

Project report

Web & mobile app for restaurant marketplace,
and finding nearest restaurants.

Type : web & mobile application

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Acknowledgements

The development team would like to sincerely thank Dr. Khaldi, our patient and supportive supervisor, for his unwavering encouragement, guidance, tolerance, and dedicated efforts throughout the entire duration of this project. Additionally, we would like to express our heartfelt appreciation to our school for granting us the valuable opportunity to gain firsthand experience of working as a professional team on an app.

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User Problem

Discovering new restaurants and exploring food delivery options in a new city can be a challenge.

The absence of a central platform for listings and menus, along with limited recommendations and personalization, These challenges limit individuals from fully experiencing the city's culinary offerings without a centralized platform for restaurant listings, menus, and reliable recommendations.

Survey

We asked questions to understand user behaviors , needs and motivations :

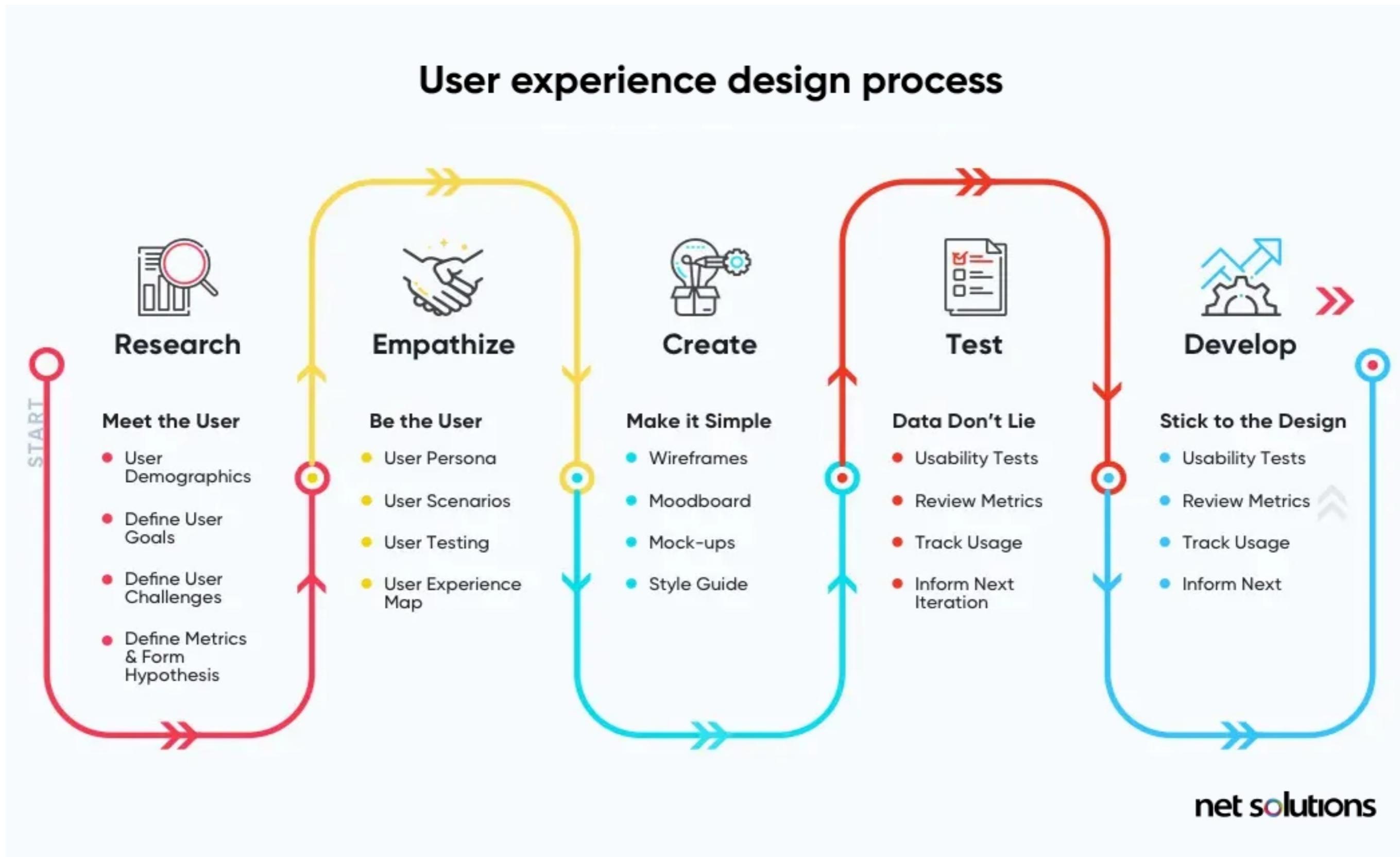
- How likely are you to try new or unfamiliar restaurant in your new city?
- Have you ever had a negative experience with a restaurant in your new city?
- What are the main reasons you choose to order food online?

Solution

So we had been fixed this problem with a full application that provides , solution for every problem :

- The solution involves creating a single platform that encompasses all restaurants, complete with descriptions, menus, and ratings. This centralized resource streamlines the process of finding and choosing restaurants in a new city, empowering users to make informed dining decisions tailored to their preferences.
- The primary reasons for trying online ordering include the time-saving convenience, special offers or discounts, and the wide variety of options available.
- Recommendation system that recommand best restaurants for users.

How can we enhance the user experience?



User experience is incredibly important because it focuses on meeting the needs of users and creating positive experiences that keep them loyal to your product or brand. It's all about making your users happy! Additionally, a meaningful user experience allows you to map out customer journeys within your product, ensuring that they have the best possible experience and helping your business thrive. So, let's prioritize user experience and create amazing journeys for our users!

"User experience is the heartbeat of a successful product." Jesse James

Technologies

We used React.js for the website dashboard and flutter for mobile development , firebase for backend , python for machine learning to make a model of Ai .

This combination of technologies ensures smooth integration and efficient management, delivering a user-friendly experience.

React js

React.js is a JavaScript library used for building user interfaces for web applications. It allows developers to create reusable UI components and efficiently update and render data as the application state changes. React.js follows a component-based architecture, making it easy to build interactive and dynamic user interfaces for modern web applications.

Flutter

The growing popularity of mobile applications has led to the rise of two major concerns of startups: How to develop an app that can compete with others with the 3,5 million apps in Google Play and 2,2 million in Apple Store? How to make my product stand out, especially with a limited budget, with 407 million innovative companies operating around the world? With such rapid growth of mobile apps and cutting-throat competition, it's become obvious for all-level enterprises that choosing a solution which ensures the best cost and time efficiency is simply a must. That's why cross-platform solutions for mobile app development are a choice to consider.

Firebase

Owned by Google, Firebase is a complete package of products that allows to build web and mobile apps, improve the app quality and help your clients grow their business. Firebase can be seen as a server-less backend for your mobile apps, web apps, etc. It is a service provided by Google. It has many features like Realtime database, Cloud functions, Analytics, Crashlytics, Cloud Firestore, etc.

Python

AI projects differ from traditional software projects. The differences lie in the technology stack, the skills required for an AI-based project, and the necessity of deep research. To implement your AI aspirations, you should use a programming language that is stable, flexible, and has tools available. Python offers all of this, which is why we see lots of Python AI projects today.

From development to deployment and maintenance, Python helps developers be productive and confident about the software they're building. Benefits that make Python the best fit for machine learning and AI-based projects include simplicity and consistency, access to great libraries and frameworks for AI and machine learning (ML), flexibility, platform independence, and a wide community. These add to the overall popularity of the language.

Render

Render is a cloud application hosting platform designed specifically for developers. It offers a seamless and straightforward experience for deploying and managing your applications in the cloud. With Render, you can focus on building and shipping your code without worrying about the underlying infrastructure.

Design System for User interface

We used Figma for different kinds of design (Prototype , Logo ... etc)

Typography

Montserrat really shines for short pieces of all caps and the geometric simplicity of the letters. In lowercase, Montserrat, is still a pretty nice font with a nice large x-+++ height and a lot more character than Arial or Helvetica. Recommended For: It is basically the one that suits all and creates feeling of trust.



01- Semi Bold

qwertyuiopasdfghjklzxcvbnm

1234567890

02 - Light

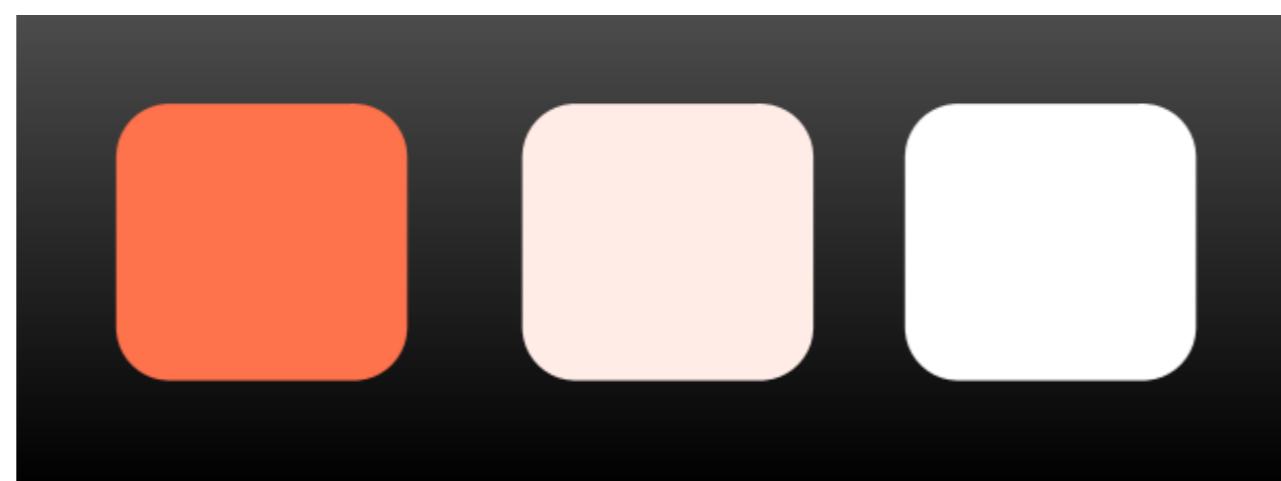
qwertyuiopasdfghjklzxcvbnm

1234567890

Color Selection for Our Restaurant Project:

The Power of Orange : We carefully selected orange, light orange, and white for our restaurant project app and website due to the following reasons:

- 1.** Appetizing: Orange is a highly appetizing color that naturally stimulates hunger and craving, making it a perfect choice for a restaurant project.
- 2.** Attention-Grabbing: Orange and light orange hues are eye-catching, helping our app and website stand out and capture users' attention amidst competition.
- 3.** Positive and Welcoming: The combination of orange and white evokes a positive and welcoming ambiance, inviting users to explore our restaurant project with a sense of warmth and hospitality.



Logo

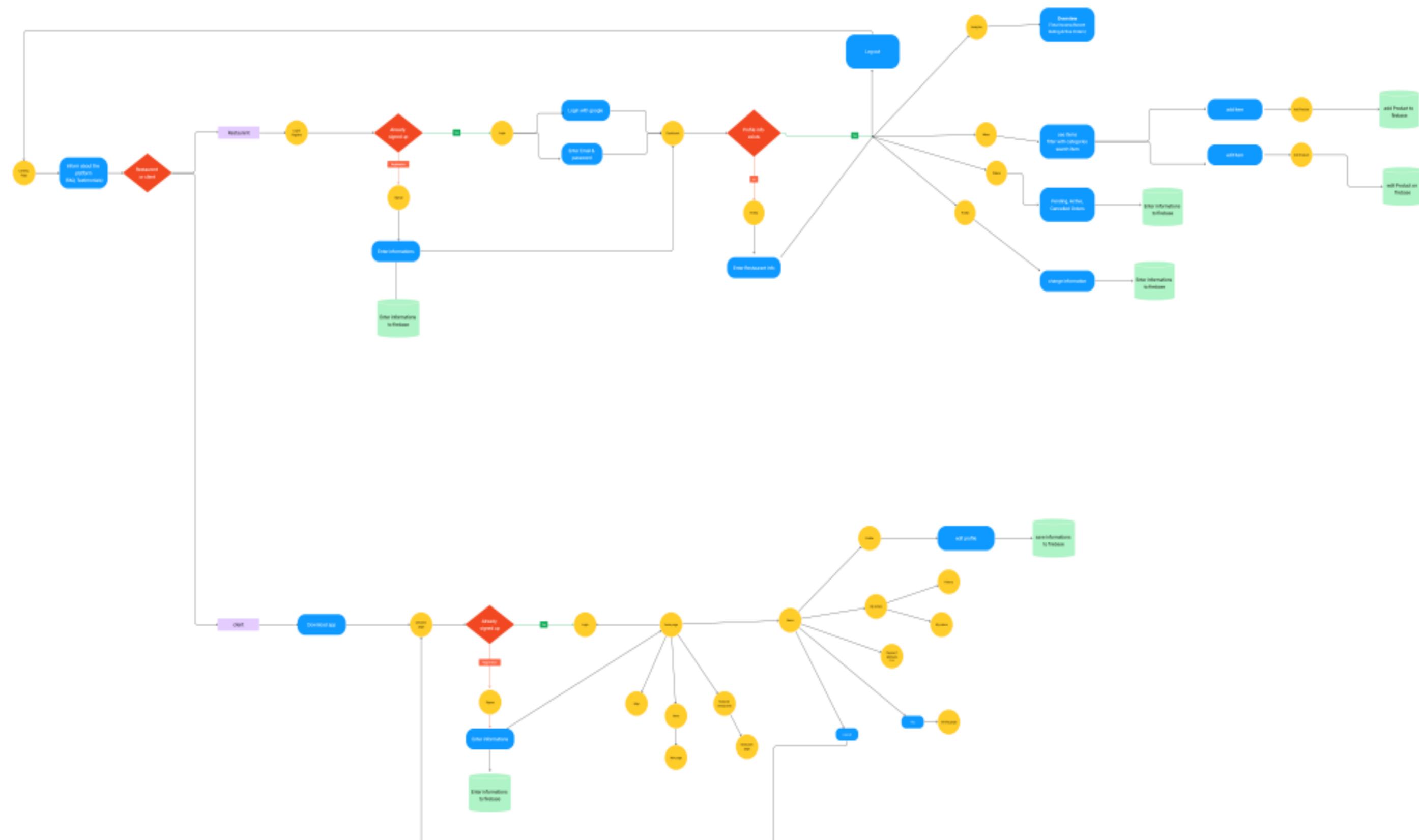
We used Figma for the logo .

Our logo app concept features a flying dish, symbolizing the wide range of items you can explore through our app. With a focus on fast delivery, we bring an exciting world of culinary options right to your doorstep.



User Flow

A user flow is a chart or diagram showing the path a user will take in an application to complete a task. Product teams build user flows to intuitive design products, present the correct information to users at the right time, and allow users to complete desired tasks in as few steps as possible.



Database Diagram

Restaurent	
email	string
mapAddress	string
name	string
numOfRatings	int
rating	int
reviews	string[]
photoid	string
TotalIncome	int
deliveryPrice	int
description	string
isActive	boolean
phone	string

User	
email	string
image	string
name	string
phone	string

Review	
createAt	timesamp
description	string
rating	number
restaurentId	string
userId	string
userName	string

Item	
available	boolean
category	string
categoryRef	string
deliveryPrice	number
description	string
name	string
numberOfOrders	number
numberOfRatings	number
photoid	string
rating	number
price	number
res_name	string
restaurentId	string

Order	
address	string
createdDate	timestamp
itemId	string
itemImage	string
itemName	string
numberOfItems	number
restaurentId	string
status	string
totalPrice	number
userId	string
userPhone	string

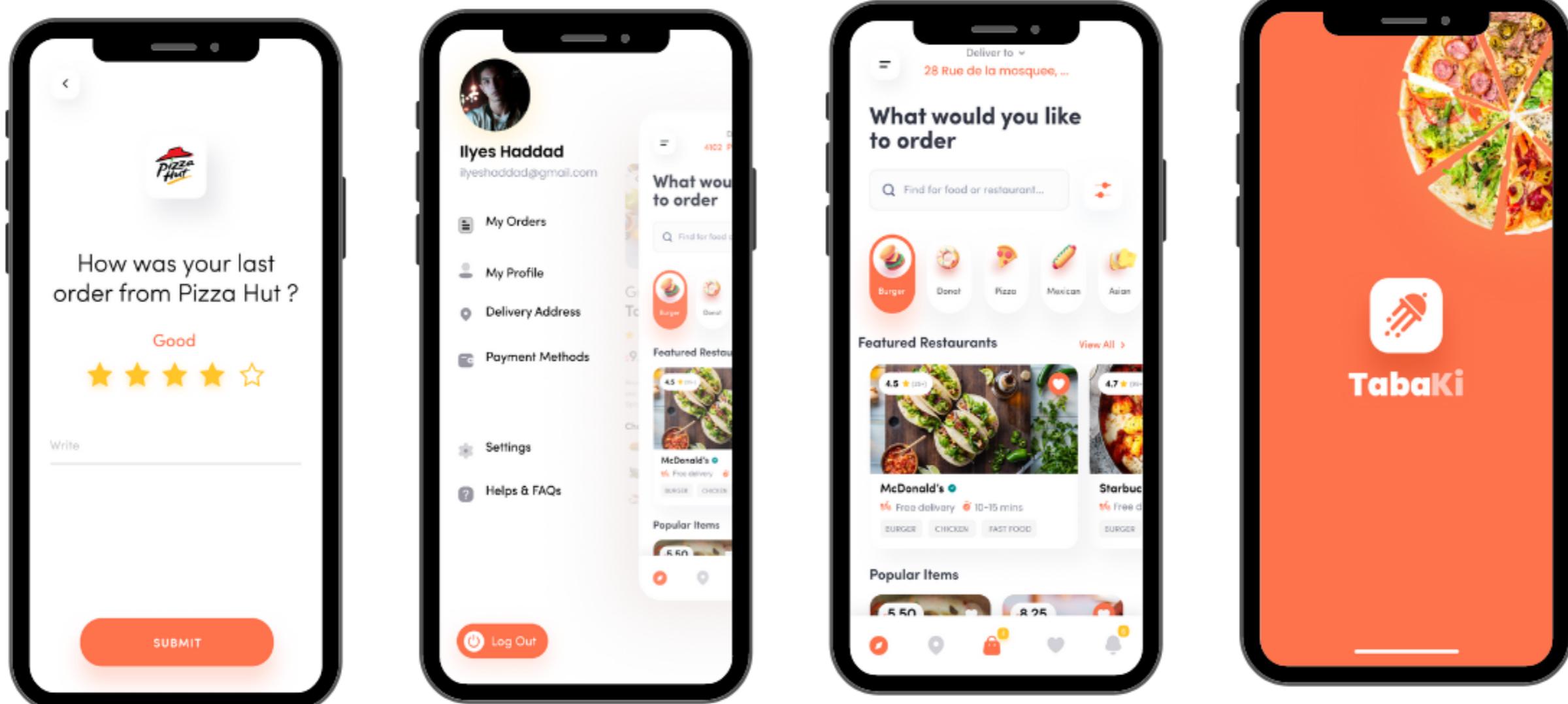
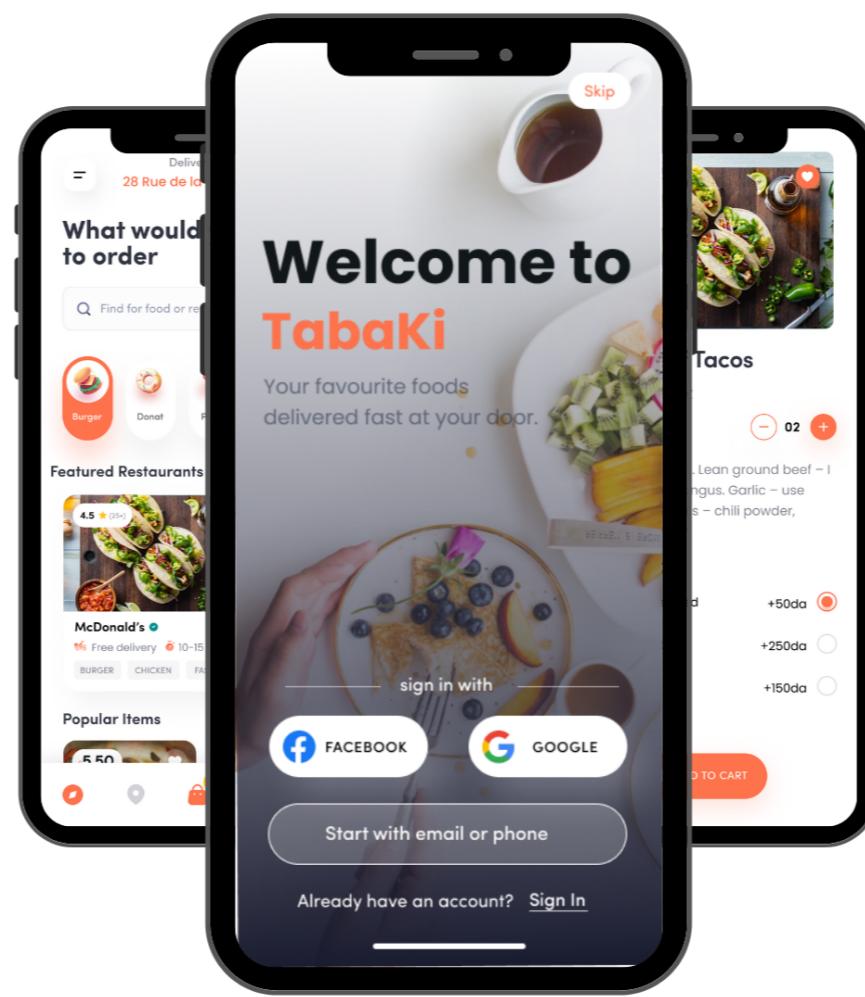
categorie	
name	string
photoid	string

promos	
code	string
percent	number

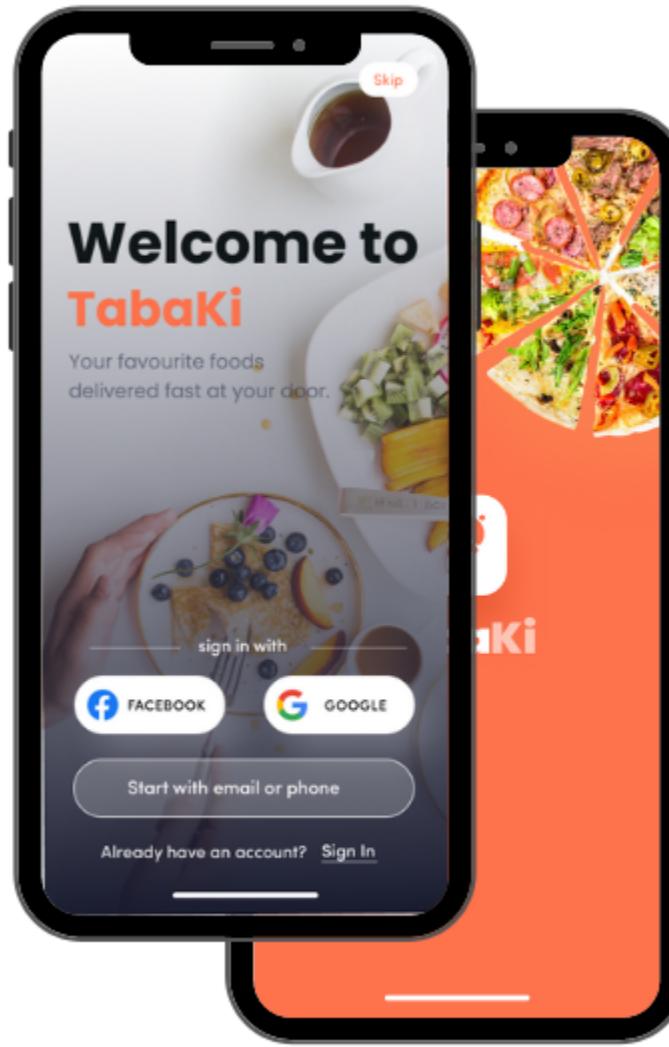
Screens

we used figma for creating our screens and prototype ,

Mobile app

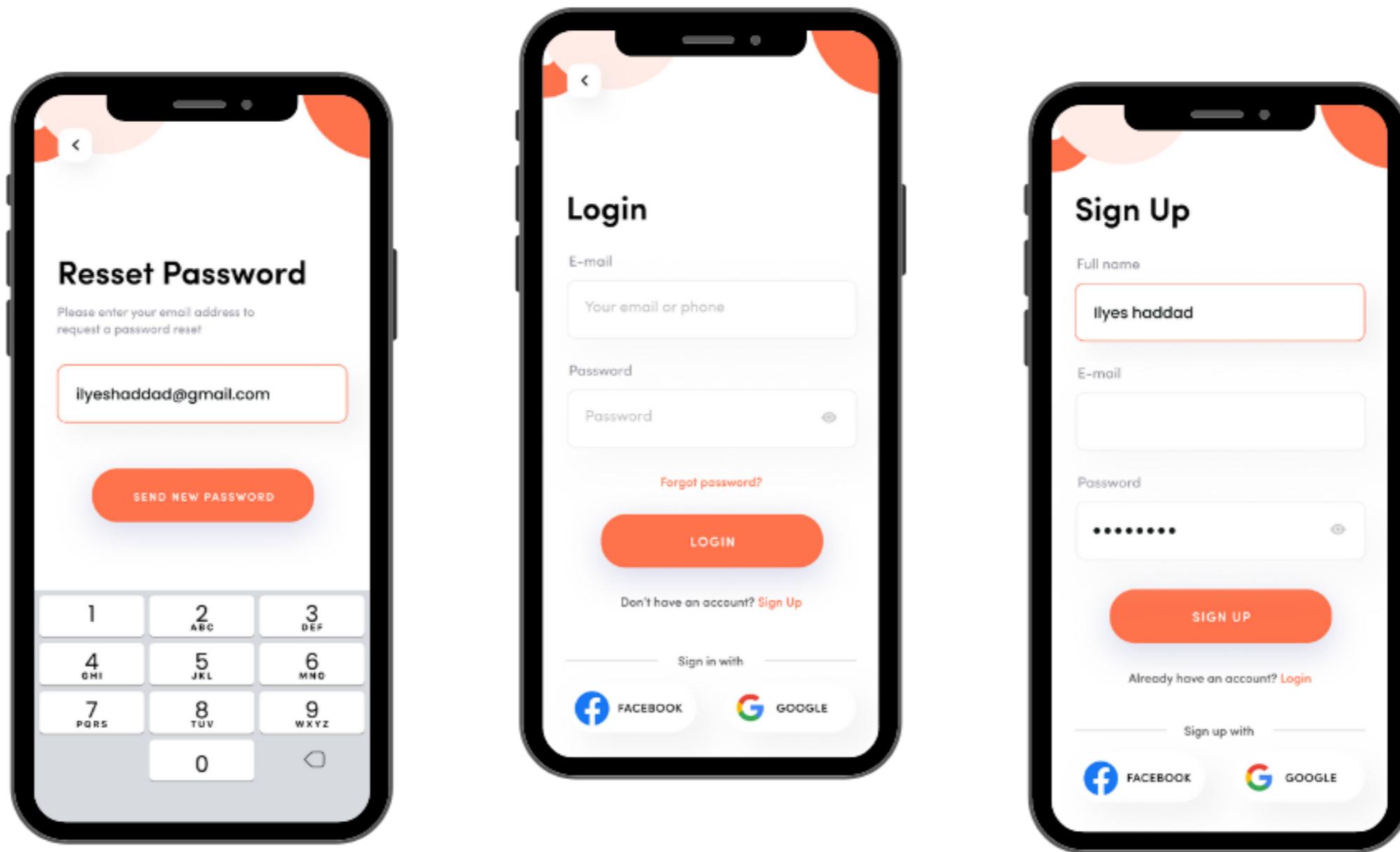


Splash screen / welcome page



Sign in / Sign up

We used firebase for authentication , Firebase simplifies authentication with its secure infrastructure, seamless integration options, and extensive user management tools, empowering developers to effortlessly handle authentication processes and focus on application development



Home screen / services

Home Page:

- 1- See a variety of restaurants with all their main information displayed, including name, rating, and cuisine type.
- 2- Browse through a wide range of items available in the featured restaurants.
- 3- Convenient search functionality to easily find specific restaurants or items.
- 4- Get quick access to your address information for seamless ordering or delivery.

Item Page:

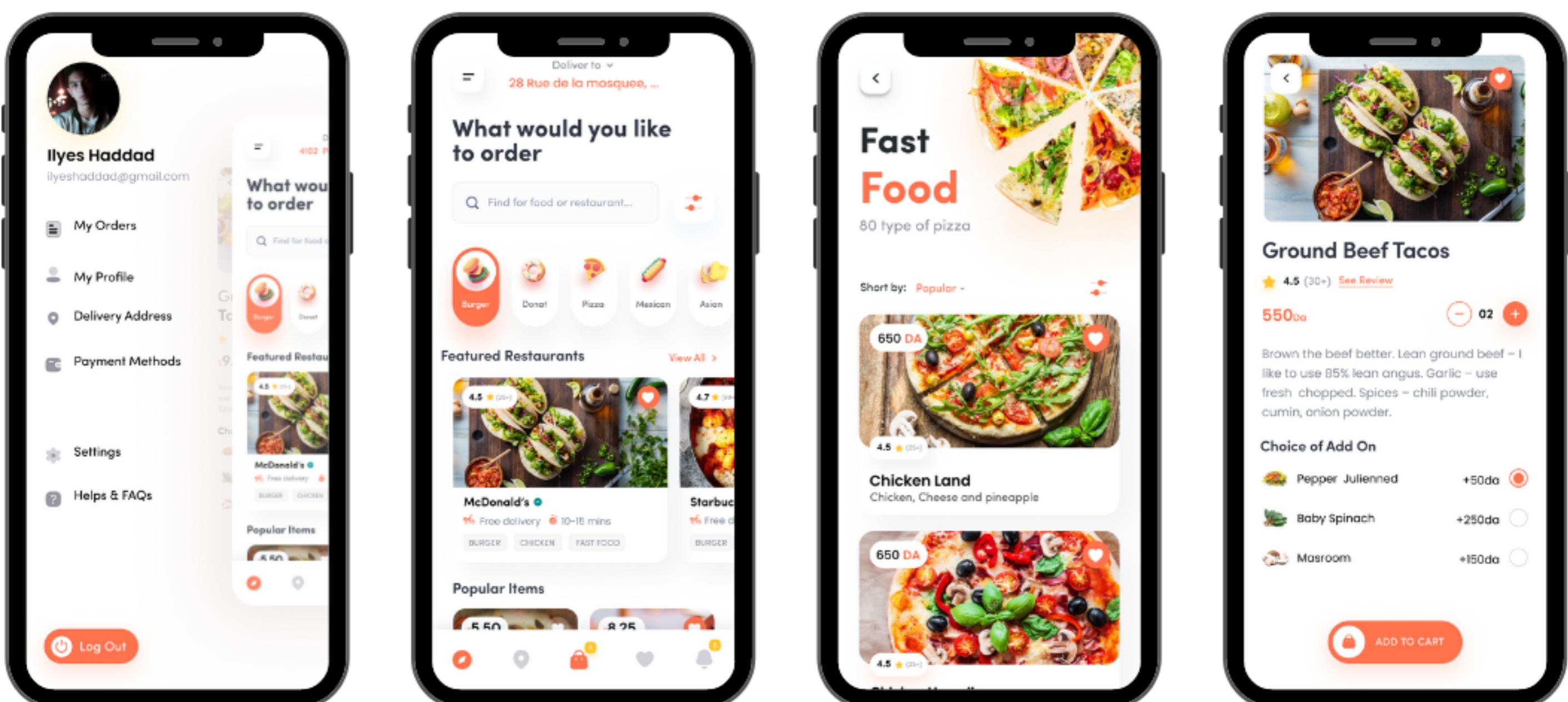
- 1- Discover detailed information about an item in a restaurant, including its name, rating, and price.
- 2- Customize your order by selecting the desired quantity of the item.
- 3- Conveniently add the item to your cart for a seamless ordering experience.
- 4- Choose additional options or additions, such as toppings, sides, or special requests, if available.

Category Page:

- 1- Access important services and features through the drawer or navigation bar.
- 2- View all the items associated with a particular category, including their main information like name, rating, and price.
- 3 -Utilize the search feature to find specific restaurants or items within the chosen category.

Drawer/Navigation Bar:

- 1- Access to various services through the draw or navigation bar.
- 2- Services include My Orders, My Profile, FAQ, Map, and Favorites.



Drawer functionalities

My Orders:

- 1- View your order history, including orders you have completed.
- 2- Cancel or track your current orders.
- 3- Access your order history for reference or reordering.

My Profile Page:

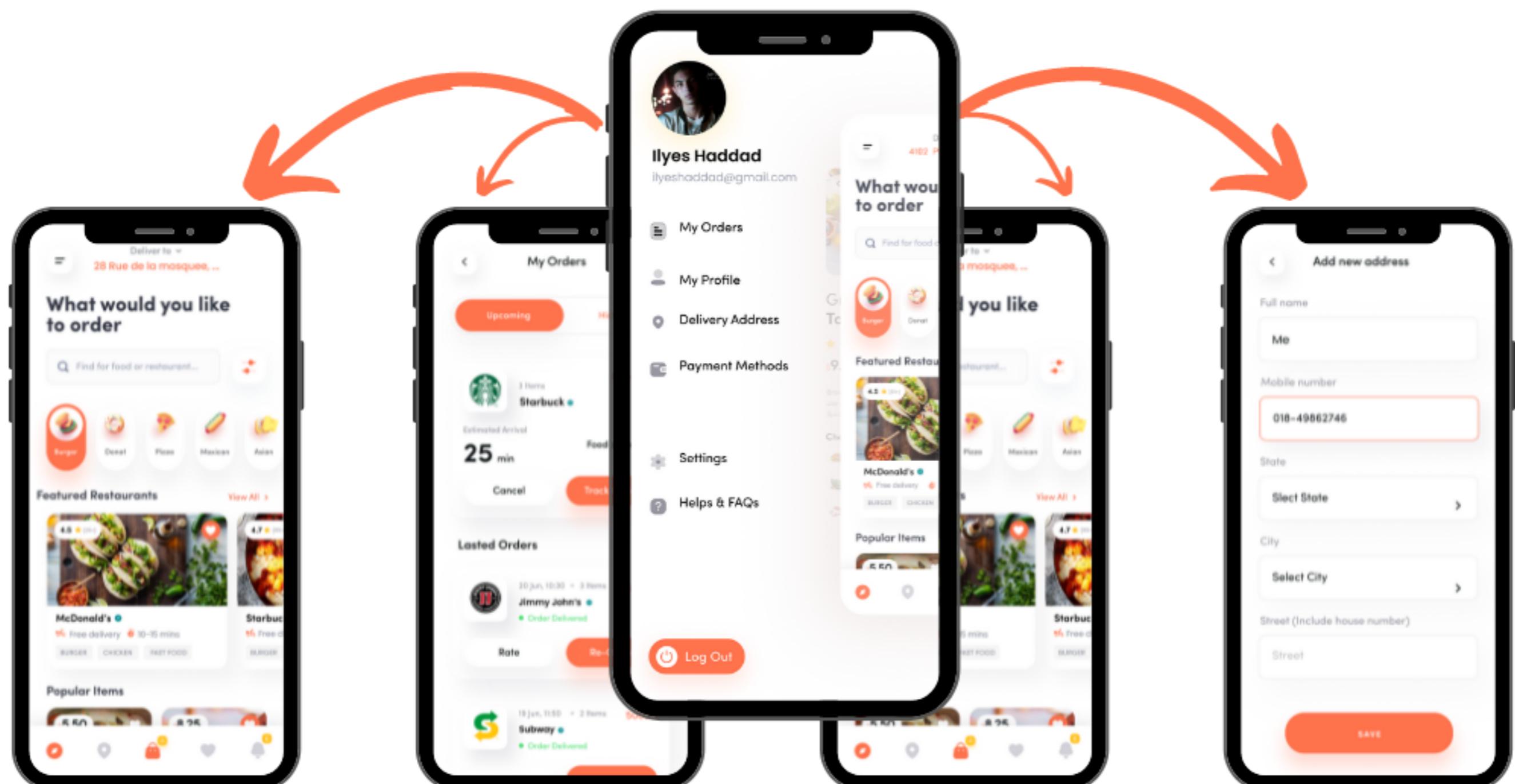
- 1- See your profile photo, full name, address, and phone number.
- 2- Easily update and modify your personal information.
- 3- Ensure your details are accurate and up to date.

Add New Address:

- 1- Provide your city, state, and street information to add a new address.
- 2- Save the address to our secure database for future use.
- 3- Streamline the delivery process with multiple address options.

FAQ:

- 1- Access frequently asked questions to find answers to common queries.
- 2- Conveniently navigate to our website for further information.
- 3- Get the support and assistance you need.



Ordering Process Steps:

Cart Review and Order Details

- 1- Start by reviewing the items in your cart.
- 2- View the total order price and any applicable delivery charges.
- 3- Take advantage of promo codes or discounts available on this page.

Place Your Order:

- 1- Once you're ready, click on the "Order" button to proceed.
- 2- On the My Orders page, you can track your order based on its current status.

My Orders Page:

- 1- On the My Orders page, you can track your order based on its current status.
- 2- Order statuses may include: canceled, active, pending, or completed.

Order Status Tracking:

Click on the order to access the Order Track page.

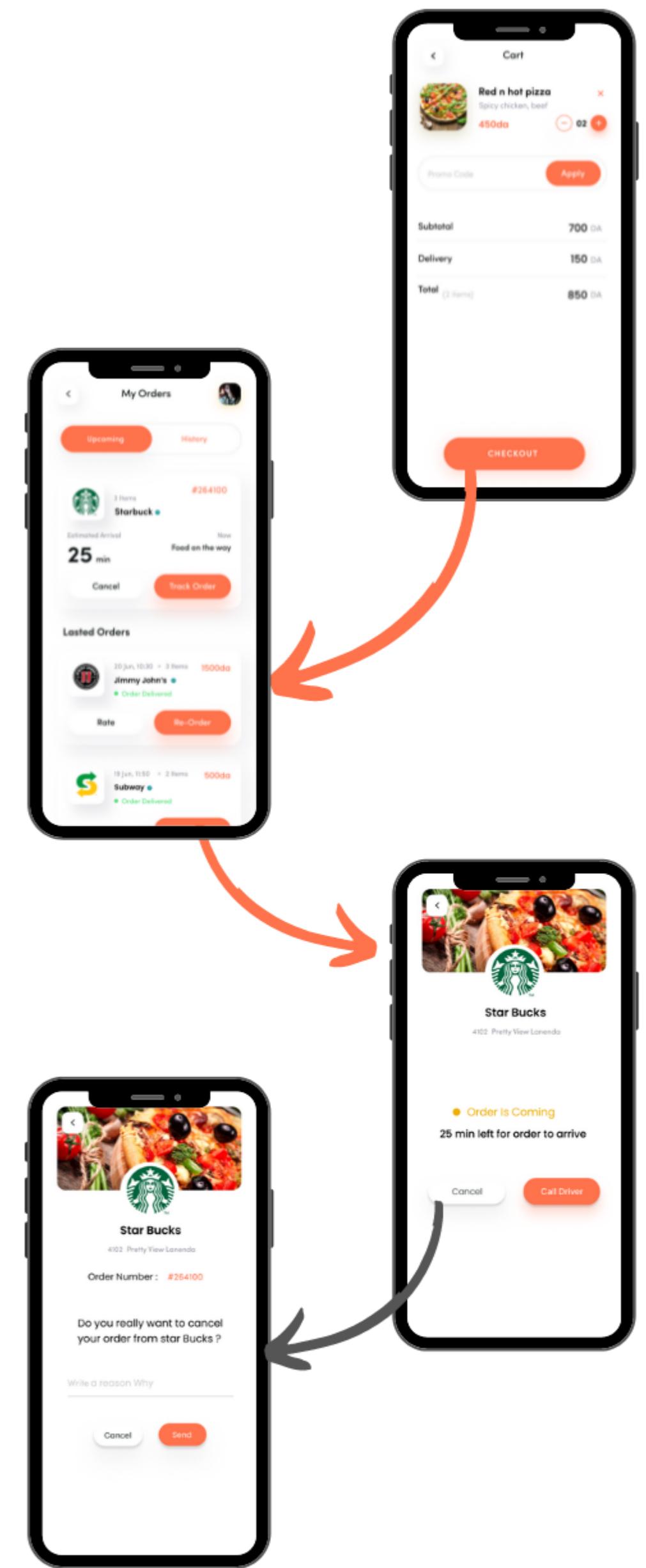
On the Order Track page, you will have two options to choose from.

a) Cancel Order:

- If needed, select the option to cancel the order.
- You will be redirected to the Order Canceled page, where you can provide a reason for cancellation.

b) Call Driver:

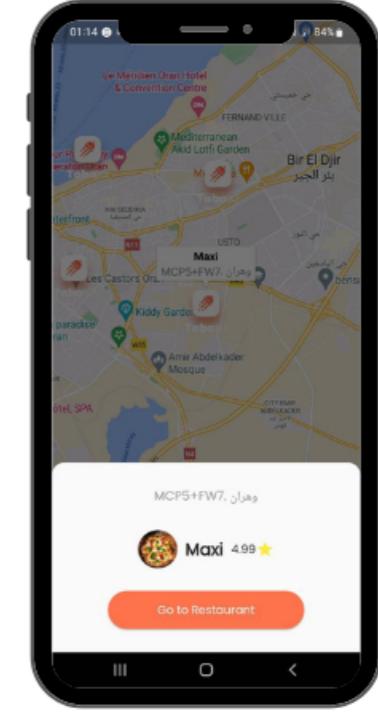
- Alternatively, click on the option to connect with one of our collaborators.
- This will initiate a call to the driver assigned to your order for any necessary communication or updates.



Other functionalities :

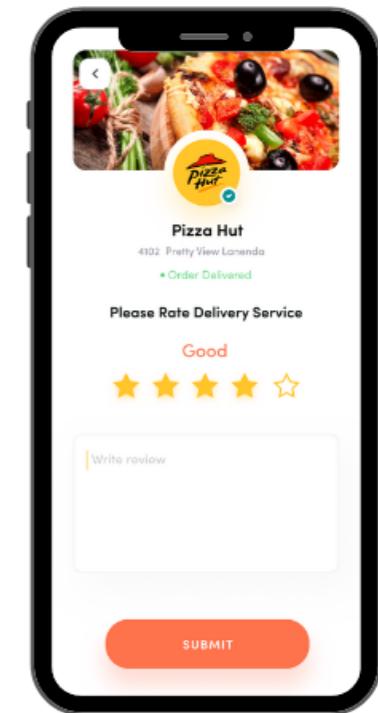
Explore Nearby Restaurants:

- 1- Discover Restaurants Nearby: Utilize our map service to explore a wide selection of restaurants in your vicinity
- 2- From the map, easily view the ratings and main information of each restaurant, such as their average rating, cuisine type, and opening hours.
- 3- navigate to the restaurant's page directly from the map, where you can find more detailed information.



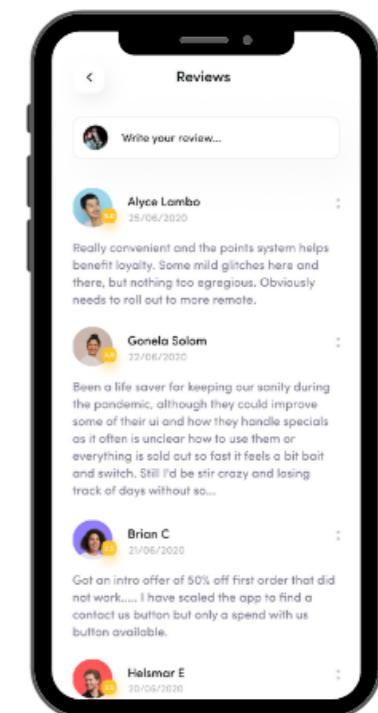
Rate and Share Your Experience:

- 1- Personalized Ratings: Share your feedback by rating the restaurants you've visited based on your dining experience.
- 2- Written Reviews: Express your thoughts and provide detailed reviews to help others make informed decisions.



Read Reviews from the Community::

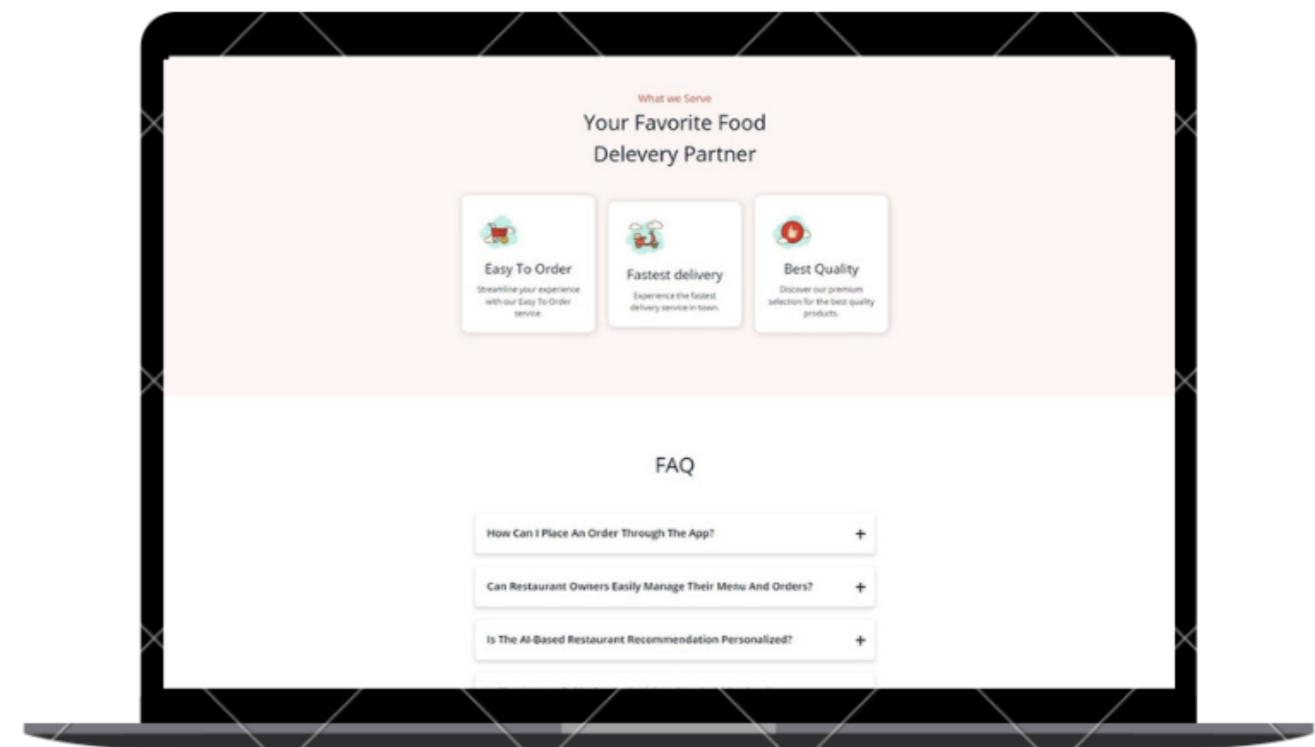
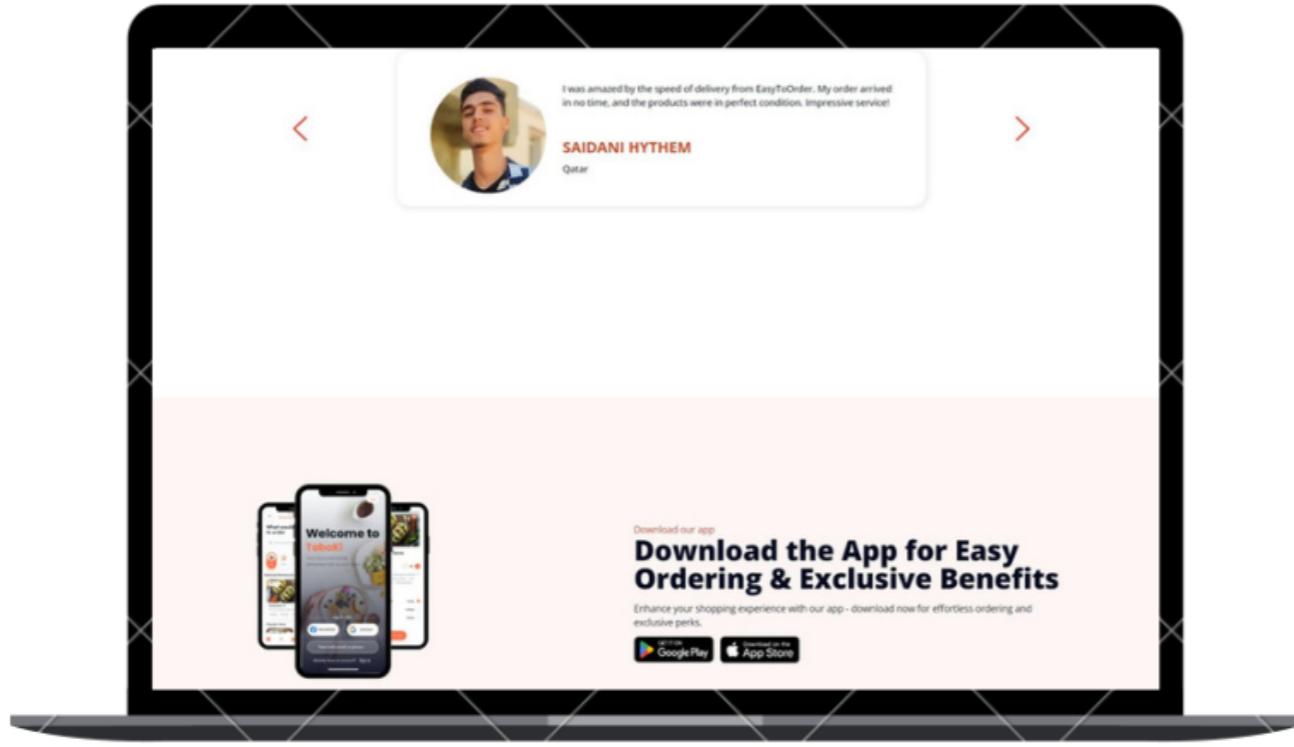
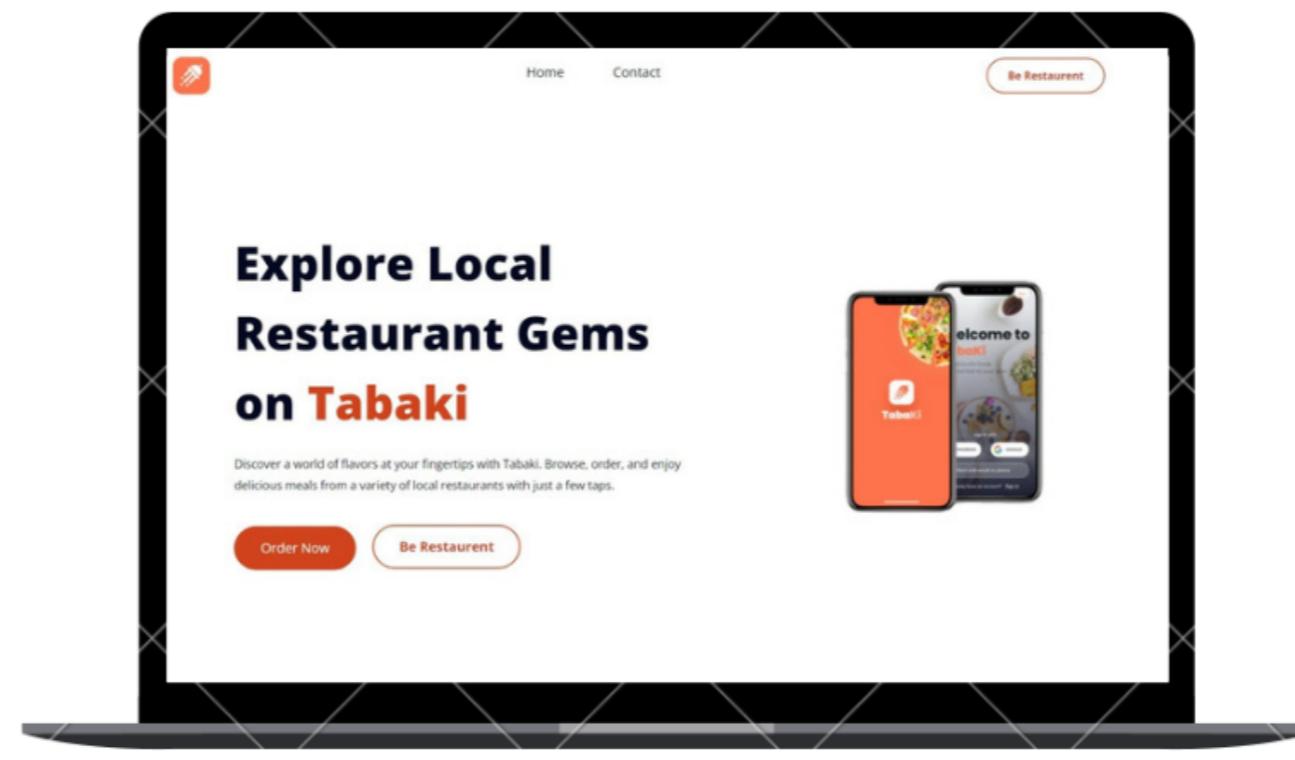
- 1- Access Restaurants Reviews: Gain insights from other users' reviews and learn about their experiences at different restaurants
- 2- Overall Reputation: Get a sense of the overall reputation and quality of a restaurant through the reviews and ratings provided by fellow diners



Web app

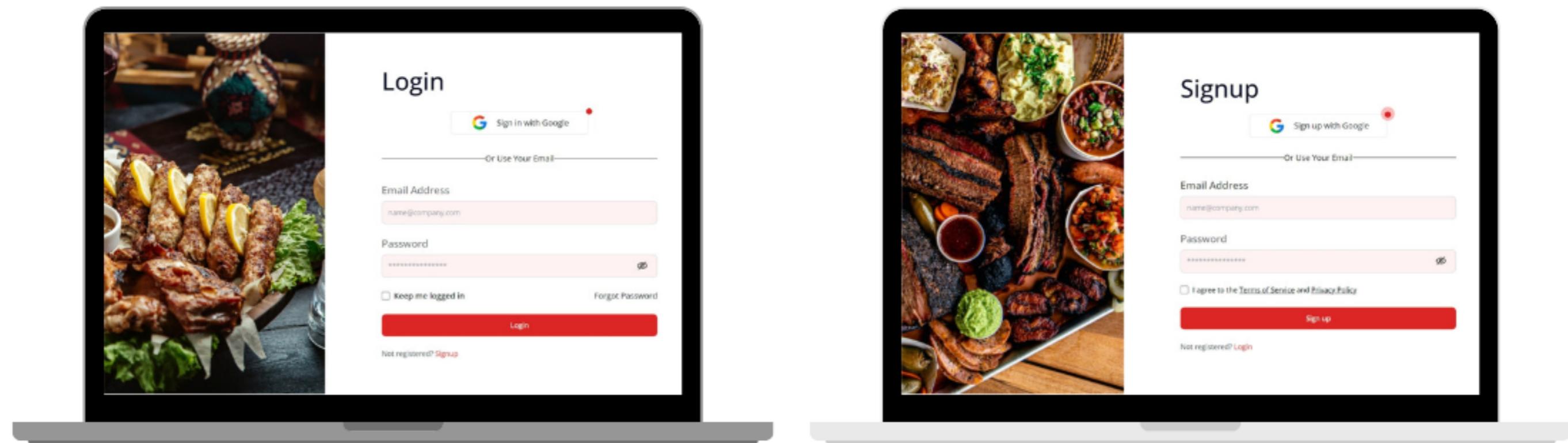
Landing page

It serves as an entry point for potential users, providing a concise overview of your platform's key features, benefits, and value proposition. A well-designed landing page can effectively capture visitors' attention, generate interest, and encourage them to take action, such as signing up or downloading the app.



Sign in / Sign up

By signing up or signing in to our web app, restaurant admins gain access to a powerful dashboard that provides comprehensive control over various aspects of your establishment. With our user-friendly sign-up process, you can quickly create an account and start enjoying the benefits immediately.

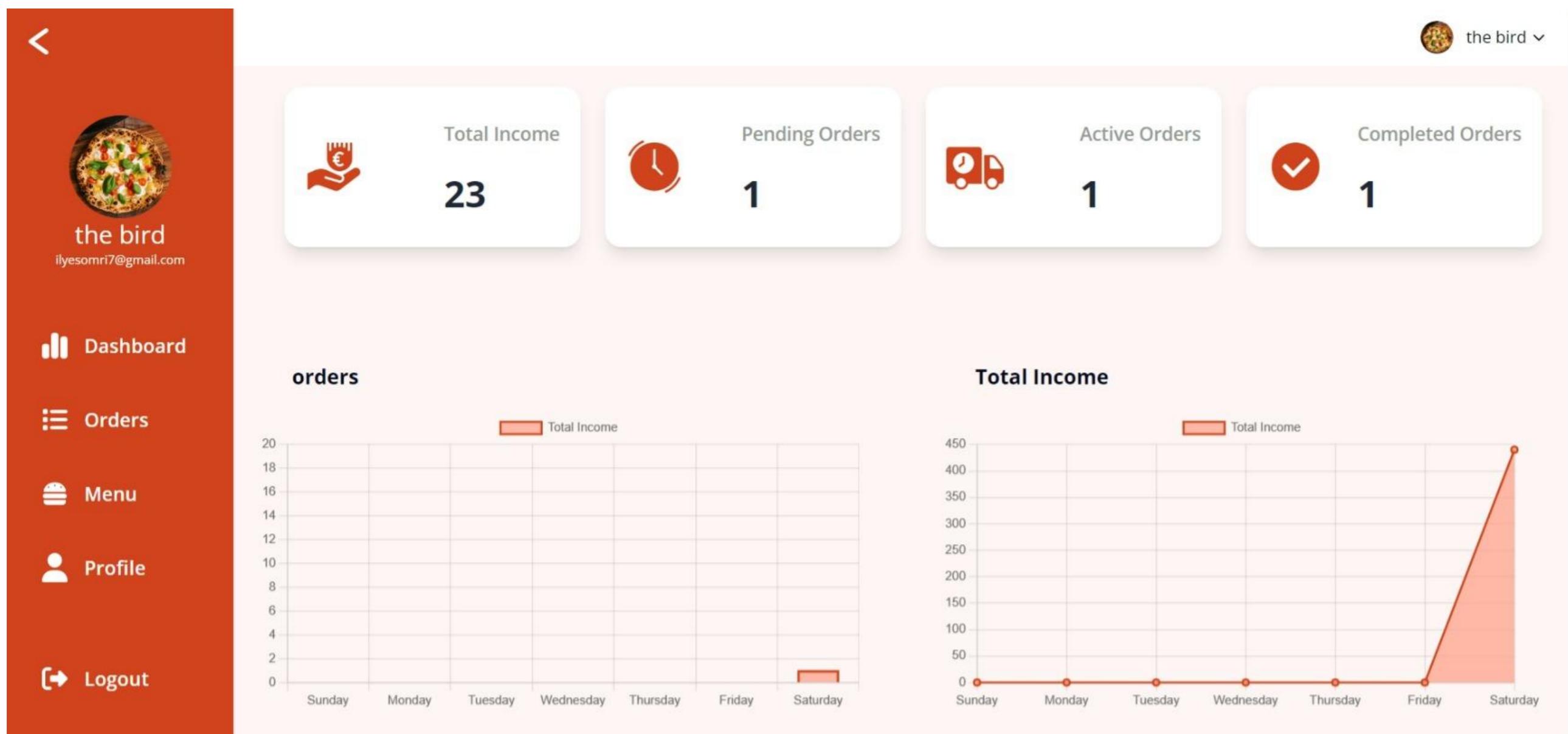


Dashboard

The Dashboard of our restaurant marketplace platform provides you with a comprehensive and intuitive interface to manage your online presence effectively. With four key pages - Menu, Profile, Orders, and Analytics - you have all the tools at your fingertips to streamline your operations and make data-driven decisions.

Analytics(dashboard)

Gain valuable insights into your restaurant's performance with the Analytics page. Track key metrics, such as active orders , completed order, total income , and customer feedback.



Orders

Manage incoming orders efficiently through the Orders page. Receive real-time notifications for new orders, review order details, and track their progress. Keep customers informed about the status of their orders.

the bird [the bird](#)

Pending Orders (1) Active Orders (1) Completed Orders (1) Canceled Orders (0)

Pending Orders (1)

- ID - #31zjMhxGv5VdEGIGpbpp 03-06-2023, 23:38 Pending
- User Contact - 0222858858
- Pizza +1 More
- Order Price - 1240DA
- Cancel Accept

Active Orders (1)

- ID - #SQDOCwTC7cfubiqbZnli 03-06-2023, 23:04 Active
- User Contact - 0222858858
- Pizza +1 More
- Order Price - 440DA
- Suspend Complete

Completed Orders (1)

- ID - #XC5nV0wHvf29K6N0aRwB 03-06-2023, 23:05 Completed
- User Contact - 0222858858
- Pizza +1 More
- Order Price - 440DA

Canceled Orders (0)

Dashboard Orders Menu Profile Logout

Menu

Easily create, customize, and update restaurant menu with just a few clicks. Showcase dishes with enticing descriptions, vivid images, and pricing information. Maintain an up-to-date menu to attract customers and provide them with a seamless ordering experience.

the bird [the bird](#)

All categories Add New item

Hum burger viande **humburger** **400.00 DZD**
azerHamburger is a popular fast food item consisting of a juicy beef patty, lettuce, tomato,

pizza **category** **340.00 DZD**
azerty....

pizza **category** **1000.00 DZD**
azerty....

pizza **category** **340.00 DZD**
azerty....

Dashboard Orders Menu Profile Logout

1-Add/Edit product page

Add page

Introduce new dishes, update existing items, and showcase your culinary creativity in just a few simple steps. Keep your menu fresh and enticing, enticing customers with a wider range of delectable options.

The screenshot shows the 'Add Product' page for a restaurant named 'the bird' (email: ilyesomri7@gmail.com). The left sidebar contains navigation links: Dashboard, Orders, Menu, Profile, and Logout. The main form fields include 'Product Name' (placeholder 'Product Name'), 'Price' (value '100'), 'Category' (selected 'Pizza'), and 'Description' (placeholder 'description ...'). To the right, there's a preview card showing a pizza image, the product details ('Product Name Pizza', '100.00 DZD'), and an 'Edit' button.

Add Product

Product Name
Product Name

Price
100

Category Pizza

Description
description ...


Product Name Pizza
100.00 DZD Edit
description

Edit page

update item details, and modify pricing seamlessly using the easy-to-use edit product page. Keep your menu up to date and cater to evolving customer preferences with just a few clicks.



the bird
ilyesomri7@gmail.com

- Dashboard
- Orders
- Menu
- Profile
- Logout

Edit Product

Product Name

Hum burger viande

Price

400

Category

Pizza

Description

Hamburger is a popular fast food item consisting of a juicy beef patty, lettuce, tomato, onions, cheese, and condiments, served in a soft bun.



Hum burger viande

hamburger

400.00 DZD

Edit

Hamburger is a popular fast food item consisting of a juicy beef

Profile

Showcase your restaurant's unique identity by easily uploading your logo, selecting appealing images, and adding compelling descriptions to engage customers and build trust.



the bird
ilyesomri7@gmail.com

- Dashboard
- Orders
- Menu
- Profile
- Logout

the bird ▾



Restaurent Name

ilyes omri

Phone

123472965762

Delivery Price

600

Google Map

MCP5+FW7، وهران

Description

AZERTYUIOP

API for recommendation system with Ai and machine learning

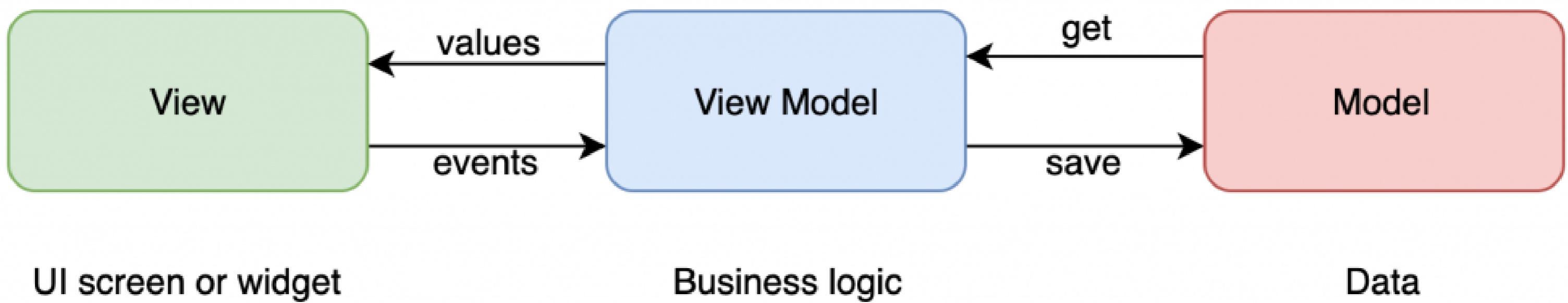
We have used Content-Based systems: These systems try to match users with items based on items' content (title , rating ...) .For example, Youtube might suggest me cooking videos based on the fact that I'm a chef, and/or that I've watched a lot of baking videos in the past, hence utilizing the information it has about a video's content and my profile .

We used render for deployment , and python for model of machine learning

Design pattern

A design pattern is a general repeatable solution to a commonly occurring problem in software design.

challenge in software design. The Model-View-ViewModel (MVVM) architecture is a widely recognized design pattern that offers significant improvements over the MVP and MVC patterns. MVVM emphasizes the separation of data presentation logic (Views or UI) from the underlying business logic of the application, resulting in a more organized and maintainable codebase. By adopting MVVM, developers can enhance the modularity and efficiency of their software applications.

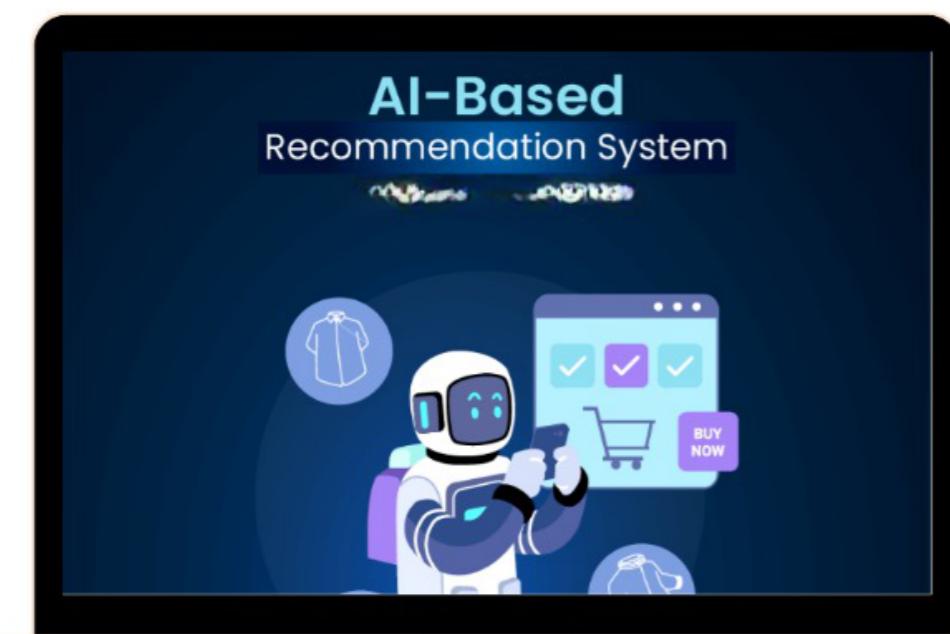


Improvements

As we strive to provide you with the best possible experience, we acknowledge that there is always room for improvement. Time constraints, the magnitude of the idea, and the need for more experience may have posed challenges. However, we firmly believe that this idea has boundless potential to transform your dining journey.

The Inclusive Payment Methods:

We understand the importance of offering diverse payment methods to cater to the needs of our users and partner restaurants. In line with this commitment, we are actively working to implement various payment options, such as Baridi Mob and Visa Card. By expanding our range of payment methods, we aim to provide you with more flexibility and convenience during the checkout process.

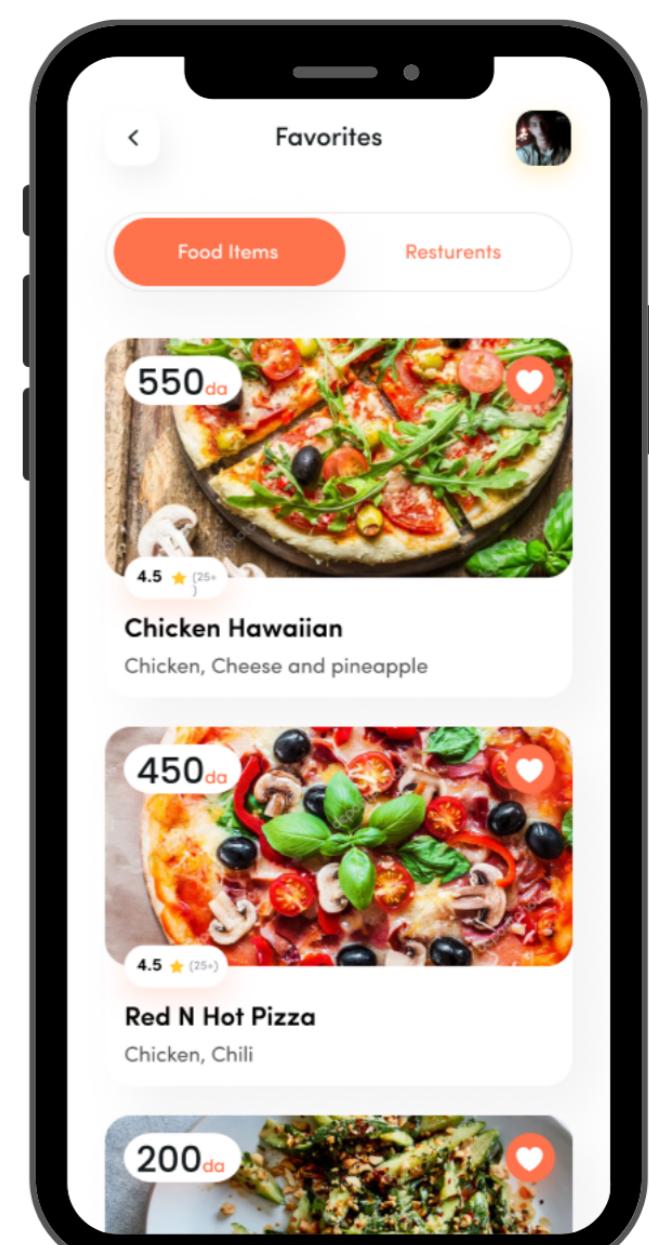


Improved AI Model:

To enhance your ordering experience, we are committed to refining our AI model. With future updates, our system will intelligently search your order history to provide tailored recommendations based on your preferences. Whether it's suggesting similar dishes or highlighting new options, our goal is to make your dining choices even more enjoyable and effortless.

Favorite Page:

We understand the importance of personalized recommendations and the ability to save your favorite dishes and restaurants. While this feature has not been implemented yet, we recognize its value. Our backend team is actively working on integrating a "Favorite" page, allowing you to like and save your preferred items for future reference.



Performance

A design pattern is a general repeatable solution to a commonly occurring problem in software design.

Performance is a crucial factor for any app or product, and multiple factors impact it. Generally, when you build apps in Flutter, the performance results are good enough, but you may still face problems with the performance of your app.

-Avoid re-building widgets .

-Make use of constant widgets

-Load list items efficiently — and on-demand

-Make use of async/await

- Reduce app size

Resources

As a team we used all what we learned about data structure and object oriented programming , and self learning to learn react js , flutter and firebase.

-Data structure to solve problems with easy way .

-OOP model that organizes software design around data, or objects, rather than functions and logic.

- System of information **ISI** for codification of user id , and controls to verify the conditions for the value of each data.

Conclusion

We want to sincerely thank God for giving us the ability to bring our ideas to life and for the opportunity to work on this project. We are also grateful to our school for allowing us to learn and grow. A big thank you goes to our supervisor, Mr. Khalidi Belkacem, for guiding and supporting us throughout this journey. We would also like to express our appreciation to the jury members for taking the time to evaluate our work. Lastly, we extend our thanks to everyone who helped us complete this project, whether directly or indirectly. Your support has been incredibly valuable, and we are truly grateful.