Food In Instant (FIN)

A SYNPSIS REPORT ON

Submitted in Partial fulfillment for the award of Degree of

Bachelor of Technology in CSE – CYBER SECURITY

Submitted to

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MAJOR PROJECT SYNOPSIS REPORT

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DEPARTMENT OF CSE – CYBER SECURITY

LAKSHMI NARAIN COLLEGE OF TECHNOLOGY & SCIENCE,

BHOPAL

SESSION 2024-25

LAKSHMI NARAIN COLLEGE OF TECHNOLOGY &SCIENCE
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CERTIFICATE

This is to certify that the work embodied in this report entitled "**Food In Instant (FIN)**" will be developed by **Naman Mandley(0157CS211121) , Nidhay Rathore(0157CS211123) , Piyush Sinha(0157CS211131) , Rohit Modi(0157CS211155),** of final year . It is Bonafide piece of work carried out under guidance in the department of **CSE – CYBER SECURITY**

Lakshmi Narain College of Technology & Science, Bhopal (M.P.). For partial fulfillment of the Bachelor of Technology in CSE – CYBER SECURITY, during the academic year 2024-25..

Under the Guidance of

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Project guide

Approved by

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CERTIFICATE OF APPROVAL

This foregoing project work is hereby approved as a creditable study of Engineering carried out and presented in a manner satisfactory to warranty its acceptance as a prerequisite to the degree for which it has been submitted. It is understood that by this approval the undersigned do not necessarily endorse or approve any statement made, opinion expressed or conclusion drawn there in, but approve the project only for the purpose for which it has been submitted.

Internal Examiner **External Examiner**

Date:

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We, Nidhay Rathore **(0157CS211123.)** , **Naman Mandley (0157CS211121)** , **Piyush Sinha (0157CS211131)** , **Rohit Modi (0157CS211155)** student of Bachelor of Technology in CSE – CYBER SECURITY **session: 2024 – 25 , Lakshmi Narain college of Technology & science Bhopal (M.P.),** hereby declare that the work presented in this project entitled **"Food In Instant"** is the outcome of our own work, is Bonafide and correct to the best of our knowledge and this work has been carried out taking care of Engineering Ethics. The work presented does not infringe any patented work and has not been submitted to any other University or anywhere else for the award of any degree or any professional diploma.

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ABSTRACT

Welcome to our **FiN Canteen's website**! Nestled in the heart of our vibrant campus, FiN is a bustling hub for students and staff alike. More than just a canteen facility, it's a space where friendships are forged over shared meals, ideas are exchanged, and memories are made.

Our menu is a culinary delight, offering a wide array of meals, snacks, and beverages. We take pride in serving nutritious and delicious food that caters to diverse tastes and dietary requirements. Whether you're a fan of local cuisine or international dishes, there's something for everyone.

We understand the importance of affordability for students, which is why we ensure our prices are budget-friendly without compromising on quality. Our commitment to providing value for money has made us a beloved spot-on campus.

Stay updated with our daily specials and upcoming events through our website. We regularly introduce new dishes and organize food festivals that celebrate various cuisines.

We believe that good food is a crucial part of the college experience, and we strive to make your meal times enjoyable and satisfying. So, come, savour the flavours at our canteen, and let food be the fuel for your academic journey. Welcome to your home away from home !

The frontend of the web application is created using HTML, CSS, JavaScript, and Material UI, with ReactJs serving as the primary component throughout the entire process. For various functionality, data is fetched through APIs, processed, and transmitted to Firebase, where the backend is handled and maintained. The data from the procedure was then transformed into meaningful, helpful information that people are looking for.

FiN is a website that allows you to order food from your phone from your college canteen. It is designed to make your life easier and your stomach happier. With FiN, you can:

- Browse the menu of your college canteen and see the prices, ingredients, and nutritional information of each item.
- Pick up your food when it's ready from a designated counter, without having to wait in line or interact with anyone.
- Rate and review the food and service, and share your feedback with other users and the canteen staff.

FiN is not only convenient for you, but also for the canteen staff. By using FiN, you help them reduce food waste, optimize their inventory, and improve their service quality. You also support your college community by choosing local and sustainable food options.

CHAPTER 1: INTRODUCTION

Are you tired of waiting in long queues at your college canteen? Do you wish you could order your food in advance and pick it up when it's ready? If so, you might want to check out FiN, a website that lets you do just that.

FiN is a website that connects you with your college canteen and allows you to browse the menu, place your order, and pay online. You can also track the status of your order and get notified when it's ready to collect. FiN saves you time and hassle, and lets you enjoy your food without the stress.

FiN is easy to use and secure. You just need to register with your college email and create a password. Then you can start ordering from your favourite canteen. You can choose from a variety of options, including vegetarian, vegan, gluten-free, and halal. You can also customize your order with extra toppings, sauces, or sides. FiN accepts all major credit cards, debit cards, and digital wallets.

FiN is not only convenient, but also eco-friendly. FiN reduces food waste by allowing you to order only what you need and want. FiN also uses biodegradable packaging and cutlery, and supports local farmers and producers. FiN is committed to making your college canteen experience more sustainable and enjoyable.

If you want to try FiN, visit their website at www.fin.com and sign up today. You can also follow them on social media for the latest updates, offers, and reviews. FiN is the ultimate solution for ordering food from your college canteen. Don't miss out on this opportunity to make your life easier and tastier with FiN.

1.1: Motivation

We are a team of students who love food and technology. We noticed that many of our classmates were struggling with long queues, limited options and high prices at the canteen. We wanted to make their lives easier and happier by offering them a convenient and affordable way to get their meals.

That's how FiN was born. FiN stands for Food in an Instant. With FiN, you can browse the menu, customize your order, pay online and pick up your food at the canteen without waiting in line. You can also rate and review the dishes, get discounts and rewards, and discover new recipes and tips.

FiN is more than just a website. It's a community of food lovers who want to enjoy their college experience to the fullest. We believe that food is not only a necessity, but also a pleasure, a culture and a way of connecting with others.

We hope you are as excited as we are about FiN. We invite you to try it out and let us know what you think.

1.2: Scope

FiN is a website that lets you order food from your college canteen online. You can browse the menu, see the prices, check the availability, and pay with UPI or Debit Cards. You can also rate and review the food, and see what other students are saying about it.

But FiN is not just a website for ordering food. It's also a platform for creating and joining communities around your favourite dishes, cuisines, and dietary preferences. You can follow other users who have similar tastes, join groups based on your interests, and chat with them about food and more.

FiN is also a great way to save money and time. You can get discounts and coupons for ordering online, and avoid the long queues and crowds at the canteen. You can also schedule your orders in advance, and pick them up when they are ready.

But how can we use FiN commercially? Well, there are many ways to do that. For example, you can:

- Become a FiN influencer. If you have a lot of followers and engagement on FiN, you can promote your favorite dishes and canteens to other users, and earn commissions for every order they make through your links.

- Become a FiN partner. If you have a food-related business, such as a catering service, a bakery, or a food truck, you can join FiN as a partner and offer your products to the FiN community. You can set your own prices, delivery options, and availability, and get exposure to a large and loyal customer base.

- Become a FiN developer. If you have coding skills, you can create apps and plugins for FiN that enhance its functionality and user experience. You can also integrate FiN with other platforms and services, such as social media, e-commerce, or education.

- Become a FiN researcher. If you are interested in food science, nutrition, or sociology, you can use FiN as a source of data and insights for your research projects. You can analyze the trends, preferences, and behaviours of the FiN users, and discover new patterns and correlations.

As you can see, FiN is more than just a website. It's a community, a marketplace, and an opportunity. So what are you waiting for? Join FiN today and enjoy the benefits of online canteen ordering !

1.3: Objective

The main objective of FiN is to provide a convenient and hassle-free way for college students and staff to order food from the canteen without waiting in long queues or wasting time. By using FiN, customers can browse through a variety of cuisines and dishes from different vendors and caterers, and place their orders in advance with options for customization, dietary preferences, and feedback.

FiN ensures timely and hygienic delivery of food to the designated pick-up points or tables in the canteen, with contactless payment and delivery options. FiN also promotes a culture of healthy and balanced eating among college goers, by providing nutritional information, calorie counts, and recommendations for each meal. FiN aims to create a loyal and engaged customer base and regular orders. FiN is a website that makes food ordering in college canteen easy, fast, and fun.

Main objectives of FiN – Food in an Instant are :

- To provide a convenient and hassle-free way for college students and staff to order food from the canteen without waiting in long queues or wasting time.

- To offer a variety of cuisines and dishes from different vendors and caterers, with options for customization, dietary preferences, and feedback.

- To ensure timely and hygienic delivery of food to the designated pick-up points or tables in the canteen, with contactless payment and delivery options.

- To promote a culture of healthy and balanced eating among college goers, by providing nutritional information, calorie counts, and recommendations for each meal.

- To create a loyal and engaged customer base, by offering rewards, discounts, coupons, and referrals for frequent and regular orders.

- To generate revenue and profit for the website owners, by charging a nominal fee or commission from the vendors and caterers, and by attracting advertisers and sponsors.

1.4: Application

FiN has many uses and applications for college students and staff who want to order food from the canteen. Some of them are:

- FiN can help customers save time and avoid hunger by ordering their food in advance and picking it up when they are ready to eat. This way, they do not have to wait in long queues or waste time during their breaks or classes.

- FiN can provide a platform for customers to explore new cuisines and dishes, and to rate and review their experiences with different vendors and caterers. This way, they can discover new flavours and tastes, and also provide feedback and suggestions to improve the quality and variety of food.

- FiN can reduce food waste and optimize food supply by allowing vendors and caterers to adjust their menus and portions according to the demand and feedback from the customers. This way, they can avoid overstocking or understocking food, and also reduce the environmental impact of food waste.

- FiN can enhance the quality and safety of food by ensuring that the food is prepared and delivered in a hygienic and timely manner, and by allowing customers to report any issues or complaints. This way, they can ensure that the food meets the standards and expectations of the customers, and also resolve any problems or concerns quickly and effectively.

- FiN can create a community and a network among college goers, by enabling them to share their food preferences, recommendations, and orders with their friends and peers. This way, they can socialize and bond over food, and also learn from each other's choices and experiences.

CHAPTER 2: LITERATURE SURVEY

2.1: Literature Survey

2.1.1: Overview

As the number of users on the World Wide Web increases every day, its use in different areas is also growing. One of the most powerful uses of web based applications is that they are used to simplify work which is normally done manually. This chapter presents a literature review on the ***FiN – Food In An Instant*** which will provide a platform for different people to get all resources at one place.

2.1.2: Information

We did study on nearby fellow students and found out that, the students face problem in ordering and picking it up the orders from the Canteen because of crowd. To solve this problem we created FiN. Which does that , now a student can order food from the Canteen without any problem and inconvenience.

FiN is not only profitable for student it will be profitable for the sellers of the canteen also because, canteen sellers don't get proper customers because the customer diverts themselves when they see the crowd at the particular shop this makes the student go from there shops. FiN brings a solution to this problem by providing a interactive website from where they can order food directly from there favourite outlets situated in the College Canteen without even lifting their foot. They can simply go to the website and place an order from the given menu on the Website.

Now the website notifies the vendor about the order that was just placed. Then the worker starts to work on the order and when it’s ready to serve, then the user is notified about their order being available on the respective vendor counter.

2.1.3: Ordering Process

FiN is a website that allows you to order your food from college canteen without being present there physically and when the order is ready you can pick it up. Here is how it works:

- First, you need to visit the website and sign up with your email and phone number. You will also need to provide your college name and student ID.

- Next, you can browse the menu of all the dishes that the canteen provides and select the ones that you want to order. You can also see the prices, ingredients, and ratings of each dish.

- After you select the dishes that you want to order, you can see a cart icon on the top right corner of the website. You can click on it to view your cart and see the total amount and quantity of your order.
- You can also add or remove items from your cart by clicking on the plus or minus buttons next to each dish. You can also change the quantity of each dish by typing the number in the box.

- You can order the whole cart or a single meal by clicking on the order button at the bottom of the cart. You will be redirected to the payment page where you can choose your payment method and confirm your order.

- Then, you can proceed to the payment page and choose your preferred mode of payment. You can pay by credit card, debit card, net banking, or UPI. You will receive a confirmation message and an order ID after the payment is done.

- The website will send a notification to the college canteen vendor with your order details and your student ID. The vendor will prepare your food and pack it in a hygienic container with your name and order ID on it.

- When your food is ready, you will receive another notification from the website with the pickup location and time. You can go to the canteen and show your student ID and order ID to the vendor and collect your food.

- You can also rate and review your food and service on the website and share your feedback with other users.

FiN is a convenient and fast way to order your food from college canteen without wasting your time and energy. It also helps you to avoid crowds and queues and enjoy your food in peace.

2.1.4: Existing Platforms

There are some existing websites that offer similar services like FiN, which is a website that helps you order your food from college canteen without being present there physically and when the order is ready you can pick it up. Here are some examples:
- Food Fox is a website that digitalises college, university, hospital and corporate campuses by bringing their canteens and food courts online. It allows you to order food from nearby restaurants and canteens using an AI-enabled food ordering platform. It also provides features like nearby restaurant locator, user reviews, notification and tracking, and multiple payment options.

- Cafeteria Portal is a website that allows you to order food from the college canteen with provisions to maintain a virtual wallet. It also gives you an administrator login for user and menu management. It is built using PHP, SQL, HTML5, CSS3, and JS.

- College tiffin is a website that is a food ordering platform for college, university, coaching center, and educational institution students. It makes it easy for students to order food from nearby restaurants as well as the college canteen. It also offers discounts, coupons, and loyalty points for students.

- Cassia is a Flutter app for ordering food online from college canteen. It has a simple and elegant user interface and a secure payment system. It also shows you the estimated delivery time and the status of your order.

2.1.5: Intended System

The issue that we are focusing on is that, in daily life, a person may have a lot of questions that they may not be able to readily answer because of several causes like:

Lack of expertise in the area in which the query is raised. Theyare unsure of who they can turn to for an answer to that query.

They don't know of any subject matter expert they could consult. For all of these reasons, we focused on the issue through our website's fitness and health care portal, which is a realistic and practical answer to the situation
at hand.

2.1.6 Web Based Application

The website is built using HTML, CSS, and JavaScript for the front-end, and Javascrpt for the back-end. HTML (HyperText Markup Language) is the standard language for creating web pages and web applications. It defines the structure and content of the web page using tags and attributes. CSS (Cascading Style Sheets) is a language that describes how HTML elements are displayed on the screen. It allows for styling, layout, and formatting of the web page. JavaScript is a scripting language that enables dynamic and interactive features on the web page, such as validating user input, manipulating the DOM (Document Object Model), and communicating with the server.

2.2 HTML

HTML is an acronym which stands for Hyper Text Markup Language
which is used for creating web pages and web applications. Let's see what is meant by Hypertext Markup Language, and Web page.

Hyper Text: HyperText simply means "Text within Text." A text has a
link within it, is a hypertext. Whenever you click on a link which brings you to a new webpage, you have clicked on a hypertext. HyperText is a way to link two or more web pages (HTML documents) with each other.

Markup language: A markup language is a computer language that is
used to apply layout and formatting conventions to a text document. Markup language makes text more interactive and dynamic. It can turn text into images, tables, links, etc.

Web Page: A web page is a document which is commonly written in
HTML and translated by a web browser. A web page can be identified by entering an URL. A Web page can be of the static or dynamic type. With the help of HTML only, we can create static web pages.

2.3 CSS

Cascading Style Sheets (CSS) is a stylesheet language used to describe the
presentation of a document written in HTML or XML (including XML dialects such as SVG, MathML or XHTML). CSS describes how elements should be rendered on screen, on paper, in speech, or on other media.9
CSS is among the core languages of the open web and is standardized across Web browsers according to W3C specifications. Previously, the development of various parts of CSS specification was done synchronously, which allowed the versioning of the latest

recommendations. You might have heard about CSS1, CSS2.1, or even CSS3. There will never be a CSS3 or a CSS4; rather, everything is now CSS without a version number.

Advantages of CSS :

1. CSS saves time.
2. Pages load faster.
3. Easy maintenance.
4. Superior styles to HTML.
5. Multiple Device Compatibility.
6. Global web standards.

2.4 JavaScript

JavaScript is a scripting or programming language that allows you to implement complex features on web pages — every time a web page does more than just sit there and display static information for you to look at — displaying timely content updates, interactive maps, animated 2D/3D graphics, scrolling video jukeboxes, etc. — you can bet that JavaScript is probably involved. It is the third layer of the layer cake of standard web technologies, two of which (HTML and CSS) we have covered in much more detail in other parts of the Learning Area.

JavaScript is a scripting language that enables you to create dynamically
updating content, control multimedia, animate images, and pretty much everything else.

2.5 ReactJs

ReactJS is a declarative, efficient, and flexible JavaScript library for building reusable UI components. It is an open-source, component-based front end library which is responsible only for the view layer of the application. It was initially developed and maintained by Facebook and later used in its products like WhatsApp & Instagram. The main objective of ReactJS is to develop User Interfaces (UI) that improves the speed of the apps. It uses virtual DOM (JavaScript object), which improves the performance of the app. The JavaScript virtual DOM is faster than the regular DOM. We can use ReactJS10 on the client and server-side as well as with other frameworks. It uses component and data patterns that improve readability and helps to maintain larger apps.

2.6 NodeJs

Node.js is an open-source and cross-platform runtime environment for
executing JavaScript code outside a browser. NodeJS is not a framework and it's not 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
can use 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 build back-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.

2.7 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.

2.8 Material UI (Material User Interface)

Material UI is an open-source React component library that implements Google's Material Design. It includes a comprehensive collection of prebuilt components that are ready for use in production right out of the box. It can be used with all the JavaScript frameworks like AngularJS, VueJS, and libraries like ReactJS, to make the Application more amazing and responsive.

2.9: Conclusion

FiN is a web application that enables you to order your food from college canteen without being present there physically and when the order is ready you can pick it up. The website gives you a menu of all the dishes it provides and you can select anyone and order. Then it directs you to the payment pages and after the payment is done, the notification is sent to the college canteen vendor and then it prepares the food and when it is ready, you are notified about it.

A possible conclusion text for the website FiN is:

FiN is a convenient and fast way to order your food from college canteen without wasting your time and energy. It also helps you to avoid crowds and queues and enjoy your food in peace. FiN is a website that digitalises your college canteen experience and makes it easy for you to order food from nearby canteens using an Web based food ordering platform. It also provides features like nearby restaurant locator, user reviews, notification and tracking, and multiple payment options. FiN is a website that caters to your hunger and satisfaction.

CHAPTER 3 : PROBLEM STATEMENT

3.1 Problem Statement

College students often face the problem of long queues, limited choices, and inconvenient payment methods when they want to order food from their college canteen. They waste a lot of time and energy waiting for their turn, and sometimes they miss out on their favorite dishes or end up paying more than they expected. This affects their academic performance, health, and satisfaction.

FiN is a website that aims to solve this problem by providing a simple and easy way to order food from your college canteen. FiN allows students to browse the menu, customize their orders, pay online, and track their delivery status. FiN also offers discounts, rewards, and feedback options to enhance the user experience. FiN is designed to be user-friendly, secure, and reliable.

With FiN, students can enjoy their food without any hassle and focus on their studies. FiN is the ultimate solution for college canteen ordering.

FiN works by connecting students with their college canteen through a website. Here are the steps to use FiN:

- First, you need to register on the website using your college email and create a profile. You can also link your preferred payment method, such as a credit card, debit card, or digital wallet.

- Next, you can browse the menu of your college canteen, which is updated daily. You can see the prices, ingredients, and availability of each item. You can also filter the menu by categories, such as vegetarian, vegan, gluten-free, etc.

- Then, you can select the items you want to order and add them to your cart. You can also customize your order by adding or removing toppings, sauces, or sides. You can also specify the quantity, portion size, and delivery time of your order.

- After that, you can review your order and confirm it. You can pay online using your linked payment method or choose to pay on delivery. You will receive an order confirmation and a receipt via email and SMS.

- Finally, you can track your order status on the website. You can see the estimated delivery time, the name and contact number of the delivery person, and the location of your order on a map. You can also rate and review your order after you receive it.

FiN is a convenient and hassle-free way to order food from your college canteen. You can save time, money, and energy by using FiN. You can also enjoy a variety of dishes and cuisines from your college canteen. FiN is the ultimate solution for college canteen ordering.

What if I had a problem with my order?

If you have a problem with your order, such as a wrong item, a missing item, a damaged item, or a late delivery, you can contact the customer support team of FiN. You can find their contact

details on the website or on your receipt. You can also use the feedback option on the website to report your issue and request a refund or a replacement. The customer support team will try to resolve your problem as soon as possible and provide you with a satisfactory solution. FiN values your feedback and strives to improve its service quality.

Can I order from multiple canteens using FiN?

Yes, you can order from multiple canteens using FiN. FiN allows you to choose from different canteens that are affiliated with your college. You can see the list of available canteens on the website and select the one you want to order from. You can also switch between canteens at any time and compare the menus and prices. You can place multiple orders from different canteens in one transaction and pay online. FiN will deliver your orders from different canteens to your location at the same time. FiN makes it easy and convenient to order from multiple canteens.

Can I use FiN outside of college campus?

As for your question, whether you can use FiN outside of college campus depends on the availability and delivery options of the college canteen. If the canteen only serves food within the campus premises, then you will not be able to use FiN outside of college campus. However, if the canteen offers delivery services to nearby locations, then you may be able to use FiN outside of college campus, but you may have to pay extra charges or wait longer for your food. You can check the terms and conditions of the canteen and FiN on their respective websites

CHAPTER 4 :
MINIMUM HARDWARE AND SOFTWARE REQUIREMENT

4.1 Minimum Hardware Requirement

Processor :

The minimum requirement of processor is at least Pentium 4 with 900 MHz processing speed.

The speed of processor determines the time taken for the execution of instructions. Higher processing speed lead to faster execution of the instruction.

RAM :

There should be minimum 256 MB of RAM available for the smooth functioning of the project. Higher memory head in better results.

Hard Disk :

There should be about minimum 40GB of hard disk for smooth functioning of the project and so recommended hard disk space is 40 GB.

4.2 Minimum Software Requirement

Operating System :

Any OS. But preferably Window XP, 7, 8, 10, and other operating system like Linux, MacOS.

Web Browser :

Any Browser like Microsoft Edge, Google Chrome etc.

4.3 Environment Needed

Latest Version of HTML, CSS, JavaScript, NodeJs, ReactJs, Material UI, API Key

4.4 Functional Requirements

A functional requirement defines a function of a system or its component. A function is described as a set of inputs, the behaviour, and outputs.

Functional requirement of this website include:

- The website must allow students to register and log in with their college email and password.

- The website must display the menu of the college canteen, including the name, price, description, and availability of each item.

- The website must allow students to select and add items to their cart, modify the quantity, and remove items as needed.

- The website must show the total amount and the estimated delivery time of the order before confirming it.

- The website must allow students to choose a payment method, such as cash, credit card, debit card, or online wallet, and process the payment securely.

- The website must send a confirmation email and a notification to the student's phone when the order is placed, and when it is ready for pickup or delivery.

- The website must allow students to track the status of their order and contact the canteen staff if needed.

4.5 Non-Functional Requirements

A non-functional requirement is a requirement that specifies criteria that can be used to judge the operation of a system, rather than specific behaviours.

Non-Functional requirements are:

- Compatibility
  - The website should run compatibly with any browser.
  - It should allow the users to register to the website and gives access to them.

- Readability and Availability
  - The data should be available to the user whenever they want.
  - System should be able to give response on time. Loading time of system should not be too much.

- Performance
  - It should allow the registered user to clear doubts by communicating with the developer.
  - It should allow the users to view the order status.
  - It should be allows the users to post their reviews.

- Usability
  - Website should be easy to use.
  - It should be easy to learn, understandable, and attractive.

- Maintainability
  - The website is often used over a long period, so it should maintain properly.

CHAPTER 5 : METHODOLOGY USED

5.1 Agile Development (SCRUM)

5.1.1 Methodology

Your ability to benefit the most from internet technology is our methodology's goal. It integrates every element pertinent to your website and enables us to guarantee the best calibre of the finished project. These are the measures we'll take to make sure all of your deliverables are finished on schedule and on a tight budget. Modern approaches offer an alternate perspective on project management and do not emphasise linear procedures. Others can be used in production, process optimization, product engineering, and other areas, while some are better suited for IT and software development. Modern project management methods make use of many management process models.

5.1.2 Requirement Analysis

We started by examining the demands of our target market. Who is going to be using our portal? What will their visit be intended to accomplish? What is the main objective of this website? What is the greatest way for your company to meet their needs? Such inquiries are examined in great detail during the needs analysis stage.

We would also like to analyse your current page views, average user time on the site, top landing pages, current search engine rankings, current bounce rates, and many other criteria if granted access to the current website information. In order to best entice and keep your online visitors, we examine your target population online and evaluate your differentiation approach.

5.1.3 Formulate Digital Strategy

We choose the elements that will best serve our website based on the needs analysis. To make sure we have the most recent technology, parts, and elements, we examine market trends. In order for our website to satisfy any future needs, we took the time to think creatively and take into account factors other than your group's immediate needs.

The primary and secondary keywords or key phrases for our website are also finalised during this step in order for it to rank well when searched. The subsequent phases of website building make use of these primary and secondary key phrases.

5.1.4 Webpage Conceptualization

This phase was one of the most crucial components of our project, in our perspective. Every part of the design is justified by us to make sure it meets a specific requirement and that the website is actually built to draw in visitors, keep them there, and improve their experience. Comparing our user interface to that of our rivals, we essentially sought to improve it.

Three unique, high-end website design templates or concepts that use our marketing and communication techniques will be developed. This process will involve extensive brainstorming and ideation processes to produce a design that meets your current demands while also being

sustainable for future expansion. With your help, we'll create the designs that best represent our brand and function as the top online resource for exercise and health.

Two further internal pages will then be created using the finalised concepts or templates to show you what internal content-heavy pages will look like.

In order to improve our services, we will now submit designs and concepts for assessment and critical input.

5.1.5 Web Development

Following the comprehensive design's approval by our team, we proceed to the HTML development and CMS configuration phases. Along with React and NodeJS, two essential JS libraries.

The HTMLs have been created in accordance with W3C guidelines. Our crew is knowledgeable on W3C standards like CSS, XHTML, etc. These tested guidelines will be used to build our websites. React.js will receive more attention as we work to improve the portal.

Following the completion of all projects, we go on to the testing stage, where our team members thoroughly evaluate each component of our website and the content management system.

Following the completion of the initial testing, we go on to the multibrowser test, in which your website is routinely tested on a variety of popular browsers, including Edge, Firefox, and Safari. Simply request that we include additional browsers in the testing phase for our project if we need our website to be tested on more of browsers.

5.1.6 Evaluation and Find Turing

Once the website has passed the initial testing stage, we can deliver it to you for user acceptance testing. We will update the website as needed depending on your input and after receiving your user acceptance testing (UAT) signoff. Once all cleared from your end, we will proceed to the Data Base phase.

5.1.7 Database Designing

Data is a universe that is always evolving and changing. As a result, businesses all around the world now face whole new growth and challenge opportunities. Our websites may handle their issues on the one hand and utilize the enormous potential afforded by this industry on the other by effectively recording, updating, and tracking data on an effective and frequent basis.

In order to methodically accomplish our aims on the one hand, and to strategically empower our gateway on the other, we acquire information through gathering up-to-date data. Following the data collection, other tasks involve calculating and producing accounting reports. Through a computerized database, the management and staff of the organisation are then given access to this data and its insights. Database management systems, which are now a crucial component of the operations of businesses and organisations all over the world, are one of the tested ways that brands can manage the interactions between the different database pieces.

5.1.8 Pre-Development Phase

When the data is prepared, we send the website for evaluation and last-minute comments. We will set up the website on the server where it will be deployed once everything has been cleared. The website is tested once it is installed on our server to confirm that data integrity and the standard of deliverables are maintained. When the pre-deployment process is complete, the location will be prepared for the final deployment.

5.1.9 Website Handover

Upon receiving your permission, we set up the website on our target server and make it online. For quality control purposes, one last round of testing is carried out on the live website. After that, you take over running the website from us.

5.1.10 Search Engine Indexing

We will submit our website to a variety of search engines and directories once it is live so they may index it on their servers.

5.1.11 SEO / SEM

At the time of deployment, our website will be optimised for search engines. We have assisted a large number of our clients in achieving top Google rankings. We will have a clearer idea of our search engine ranking after the first three months of it being online, despite the fact that it is very difficult to guarantee any place on search engines, especially for a freshly launched website or domain. At that point, we may conduct a comprehensive search engine study to evaluate the over 100 elements that influence how well a website ranks in search engines. As we move forward, we carefully examine each factor and create an SEO plan. It will be an independent service. Typically beginning one to three months after deployment, a typical SEO plan lasts at least six months.

5.2 NLP Techniques

5.*2.1 Evaluation and Turing Test*

After our team approves the comprehensive design, we move on to HTML development and CMS configuration, using essential JS libraries like React and NodeJS. Our HTMLs adhere to W3C guidelines, ensuring compliance with standards like CSS and XHTML. We focus on enhancing the portal with React.js.

5.2.2 Testing Phase

Once all projects are completed, we thoroughly test each component of the website and CMS. This includes a multibrowser test on popular browsers like Edge, Firefox, and Safari. If additional browsers are needed, we can include them upon request.

5.2.3 User Acceptance Testing (UAT)

After initial testing, we deliver the website for user acceptance testing. Based on your feedback, we update the website and proceed to the database phase once we receive your UAT signoff.

5.2.4 Database Design

Data is ever-evolving, presenting new growth and challenge opportunities. Our websites effectively record, update, and track data, leveraging this potential. We gather up-to-date data, calculate and produce accounting reports, and provide insights through a computerized database. Database management systems are crucial for managing interactions between different database components.

5.2.5 Pre-Development Phase

With data prepared, we send the website for final evaluation and comments. Once cleared, we set up the website on the server for deployment. We test the website on our server to ensure data integrity and quality. After pre-deployment, the site is ready for final deployment.

5.2.6 Website Handover

Upon your approval, we set up the website on the target server and make it live. A final round of testing ensures quality control. After this, you take over the website's operation.

5.2.7 SEO / SEM

At deployment, our website is optimized for search engines. We have helped many clients achieve top Google rankings. After three months, we conduct a comprehensive search engine study to evaluate over 100 factors influencing rankings. We then create an SEO plan, typically lasting six months, starting one to three months after deployment.

CHAPTER 6 : DESIGN FRAMEWORK

6.1 ER Diagram

An entity relationship (ER) diagram is a form of flowchart that shows the relationships between "entities" like people, things, or concepts in a system. ER Diagrams are most frequently used in the disciplines of software engineering, business information systems, education, and research to build or troubleshoot relational databases. They are also known as ERDs or ER Models, and they use a predetermined collection of symbols to represent the interconnectedness of entities, relationships, and their qualities. These symbols include rectangles, diamonds, ovals, and connecting lines. They have verbs for relationships and nouns for entities, reflecting the grammatical structure.

ER diagrams share similarities with data structure diagrams (DSDs), which emphasise interactions between pieces within entities rather than relationships between entities themselves. Data flow diagrams (DFDs), which depict the information flow for systems or processes, are frequently used in conjunction with ER diagrams.

The components and features of an ER diagram:

ER Diagrams are composed of entities, relationships and attributes. They also depict cardinality, which defines relationships in terms of numbers. Here's a glossary:

- **Entity**

A definite thing that can have information stored about it, such as a person, entity, idea, or event. Consider entities to be nouns. Examples: a client, pupil, vehicle, or item usually displayed as a rectangle.

Entity type: A group of definable things, such as students or athletes, whereas the entity would be the specific student or athlete. Other examples: customers, cars or products.

Entity set: Same as an entity type, but defined at a particular point in time, such as students enrolled in a class on the first day. Other examples: Customers who purchased last month, cars currently registered in Florida. A related term is instance, in which the specific person or car would be an instance of the entity set.

Entity categories: Entities are categorized as strong, weak or associative. A strong entity can be defined solely by its own attributes, while a weak entity cannot. An associative entity associates entities (or elements) within an entity set.

Entity keys: Refers to an attribute that uniquely defines an entity in an entity set. Entity keys can be super, candidate or primary.

Super key: A set of attributes (one or more) that together define an entity in an entity set.

Candidate key: A minimal super key, meaning it has the least possible number of attributes to still be a super key. An entity set may have more than one candidate key.

Primary key: A candidate key chosen by the database designer to uniquely identify the entity set.

Foreign key: Identifies the relationship between entities.

➢ Relationship

How entities act upon each other or are associated with each other. Think of relationships as verbs. For example, the named student might register for a course. The two entities would be the student and the course, and the relationship depicted is the act of enrolling, connecting the two entities in that way. Relationships are typically shown as diamonds or labels directly on the connecting lines.

➢ Attribute

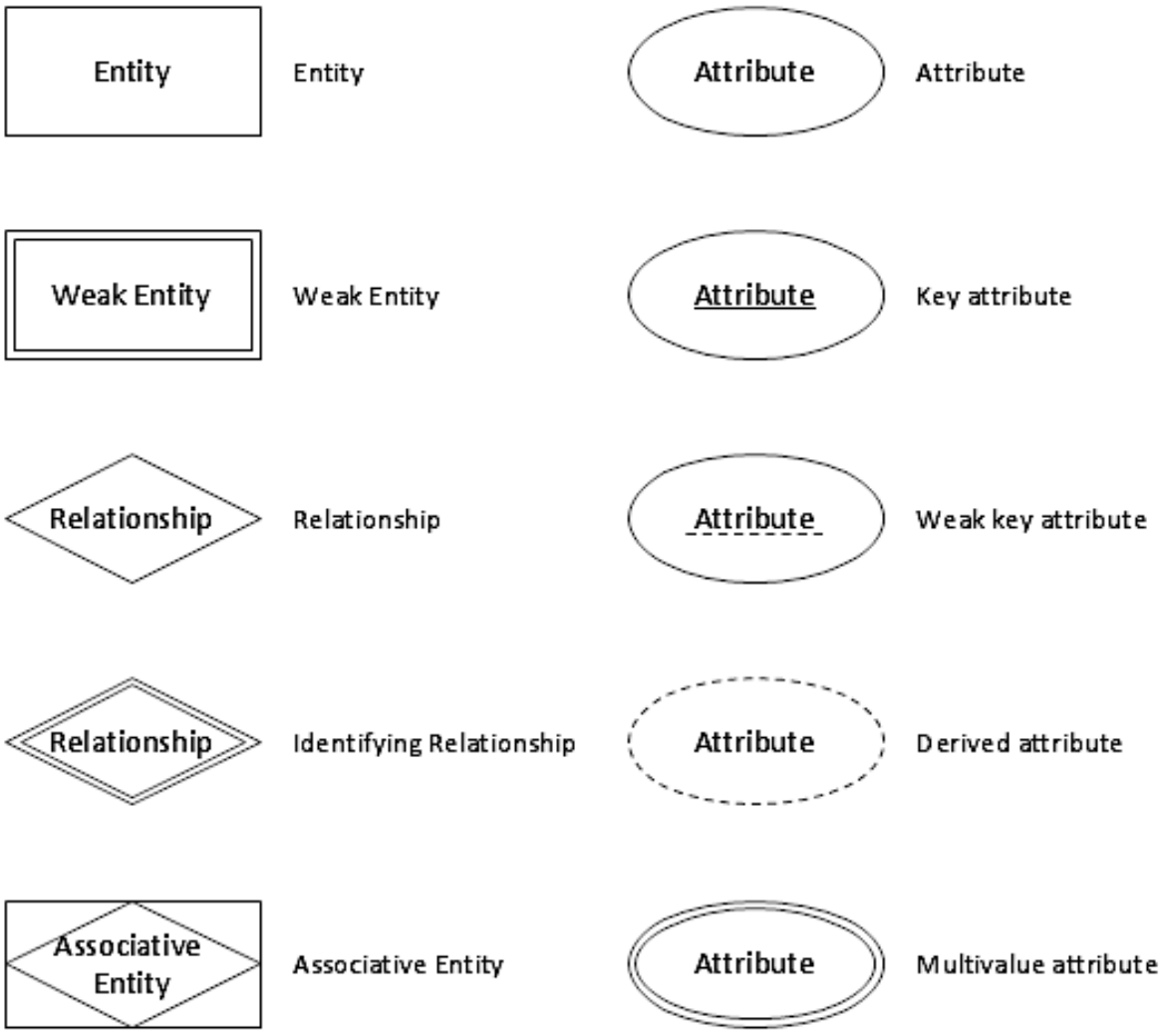
Attribute categories: Attributes are categorized as simple, composite, derived, as well as single-value or multi-value.

Simple: Means the attribute value is atomic and can't be further divided, such as a phone number.

Composite: Sub-attributes spring from an attribute.

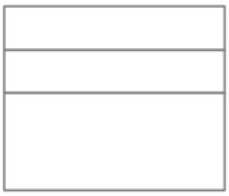
Derived: Attributed is calculated or otherwise derived from another attribute, such as age from a birthdate.

Symbols used in ER Diagram

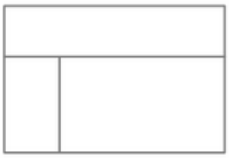


Entity
(with no attributes)

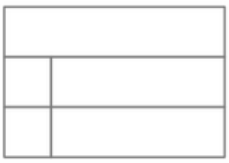
Entity
(with attributes field)



Entity
(3 sections)



Entity
(attributes field with columns)



Entity
(attributes field with columns and
variable number of rows)

Relationships
(Cardinality and Modality)

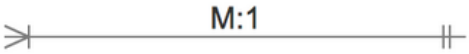
Zero or More

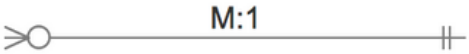
One or More

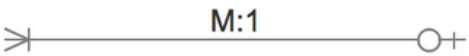
One and only
One

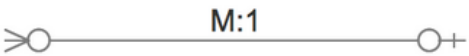
Zero or One

Many - to - One



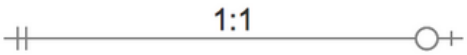


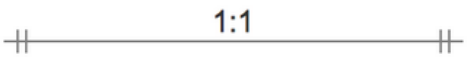


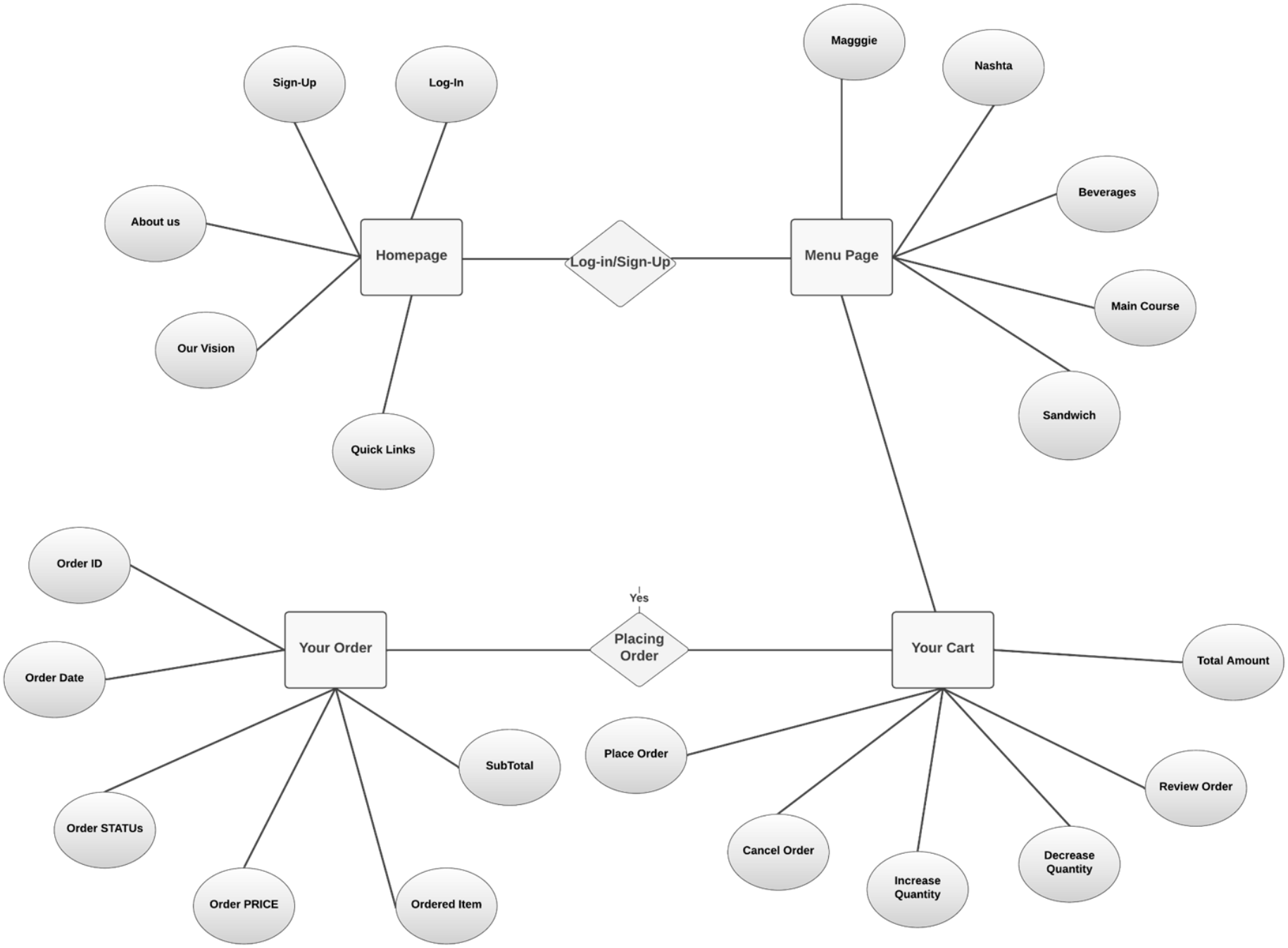


Many-to-Many

One-to-One






Sign-Up
Log-In
About us
Homepage
Our Vision
Quick Links
Log-in/Sign-Up
Magggie
Nashta
Beverages
Menu Page
Main Course
Sandwich
Order ID
Order Date
Your Order
Order STATUs
Order PRICE
Ordered Item
SubTotal
Yes
Placing Order
Your Cart
Total Amount
Place Order
Review Order
Cancel Order
Increase Quantity
Decrease Quantity

6.2 Use Case Diagram

In UML, use-case diagrams model the behaviour of a system and help capture the requirements of the system. Use-case diagrams describe the high-level functions and scope of a system. These diagrams also identify the interactions between the system and its actors. The use cases and actors in use-case diagrams describe what the system does and how the actors use it, but not how the system operates internally.

Use-case diagrams illustrate and define the context and requirements of either an entire system or the important parts of the system. You can model a complex system with a single use-case diagram or create many use-case diagrams to model the components of the system. You would typically develop use-case diagrams in the early phases of a project and refer to them throughout the development process.

Use-case diagrams can be helpful in the following situations:

• Before starting a project, you can create use-case diagrams to model a business so that all participants in the project share an understanding of the workers, customers, and activities of the business.

• While gathering requirements, you can create use-case diagrams to capture the system requirements and to present to others what the system should do.

• During the analysis and design phases, you can use the use cases and actors from your use-case

diagrams to identify the classes that the system requires.
• During the testing phase, you can use use-case diagrams to identify tests for the system.

The following topics describe model elements in use-case diagrams:

➢ Use cases

A use case describes a function that a system performs to achieve the user's goal. A use case must yield an observable result that is of value to the user of the system.

➢ Actors

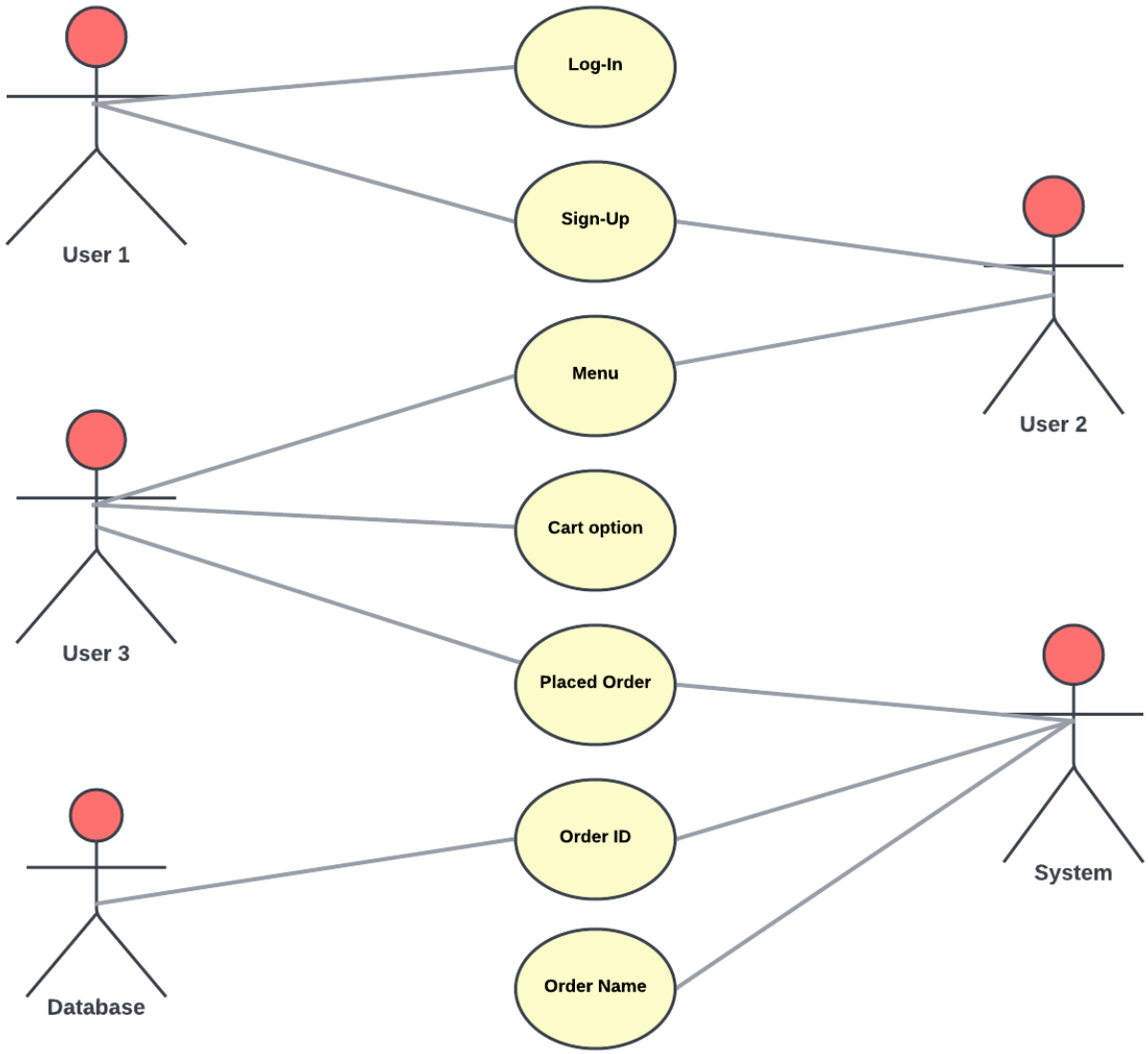
An actor represents a role of a user that interacts with the system that you are modelling. The user can be a human user, an organization, a machine, or another external system.

➢ Subsystems

In UML models, subsystems are a type of stereotyped component that
represent independent, behavioural units in a system. Subsystems are used in class, component, and use-case diagrams to represent large-scale components in the system that you are modelling.

➢ Relationships in use-case diagrams

In UML, a relationship is a connection between model elements. A
UML relationship is a type of model element that adds semantics to a model by defining the structure and behaviour between the model elements


Log-In
Sign-Up
Menu
Cart option
Placed Order
Order ID
Order Name
User 1
User 2
User 3
Database
System

6.3 DFD Diagram

Data Flow Diagram is referred to as DFD. DFD illustrates how data flow in a system or process. It also sheds light on each entity's inputs, outputs, and the process itself. DFD lacks control flow, loops, and decision-making guidelines. Based on the type of data, a flowchart can describe specific operations. There are various ways to represent a data flow diagram. The DFD is a modelling tool for structured analysis. Because they enable us to visualise the key phases and data involved in software-system processes, data flow diagrams are particularly well-liked.

The traditional visual representation of how information moves through a system is a data flow diagram (DFD). The appropriate amount of the system needs can be graphically represented by a clean and unambiguous DFD. It can be done manually, automatically, or both.

It demonstrates how information enters and exits the system, what modifies the data, and where information is kept.

A DFD's goal is to outline the boundaries and scope of a system as a whole. It can be utilised as a communication tool between a system analyst and any participant in the sequence that serves as the foundation for system redesign. The DFD is also known as a bubble chart or data flow graph.

Components of DFD

The Data Flow Diagram has 4 components:

- **Process**

A system's input-to-output transformation is caused by the process function. A process can be represented by an oval, a circle, a rectangular shape with rounded corners, or a rectangle shape. The process is named in a single word or phrase that captures the essence of the operation.

- **Data Flow**

Data flow is a term used to describe the movement of information within a system. The arrow icon represents data flow. To identify the information being moved, the flow should be given a name that makes sense. Along with information, data flow also symbolises the substance that is being transferred. Systems that are more than just informative model material shifts. Only one sort of information should be transferred in any given flow. The arrow, which can alternatively be bi-directional, denotes the flow direction.

- **Warehouse**

The warehouse houses the data for future usage. The store's logo is represented by two horizontal lines. The warehouse can be anything, such as a folder containing documents, an optical disc, or a filing cabinet; it is not just limited to being a data file. It is possible to inspect the data

warehouse regardless of how it was used. Data flow into the warehouse is referred to as data entry or data updating, while data flow out of the warehouse is referred to as data reading.

➢ Terminator

The Terminator is an outsider who interacts with the system while remaining outside of it. It could be, for instance, businesses like banks, populations like clients, or several divisions within the same company that are not a part of the model system. Modelled systems converse with the terminator as well.

Rules for creating DFD

• The name of the entity should be easy and understandable without any extra assistance (like comments).

• The processes should be numbered or put in an ordered list to be referred to easily.

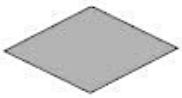
• The DFD should maintain consistency across all the DFD levels.

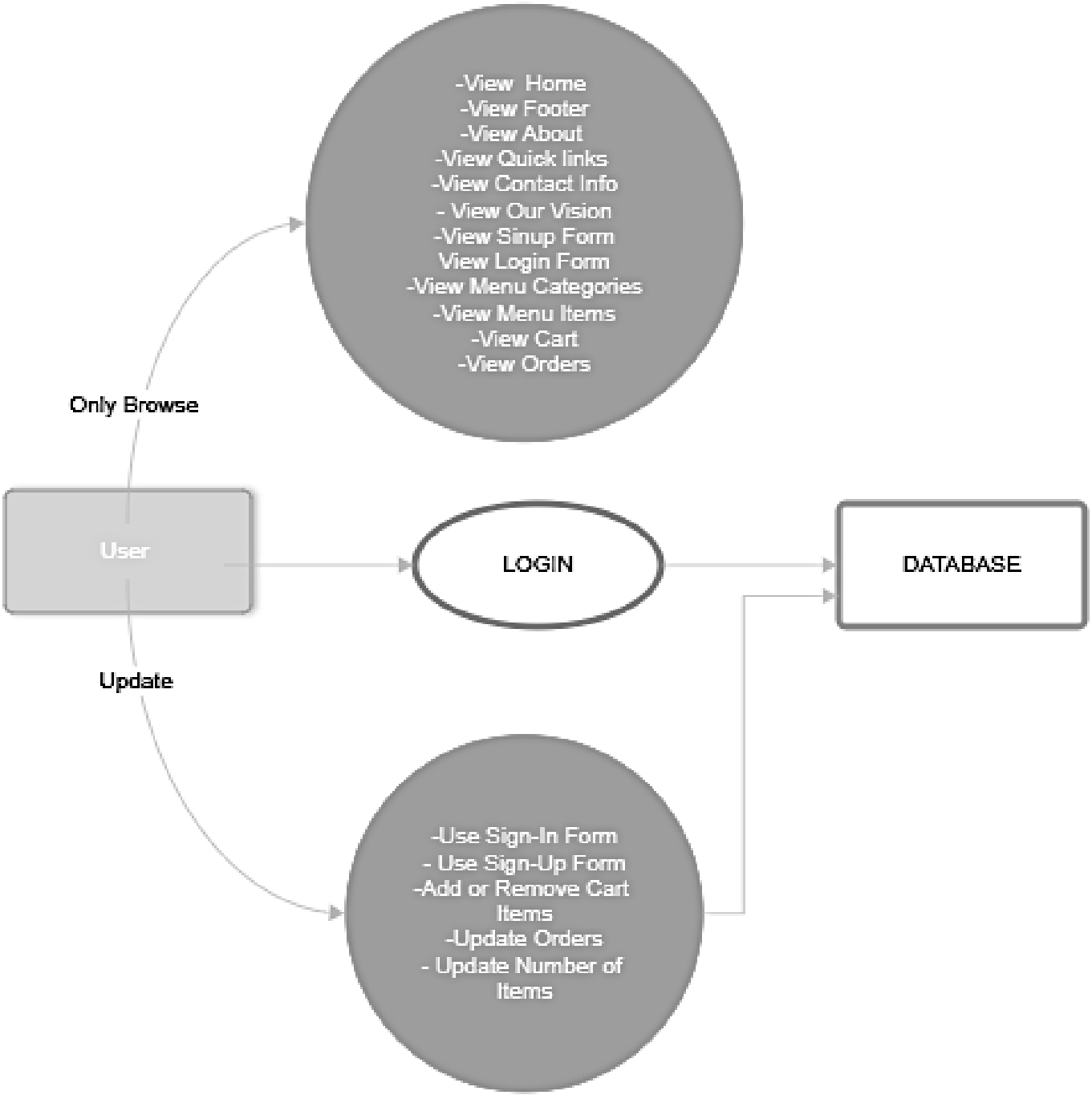
• A single DFD can contain a maximum of 9 processes and a minimum of 3.

Levels of DFD

DFD uses hierarchy to maintain transparency, so multilevel DFDs can be created. The levels of DFD are as follows:

- 0-level DF
- 1-level DFD
- 2-level DFD

Symbol	Name	Function
	Start/end	An oval represents a start or end point
	Arrows	A line is a connector that shows relationships between the representative shapes
	Input/Output	A parallelogram represents input or output
	Process	A rectagle represents a process
	Decision	A diamond indicates a decision


-View Home
-View Footer
-View About
-View Quick links
-View Contact Info
- View Our Vision
-View Sinup Form
View Login Form
-View Menu Categories
-View Menu Items
-View Cart
-View Orders
Only Browse
User
LOGIN
DATABASE
Update
-Use Sign-In Form
- Use Sign-Up Form
-Add or Remove Cart Items
-Update Orders
- Update Number of Items

CHAPTER 8 : TESTING

8.1 Testing

8.1.1 Description

"Testing is the critical element of any software quality assurance and represents the ultimate review of specification, design and code generation."

Software testing is the process of assessing and confirming that a software application or product performs as intended. Bugs can be reduced, development expenses are decreased, and performance is increased.

Testing is the process of analysing a system or its component(s) to determine whether or not they meet the required specifications. Fundamentally said, testing is the process of running a system in order to find any flaws, inconsistencies, or gaps that run counter to the actual requirements.

Testing is described as "a method of analysing a software item to detect the anomalies between existing and necessary conditions (that is, faults, errors, and bugs) and to evaluate the features of the software item" in accordance with the ANSI/IEEE 1059 standard.

Early testing saves resources, cost and time on rework and results in software that is provided to the client without errors. Testing, however, can originate at the requirements collecting hase and continue until the software is delivered throughout the Software Development Life Cycle (SDLC).

8.1.2 Testing Methods

Software testing can be done using a variety of methods. The methods are briefly discussed here.

8.1.3 Black-Box Testing

The technique of testing without knowledge of the interior workings of the application is called "black box" testing. The tester lacks access to the source code and is unaware of the system architecture. A tester will often engage with the system's user interface during a black-box test by providing inputs and evaluating outputs without being aware of how or where the inputs are processed.

8.1.4 White-Box Testing

White-box testing requires a thorough analysis of the code's internal logic and structure of the code. Glass testing and open-box testing are other names for white-box testing. A tester needs to be familiar with the inner workings of the code in order to conduct white-box testing on an application.

The tester must examine the source code to identify the specific unit or section of code that is acting erroneously.

8.1.5 Grey-Box Testing

A technique for assessing an application without having full access and knowledge to its internal workings is known as "grey-box testing." The phrase "the more you know, the better" has a lot of weight when it comes to software testing while evaluating an application.

A tester will always have an advantage over someone with little domain expertise if they have mastered the domain of the system. Grey-box testing, in contrast to black-box testing, allows the tester access to design documents and the database in addition to the application's user interface. A tester can create a test strategy and better prepare test data and test scenarios using this knowledge.

8.1.6 Testing Levels

There are different levels during the process of testing. A brief description is provided about these levels.

Levels of testing include different methodologies that can be used while conducting software testing. The main levels of software testing are –

• Functional Testing
• Non-functional Testing

8.1.7 Functional Testing

Based on the requirements of the software that is to be tested, this kind of black-box testing is used. By providing input, the application is put to the test. The results are then reviewed to determine whether they match the functionality that the application was designed for. To determine whether a software system complies with its stated requirements, functional testing is performed on an integrated, full system.

There are different types of functional testing are present. Few are listed below.

- Unit Testing.
- Integration Testing.
- System Testing.
- Regression Testing.
- Acceptance Testing.
- Alpha Testing.
- Beta Testing.
- Module Level Testing.

8.1.8 Non-Functional Testing

Testing non-functional characteristics of an application is the focus of this section. Software is tested for non-functional although crucial needs like performance, security, and user interface and so on during non-functional testing.

The following section discusses a few significant and often used non-functional testing types.

- Performance Testing.
- Load Testing.
- Stress Testing.
- Usability Testing.
- Security Testing.
- Portability Testing.

CHAPTER 9 : CONCLUSION AND FUTURE SCOPE

FiN is a web application that enables you to order your food from college canteen without being present there physically and when the order is ready you can pick it up. The website gives you a menu of all the dishes it provides and you can select anyone and order. Then it directs you to the payment pages and after the payment is done, the notification is sent to the college canteen vendor and then it prepares the food and when it is ready, you are notified about it.

A possible conclusion text for the website FiN is:

FiN is a convenient and fast way to order your food from college canteen without wasting your time and energy. It also helps you to avoid crowds and queues and enjoy your food in peace. FiN is a website that digitalises your college canteen experience and makes it easy for you to order food from nearby canteens using an Web based food ordering platform. It also provides features like nearby restaurant locator, user reviews, notification and tracking, and multiple payment options. FiN is a website that caters to your hunger and satisfaction.

The future scope of a website like FiN, which allows users to order food from their college canteen using their phones, is quite promising. Here are some reasons why:

- Millennials and Gen Z as Key Driving Forces: Millennials and Gen Z are the most significant spenders on food preparation and deliveries. They are ready to eat at fast service restaurants and prefer online food ordering through an app.

- Convenience and Efficiency: An online food ordering system provides a convenient way for users to order food from their preferred brands, kitchen needs, essential restaurant supplies, and more. It simplifies the food ordering process, making it easy for users to buy products from the store with just a few clicks.

- Adopting Novel Niches: Being in a unique niche can help online food delivery businesses get through competitive boundaries and flourish. Most service providers focus on farm-grown items and vegan-friendly options. Startups can make a noticeable dent in the food delivery market by keeping an eye out for trendy and novel niches.

- Big Data: Data via big data helps businesses to find customer’s complaints, feelings, offers, delivery time, and more. By utilizing big data, service providers can collect and analyze information like present effect on food, food buy history, real-time street traffic, social media reviews, and cart details.

- Growth in the Online Food Delivery Market: The online food delivery market is booming. The global revenue of this industry is expected to show a growth rate of 7.5%, resulting in a projected volume of US$182,327M by 2024. In India, the online food delivery market is estimated to be a 7 Billion USD market with about 170 Million users and an annual growth rate of 10.5%.
Given these trends, a website like FiN has a bright future ahead. It can provide a valuable service to college students, making it easier for them to order food from their college canteens. This convenience, combined with the growing popularity of online food ordering, could make FiN a popular choice among college students..

SUGGESTIONS

- User-Friendly Interface: Ensure the website has a clean, easy-to-navigate interface. The food menu should be well-organized and searchable.

- Mobile Optimization: As most users will be accessing the site from their phones, make sure the website is mobile-friendly.

- Order Customization: Allow users to customize their orders. For example, they should be able to add or remove ingredients, specify portion sizes, etc.

- Real-Time Updates: Provide real-time updates on order status. Users should be able to track their order from the time it is placed until it is ready for pickup.

- Payment Options: Offer multiple payment options, including digital wallets, UPI, credit/debit cards, and cash on delivery.

- Feedback and Ratings: Include a section for users to rate their experience and leave feedback. This can help you continuously improve your service.

- Promotions and Discounts: Regularly offer promotions and discounts to attract more users and encourage repeat orders.

- Healthy and Diverse Menu Options: Cater to a wide range of dietary preferences and restrictions. Include healthy options on the menu.

- Integration with Student ID: If possible, integrate the payment system with the college's student ID cards. This could make the payment process even more convenient for students.

- Sustainability: Consider implementing sustainable practices, such as minimizing food waste, using eco-friendly packaging, and more. This could appeal to environmentally conscious students.

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