DECLARATION

I/We hereby declare that the work which is being presented in the report entitled "SWAAD", is an authentic record of my own work carried out during the period from JAN, 2023 to April, 2023 at School of Computer Science and Engineering and Technology, Bennett University Greater Noida.

The matters and the results presented in this report has not been submitted by me/us for the award of any other degree elsewhere.

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Abstract

Swaad is a unique food delivery application that is designed to change the game of the food delivery industry and simplify the process of placing orders from multiple restaurants at once. Ordinarily, food delivery services would only allow for one restaurant per order. For example: You are craving pizza and your sister is craving Italian but you cannot order both in conventional apps without paying extra delivery charges and giving two separate order, at Swaad you can order from multiple restaurants at the same time through one delivery partner hence it will have only one delivery cost. Swaad allows simultaneous orders in a single transaction from numerous restaurants through a centralized delivery system.
The key focus of this initiative is to make it easier for consumers to access wide varieties of foods under one platform without having to make several transactions and pay double delivery fees. This is achieved through the use of efficient algorithms that ensure timely and cheap delivery processes from different eateries.

Its main features include an easy user interface, reliable search tools, safe payment methods that can be trusted and order status updates. Besides, Swaad gives recommendations that are personalized according to user preferences as well as previous orders so as to improve the overall user's satisfaction.

Additionally, Swaad not only benefits users but it also offers advantages for partner restaurants by extending their consumer pool hence boosting sales through increased visibility on the platform. Thus partnering with Swaad provides an opportunity for local vendors to exploit new markets previously unexplored on digital space by reaching wider audience and attracting new

INTRODUCTION

In the fast-paced world of today, food delivery services have become increasingly popular as they offer convenience and flexibility to busy individuals and families. Traditional food delivery apps usually restrict their users to order from a single restaurant at a time hence limiting their options and sometimes resulting in multiple delivery fees.

To address this challenge, we began developing Swaad as a revolutionary food delivery platform that overcame the failings of existing services. By allowing users to make orders from different restaurants within one transaction only with just one delivery fee, Swaad is set on redefining the user experience.

Swaad's motive is to make ordering food quicker, cheaper and easier , also enhance the ordering process for users while supporting local eateries. Hence, we bhave also made a personalized mood board which helps customers with recommendations of what to eat based on customers' exploration of various cuisines and foods from different outlets operating around them, it aims at enhancing their dining experience and advocating gastronomic diversity.

Apart from satisfying consumer demands, Swaad also endeavors to benefit local restaurants as well as restaurant partners through providing them with such a platform.

RELATED WORK

Related Work:

Before going into the details of Swaad development, we closely inspected other food delivery apps and services to understand the landscape. What we found was that though there were many platforms that provided easy ways of ordering for meals, this became hard when it came to ordering from several restaurants in a single transaction.

Some apps allowed you to browse menus from various restaurants; however, each order had to be done separately, hence more delivery fees and long wait times. On the other hand, others offered aggregation services but they did not have seamless integration and lacked user-friendly interface that we envisioned for Swaad.

Similarly, we looked at trends in food delivery industry showing a growing demand by consumers for more choice, flexibility as well as affordability. As on-demand services rose coupled with the popularity of food delivery apps, it presented an excellent opportunity to come up with something new and meet the needs of modern users.

In addition, we explored emerging technologies and best practices in logistics and delivery management field. We studied how optimization algorithms and route planning solutions can be used to simplify the dispatch process reducing its duration.

We gathered insights about existing platforms' strengths & weaknesses as well as current trends & technologies through which valuable knowledge could be gained.

PROBLEM STATEMENT

Have you ever wanted to order pizza from one place and burgers from some another restaurant but unfortunately you needed two separate orders and paying double delivery fees? This is a common problem faced by many people when using the regular food delivery apps.

In its present form, most food deliver services limit users to ordering food from just one restaurant at any given time. Ordering food in this way can be expensive and take up more time before it is delivered.

Furthermore, managing several orders from different restaurants becomes difficult for users as well as consuming too much of their time.

Don't worry weve got your back. For our project, we intend to come up with a system that would allow customers to make an order from multiple restaurants at once. We aim at simplifying many orders and delivery charges while providing users with enough flexibility so they can order meals from diverse outlets via a single channel.

In addition, it is our objective to streamline the process of ordering meals online, increase customer satisfaction levels while supporting community based restaurants. We are convinced that there is room for improvement if we could only come up with more effective methods of ordering food.

Requirement Analysis:

We had to analyze the requirements before it came to developing our food delivery platform so that we establish what our target users need and expect. This entailed gathering potential buyers' feedback through surveys and interviews in order to know what they like, where it hurts most when ordering foods online or what matters most for them.

Through this process, we identified several key requirements for our platform:

Ordering from Multiple Restaurants: Users should be capable of making their orders from different restaurants at once.

User-Friendly Interface: An intuitive interface that would make placing an order a seamless process is necessary for this platform.

Secure Payment Options: To execute transactions safely, users should have the ability of using secure payment options.

Real-Time Order Tracking: The platform must provide real-time information on order status which includes estimated delivery times.

Personalized Recommendations : Based on user's preferences and previous orders made by the user, such a platform should offer personalized recommendations .

These requirements allowed us to set specific development objectives for our created system as well as better satisfying end-users' needs.

Risk Analysis:

In addition to identifying requirements, we also conducted a risk analysis Risk Check and Feasibility Check:

Besides figuring out needs, we also looked at risks that might come up as we take our project to a bigger scale

Some of the risks we found:

How will we give out multiple orders in the same delivery price wouldn't it cost extra for the delivery agent to run to different restaurants. So to conquer this issue we have come up with a solution.

In todays world where fast food chains are being made everywhere we thought why not incorporate food hubs and food courts of malls and markets. For example Our app will notify youwhere all you can order muktiple from it will have food hubs and mall food courts at high priority also markets where the delivery agent does not have to travel extra and spend extra fuel costs, this will also be time saving.

Tech Hitches: Making an app that can take on orders from lots of food spots all at once might give us tech hitches like mix-up and ways to make it run best. Safety Problem: Making sure user facts and pay deals are safe is key to gain trust with our users. We saw the risk of data theft and put strong safety tools in place to ease this risk.

Rivalry: The food delivery trade is a fierce one, with lots of big names in the mix. We saw the risk of tough competitors and made plans to make our tool stand out . By seeing and sorting these risks out soon in the start-up phase, we can reduce errors and make sure our plan runs smooth.

Before we made our app, we did a do-able check to weigh up if the plan works from tech, cash, and work view. From tech view, we saw if we can bring in all the bits we need it will work with our app. We saw that with the right skills and tools, we can make the app we need on a much higher scale. From the finance point of view, we saw if the plan within our budget and if it has positive potential customer feedback we could bring in investors. we saw that our app has great potential and could possibly be one of the toughest competitors to any food delivery app also it could make a good flow of cash with time. Last, from work view, we saw if we could start and implement the app in a real-world way. We saw some challenges we might have to deal with, like how to move food from place to place and how to help folks who need it, and made plans to deal with it all. All in all, from perspective of the do-able side, we saw that the plan is both tech-wisely and cash-wisely do-able, and we feel good that we can make it work.

Background Research

We relied on multiple sources that ranged from research papers to reports and blogs about the industry. The study aimed at examining the current state of affairs, obstacles experienced in this field, and prospects for progress.

In a document by Leong, W.H. (2016), “Food Ordering System Using Mobile Phones” is one such paper which provided a lot of insights into challenges faced in the online food delivery market. It covered some of the challenges including stiff competition, optimization of delivery time and ensuring customer satisfaction among others. Moreover it addressed an ever rising demand for variety and convenience amongst consumers who also made different orders from various restaurants.

Scholarly work and industry reports dealing with food delivery, and the change in taste of consumers formed the basis of our exploration. A study by Smith et al. (2019) found that there is a growing demand for convenience and personalization within the market; this means that there is a group of customers who want diverse cuisines in one order. This was very important to our team because it led to the beginning of our project.

Moreover, an examination of the market trends and dynamics gave valuable insights into competition levels and emerging opportunities. The food delivery market has been expanding rapidly according to various reports from research firms such as Statista and Euromonitor International, which attribute this growth to factors like changing lifestyles, urbanization, and technology advancements among others. These findings emphasized more on how pertinent our project could be within the wider context of food delivery ecosystem.

Furthermore, we discovered that existing solutions in the market did not cater for specific requirement concerning easy integration of different foods ordered from several restaurants at a go. They may be convenient for use but traditional food delivery apps are limited as far as the number of orders one can give is concerned

Lastly, another important source I considered was an industry report by Statista on Worldwide Food Delivery Market (2023). According to the survey, fast-paced life and digitalization have caused a remarkable growth in online meal delivery services particularly in big cities. In addition it emphasized how significant technological advancements are to improving user experience as well as operational efficiency in food delivery services.

A great deal of research motivated us to begin working on Swaad project because: first we had undergone many investigations that we were inspired by; second there seemed to be no other competitor offering these services anywhere in our target region; finally people’s

changing tastes gave us more confidence than before as they seemed tired already of traditional cuisines which most outlets had concentrated their efforts upon.

Unordered talks and polls from possible buyers confirmed we should try this plan. Chats with unique groups showed everyone needed a way to make ordering and paying less from e-ateries. Our crew felt inspired by these insights, fully wanting to fix this huge problem.

In essence, before starting, checking the background provided useful details, drive, and backdrop. Serious studies, market lookups and consumer know-how let us find major chance for supply shakeups. Holding that wisdom, we aimed to settle on a choice.

Proposed System

The Swaad project aims to resolve the problems of users of the usual meal delivery apps where options are limited and multiple delivery charges. The objective of this project is to make a smart phone app that is user-friendly through a centralized delivery system and enables customers to order simultaneously from different restaurants. Highlighted below are the main features suggested for the system:

1. Single Transaction, Single Delivery Fee: Customers can do away with having to make several orders and bear numerous delivery costs by enabling them to pick products from various restaurants and pay for all in one go.

2. Personalized Recommendations: To enhance eating experience wholly, the app will provide recommendations on what menu item a client would be interested in based on his/her preferences, previous purchases as well as mood boards.

3. Centralized Delivery System: In order for smooth and timely transfer of orders from different joints, Swaad will employ local courier companies.

4. User Interface and Payment Security: The app will feature an easy-to-use interface which aims at making navigation easy through it as well as secure modes of payment thus giving confidence among users.

Swaad intends on enhancing its subscribers' experiences through affordably providing an easy way to taste a variety of dishes across various restaurants.

Goals and Objectives

1. Increase User Engagement: In six months, there should be a 20% increase in the number of Swaad users placing orders.

2. Increase Partner Restaurants' Visibility: On-board 50 neighborhood eateries as partners within the first three months and raise partner restaurants' revenues by 30% in one year.

3. Enhance Delivery Efficiency: All order delivery times must not exceed an average of thirty minutes each so as to ensure prompt and reliable service.

4.Have satisfied cutomers

5. Help local restaurants with our multiple ordering systemProject Lifecycle Project

Lifecycle: Agile Development with Iterative Refinement

For the Swaad project, we're developing dynamically so as to have a similar characteristic of a fast changing food delivery industry. This is how we are going to do it:

Initiation and Planning:

Getting Started: We begin by thoroughly understanding what our customers exactly want and need from us as well as what our partners expect from us. It's all about building a strong foundation.

Making a Plan: Guided by the information in our possession, we draw up an itinerary that outlines our objectives, methods of achieving them and those who will be involved. Essentially, this is like our north bearing during this project.

Iterative Development:

Taking Steps: We break the project up into bite-sized pieces called sprints where we concentrate on creating and refining particular features.

Round and Round: Every sprint is like an orbit where we build, test and learn. Just remember that it's not just about staying flexible but also adaptable as per changes happening henceforth.

Getting Better: Following each sprint, minor adjustments are made based on team input and user feedback. Ultimately, it is unending because there is growth at every turn.

Review and Enhancement : We collect reviews from our potential customers as to how we can enhance the performance of our app.

1.1. Stakeholders

Business Managers These provide the general vision and direction of the project. They will be watching things like budget, timelines, and overall business impact.

Developers: These are skilled individuals who will convert ideas into reality, write code and create Swaad app from start. Their proficiency is significant to the achievement of this project.

Testers: The Swaad app's validity is what testers will look out for; they will test it for any bugs or issues and make sure everything runs smoothly before it goes live.Support

People:Once Swaad is up and running these guys will be on the front line dealing with clients assisting them in resolving their problems ensuring that they have a great customer experience.

End Users In general it all depends on them! The ones who are using swaad app through which delicious food can be bought easily. For this reason, their feedback and satisfaction are important to the success of this venture.

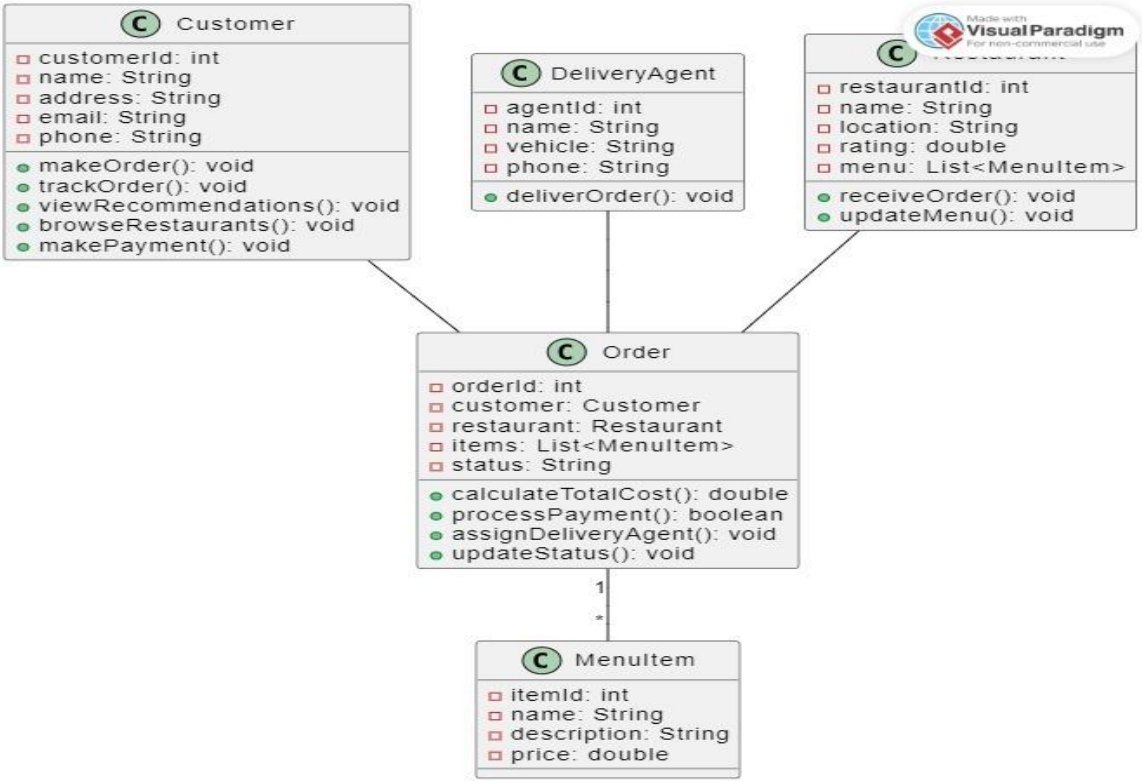
Proposed Solution or Approach or Technique

Our proposed approach for creating Swaad is to construct a coordinating and requesting framework that would let clients arrange from a few eateries at

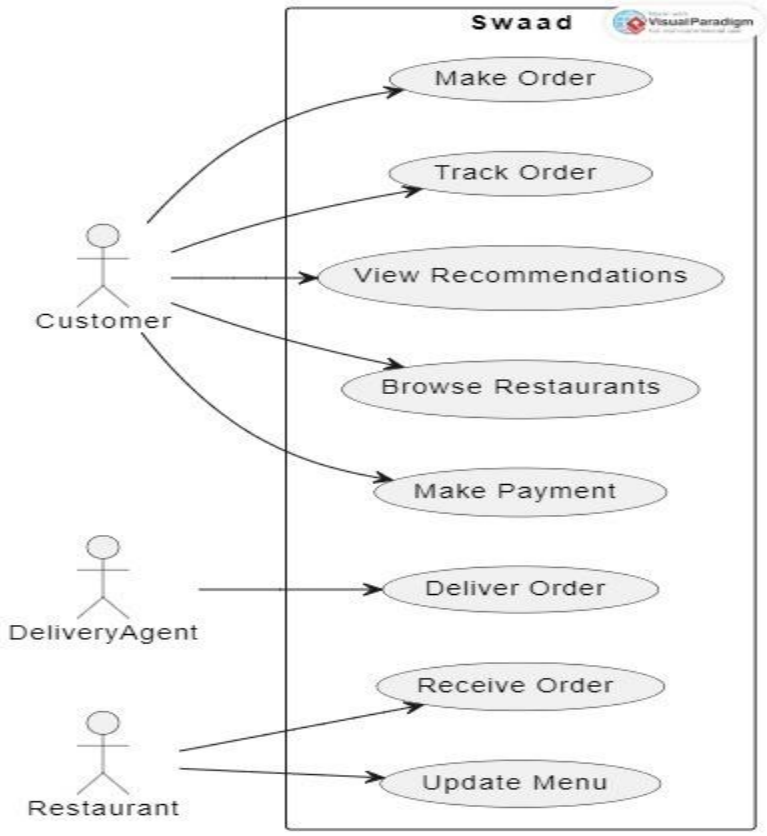
once. By taking this procedure, clients can put orders more effectively and maintain a strategic distance from having to explore between numerous restaurents or apps.Swaad guarantees that the conveyance comes to to the buyer effortlessly

This idea not only saves time but also delivers all the orders at the delivery charge of one . We developed a user-friendly interface, so that the consumers can easily interact with it Swaad seeks to remake the restaurant delivery market by offering consumers convenience and flexibility .Furthermore, we are establishing robust collaborations with a wide variety of eateries in order to broaden our selection and offer our users a vast array of food options. We thought of doing collaboration with different restaurant partners, Swaad guarantees order coordination and on time .

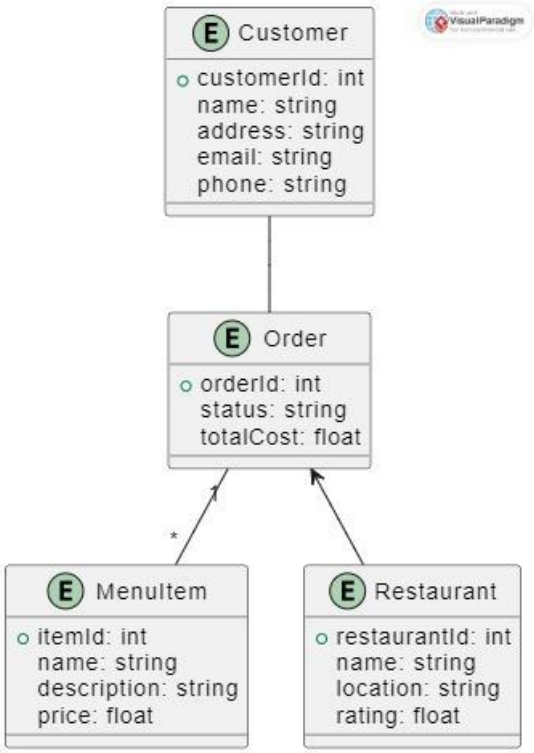
Design diagrams/Architecture/ UML diagrams/ Flow Charts/ E-R diagrams Class Diagram



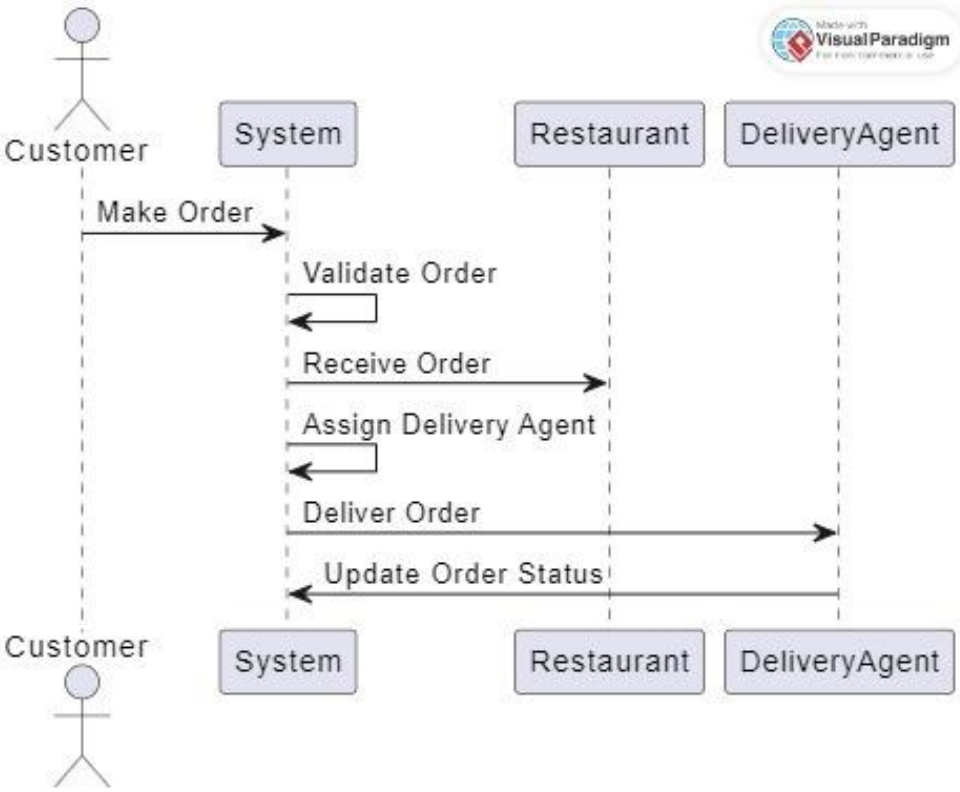
USE CASE DIAGRAM



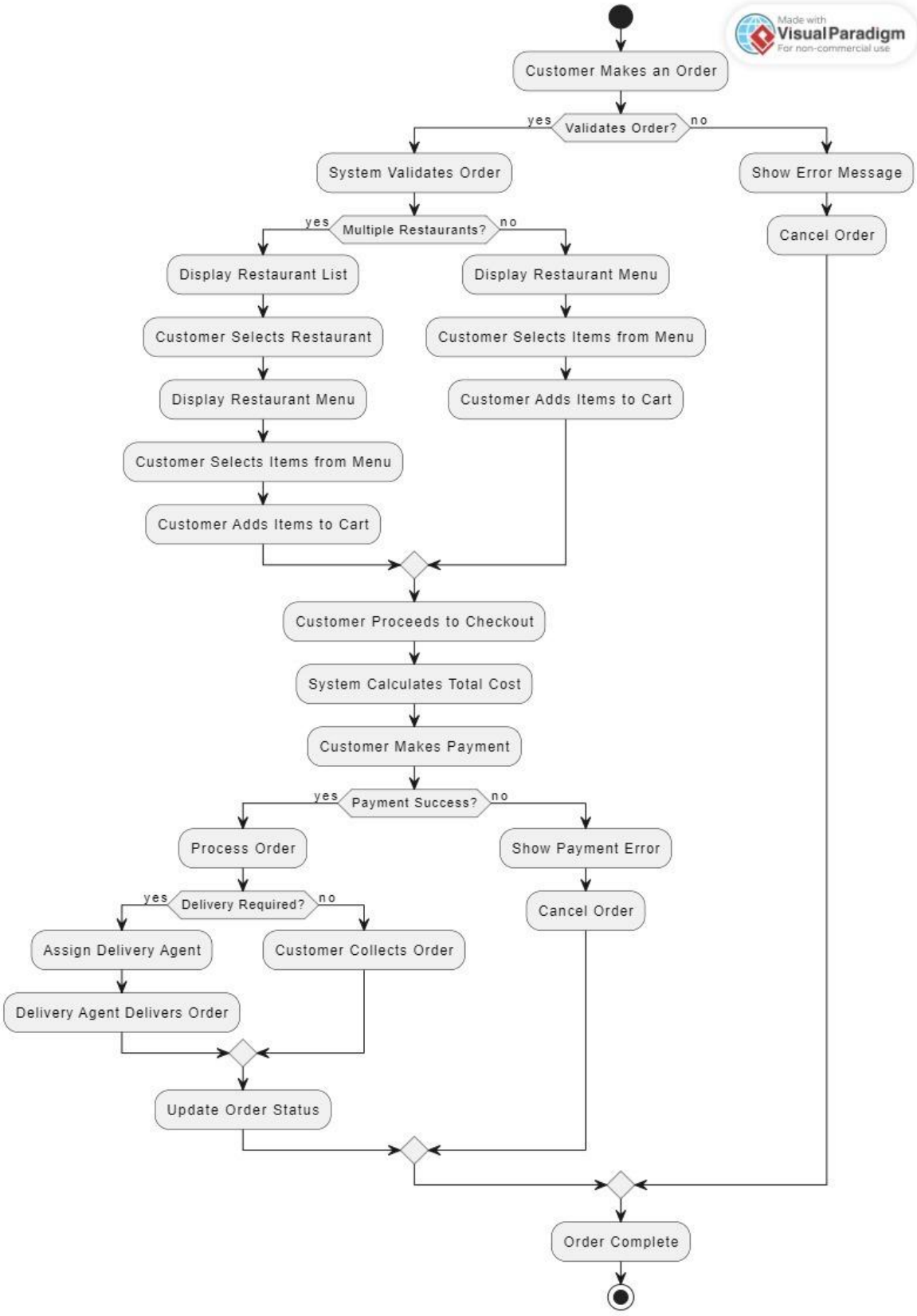
DATA ARCHITECTURE



SEQUENCE DIAGRAM

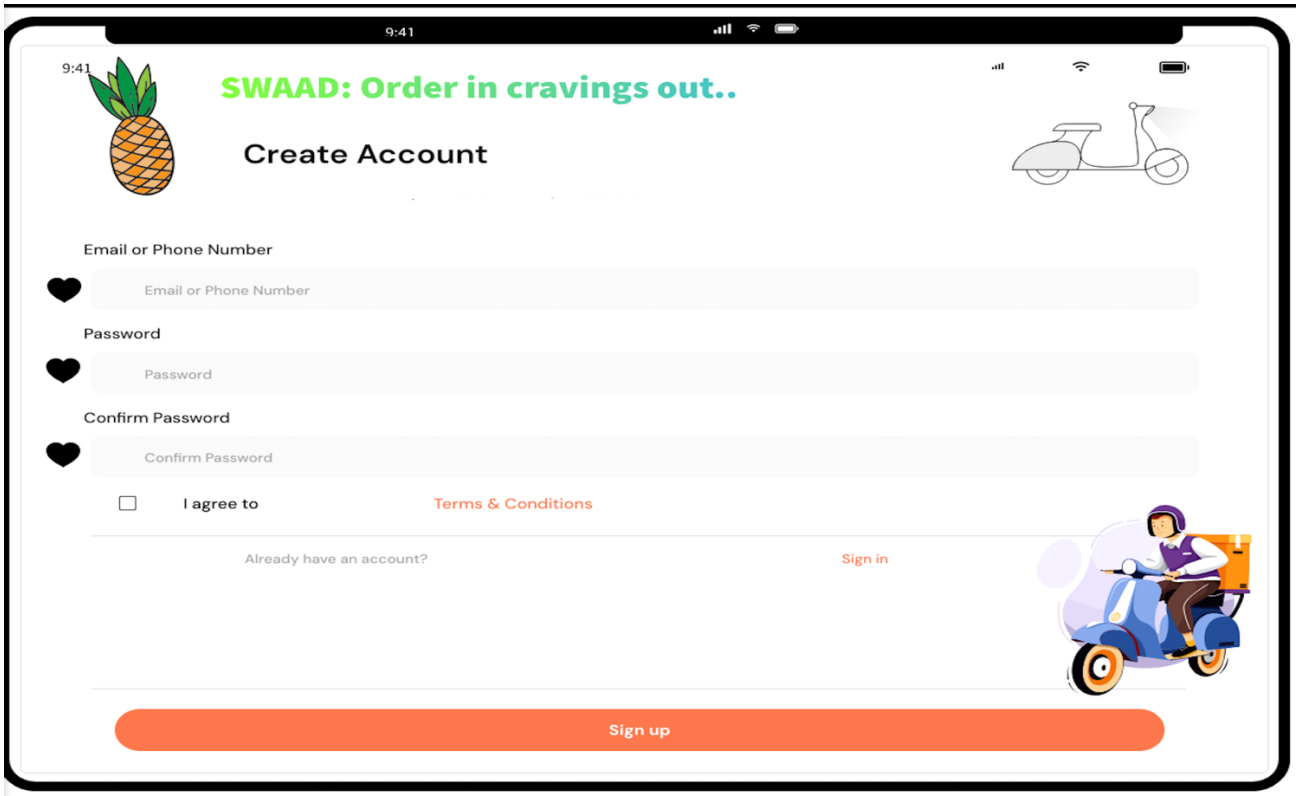


ACTIVITY DIAGRAM

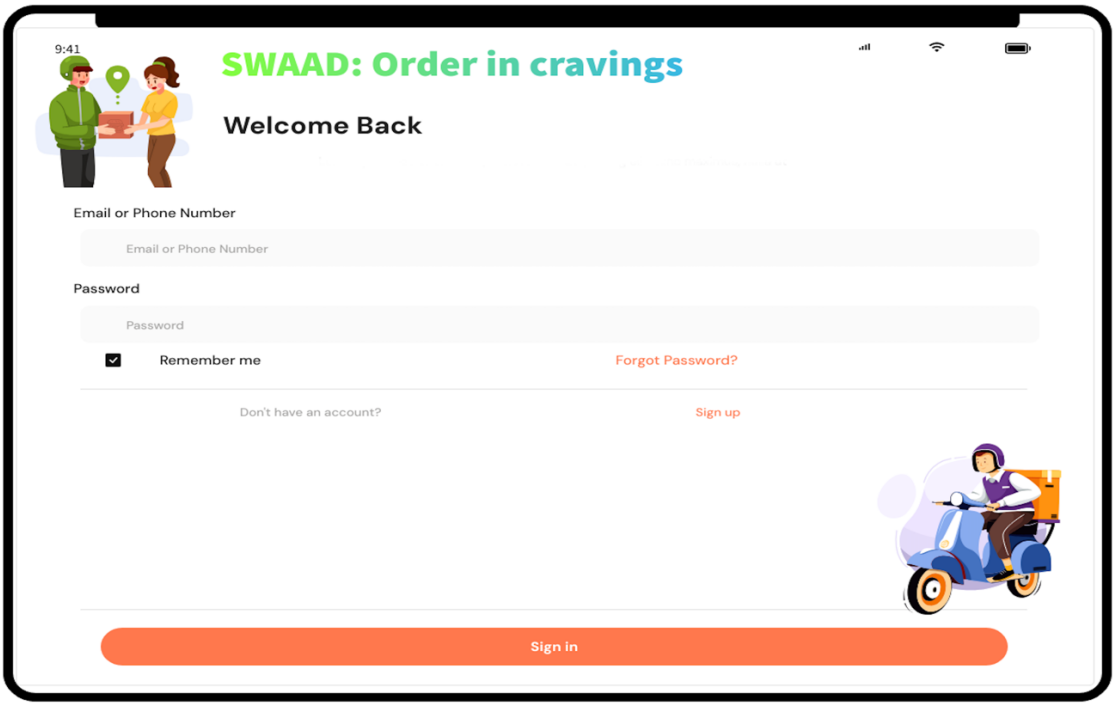


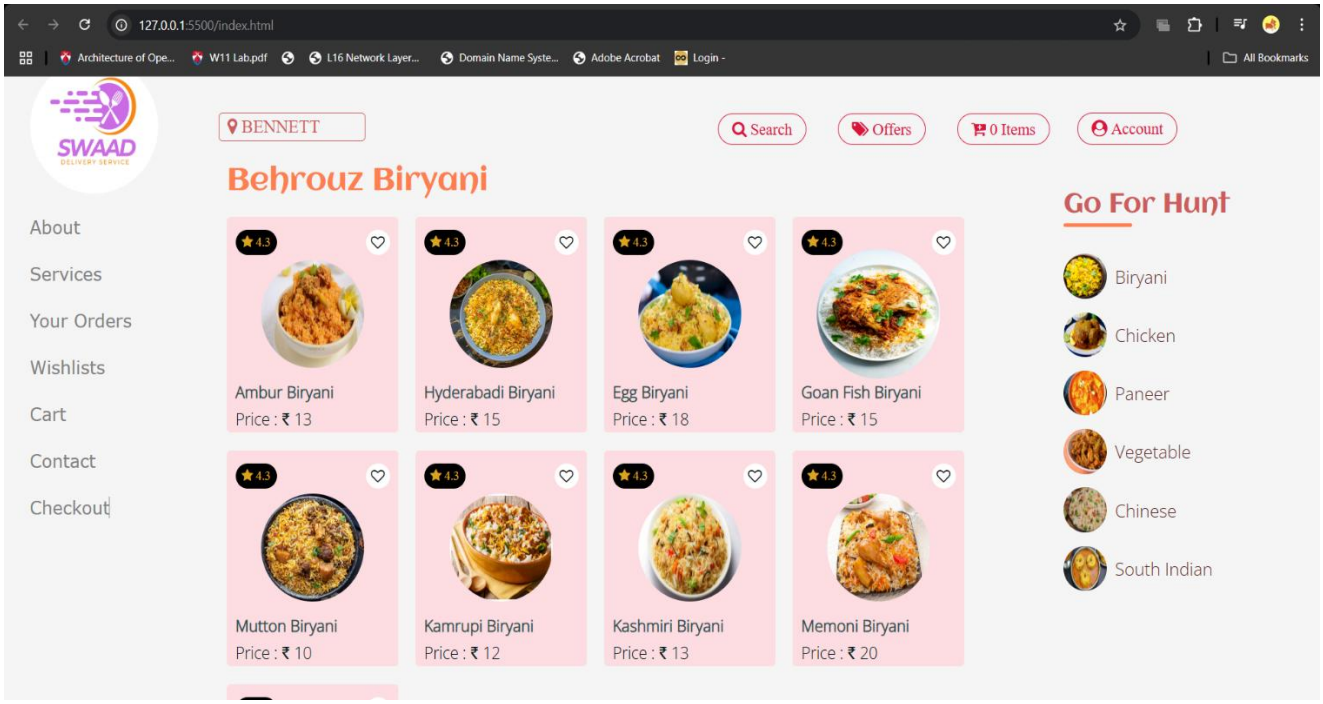
USER INTERFACE

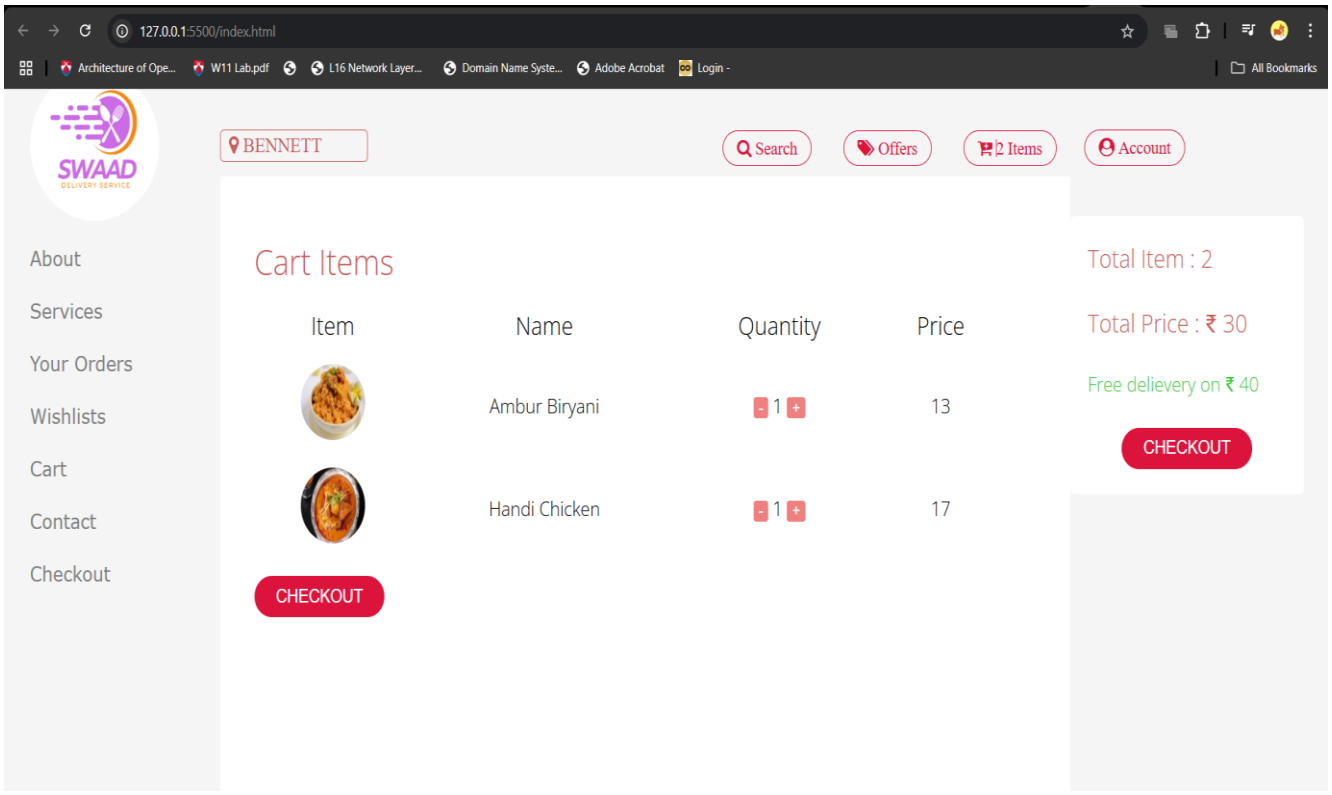
SIGN UP PAGE



LOG IN PAGE







Simulation Set up and Implementation

We had to test the efficiency and how effective our app would be if we plan to expand it in the market.We tried various arrange combinations counting different sorts of cuisines and amounts. We moreover checked the finest course

and delivery areas to evaluate that our project handles Complex orders. We did intensive testing. We took fake orders from a variety of eateries and areas to see if our app may handle conveying them all together to achieve the best possible result.

We used the best technology to utilize the tracking of delivery in real time . However, to minimize the delivery fees We thought of reaching out to the restaurants in the food court and malls as there are a lot of food stalls to make a good profit . Swaad’s algorithm ensures smooth order processing and on time time.We took various surveys from the people who could be future users of our app and we tried to incorporate all of their reviews in our app because collecting feedback and making changes regularly ensures that Swaad is up to date and continues to meet the need of users .

Result Comparison and Analysis

After carrying out a complete reconstruction, the Swaad execution was compared with regular food transportation administrations.
This is very beneficial for Swaad, demonstrating its dominance in unified agreements, shipping control and overall customer satisfaction.
Swaad's innovative approach of allowing customers to order from different restaurants in one exchange has proven to be extremely attractive, eliminating the need for customers to monitor orders and expenses.
transport fee.
different transfers.
Additionally, Swaad's optimized back-end calculations ensure orderly, smooth and hassle-free coordination.
-Free shipping.
40 customer reviews praise the Swaad for its comfort and reliability, confirming its dynamic influence on the food transportation industry.
By providing a user-friendly interface, ensuring transportation organizations save costs, and providing widespread catering, Swaad has set an underutilized standard for food delivery segment, bringing unparalleled convenience and choice to its customers.

Learning Outcome

While developing swaad , we did a lot of research on how to make customers happy . We have seen that making people order from multiple restaurants at same delivery charge is a big win. We make sure that it runs smoothly and gets the order to the people at right time To expand Swaad we got to know that how important it is to make connections and reach out to other people

By doing this, we've learned how to create while still giving unimaginable advantage.

By and large, Swaad has been a exceptional learning involvement for us. It's teaching us how to make things more better for our clients and how to keep developing as a exchange. We're committed to utilizing what we've learned to keep making Swaad in fact way better, so that everybody can appreciate simple and tasty food movement.

PSEUDO CODE

```
// Define a function called displayItems

function displayItems() {

    // Retrieve HTML elements for various food categories

    const biryani = document.getElementById('biryani');

    // Repeat for other categories...


    // Filter food items based on their category

    const biryaniData = foodItem.filter((item) => item.category == 'biryani');

    // Repeat for other categories...
```

```
    // For each category, create HTML elements dynamically to display food items
    biryaniData.forEach(item => {
        // Create HTML elements...
        // Append elements to the category container...
    });
    // Repeat for other categories...
}

// Define a function called selectTaste
function selectTaste() {
    // Retrieve HTML element for the category list
    const categoryList = document.getElementById('category-list');

    // Filter unique food categories from the foodItem array
    const categories = [...new Set(foodItem.map(item => item.category))];
    categories.forEach(category => {
        // Create HTML elements...
        // Append elements to the category list container...
    });
}

// Define an event listener for the add-to-cart buttons
document.querySelectorAll('.add-to-cart').forEach(item => {
    item.addEventListener('click', addToCart);
});

// Define functions to handle cart functionalities
function addToCart() {
    // Add item to cartData array...
```

```
    // Update cart icon and total price...
}

// Define other functions: incrementItem, decrementItem, cartToggle, calculateTotalPrice

// Implement responsive design
window.onresize = window.onload = function() {
    // Adjust layout based on screen size...
    // Reassign event listeners...
};

// Call displayItems and selectTaste functions to initialize UI
displayItems();
selectTaste();
```

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