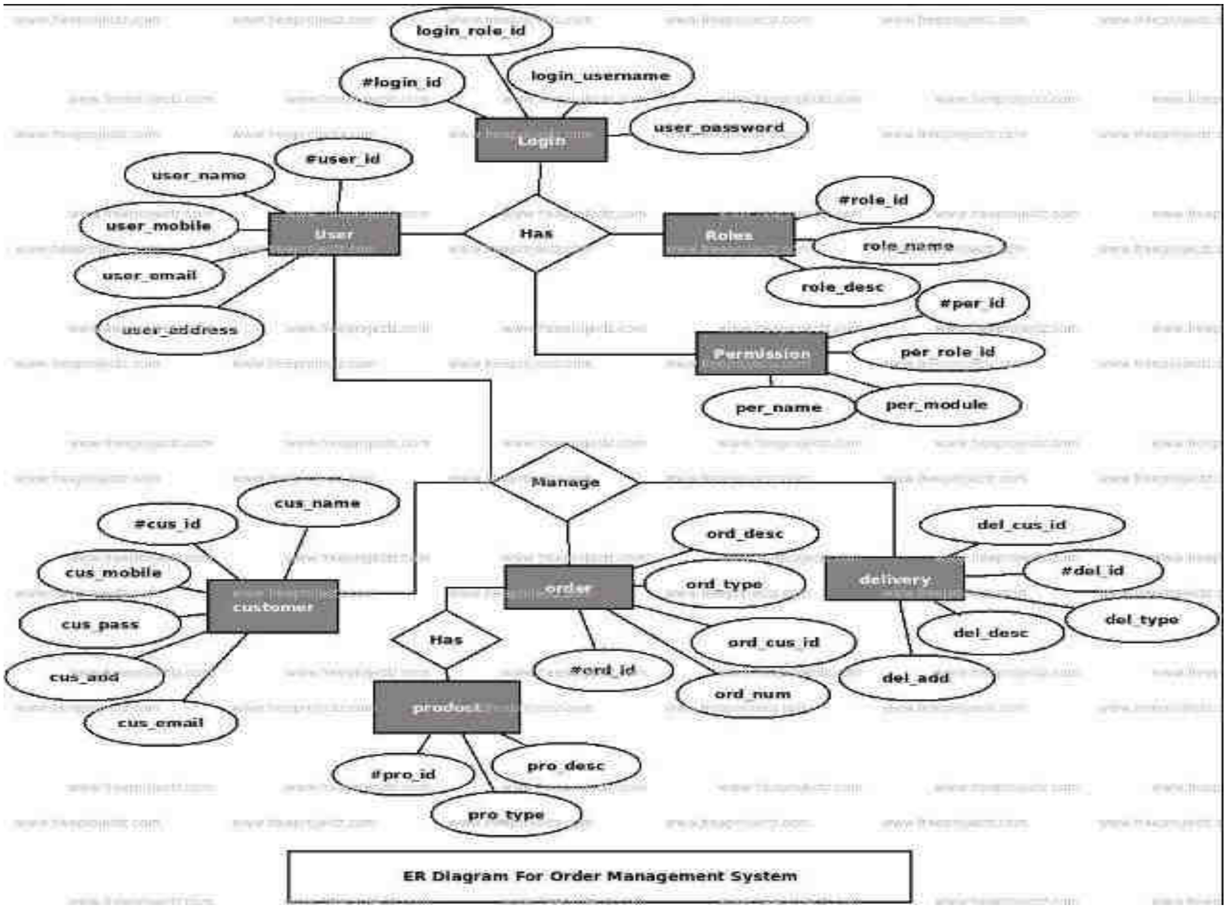


Fig-1 (ER Diagram)

Application

The application starts by displaying the Home Page with a dashboard of delivery, dine out and Nightlife. When the user can navigate or can search for any restaurants. If the user is ordering for first time i.e. then, he/she has to first ‘Register’ and then they can start viewing the deals. Else, if it’s not their first time then they have to ‘Login’ with all the credentials such as filling his/her first name, last name, phone number, Email Id, address and password. He/she has to choose theirfavorite dishes from the menu, then place their favorite dishes in the food cart,this food cart will help them to customize the orders like increasing the quantity, removing the food items etc. Oncehe/she is done customizing their orders, they cancheckout and will be redirected to the final order page including their personal details, their orders, total amount to be paid with appropriate payment method. Lastly, they can just pay the amount by selecting the payment method of their choice and simply log-out.

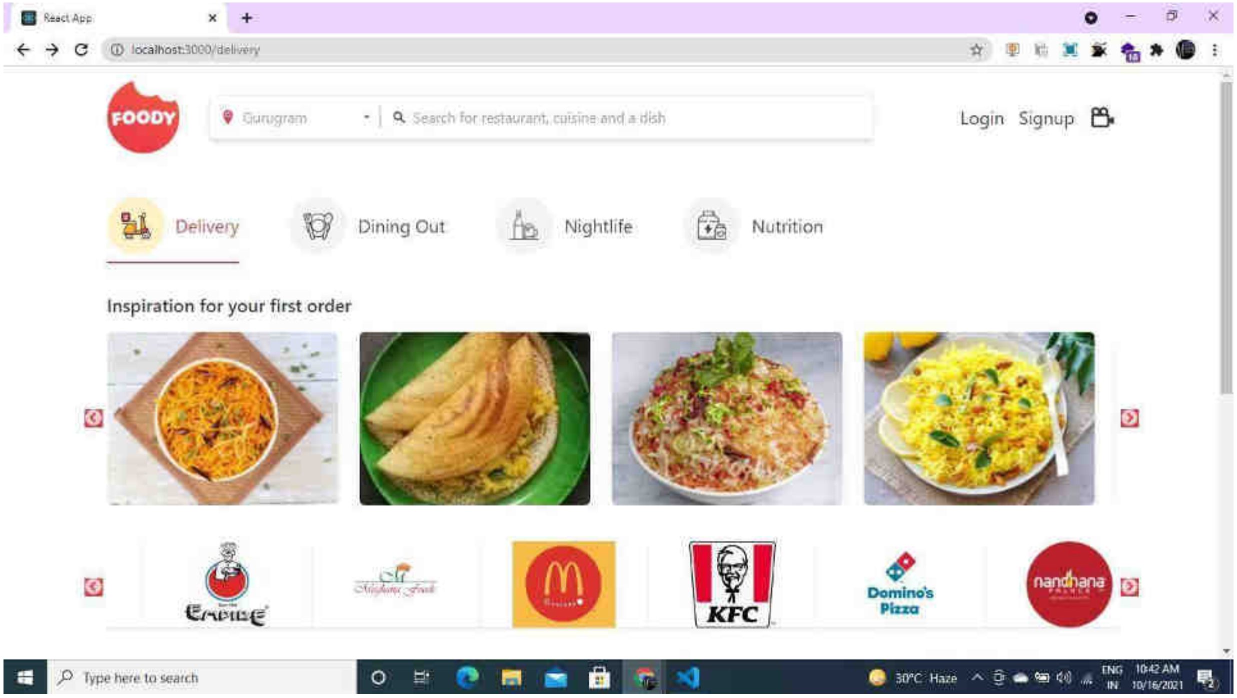
Home Page

It is the home page layout the home page is located in the root directory of a website.Most web server allow the home page to have one of several different filenames.

Examples include index.html, default.html, and home.html. The default filename of awebsite's home page can be customized on both Apache and IIS servers. Since the home page file is loaded automatically from the root directory, the home

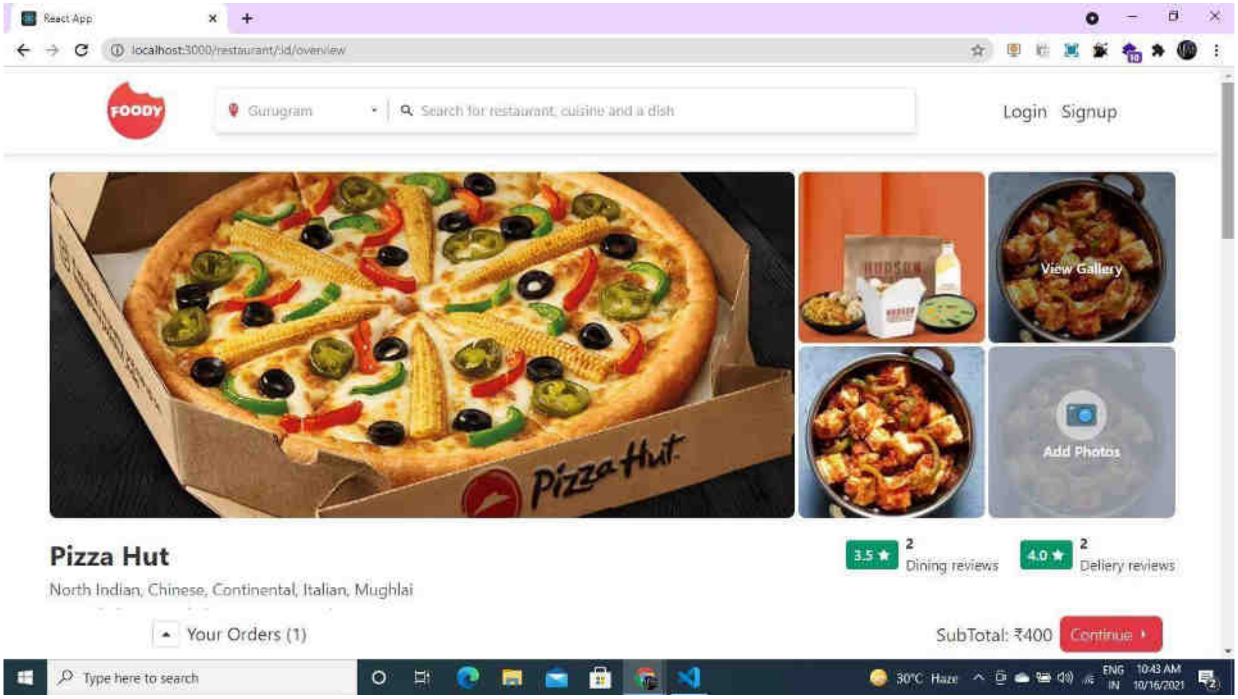
page URL does not need need to include the filename.

There is no standard home page layout, but most home pages include a navigation bar that provides links to different sections within the website. Other common elements found on a home page include a search bar, information about the website,and recent news or updates. Some websites include information that changes every day. For example, The Foody home page includes a restaurant and different cuisinesfor the day.



Restaurant Page

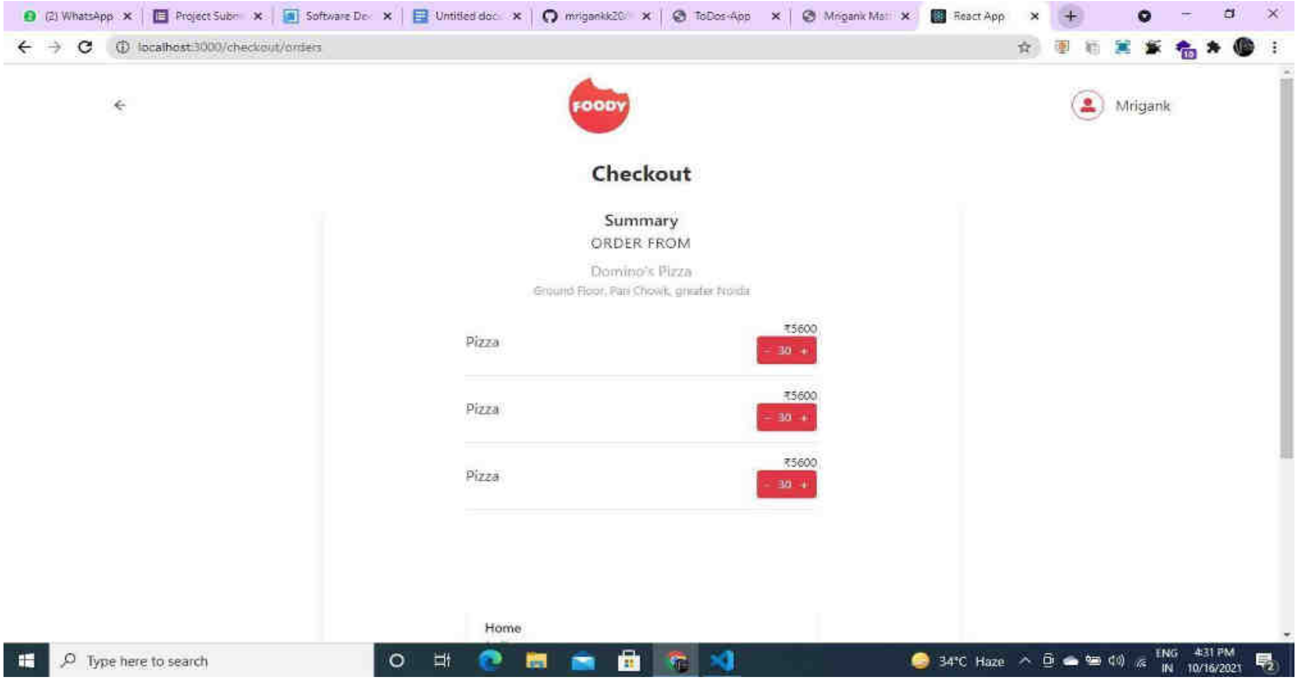
The first thing to do while deciding your restaurant layout is to ensure that the design and layout are in sync with the concept and theme of your restaurant. The restaurant design will vary significantly for different types of restaurant formats. For example, quick-service restaurants are designed towards fast eating for a quicktable turnover, while fine dining restaurants aim to seat customers for a longer period. That being said, the way the restaurant layout is sketched will have a huge impact on your restaurant operations. The efficiency of the layout will reflect in the ease with which operations are carried out in your restaurant



Check-out Page

A checkout page is any website page shown to a customer to conclude a transaction.It is the digital equivalent of arriving at the checkout counter at any store. Dependingupon the nature of the transaction and the product or service being offered, online food ordering websites can have either multiple checkout pages or a single checkoutpage.

The checkout page is shown at the end of the checkout process, giving the customera series of payment options and showing them an overview of their ordering cart



Checkout

Summary

ORDER FROM

Domino's Pizza

Ground Floor, Pari Chowk, greater Noida

Pizza	₹5600 - 30 +
Pizza	₹5600 - 30 +
Pizza	₹5600 - 30 +

TESTING AND IMPLEMENTATION

The term implementation has different meanings ranging from the conversationof a basic application to a complete replacement of a computer system. The procedures however, are virtually the same. Implementation includes all those activities that take place to convert from old system to new. The new system may be totally new replacing an existing manual or automated system or it maybe major modification to an existing system. The method of implementation and time scale to be adopted is found out initially. Proper implementation is essential to provide a reliable system to meet organization requirement.

UNIT TESTING

Introduction

In computer programming, unit testing is a software testing method by which individual units of source code, sets of one or more computer program modulestogether with associated control data, usage procedures, and operating procedures, are tested to determine whether they are fit for use. Intuitively, onecan view a unit as the smallest testable part of an application. In procedural programming, a unit could be an entire module, but it is more commonly an individual function or procedure. In object-oriented programming, a unit is often an entire interface, such as a class, but could be an individual method.

Unit tests are short code fragments created by programmers or occasionallyby white box testers during the development process. It forms the basis for component testing. Ideally, each test case is independent from the others.

Substitutes such as method stubs, mock objects, fakes, and test harnesses canbe used to assist testing a module in isolation. Unit tests are typically writtenand run by software developers to ensure that code meets its design and behaves as intended.

Benifits

The goal of unit testing is to isolate each part of the program and show that theindividual parts are correct. A unit test provides a strict, written contract that the piece of code must satisfy. As a result, it affords several benefits.

1) Find problems early : Unit testing finds problems early in the developmentcycle. In test-driven development (TDD), which is frequently used in both extreme programming and scrum, unit tests are created before the code itself is written. When the tests pass, that code is considered complete. The same unit tests are run against that function frequently as the larger code base is developed either as the code is changed or via an automated process with thebuild. If the unit tests fail, it is considered to be a bug either in the changed code or the tests themselves. The unit tests then allow the location of the fault or failure to be easily traced. Since the unit tests alert the development team ofthe problem before handing the code off to testers or clients, it is still early in the development process.

2) Facilitates Change : Unit testing allows the programmer to refactor code orupgrade system libraries at a later date, and make sure the module still works correctly (e.g., in regression testing). The procedure is to write test cases for all functions and methods so that whenever a change causes a fault, it can be quickly identified. Unit tests detect changes which may break a design contract.

3) Simplifies Integration : Unit testing may reduce uncertainty in the unitsthemselves and can be used in a bottom-up testing style approach. By testingthe parts of a program first and then testing the sum of its parts, integration testing becomes much easier.

4) Documentation : Unit testing provides a sort of living documentation of the system. Developers looking to learn what functionality is provided by a unit, and how to use it, can look at the unit tests to gain a basic understanding of the unit's interface (API).Unit test cases embody characteristics that are critical to the success of the unit. These characteristics can indicate appropriate/inappropriate use of a unit as well as negative behaviors that are to be trapped by the unit. A unit test case, in and of itself, documents these critical characteristics, although many software development environments do not relysolely upon code to document the product in development.

INTEGRATION TESTING

Integration testing (sometimes called integration and testing, abbreviated I&T)is the phase in software testing in which individual software modules are combined and tested as a group. It occurs after unit testing and

before validation testing. Integration testing takes as its input modules that have been unit tested, groups them in larger aggregates, applies tests defined inan integration test plan to those aggregates, and delivers as its output the integrated system ready for system testing.

Purpose

The purpose of integration testing is to verify functional, performance, and reliability requirements placed on major design items. These "design items", i.e., assemblages (or groups of units), are exercised through their interfaces using black-box testing, success and error cases being simulated via appropriate parameter and data inputs. Simulated usage of shared data areas and inter-process communication is tested and individual subsystems are exercised through their input interface. Test cases are constructed to test whether all the components within assemblages interact correctly, for exampleacross procedure calls or process activations, and this is done after testing individual modules, i.e., unit testing. The overall idea is a "building block" approach, in which verified assemblages are added to a verified base which is then used to support the integration testing of further assemblages. Software integration testing is performed according to the software development life cycle (SDLC) after module and functional tests. The cross-dependencies for software integration testing are: schedule for integration testing, strategy and selection of the tools used for integration, define the cyclomatical complexity of the software and software architecture, reusability of modules and life-cycleand versioning management. Some different types of integration testing are

big-bang, top-down, and bottom-up, mixed (sandwich) and risky-hardest. OtherIntegration Patterns are: collaboration integration, backbone integration, layer integration, client-server integration, distributed services integration and high-frequency integration.

5.6 : SYSTEM TESTING

System testing of software or hardware is testing conducted on a complete,integrated system to evaluate the system's compliance with its

specified requirements. System testing falls within the scope of black-box testing, and as such, should require no knowledge of the inner design of the code or logic. As a rule, system testing takes, as its input, all of the "integrated"software components that have passed integration testing and also the softwaresystem itself integrated with any applicable hardware system(s). The purpose of integration testing is to detect any inconsistencies between the software unitsthat are integrated together (called assemblages) or between any of

the assemblages and the hardware. System testing is a more limited type of testing; it seeks to detect defects both within the "inter-assemblages" and alsowithin the system as a whole.

System testing is performed on the entire system in the context of a Functional Requirement Specification(s) (FRS) and/or a System

Requirement Specification (SRS). System testing tests not only the design, butalso the behavior and even the believed expectations of the customer. It is alsointended to test up to and beyond the bounds defined in the software/hardwarerequirements specification(s).

CHAPTER 6
RESULT

Below are some of the results/consequences obtained from this onlinefood ordering management system software:

- Offering Online food ordering helps the customers to place ordermore conveniently.

- Traditional long queues to fetch the food or the take-outs will nolonger exist.

- This proposed system can even be used by the customers with nosuch technical background.

- Labor work is almost reduced.

- Also, people can have food from their favorite restaurants. Just ‘oneclick’ and their favorite restaurants delicious food will be right at thedoor.

- Last but not least, it saves the customer time and that time can beused by customers into something more productive.

From Fig.2 (a)-(h) are some of the snapshots of our online food ordering application.

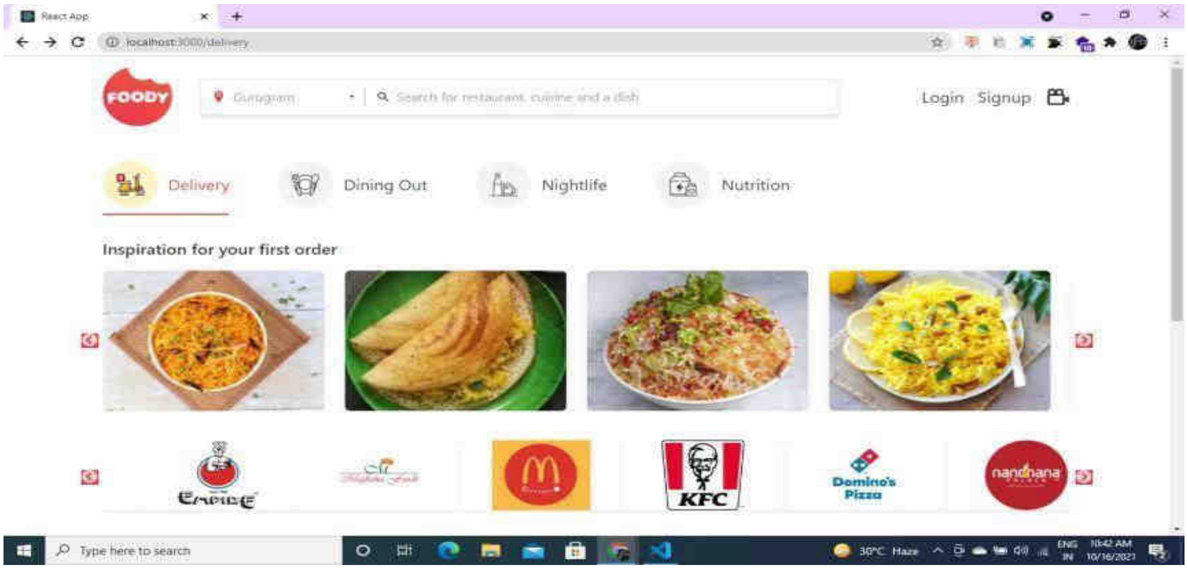


Fig.2(a). The above snapshot is of the home page

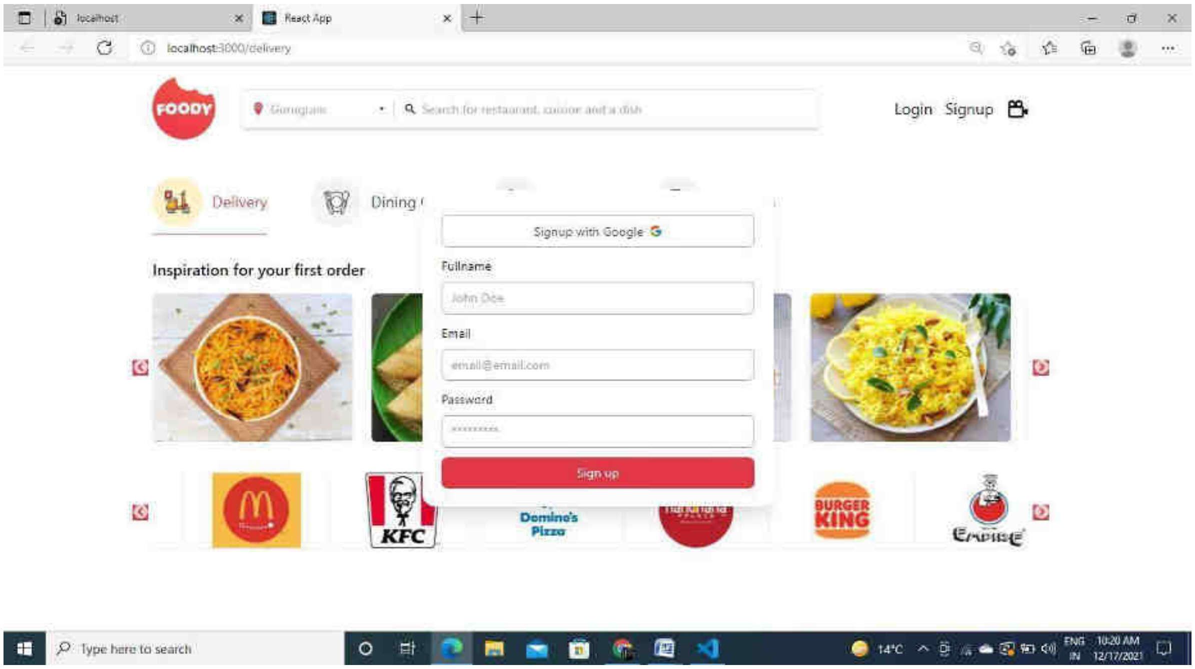


Fig.2(b). The above snapshot is of the Signup page.

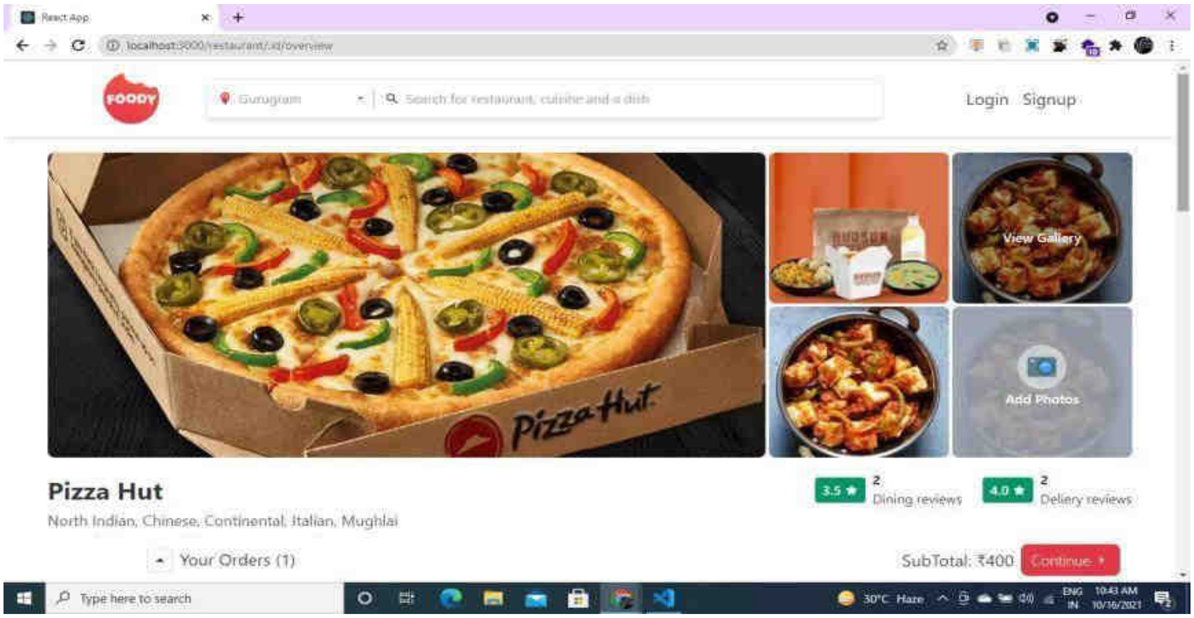


Fig.2(c). The above snapshot is of the restaurant layout

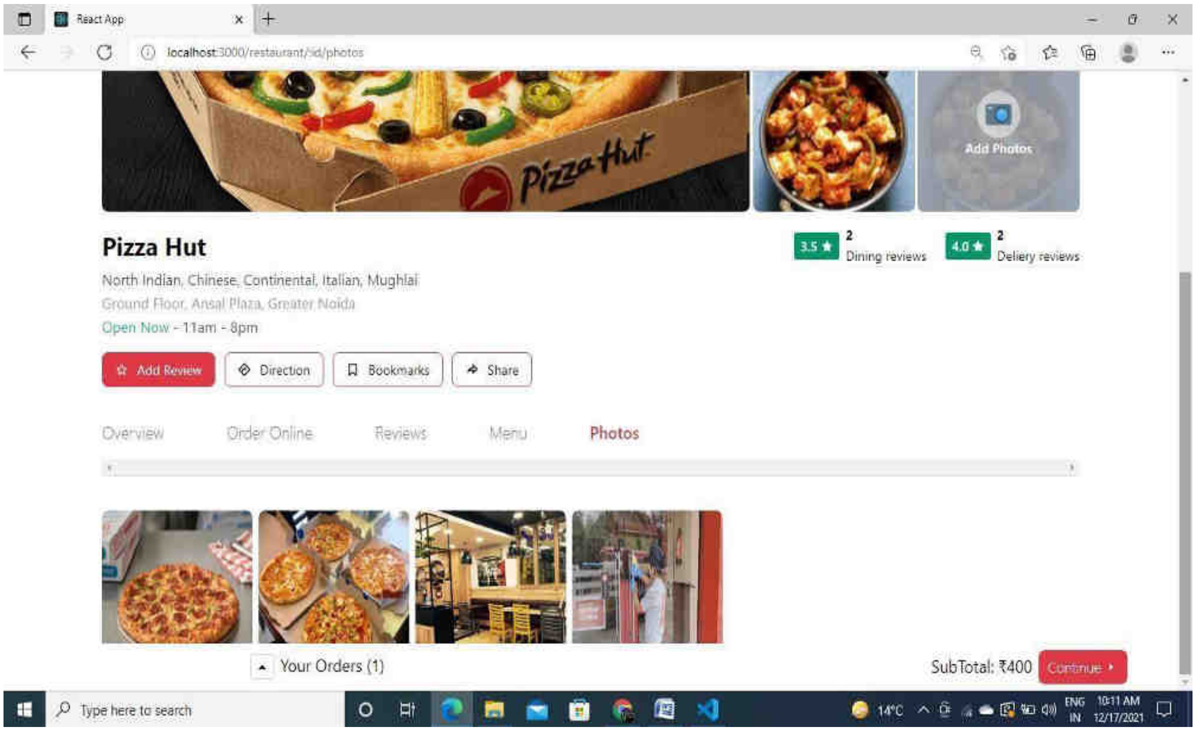
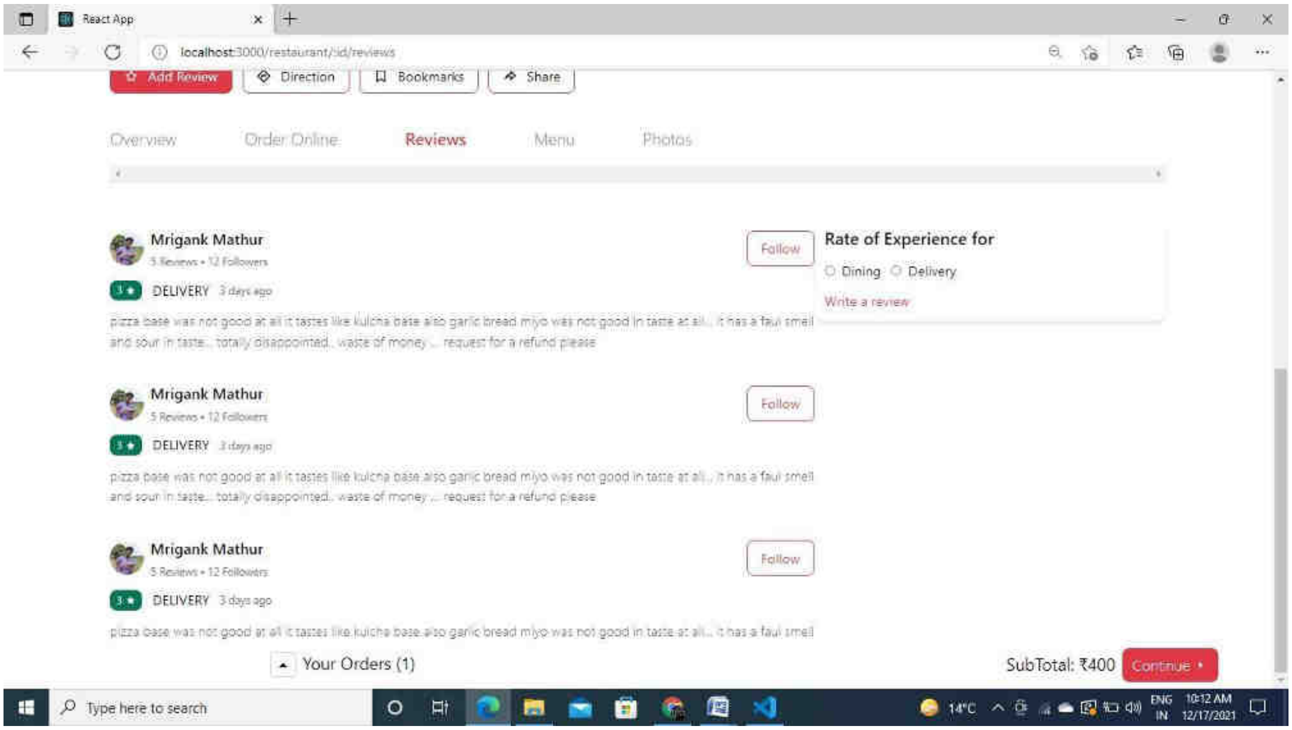


Fig.2(d). The above snapshot is of the add photos of restaurant page.



Mrigank Mathur
5 Reviews • 12 Followers
3 ★ DELIVERY 3 days ago
pizza base was not good at all it tastes like kulcha base also garlic bread miyo was not good in taste at all... it has a faul smell and sour in taste... totally disappointed.. waste of money ... request for a refund please

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5 Reviews • 12 Followers
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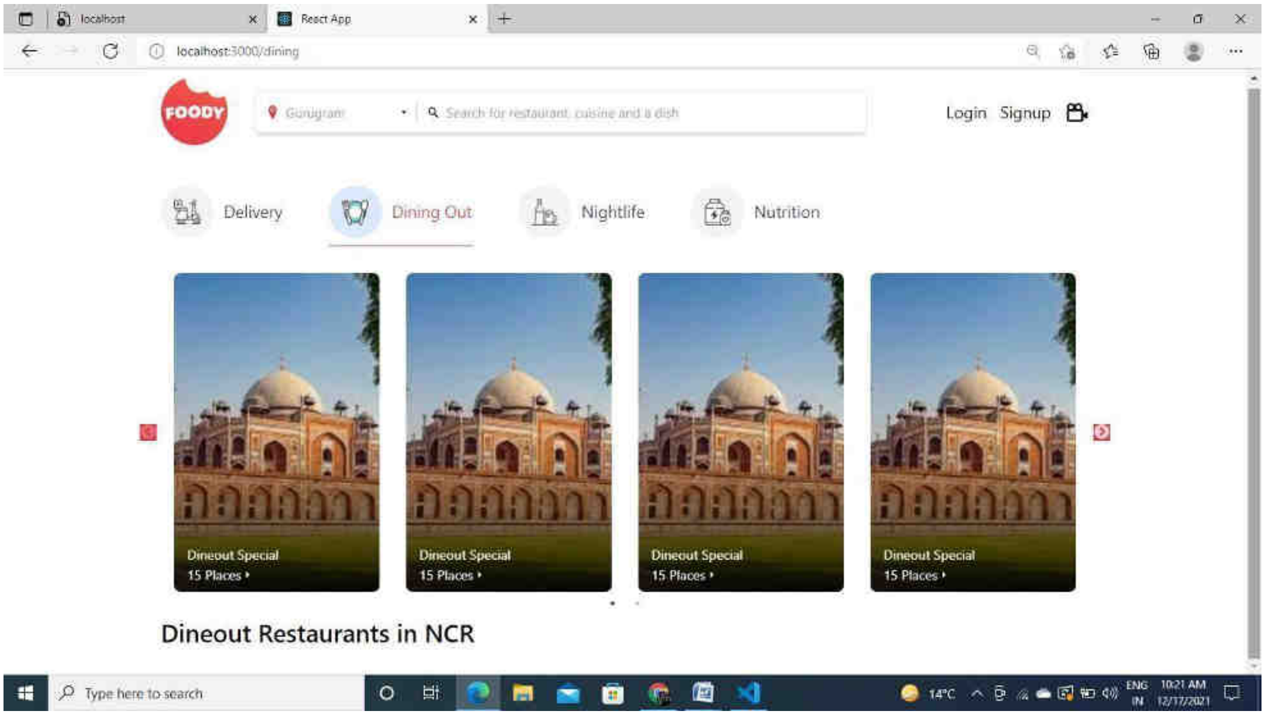
Mrigank Mathur
5 Reviews • 12 Followers
3 ★ DELIVERY 3 days ago
pizza base was not good at all it tastes like kulcha base also garlic bread miyo was not good in taste at all... it has a faul smell

Fig.2(e). The above snapshot is of the Review page.



Dineout Restaurants in NCR

Fig.2(f). The above snapshot is of the Dineout page.

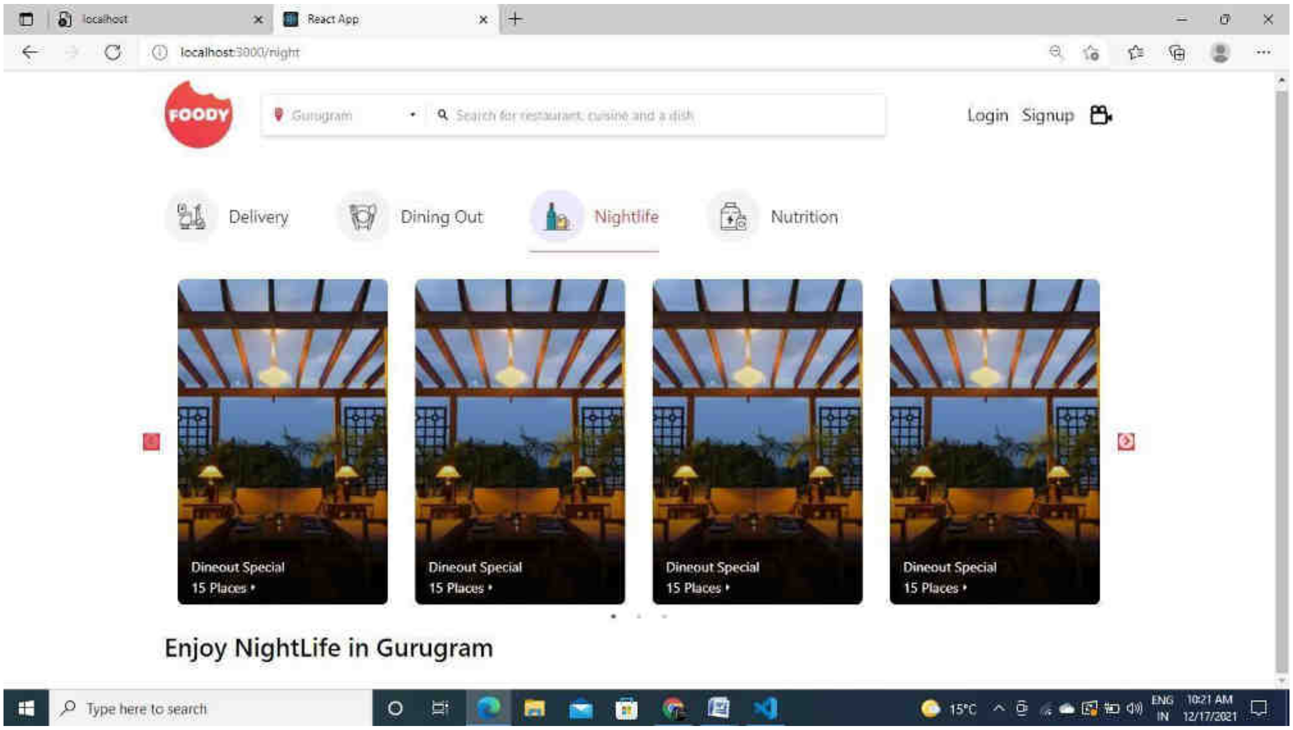


Fig.2(g). The above snapshot is of the Nightlife page.

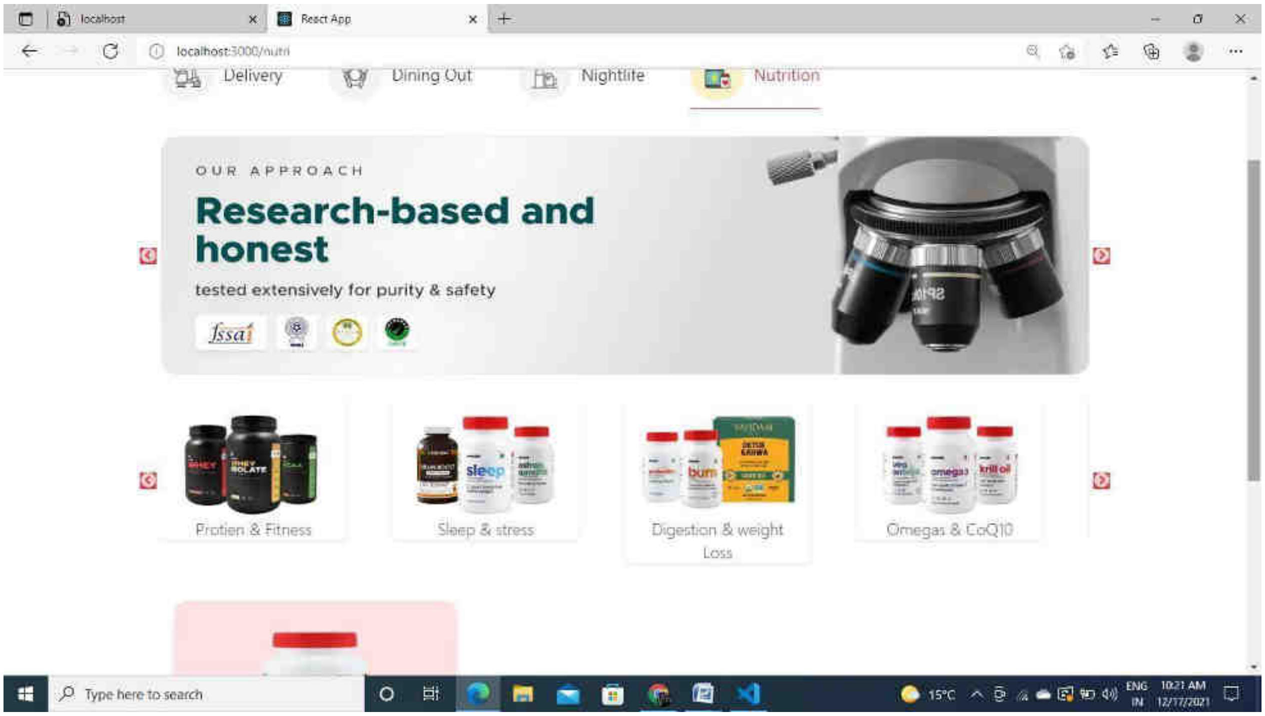


Fig.2(h). The above snapshot is of the Nutrition page.

7. CONCLUSION

We have presented that why and how the online food ordering systems can be used and built. This online food ordering systems is built for the customers who are dealing with busy lives, this could help them to save some of their time. With privatelogin system customer can place a secure online order and also can view or receive the updates in real-time. It allows the customers to navigate through the menus and customize their orders. Our experience in developing this software was to show the abilities of wireless communication and in refining the business management and decent service delivery. Generally, the customers who keep on visiting the restaurants are facing problems may be in terms of time, weather, etc. By this application the customer can access their adored food in their place itself. Moreover,this application is useful to all the introverts who hesitate to interact with others. Thisapplication does not take much time to order or the delivery of food. It is very simpleto use and it gives an efficient way also. This designed project is customer friendly and can be used efficiently for storing the customer details, orders, payment options,etc. Thus, this system is user-friendly, convenient and effective so that improves the restaurants performance.

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