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ADVANCED COLLEGE OF ENGINEERING AND MANAGEMENT

DEPARTMENT OF ELECTRONICS AND COMPUTER ENGINEERING

KALANKI, KATHMANDU

[CT755]

A MAJOR PROJECT REPORT ON

"Online Food Ordering App"

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Project Supervisor:

Er. Neha Karna

A Major Project Final report submitted to the department of Electronics and Computer Engineering in the partial fulfillment of the requirements for degree of Bachelor of Engineering in Computer Engineering

Kathmandu, Nepal

March 07, 2025

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Balkhu, Kathmandu

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LETTER OF APPROVAL

The undersigned certify that they have read and recommended to the Institute of Engineering for acceptance, a project report entitled "**ONLINE FOOD ORDER APP**"

Submitted by:

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Neha Gupta   [ACE077BCT048]

In the partial fulfillment of the requirements for the degree of Bachelor's Degree in Computer Engineering.

………………………..

Project Supervisor

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March 07, 2025

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ABSTRACT

Nowadays, mobile devices with wireless technologies has emerged into the hospitality industry especially restaurants with the advancements of online food ordering systems. Most restaurants use manual ordering process involving pen and papers in which noting down the orders can be quite slow and can caused errors in noting down the customers' orders. Based on QSR statistics, young generations usually order food online which caused the online ordering traffic to grow 300% faster than dinein traffic. Moreover, most people preferred to use online ordering system as it is more convenient and reduce their waiting time. This "Online Food Ordering System" is a efficient platform designed using Android Studio for a particular restaurant to facilitate the ordering process for customers . This system enables the users to browse the restaurant's menu and place orders online and get the delivery seamlessly without in-person visits. The platform streamlines order management, reducing errors and improving operational efficiency for the restaurant staff. With a user-friendly interface, the system ensures a smooth experience for customers while helping the restaurant handle orders more effectively. This digital solution enhances customer convenience and optimizes the restaurant's workflow, ultimately improving service quality.

Keywords: Android application, Wi-Fi, Dynamic database, Android Sudio, GPS

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LIST OF ABBREVIATIONS

API	:	Application Programming Interface
BaaS	:	Backend-as-a-Service
GPS	:	Global Positioning System
IDE	:	Integrated Development Environment
PDA	:	Personal Digital Assistant
SMS	:	Short Message Service
TAM	:	Technology Acceptance Model
UI	:	User Interface
WOS	:	Wireless Ordering System

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CHAPTER 1: INTRODUCTION

1.1 Background

We look at the problem of setting up a fast food restaurant. In existing system there are few problems:

➤For placing any orders customers have to visit hotels or restaurant to know about food items and then place order and pay. In this method time and manual work is required.

➤While packing an order over the phone, customer lacks the physical copy of the menu items, lack of visual confirmation that the order was placed correctly.

➤Every restaurant needs certain employees to take the order over phone or in person, to offer a rich dining experience and process the payment. In today's market, labor rates are increasing day by day making it difficult to find employees when needed.

Hence, to solve this issue, what I purpose is an "Online Food Order System", originally designed for small scale business like college cafeterias, fast food restaurant but this system is just as application in any food delivery industry. The main advantage of my system is that it greatly simplifies the ordering process for both the customer and the restaurant and also greatly lightens the load on the restaurant's of taking orders is automated.

The benefits are:

➤This will reduce staff involvement in order processing, making operations more efficient.

➤The system will help to reduce labor cost involved.

➤The system will be less probable to make mistake, since it operates automatically.

➤This will streamline order processing, reducing wait times and optimizing the system to handle maximum orders efficiently.

➤Enhance the food delivery experience by allowing customers to track orders and receive timely updates.

1.2 Motivation

The need to develop an online food ordering system is majorly driven by the increasing consumer preference for convenience and easy access to meals. In this era where smartphones and digital connectively are everywhere available, customers want to be able to place orders, and get the food delivered to their doorstep no matter where they are. This not only makes it easier for users to eat out but also expands the market area of a restaurant outside its immediate locality.

In addition, the COVID-19 pandemic has taught us a big lesson on contactless solutions in the food industry. With social distancing and lockdowns necessitating online services, an online food ordering system becomes vital for business continuity and customer protection. This solution allows restaurants to change their behavior based on how people are behaving, operate when there is a disturbance, and gather useful data concerning what customers want so that they can be served better or build strong customer loyalty.

Moreover, traditional food ordering relies on direct communication, which can lead to miscommunication, delays, and errors. Seeing these issues in daily interactions motivated the creation of the app that ensures accuracy and efficiency by reducing verbal dependency.

1.3 Problem Statement

The challenges encountered by the existing system serve as a major drawback to the realization of efficiency and customer satisfaction. The experience of ordering in most restaurants is not pleasant for the customers. Customers will have to make long queues before placing their orders especially during peak hours and then the ordering staff will record customer orders. Having placed their order, the customer must then wait near the counter until their order is ready for collection. The other problem in the food service industry is that restaurants are not realizing the efficiencies that would result from better application of technology in their daily operations. Food business in a very competitive business and one way to stand out from competitors is through improving the business process where business process automation can assist business improvement. The other problem with the current system is that the customers are not able to see the ingredients of the meals before they place their order and also, they only have to pay for an order online. Food can be ordered through the internet and payment made

without going to the restaurant or the food vendor. So, there is need for a wide range of publicity and enabling direct order, processing and delivering of food through online system.

1.4 Objective

The main objective of this project is to develop an application that enables restaurant owners to expand their business by uploading menus at no cost while also offering a seamless food delivery system. This not only enhances customer convenience but also improves retention and acquisition rates by providing a smooth and efficient ordering and delivery experience.

1.5 Significance of the study

In view of the rapid development of computer technology in almost all the fields of operation and its use in relation to information management, it has become important to look into the development of online ordering system for firms to meet up with demands of the customers. Therefore, the food ordering and deliver system will help customers and management to:

1. Advertise available foods in their company.
2. Reduce the workload in the present system.
3. Reduce time wasted in data processing.
4. Create a platform for online purchase and delivery of fast food.
5. Keep accurate record on purchased order and delivery.

LITERATURE REVIEW

In an automated food ordering system is proposed which will keep track of user orders smartly. Basically, they implemented a food ordering system for different type of restaurants in which user will make order or make custom food by one click only. By means of android application for Tablet PCs this system was implemented. The front end was developed using JAVA, Android and at the backend MySQL database was used [1].

In Customer using a Smartphone is considered as a basic assumption for the system. When the customer approach to the restaurant, the saved order can be confirmed by touching the Smartphone. The list of selected preordered items shall be shown on the kitchen screen, and when confirmed, order slip shall be printed for further order processing. The solution provides easy and convenient way to select pre-order transaction form customers [2].

In there was an attempt to design and implementation of digital dining in restaurants using android technology. This system was a basic dynamic database utility system which fetches all information from a centralized database. Efficiency and accuracy of restaurants as well as human errors were improved by this user-friendly application. Earlier drawbacks of automated food ordering systems were overcome by this system and it requires a onetime investment for gadgets [3].

In research work aims to design and develop a wireless food ordering system in the restaurant. Technical operations of Wireless Ordering System (WOS) including systems architecture, function, limitations and recommendations were presented in this system. It was believed that with the increasing use of handheld device such as PDAs in restaurants, pervasive application will become an important tool for restaurants to improve the management aspect by minimizing human errors and by providing higher quality customer service [4].

In Paper, the purpose of this study was to investigate the factors that influence the attitude of internet users towards online food ordering in Turkey among university students. A Technology Acceptance Model (TAM) developed by Davis in 1986 was used to study adoption of Web environment for food ordering. Trust, Innovativeness and External Influences are added to the model as main factors along with TAM [5].

In Paper, the research work aims to automate the food ordering process in restaurant and also improve the dining experience of customers. Design implementation of food ordering system for restaurants were discuss in this paper. This system, implements wireless data access to servers. The android application on user's mobile will have all the menu details. Kitchen and cashier receives the order details from the customer mobile wirelessly. These order details are updated in the central database. The restaurant owner can manage the menu modifications easily [6].

In this paper it has been planned that the way to improve the management of food delivery services and pay attention to customers' databases and it is developed from the edifice management system to induce the services with efficiency from the users of the system, providing numerous facilities. Restaurants yet as a multitude facility square measure enclosed during this. So, with the assistance of automaton smartphones and tablets, we can simply direct and operate the appliance for his or her orders. This application conjointly helps the admin with the client's needs [7].

Nowadays, GPS (Global positioning system) fetches the locations offered by sensible devices like smartphones, tablets, and computers being employed. Here, scrutiny of customers, cooks, and waiters with the assistance of humans could be a long and manual task, thus during this work wireless technology and going with the net mode are used. It saves time and their day-after-day staple items. The necessity for symptom GPS-based services with alternative vital sectors of the economy, like retail and therefore the building business, is that they would like of the fast-becoming world [8].

The discussion concerning the impact of COVID on the food delivery business is like however, the pandemic competes for a dramatic role in everyone's lives and work, which during this situation, everybody most popular the net mode. The ordering happens online yet offline, however online gets preference. So, in this, they need to use the first yet as a secondary supply of knowledge to induce a transparent image of the matter within the online food delivery services [9].

It has been planned that Indian transnational edifice aggregators and food delivery firms like Swiggy and Zomato. In this, the format of home delivery or takeaway has gained lots of extra customers in locations like malls, offices, big-party orders for residential complexes, etc. It conjointly accesses trendy growth and is incredibly difficult for others which may create them convenient and accessible for all the purchasers who want to order frequently [10].

Full service restaurant Tradition food order process used in most full-service restaurants starting when a waiter brought the guests the paper-based menu, and then waiting for the guests to choose items from the menu and inform the waiter the order items. The process typically required the guests to be seated in the restaurant and a waiter to assist the ordering. One of the most widely used food ordering system is the conventional paper based system. In this system all records are stored on paper. The main drawback of this system is papers can get easily lost or damaged. There is also wastage of money, time and paper. Paper-based systems do not provide any form of dynamicity. Even a small change requires the re-print of entire menu-card. Also large amount of human efforts are required, this system is not work properly because it has some error and from a customer's point of view it is time consuming [11].

Automated food ordering system, In order to reduce service cost and enhance customer experiences, few restaurants have invested in the service automation system. The automation system used to capture the food order from guests ranged in many forms but mostly comprise of an electronic device with a screen presenting the menu and accept user's input for order placing First waiter takes the order from customer. After taking the order, waiter should enter that order in system where PC was set up. At the kitchen information was displayed on screen. The kitchen staff would then prepare the dishes according to order and after completion of order they would inform to waiter, who collected and delivered the dishes to the respective tables. The system was also informing the waiter about the availability of a dish. If a certain dish was not available then waiter was able to ask for changes or even cancel a customer's order. After serving the order, bill was generated at the cash counter as per customer order. The management had full authority to access all details of the customer which are fed into the system. With the improvement in the computer and communication technology, various systems launched in market for the purpose of computerization of the food ordering system. Some of the existing system's are mentioned below:

a) Person digital assistant (PDA'S) based system: A number of wireless systems like WOS, i-menu, FIWOS were developed when new technologies and approaches being introduced to automate the food ordering process. All the above systems were PDA- based. The feature of PDA systems was that customers or waiters key in ordering process. Using wireless technology there was easy communication between the PDA's and server. But PDA based system also had several drawbacks. PDA- based system increased the restaurants expenditures. PDA systems also did not provide any real time feedback from customers. Menu cards in the PDA's were not attractive and uninformative as it did not support images.

b) Multi touch technology: Multi-touch technology is an advance version to the existing touch technology where user has authority to control and perform operations concurrently on the electronic visual displays using multiple fingers inputs. Large displays such as from the tabletop and the wall-screen are deemed to be essentials for information visualization purposes when dealing with multiple users sharing the same display. It is reported that the social interaction is highly improved among users using a shared display and input. But there are certain limitations of the multi-touchable restaurant management systems. Touch screens available in the market are of capacitive, resistive types which are very costly. Limitations of capacitive touch screen are not able to operate with stylus until it is of conductive material. One more disadvantage of capacitive touch screen is it is expensive, offers less durability and short life. The drawbacks of resistive touch screen include its inability to support multi-touch gestures, its poor visibility in direct sunlight and its less durability. The technology can be susceptible to data-noise, it may be affected by large amounts of dirt and dust in the environment [12].

2.1 Literature Summary

Table 2.1 Literature Summary

Year	Authors	Published in	Objective	Contribution	Data	Method	Conclusion
2015	K. Bhandge , T. Shinde, D. Ingale, N. Solanki, R. Totare	International Journal Research in Computer Science Technology (IJARCST)	Implement a touchpad-based food ordering system using Android	Developed a food ordering system for different restaurants using a Tablet PC with a JAVA, Android front end, and MySQL backend	Implementation details and functionality of the touchpad-based system	Design and development using JAVA, Android, and MySQL	Provides a smart and efficient way for food ordering in restaurants
2015	V. Chavan, P. Jadhav, S. Korade, P. Teli	International Science, Engineering Technology (IJISET)	Implement a customizable online food ordering system	Allows customers to pre-order food via Smartphone; kitchen receives order details for processing	Implementation details and system architecture	Design and development of the customizable online food ordering system	Enhances customer convenience by enabling easy pre-order transactions
2014	R. Shinde, P. Thakare, N. Dhomne , S. Sarkar	International Journal of Advance Research in Computer Science and Management Studies	Design and implement digital dining in restaurants using Android	Improved efficiency and accuracy in restaurants by using a user-friendly Android application	Efficiency and accuracy improvements	Design and implementation using Android	Overcomes earlier drawbacks of automated food ordering systems and requires a one-time investment for

Year	Authors	Journal					
							gadgets
2009	Khairunnisa K., Ayob J., Mohd. Helmy A. Wahab, M. Erdi Ayob, M. Izwan Ayob, M. Afif	MASAUM Journal of Computing	Design and develop a wireless food ordering system	Presented systems architecture, function, limitations, and recommendations for Wireless Ordering System (WOS)	System architecture, functionality, limitations	Design and development using wireless technology	Enhances restaurant management by minimizing human errors and improving customer service quality
2012	S. M. Alagoza, H.Hekimo glu	Elsevier Ltd.	Investigate factors influencing attitudes towards online food ordering	Used Technology Acceptance Model (TAM) to study adoption of web environment for food ordering	Factors influencing attitudes towards online food ordering	Survey and analysis using TAM model	Trust, innovativeness, and external influences are key factors in adopting online food ordering
2014	P. Thakare, R. Shinde, S. Sarkar	International Journal of Advance Research in Compute Science and management	Design and implement digital dining in restaurants using Android	Developed an Android-based system for digital dining with efficiency improvements	Implementation details and system architecture	Design and development using Android	Overcome drawbacks of previous food ordering systems and enhances dining experience

Year	Authors	Journal	Objective	Methodology	Implementation	Design	Outcome
2015	K. Patel, P. Patel, N. Raj, L. Patel	International Journal of Engineering Research and Development (IJERD)	Automate the food ordering process in restaurants	Implemented a wireless data access system for automated food ordering in restaurants	Implementation details and wireless data access functionality	Design and development using wireless technology	Improves dining experience and facilitates easy menu management for restaurant owners
2018	A. Singh, A. R., V. Kanade, S. Pathan	International Research Journal of Engineering and Technology (IRJET)	Improve management of food delivery services	Developed an Android application for easy management of food delivery services	Implementation details and food delivery management functionality	Design and development using Android	Enhances efficiency of food delivery services and customer satisfaction
2017	K. U. Vaishnavi Chimote , S. Dhole	International Journal of Emerging Science and Computing (IJESC)	Review food ordering and payment system using GPS and Android	Developed a system using wireless technology and GPS to facilitate food ordering, payment	Review and implementation details	Design and development using GPS and wireless technology	Saves time and enhances efficiency of food ordering and payment processes

2021	U. More et al.	PalArch's Journal of Archaeology of Egypt/Egyptology (PJAEE)	Study online food delivery services during COVID-19	Investigate preferences during pandemic, Assess online/offline ordering trends	Data from online delivery services	Analyze ordering trends during pandemic	Understand preferences during pandemic, optimize services
2019	Dr. Mitali Gupta	International Journal of Research and Analytical Reviews (IJRAR)	Study impact of online food delivery apps on restaurants	Assess growth and challenges faced by delivery companies, evaluate convenience to customer	Data from delivery apps, customer reviews	Analyze impact on restaurant business	Understand impact on restaurant business, improve services
2019	A. Saxena	Proceedings of the 4th International Conference on Recent Trends in Humanities, Technology, Management & Social Development	Analyze online food ordering applications in India	Study Zomato and Swiggy, assess growth and innovation in Indian Market	Data from Zomato, Swiggy	Analyze application features, assess market trends	Understand market trends, assess application effectiveness

CHAPTER 3: REQUIREMENT ANALYSIS

3.1 Hardware Implementation

System   : intel core i5 processor or higher

Hard disk: 512 GB

Monitor : 15''LED, 1920x1080 resolution

RAM   : 8 GB

Mobile   : Android

3.2 Software Implementation

Window Operating System: Windows 10 or above

Mobile Operating System : Android 7.0 or above

Front End   : Android Studio

Back End   : Firebase(BaaS)

3.3 Functional Requirements

- Customer should be able to view menu item into the cart.

- Customer should be able to add menu item into the cart.

- Customer should be able to place order.

- Customer should be able to track their order and view invoice.

- Admin should be able to update menu.

- Admin should be able to manage order.

3.4 Non-Functional Requirements

1)Usability

The system is easy to operate and understand. It has intuitive and responsive design.

2)Reliability and Compatibility

The system can operate reliable while performing CRUD operation and other functionality. The system is compatible on all the web browsers.

3)Performance

The system can maintain security of user credentials and data. There is no any lag while performing different operations.

CHAPTER 4: METHODOLOGY

4.1 Software Development Model

The incremental model is used for developing online food order system because it allows for gradual development and improvement of features. This approach reduces risk by building software product in which system is build piece by piece. As final requirement specification is clear from beginning and each new version is delivered to the customer site for testing and feedback so that we found the Incremental model is one of the best models to develop this product.
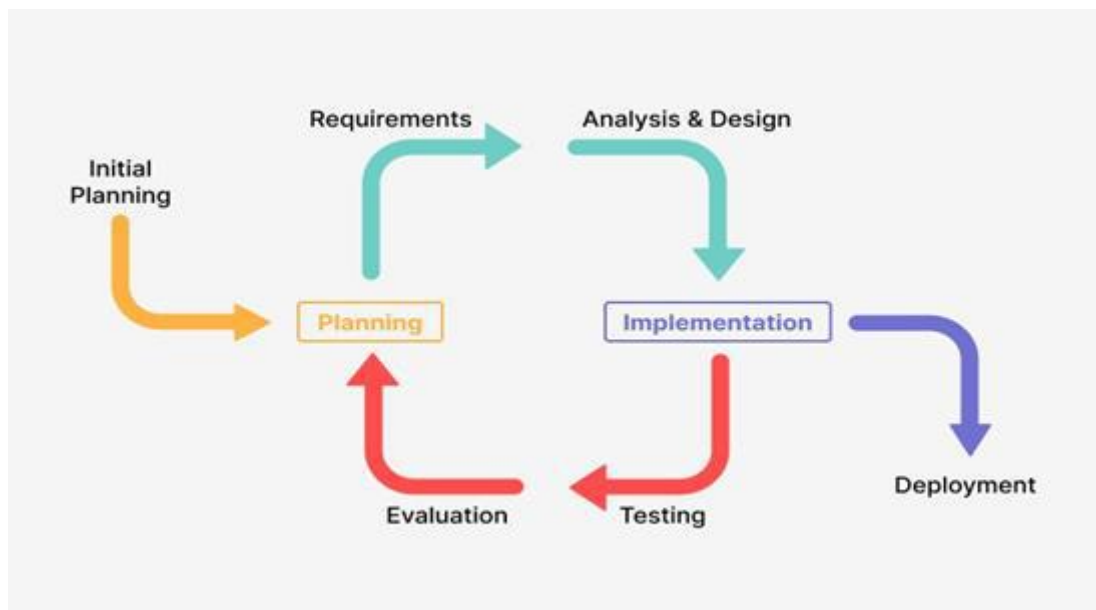
Figure 4.1: Incremental Development Model
Source: www.wikipedia.org/wiki/Iterative and incremental development

4.2 Project Framework

Project framework is a combination of processes, tasks, and tools used to transition a project from start to finish. This chapter reveals the proposed method of implementing the project. The important on this is systematic planning and implementation in order to complete system on time.
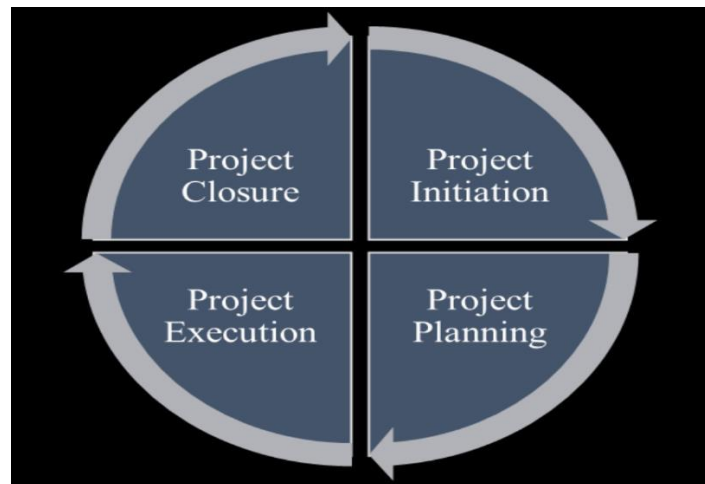
Figure 4.2: Project Framework

Source:www.jogjamultimedia.com/kursus-jasa-android-aplikasi-pemesanan-makanan-android-studio

4.2.1 Project Initiation

The Project Initiation is the first phase of Project Life Cycle, as it involves starting up a new project. In this phase, identified the issues and problems of the organization. Project is started with by defining its objectives, scope, purpose of the report and proposal is submitted to with the clear information.

4.2.2 Project Planning

In the Project Planning phase, various planning activities has been be conducted, which includes the planning of work, schedule, budget, gathering resources, and etc. Those proper planning activities helps us to complete the project on time.

4.2.3 Project Execution

The execution phase turns all the plan into action. we will complete the development activities and identified in the planning phase to produce the project requirement. This phase ends by completing the project after testing process.

4.2.4 Project Closure

Project Closure is the last phase of Project Life Cycle. In this phase we will formally close our project and then report the overall level of success and findings, lesson learned from the project, as well as plan and conduct transferal activities. In this phase we will have done analyzing of project, documenting project closure and conducting post-implementation reviews.

4.3 Data and Information

Data are collected through observation and internet. It is collected for the purpose of analysis. Information consists of facts that defines the relationship between pieces of data. Data becomes information after being processed, information gives off facts when data supports it and facts are what data reveals. The data and information are collected from two major sources:

4.3.1 Primary Data:

In this project, data have been collected directly through observation.

4.3.2 Secondary Data:

In this project, the data and information are also collected through the secondary sources like internet, newspaper, magazines, books, reports, etc.

4.4 Tools used for Data collection

It is the most important part of the development process. It provides the information about the requirement that the users want in the system or expecting from it. Requirements have to be gathered by using various techniques. Some of the techniques are as follow:

4.4.1 Observation:

Observation is another technique for gathering information. The activities on the organization were observed and analyzed accordingly. We will visit to observe and find out the reliable information that will be useful for the project.

4.4.2 Internet Research:

The internet is a compelling tool for research. It enables efficient, cost-efficient data collection and facilitates access to large sample of data. Internet play a vital role during this project.

CHAPTER 5: SYSTEM DESIGN AND ARCHITECTURE

Our project focuses on developing a web-based food ordering system using Java, designed to simplify restaurant management and enhance the customer experience. The system consists of three main roles: admin, restaurant, and customer. The admin is responsible for creating and managing restaurant accounts. Restaurants must contact the admin to receive their login credentials (ID and password) before they can access the system. Once logged in, the restaurant can add and update food items along with their actual prices. Meanwhile, customers can browse the menu, select food items, and place orders through the website.

The system is designed to be fully web-based and user-friendly, making it accessible from any device with an internet connection. The homepage displays available food options with their prices, allowing customers to make quick and informed choices. The platform ensures efficient role-based access, where the admin manages user accounts while restaurants handle their menus and orders. With menu management, restaurants can easily update food items, ensuring accurate pricing and availability. Customers benefit from a seamless ordering experience with real-time order tracking. In the future, we could also integrate kitchen robots to streamline food preparation, ensuring faster service and seamless order fulfillment.

Following are the system design of the system:

☐ Create and manage an account.

☐ Log in to the system securely.

☐ Browse the restaurant's menu.

☐ Select an item from the menu.

☐ Add an item to their current order.

☐ Review their current order.

☐ Place the order.

☐ Receive an confirmation.

☐ Track the order in real-time.

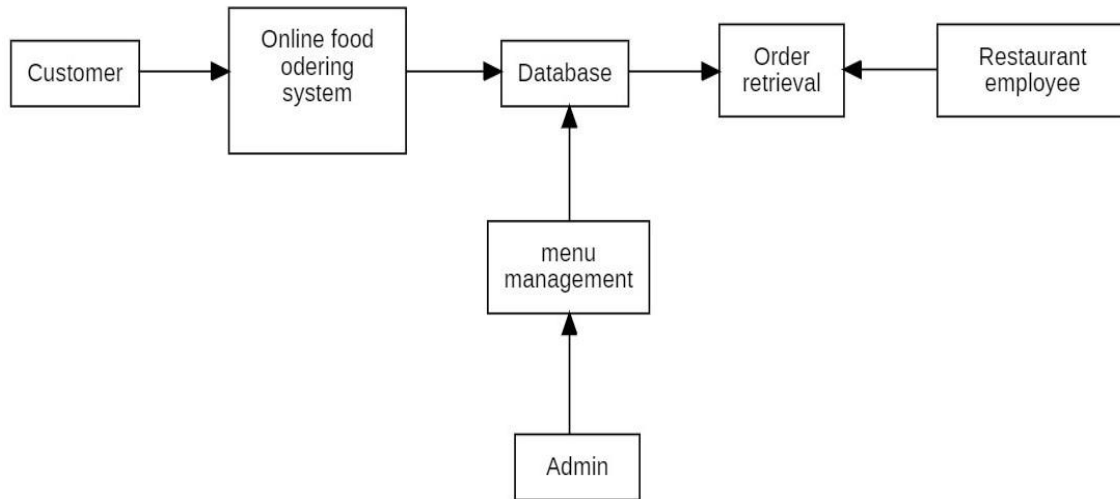☐ Receive the delivery.

5.1 System Architecture

Figure 5.1: System Architecture

5.2 Android Studio and it's Components

Android Studio is the official integrated development environment(IDE) for Android application development. It is based on Intelli IDEA, a java integrated development environment for software, and incorporates its code editing and development tools. To support application development within the Android operating system. Android Studio uses a Grade-based build system, Android Emulator, code templates and Github integration. Every project in Android Studio has one or more modalities with source code and resource files. These modalities include Android app modules, Library modules and Google App Engine modules.

There are four different types of app components:

Figure 5.2: Component of Android Studio
Source: www.medium.com/@Abderraouf/understand-android-basics-part-1-application-activity-and-lifecycle-b559bb1e40e

All these components serve special purposes in their own lifecycle which describe how the component is created and destroyed. Let's examine all the components one by one under the given headings:

5.2.1 Activity

Activity represents a single screen in Android. It contains all the user interface components(Button, Text Input etc.) in one screen. Likewise, we can add each activities to intent filter.
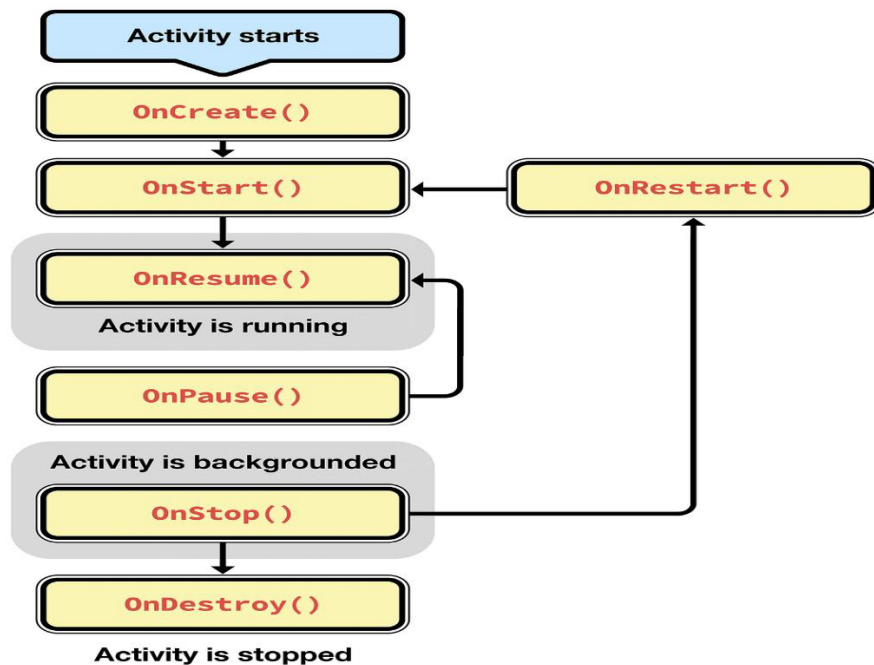
Figure 5.2.1: Activity Component
Source: www.medium.com/@huseyinozkoc/all-things-you-need-to-know-about-activity-in-android-development-d20a50b80be0

An activity goes through different number of states, and we can use some callbacks to manage all these transitions between state. These number of states are given below:

a)onCreate()
This is the first callback and called when the activity is first created.

b)onStart()

This callback is called when the activity becomes visible to the user.

c)onResume()

This is called when the user starts interacting with the application.

d)onPause()

The paused activity does not receive user input and cannot execute any code and called when the current activity is being paused and the previous activity is being resumed.

e)onStop()

This callback is called when the activity is no longer visible.

f)onDestroy()

This callback is called before the activity is destroyed by the system.

g) onRestart()

5.2.2 Services

A service is simply processing in background while app is running. It is a component that works in the background to perform operations. For instance, service can play music in the background while user is dealing with other apps or can get data from network without any user interaction.

A service is implemented as subclass of Service of class:

5.2.3 Broadcast receivers

Broadcast Receivers are one of the major component of the android. To explain briefly, Broadcast Receivers answer to broadcast messages from another applications or system. For example, to deliver other apps know that some data downloaded to the device and available for use. Even though broadcast receivers do not show user interface, they might create status bar notification to user for events.

A broadcast receiver is implemented as a subclass of **Broadcast Receiver.** Each broadcast is delivered as an Intent object.

5.2.4 Content providers

Content Provider component is providing data from one application to others on request. These requests are handled by the "Content Resolver" class methods. Data might be stored in the system, databases or somewhere else.

A content provider is implemented as a subclass of Content Provider.

5.3.1 Flowchart Diagram
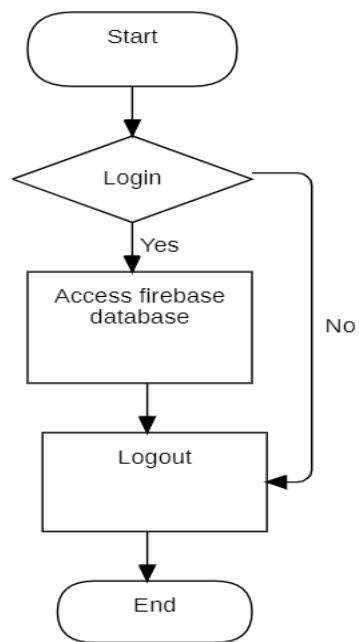
Figure 5.3.1: Admin Flowchart Diagram

5.3.2 Flowchart Diagram
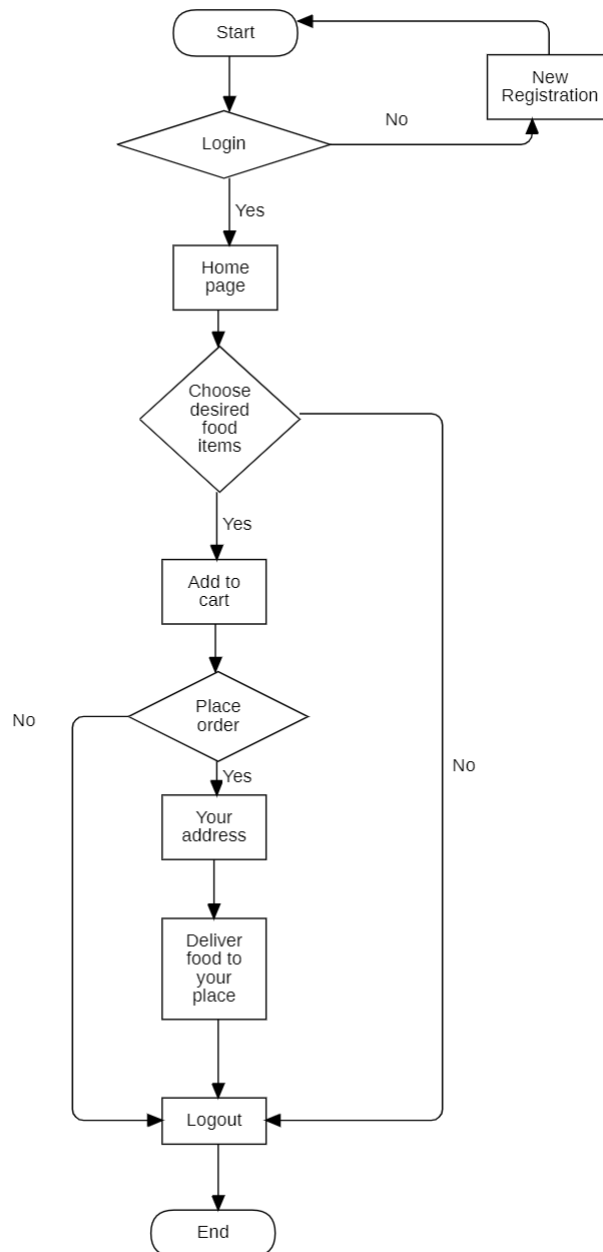
Fig 5.3.2 User Flowchart Diagram

5.4 Sequence Diagram
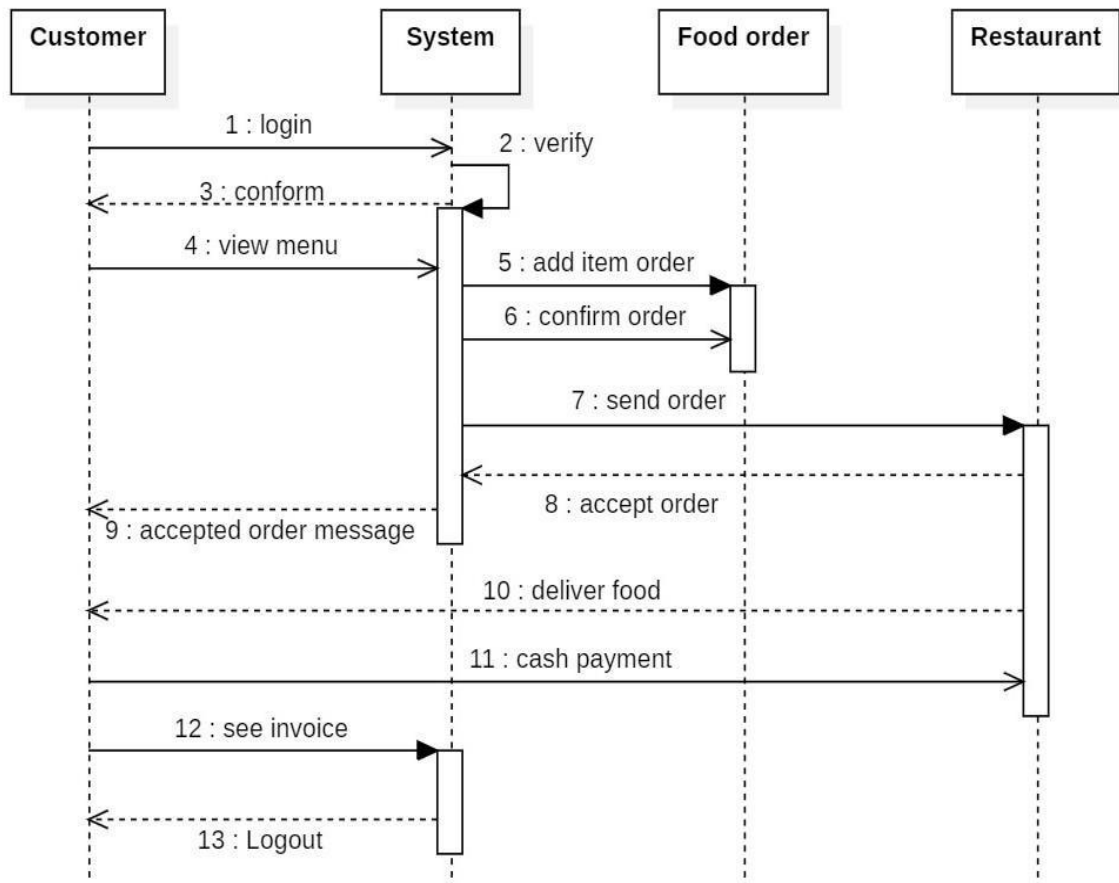
Figure 5.4: Sequence Diagram

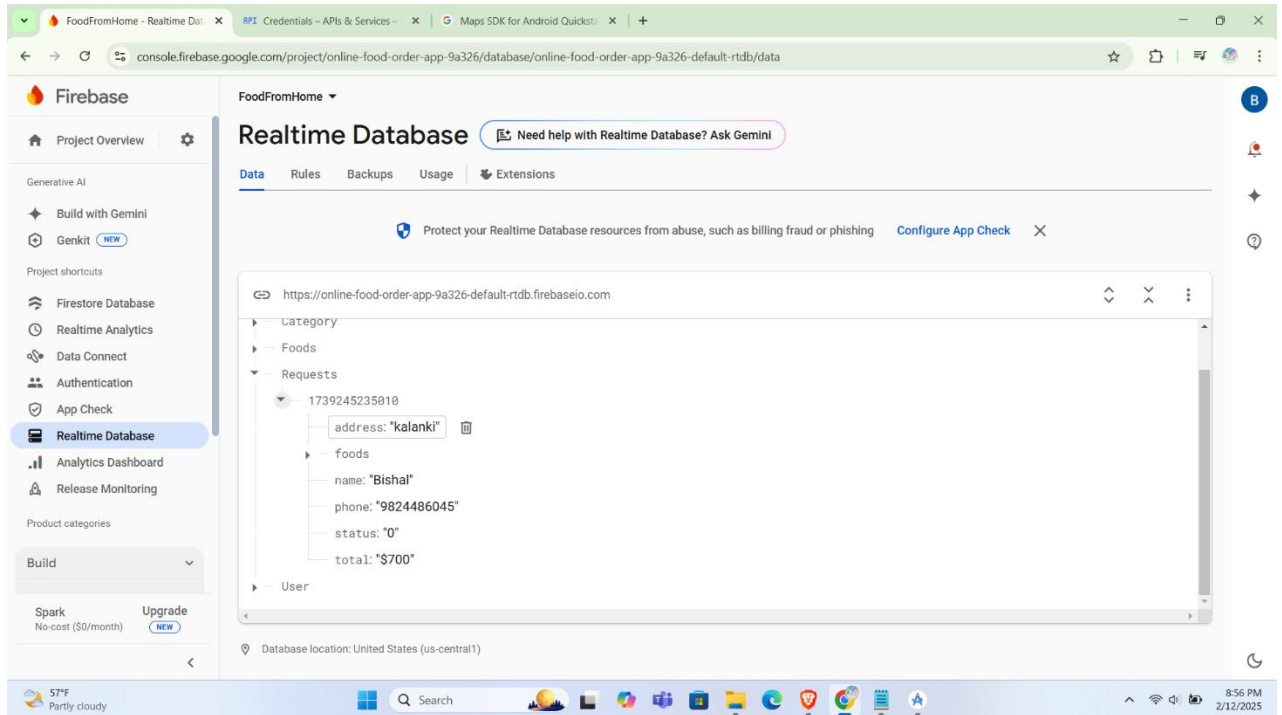# CHAPTER 6: RESULTS AND ANALYSIS

6.1 Results

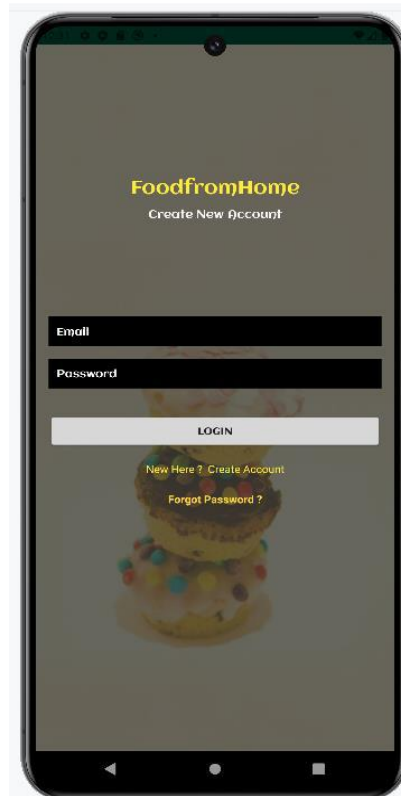Fig 6.1.1: Realtime Database in Firebase
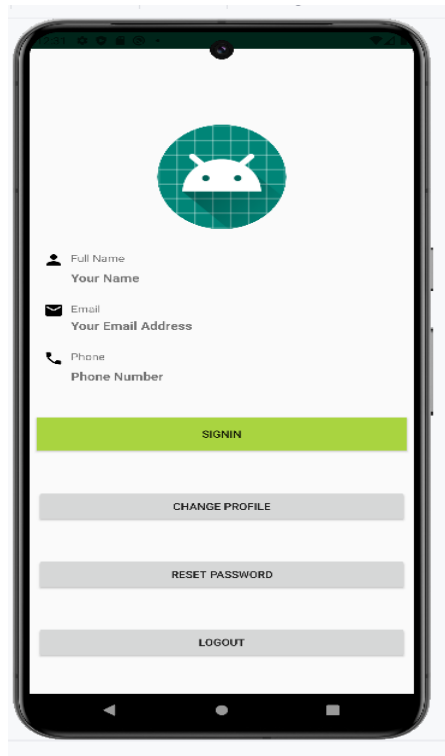
Fig 6.1.2: Email authentication Page
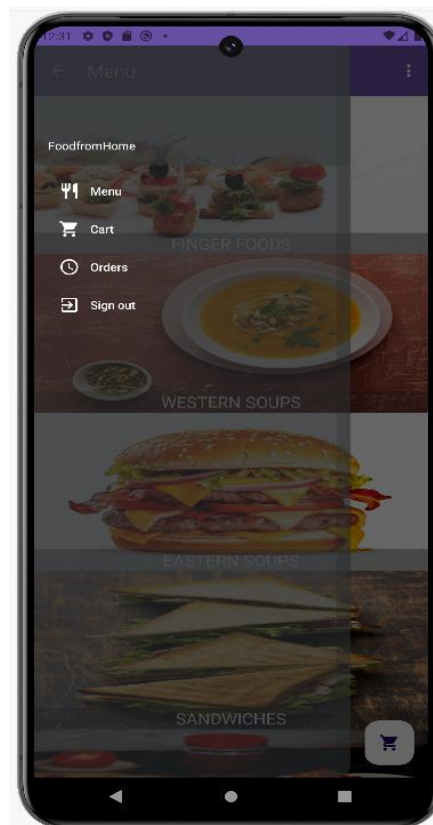
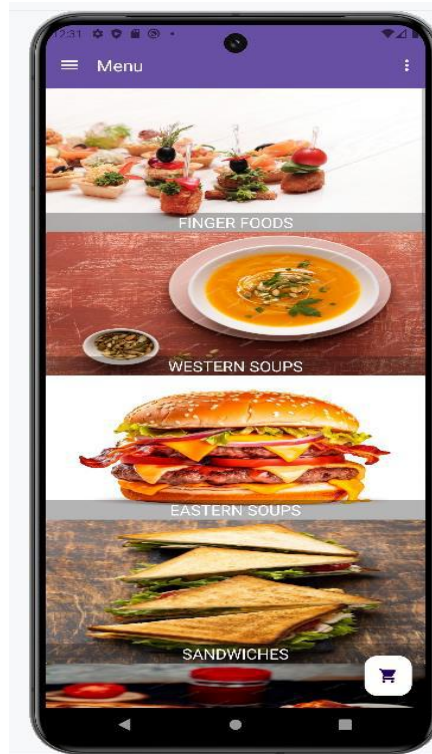Fig 6.1.3: SIGN IN and LOGOUT Page
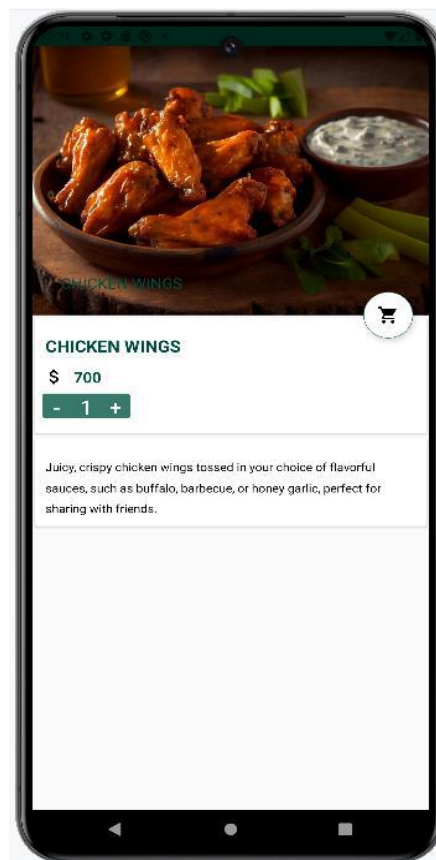

Fig 6.1.4: Home Page

Fig 6.1.5: Menu
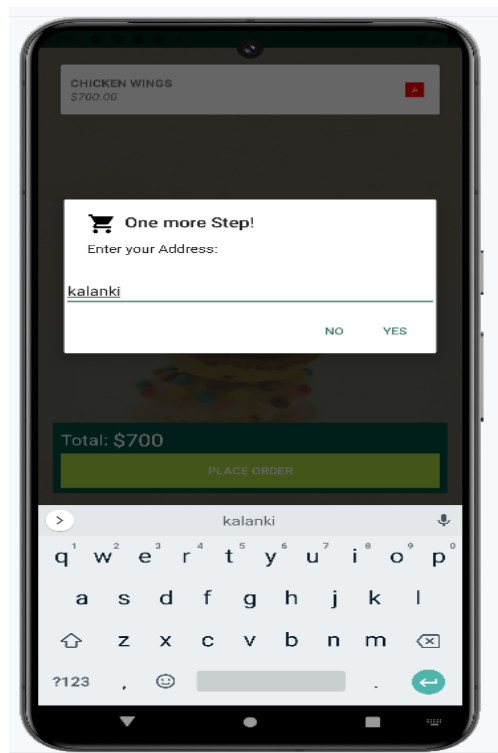

Fig 6.1.6: Food Description

Fig 6.1.7: Add to Cart

Fig 6.1.8: Place Order

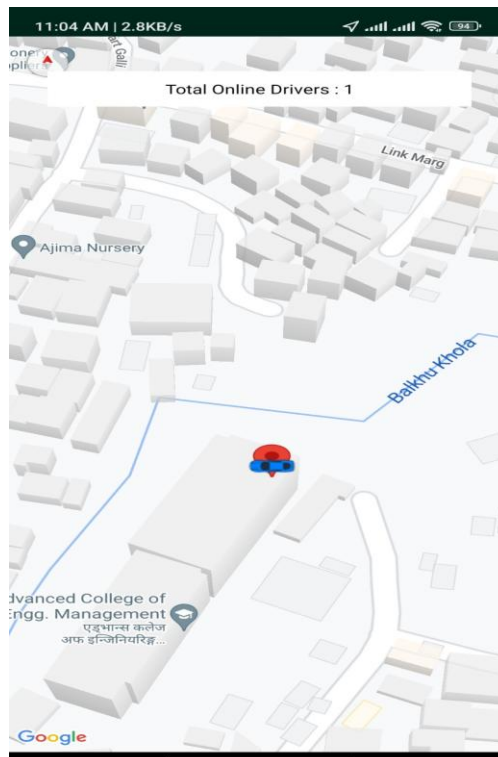28
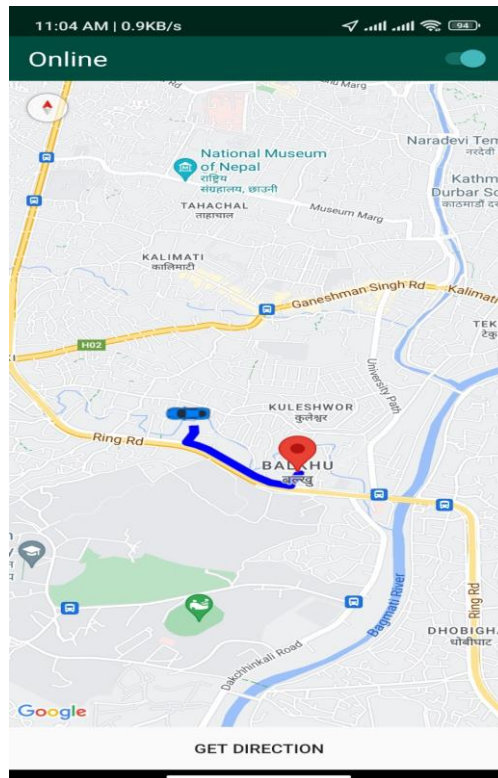
Fig 6.1.9: Delivery Route

Fig 6.1.10: Real-time Tracking

CHAPTER 7: CONCLUSION, LIMITATIONS AND FUTURE ENHANCEMENT

7.1 Conclusion

Our Online Food Ordering App represents a step forward in modernizing the food service industry, particularly for small and local restaurants. By leveraging a digital platform, the system enhances efficiency, reduces manual errors, and provides a seamless user experience. The integration of Firebase ensures secure authentication, real-time database management, and smooth order processing. Additionally, the app features real-time delivery tracking, allowing customers to track their order live, from restaurant preparation to doorstep delivery, enhancing transparency. This system also optimizes delivery routes, ensuring that delivers take the fastest, most efficient paths, which reduces delays and improves customer satisfaction. This system not only simplifies the food ordering process but also serves as a model for how technology can bridge gaps in accessibility and affordability for restaurants in developing markets like Nepal, contributing to the growth and sustainability of local businesses.

7.2 Limitations

- No Online Payment- Customers can only place orders and must pay in cash upon pickup or delivery.
- Customization of Food- Customers cannot modify menu items or add special instructions while placing orders.

7.3 Future Enhancement

- Integration of Online Payments
- Customization Options of food Orders
- Recommendations based on Past Orders

CHAPTER 8: Time Scheduling

Table 8: Gantt Chart

Online Food Order App				Gantt Chart					
Months	Jestha	Ashadh	Shrawan	Bhadra	Ashwin	Kartik	Mangsir	Poush	Magh
Planning	▬								
Analysis		▬							
Design			▬						
Coding				▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬					
Testing				▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬					
Documentation	▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬								

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