Compass My Meal
(Food delivery app for hospital patients)

Major Project report submitted in partial fulfilment of the requirement for the degree of Bachelor of Technology

In

Computer Science and Engineering

By

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UNDER THE SUPERVISION OF

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CERTIFICATE

Candidate's Declaration

I hereby declare that the work presented in this report entitled " Compass My Meal (Food delivery app for hospital patients) " in partial fulfillment of the requirements for the award of the degree of Bachelor of Technology in Computer Science and Engineering submitted in the department of Computer Science & Engineering, Jaypee University of Information Technology Waknaghat is an authentic record of my own work carried out over a period from Feb 2022 to May 2022 under the supervision of Dr. Ravindara Bhatt, Associate Professor, Department of Computer Science and Engineering.
The matter embodied in the report has not been submitted for the award of any other degree or diploma.

Nitin Thakur, 181268.

This is to certify that the above statement made by the candidate is true to the best of my knowledge.

(Supervisor Signature)
Dr. Ravindara Bhatt
Associate Professor
Department of Computer Science & Engineering
Dated: 27-May-2022

ACKNOWLEDGEMENT

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I would like to express my heartiest gratitude to Dr. Ravindara Bhatt, Department of CSE, for
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Nitin Thakur

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ABSTRACT

The motivation behind the Compass My Meal, Online Food Ordering application is to robotize the current manual framework with the assistance of completely coordinated PC programming, to address their issues, so their significant information/data is put away longer and effectively open and utilized in an adaptable way. the equivalent. The necessary programming and equipment are effectively available and simple to work. It can help the client with focusing in on various tasks rather than focusing in on keeping records. That way it will help the relationship with using resources. An association can store PC records without superfluous access. That implies one ought not be diverted by futile data, while having the option to get to data. The point is to make its current manual framework mechanized with the assistance of completely automated programming and programming, to address their issues, to make them important. information/data can be put away for quite a while with simple access and a similar misdirection. Fundamentally the venture frames how to oversee proficiency and better client assistance.This is different from other food delivery services because this focuses on providing a healthy meal to hospital patients in which the menu is suggested by doctors and the app will show you all the nutritional details related to food ordered.

INTRODUCTION

1.1 Introduction

In these changed times internet based food mentioning is a transportability of meal movement or pickup from a close by bistro or food store. By and by days the speedy improvement in the usage of web and the advances related with it, the couple of important entryways are coming up on the web or compact application. This is made possible utilizing electronic portion structure. The portion ought to be conceivable through the client's Mastercard, really take a look at card. It is useful for everyone to orchestrate any items from wherever the web and have the product conveyed at his/her home.

Different types are web exchange promotions to the financial of advanced cash, the fundamental instrument for this cycle media transmission with clients. The framework will turn into a significant devices use for café to further develop the administration viewpoint by utilization of PC framework to associated every single food requesting exchange rather than information record on it. Moreover, it can likewise give productivity to the eatery by lessening time consuming, limit human blunders or conveyance and giving great quality and administration to clients. As far as the respectability and accessibility of the framework gave, it very well may be inferred that this framework is a reasonable arrangement.

The "Online Food Ordering System" has been made to override the problems prevailing in the practicing manual structure. This item is maintained to discard and,in a couple of cases, reduce the challenges looked by this ongoing structure. What's more, thissystem is planned for the particular need of the association to finish errands in asmooth and effective manner.The application is diminished whatever amount as could sensibly be anticipated to avoid bungles while entering the data.It in like manner gives botch message while entering invalid data. No traditional data isneeded for the client to use this structure. Likewise, by this all it shows it is client friendly.Online Food Ordering System, as depicted above, can provoke goof free, secure,reliable and speedy organization structure. It can assist the client with zeroing in on theirother practices rather to zero in on the record keeping. Likewise, it will helporganization in better utilization of resources.Every affiliation, whether gigantic or little, experiences issues to make due and managingthe information of Category, Food Item, Order, Payment, Confirm Order. Each OnlineFood Ordering System has different Food Item needs; accordingly, we plan exclusiveemployee the board structures that are acclimated to your authoritative requirements.This is expected to help imperative readiness and will help you with ensuring that yourorganization is furnished with the right level of information and nuances for your futuregoals. Furthermore, for those clamoring bosses who are constantly in a rush, our structures comewith remote access features, which will allow you to manage your workforce at whatever point, atall times. These systems will finally allow you to all the more probable regulate resources.

1.2 Problem Statement

Eateries can offer electronic mentioning both through their own web based web or portable webpage what's more, through districts that serve various diners, and all bistros also recognize orders through instant message more over the credit point and discount coupen out that various bistros extended bargains level due to enduring electronic orders. The restaurant now day a keen and current menu with all reasonable decisions in an easy to use way. Most of Younger buyers will undoubtedly have used web based food mentioning is essentially gathering on selfservice moves close. Particularly arranged self-organization mentioning systems provide clients veritable control over the speed of their trade and license them to limit how much confidential participation of diner.
An extended level of control, by and large, has been shown to lead
to more raised degree of customer faithfulness and more critical arrangement to use or recommend proposed the organization. Seen solace of a self-organization structure similarly prompts a development in gathering what's more, satisfaction. For this situation, the importance of solace is associated fundamentally to get to solace and trade convenience. A client will search for a most cherished bistro base on client region, peruse open things.

Food movement providers can be sorted out as being either Restaurant-to-Consumer Delivery or Stage to-Consumer Delivery exercises. Diner to-Consumer Delivery providers make the food and convey it, as encapsulated by providers, as mcdonald KFC's, and Domino's.

The solicitation can be made directly through the diner's web based stage or through a pariah stage. These untouchable stages shift starting with one country then onto the next, and consolidate models, for instance, Uber eats in the U.S., Eleme in China, Just Eat in UK, and Swiggy in India. Outcast stages in like manner give on the web movement organizations from associate diners which don't be ensured to offer transport organizations themselves, a cycle which is described as Platform-to-Consumer Delivery. Online meal access requires astoundingly useful and adaptable continuous movement organizations. Bistros can use existing staff for self-transport, for instance, the usage of servers in a couple of little bistros or they could use specific movement bunches who are unequivocally used and ready for this work, as is seen with a part of the gigantic bistro brands, as domino KFC's, and Xibei. Then again, bistros can use openly supporting composed tasks, an association of movement people (riders) who are independently employed elements, a model that gives a capable, insignificant cost method for managing food transport. Online meal service stages can either be responsible for enlisting and planning capable transport people, or they may in like manner resort to openly supporting

activities, using movement people who are not exactly used by the web-based meal delivery stage.

But the main problem that remains is that the food provided by these suppliers doesn't have any check for the food the restaurants are selling. And they do not come with proper details about the food nutrients and all the details about the food because the patients in the hospital need to know that before they can consume the food and the menu that they have isn't compatible with the food that is recommended by the doctors to the patients.

1.3 Objectives

The primary goal of this Project compass my meal which is online meal service, is to managethe subtleties of Food Category, items ,etc. It manages all theinformation about Food Item, Payment, Confirm Order, Food Item. The errand is totallybuilt at administrative end and thusly the head is guaranteed the entry. The purpose of the errand here is to manufacture an application program to decrease the manual work formanaging the Food Item, Category, Payment, Customer. It tracks all of the nuances about the user ,about the order and services too.

Features provided by Compass My Meal are as follows:

- Provides the facility in light of different elements.
- Online meal delivery System additionally deal with the Payment subtleties online for Orderdetails, acceptance of Order subtleties, etc.
- It keeps note of all the data of meals , Payment, menu etc
- Manage the data of CategoryShows the data and depiction of the menu Item, user.
- To increment proficiency here by dealing with the menu Item, Category it manages observing the data and exchanges of Order.
- Organize the data of Food ItemEditing, adding and refreshing of Records is further developed which results in properresource the board of Food Item data.
- Manage the data of OrderIntegration of all records of successful Order

Scope of Compass My Meal

Gives the looking through work environments thinking about different parts. Like menu Item,user, meal , Confirm OrderOnline. Compass my meal likewise deal with the Payment subtleties online for Orderdetails, success Order subtleties, Menu Item.It keeps note of all of the data of Category, Payment, Order etc Manage the data of CategoryShows the data and depiction of the menu Item, user to increment ability of

dealing with the menu Item, Category. It administers seeing the data and exchanges of Order. Manage the data of Food ItemEditing, add more and resuscitating of Records is also developed which results in properresource the main gathering of meun Item logs.

- It satisfy the user requirement
- Be straightforward by the client and administrator
- Be easy to operate
- Have a good user interface
- Be expandable
- Delivered on schedule within the budget
  In PC framework the individual needs to fill the different structures and number of duplicates of the structures can be effortlessly produced at a time.
- In computer system, it is not necessary to create the manifest but we can directly print it, which saves our time.
- To utilize resources in an efficient manner by increasing their productivity through automation.
  The framework produces sorts of data that can be utilized for different purposes.

1.4 Methodology

Obtaining the results of financial, social, and meal service environment support online requires high-level research and multidisciplinary evaluation of late writing. More than 60 records have been identified for the 'impact of online food transmission', using the associated search engines: Scopus, Web of Science, Google Scholar, and China National Knowledge Infrastructure (CNKI). The wide range of data sets viewed was due to the perception of different aspects of the test question and the eagerness to look at the two vernacular languages. Remarkably, with the exception of diary headlines, check out more included books and sections of books, government procedures, reports, worksheets, and other black writing sources. Considering the newness of the web-based meal delivery environment, our basic search revealed that accurate research on scholarly writing was not true as it was insufficient in terms of administrative effects on empowering strong decisions about the environment to be considered. Therefore, a more experimental approach was adopted stating that the prominent themes of further research and tried to propose it to enable future testing. Source material distributed locally for the period 2010 and 2020 that was accessible in one or another English or Chinese (language) category. Although our review is expected to understand the effects of online food service online internationally, the choice to include both Chinese and English language articles was made on the grounds that the web-based meal site originated largely in China, and in this way, online food delivery in China. has received much scholarly respect for the date.

To be sure, the results of our investigation showed that most of the writing on the MD web covered MD within the Chinese setting.

Android is a versatile working framework in view of a changed rendition of the Linux part and other open-source programming, planned principally for touchscreen cell phones, for example, cell phones and tablets. Android is created by a consortium of designers known as the Open Handset Alliance and economically supported by Google. It was divulged in November 2007, with the principal business Android gadget, the HTC Dream, being sent off in September 2008.

Many Android translations are special. The intermediate components are based on the Android Open Source , which is primarily authorized under the official License. At the point where the operating system is introduced to gadgets, the ability to modify any FOSS settings is usually limited, by not providing the related source code or preventing re-installations with special steps, to bring the different limitations introduced. Many Android gadgets move through a special program that has been introduced, most notably Google Services of real time mobile device which includes intermediate applications, for example, Google Chrome, the Google Play computer application phase, and the related Google Services related to games under the development section.

More than 70% of Android cell phones run Google's biological system; some with seller redid UI and programming suite, like TouchWiz and later One UI by Samsung, and HTC Sense. Contending Android environments and forks incorporate Fire OS (created by Amazon), ColorOS by OPPO, OriginOS by vivo and MagicUI by Honor or custom ROM like LineageOS. Notwithstanding, the "Android" name and logo are brand names of Google which forces guidelines to confine the utilization of Android marking by "uncertified" gadgets outside their environment.

This project is a native android app built using android development studio known as android studio and the language used is kotlin.

- Android Emulator : For Testing the application which is made responsive.
- Android Studio: For development
- Kotlin: language used for development.
- XML: for UI.

Library/Framework used

- Android
- Retrofit
- Hilt/Dagger
- Android jetpack
- Firebase
- Android Navigation

Language used

- Kotliln
- XML

Technical Requirements

- Processor - Intel core i5 or above
- Installed Memory (RAM) - 32GB (8gb + recommended)
- System Type - 64 bit windows/mac operating system
- Android Studio for editing and development
- Git/github for version control
- Google pixel XL/5 or any other browser for testing. (Android Emulator)

1.5 Organization

The initial phase in the framework advancement life cycle is the starter investigationto decide the achievability of the framework. The motivation behind the starter examination isto assess project demands. It's anything but a plan study nor does it incorporate the assortment ofdetails to portray the business framework in all regard. Rather, the gathering ofinformation helps council individuals to assess the benefits of the task requestand make an educated judgment about the plausibility regarding the proposed project.

- Benefits

The association can clearly acquire advantages, for example, reserve funds inoperating cost, decrease in administrative work, better use of HR and morepresentable picture expanding generosity.

- Starting costs

The initial cost of setting up the system for the application will also take the cost of hardware software which includes the operating system that will be required & labor which has the costs for setup and maintenance.

- Need for training

So, clients alongside head should be prepared by the hour of execution of the framework for proper working of the framework. The user will give the preparation site.We conversed with the administration individuals those that were dealing with a the monetary errors of the middle, the employees who were handling the records in bunches of registers and the revealing director in regards to their current framework, their prerequisites and their assumptions from the new proposed framework. Then, at that point, the framework investigation was completed of the whole framework in light of their supervisors and the extra elements thet were needed to consolidate in this application.

Dependable, precise and secure information was likewise viewed as a complicated errand without this accepted framework. Since there wasn't record for monitoring all the exercises, which was finished by the compass my meal on the regular schedule.

The new framework created and afterward created by me will facilitate the assignment of the association in thought. It will be useful in producing the necessary reports by the employees, which will assist them with keeping tabs on their development and administrations. In this way, here that will facilitate the errand of Management generally cause of all the exercises to be done, are mechanized using this framework.

LITERATURE SURVEY

Online meal services Growth is a global pattern with many nations around the world having an important stage in less than one food chain. China is pursuing a path in which the MD pie online, closely followed by the US by building markets in India and Brazil, showing rapid development .

The web-oriented food service industry has been incredibly effective in growing new business models and improving consumer nutrition.

Apart from the fact that online meal delivery is a source of strength especially in a few areas, globally web-based food service is in the early stages of market development, and will require significant business to support development and operations and provide support for participation.

cafes. For example, a cafe can serve a purpose with the MD stage, where the consumer receives ¥ 8 as a discount in the event that the combined total amount reaches ¥ 20. This placement can only be said to cost a ¥ 2 cafe, as it will receive ¥ 6 support from the meal delivery section (actual settings may vary from stage to stage. Such a method is useful in the store from then on. Will draw more customers and orders. in the future of online meal delivery to improve consumer food patterns by getting used to picking up and purchasing food on the web. clearer with this pattern than in China.A 2019 Summary of 1000 College Students in Nanjing,

found that something like 71.45% of them had used an online MDfor less than two years and that 85.1% of them had used an online MDat least a few times in seven days.

Country	Forecast Revenue in 2020 (in million US$)	Annual Growth Rate (CAGR 2020–2024)	Market's Largest Delivery Segment	Volume of Market's Largest Delivery Segment in 2020 (in million US$)	Leading Platforms
China	51,514	7.0%	Platform-to-Consumer	37,708	Meituan, Eleme
US	26,527	5.1%	Restaurant-to-Consumer	15,631	Grubhub, Uber Eats, Doordash
India	10,196	9.5%	Restaurant-to-Consumer	5401	Foodpanda, Swiggy, Zomato, Uber Eats
UK	5988	6.5%	Restaurant-to-Consumer	4115	Just Eat, Food Hub, Deliveroo, Hungry House
Brazil	3300	9.5%	Restaurant-to-Consumer	2033	iFood, HelloFood

Fig1.1 : Revenue of food delivery marked in maor countries.

Online meal delivery is said to be popular with japan college students as it saves time and can offer even more options.

or it is also different with respect to the flask diet. Obviously, different people around the world have different opportunities to buy a web-based food web, new intelligence in addition, financial reasons and this difference can be reversed by the different phasing stages of web-based meal service seen. In collaboration with China, for example, a 2019 study of 252 Greek college students aged 18-23, found that most of them cooked at home and rarely ate outside or brought food (45.6%), while others usually ate locally. student or home-cooked cafeteria (23.4%), with 21% of students surveyed indicating that they have food delivered.

Economic development and expanding broadband infiltration are driving the worldwide extension of online business. Purchasers are progressively involving on the web administrations as their discretionary cashflow increments, electronic installments become more dependable, and the scope of providers and the size of their conveyance networks extend.

Online to disconnected is a type of web based business in which shoppers are drawn to an item or administration on the web and prompted to finish an exchange in a disconnected setting. An area of O2O business that is growing quickly is the utilization of online food conveyance (online FD) stages. Generally around the world, the ascent of online FD has altered the way that numerous customers and food providers communicate, furthermore, the maintainability influences (characterized by the three mainstays of financial, social and natural) of this change still can't seem to be exhaustively surveyed. Some portion of the trouble in evaluating its effect has been that researchers are moving toward this point from a scope of various disciplines. Hence, the goals of this survey are triple: To lead an interdisciplinary audit that unites scholastic research on the expansive scope of regions influenced upon by the expanded utilization of online FD; to examine the valuable open doors and difficulties these effects posture; and (3) to feature the open doors for activity by all partners, including on the web FD industry specialists, strategy creators, purchasers, and scholastics, to expand its positive and diminish its unfavorable effects.

SYSTEM DEVELOPMENT

1. System Flow

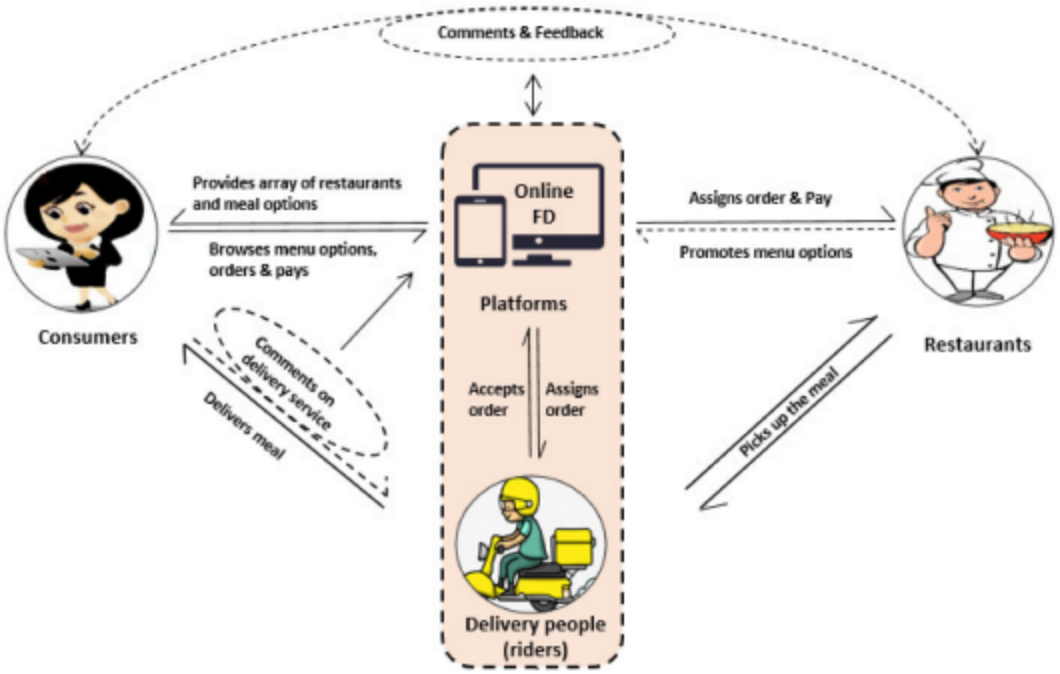


Fig 1.2 : The functions associated with the application.

There has been constant work to foster tools, which can facilitate the cycle of software improvement. Be that as it may, with the advancing pattern of various writing computer programs paradigmstoday's product designers are truly tested to manage the rapidly growing technology. And other different matters, programming re-designing is being viewed as a significant processin the product improvement industry. One of the significant undertakings here is to understandsoftware frameworks that are now evolved and to change them to a differentsoftware climate. For the most part, a ton of manual exertion in going through aprogram what could have been created by any other software engineer. So the,task makes anovel endeavor to maintain the gave of program examination and age of diagrams,which can portray the construction of a system in a superior manner. These days, GML is being considered as a modern norm for programming configuration process.

Here is the flow of the project, which stated that there will be two accounts of the users. One for customer another for the sellers. Both types of accounts will have different features which will be well integrated with each other for seamless flow of the application and the server side will be keeping a check on the flow.

2. Proposed System Model

Technologies used

Android

Android apps are grouped as a variety of components. There are four types of components, and applications can be made for at least each one. The unique feature of the component is compared to the sub-set of the app which can be done freely in others. In this way, in many ways, the Android app can be considered as an assortment of interactive components. The Android system components come in four types:

- Activities. Client confronting parts that carry out show and information catch.
- Services. Foundation parts that work autonomous of any client apparent movement.
- Broadcast receivers.. A part that tunes in for and answers framework wide transmission declarations.
- Content providers. Parts that make application information open to outside applications and framework parts.

Activities.An Acitivity part carries out cooperations with the client. Exercises are ordinarily intended to deal with a solitary sort of client activity, and different exercises are utilized together to give a total client connection.

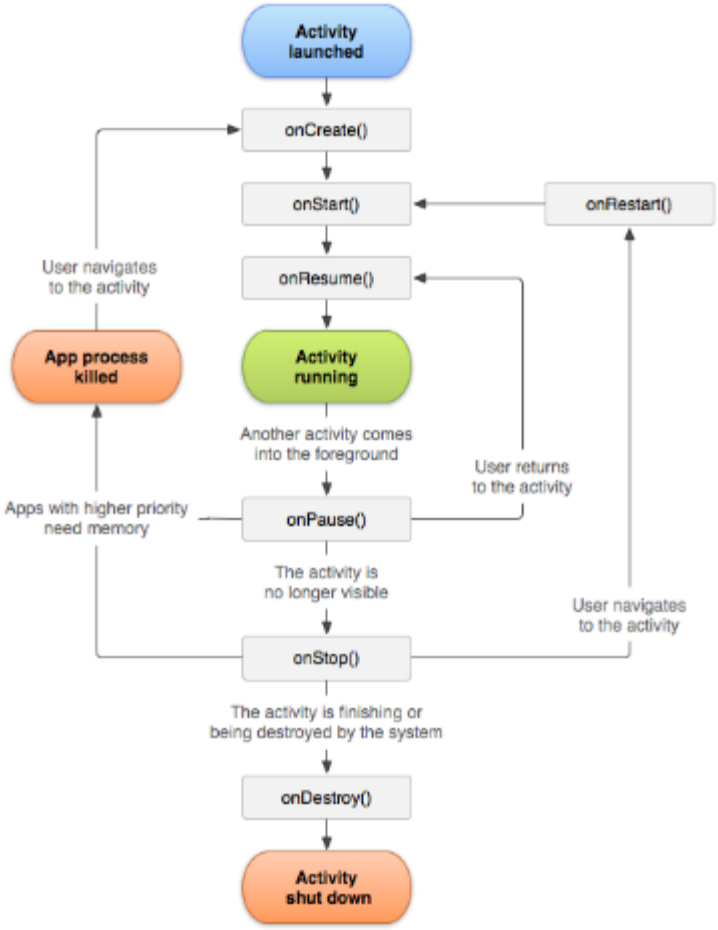


Fig 1.3: simplified illustration of activity lifecycle

For instance, a planning application might comprise of two exercises: one that repots to the client a rundown of areas to guide, and other to show a guide realistic that incorporates the picked area. An action incorporates a default screen for drawing UI components. An action will utilize at least one view elements, which are coordinated progressively, to create or catch client input. Perspectives can be considered gadgets, or UI objects, for example, really take a look at boxes, pictures, and records that are normal to a wide range of GUI-based improvement conditions. The Android SDK incorporates various perspectives for engineer use.

Services.Long-running or foundation parts that don't straightforwardly connect with the client are communicated as administration parts. For instance, I/O tasks that are started by an action may not finish before the client confronting movement vanishes. In this case, a help part can be utilized to do the I/O task, free of the lifetime of the UI components that started it.

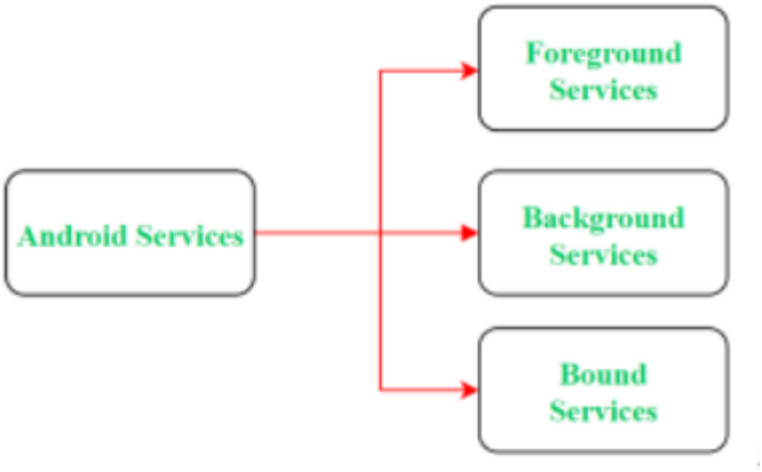


Fig 1.4 android services

Administrations characterize and uncover their own connection points, which different parts tie to utilize the assistance. As is normal with UI components in GUI conditions, benefits ordinarily send off their own strings to permit the primary application process string to gain ground and timetable strings related with different parts.

Broadcast receivers. As recently talked about, framework wide transmission occasions can be produced by the framework programming or by applications. Parts that pay attention to these transmissions in the interest of uses are communicated collectors. An application can incorporate numerous transmission beneficiaries tuning in for declarations. Accordingly, a transmission collector can start another part, like an action, to connect with the client or utilize the framework wide notice chief.

Content providers. Partments that provide access to app data are content providers. Basic classes are offered on the Android SDK in both the content provider (i.e., the content provider component should expand the base category) and the section you want to access. The content provider is free to store data in any background background you choose, be it a file system, SQLite service, or application-specific representation (including those used by remote web services).

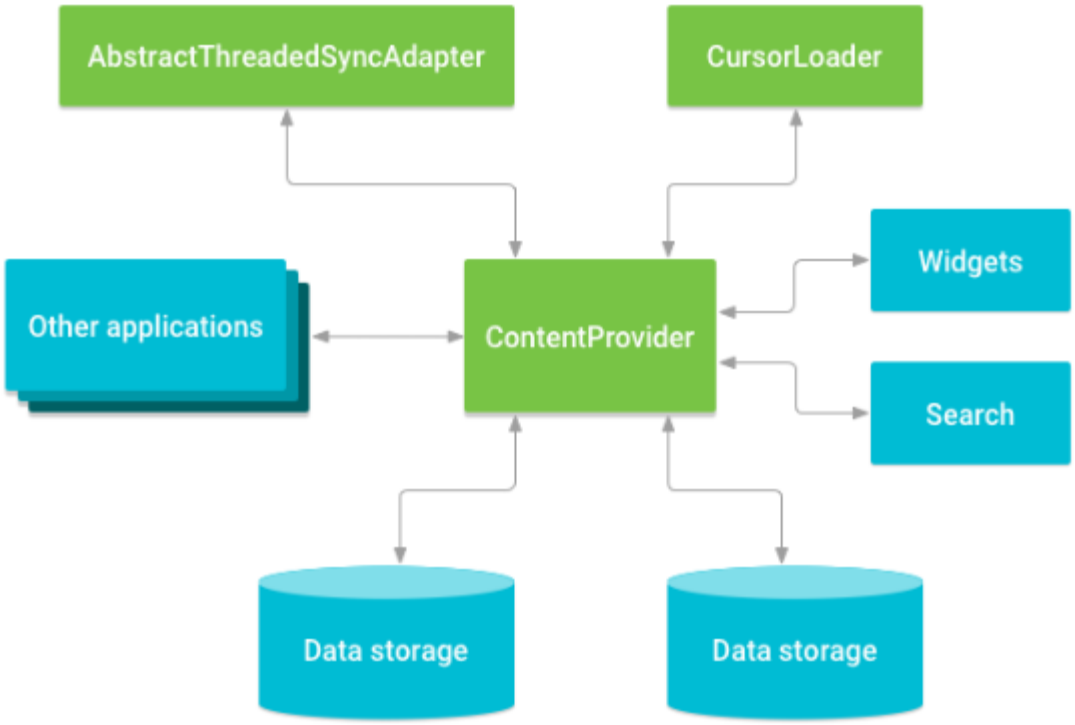


Fig 1.5 : content providers

Android applications essentially store information in two areas, inner and outside capacity, the two of which will be canvassed in more detail later in this part. Notwithstanding, it is useful to have a significant level comprehension of the information stockpiling index structure.

In the outer information stockpiling regions (the SD card and copied SD cards), applications can store information in any area they wish. Be that as it may, interior information stockpiling is constrained by the Android APIs. At the point when an application is introduced (through either the commercial center or in the form sent to the shopper), an inward information stockpiling is saved in a subdirectory of/information/information/named after the bundle name. For instance, the default os program has a bundle name of browser and, in that capacity, the information documents are put away in/information/information/com.android.browser. While other projects are not expected to store information records.

Building Android app is an extremely well known movement these days. Be that as it may, Android application advancement experiences a few continuous issues, as malware obstruction, absence of memory space, unfortunate reaction time, compromised client experience, and so on. This examination work attempts to connect one of these holes, and an endeavor is made to advance the exhibition of Android applications in time-controlled conditions. Two open source applications (utilized for taking notes and for setting alerts,

warnings, and so on) were inspected and k-implies grouping assisted with bunching the useful and non-utilitarian necessities of the applications. In coordinated programming improvement, it has become important to isolate the ideal necessities the Android application ought to execute in a specified time. GA and ACO strategies were utilized to advance the quantity of necessities. DIT navigated per unit of execution time was picked as the wellness work.

It created the impression that GA caused a bigger decrease in the quantity of necessities than ACO. Then again, ACO is more compelling in diminishing execution time. Now and again, the quantity of prerequisites turned out to be half while in certain cases it was diminished to close to 33%. The execution season of necessities turned out to be half as a rule, while in different cases it was decreased to close to one-fourth. Subsequently grouping alongside the utilization of advancement heuristics made the exhibition assessment of Android applications more straightforward.

Language of choice

This project is a result of most of the development work done using kotlin language. Previously, java was used in native development of android applications but after google made kotlin the official language for android development in 2017, it has got a lot of reputation and most of the professional are switching to it , it offers more efficient and easier methods writing code.

Why do we choose the KOTLIN?

In many ways, Kotlin, organized by JetBrains, has become the preferred language of the Android development industry. Although it will not be able to outrun Java in its spread, many developers insist Kotlin will soon become an existing stage of Android development.

In terms of its ease of use, Kotlin has many devices and applications that work with Java. Additionally, its advanced compiler can detect errors both during order time and processing time. Similarly it reduces the number of lines of code altogether.Kotlin is officially being maintained by Google for the development of Android variables since the release of Android Studio 3.0 in October 2017.

- Kotlin is a statically-composed language which is very simple to peruse and create. It has many easier and more limited code than Java's code for a similar issue. As this makes the language more intelligible, it turns out to be not difficult

to investigate. Kotlin's code is a much more modest and smoothes out the programming system, in comparision with Java. This is somewhat a result of Kotlin's smooth IDE.

- Kotlin codes don't require semicolons in their code. Thus , makes the projects simple to peruse and comprehend. They additionally have savvy projects and string formats. Java is certainly not a concise language. Such a language code expands the possibilities of bugs. The code being in a compact language implies less possibilities of both runtime and order time blunders. Kotlin gives a basic method for involving impermanent and changeless statements for various information structures.

- In addition to the libraries however a lot of structures from Java are viable with Kotlin, including a few high level systems. You can utilize Kotlin from Java with no significant advances like changing a whole task over completely to Kotlin. This is a tremendous benefit to engineers since they don't actually need to get familiar with another dialect definitely. Anybody who realizes Java will actually want with and have the option to code in Kotlin. It is not difficult to Translate Java to Kotlin. In IntelliJ or Android Studio is the main thing expected as a Kotlin module to make an interpretation of Java to Kotlin.

- Perhaps the greatest benefit of Kotlin over Java is the invalid references. This invalid reference, alluded by Sir Tony Hoare, a British PC researcher, as The Billion Dollar Mistake. Getting to an individual from an invalid reference bring about an invalid reference special case. This is one of the significant downsides of Java in which it is known as a NullPointerException or NPE. Kotlin's sort framework is planned to take out NullPointerException from the code.

- Regular Java has various imperfections. It represses the extremely popular issue of invalid pointer. Kotlin endeavored to settle these obstacles made by Java. It has embraced things from various dialects like C# to defeat hardships of former language . It contains examples from the language of Pascal and is considered as exceptionally compelling in the advancement of Kotlin. Components like boundary records and variable statements with the information type following a variable could possibly be in Kotlin.

  It eliminates the standard code, incredibly disposes of potential mistakes. It has highlights like appointments, late instatements. It likewise maintains type security in records, which is a significant issue in former language . It was exceptionally simple to type a wrongly composed variable to a rundown before generics went along. This would commonly prompt exploding during the run time in issue of the fact that the compiler doesn't identify it.

Retrofit

Retrofit is a REST Client for Java and Android permitting to recover and transfer JSON (or other organized information) through a REST based You can design which converters are utilized for the information serialization, model GSON for JSON

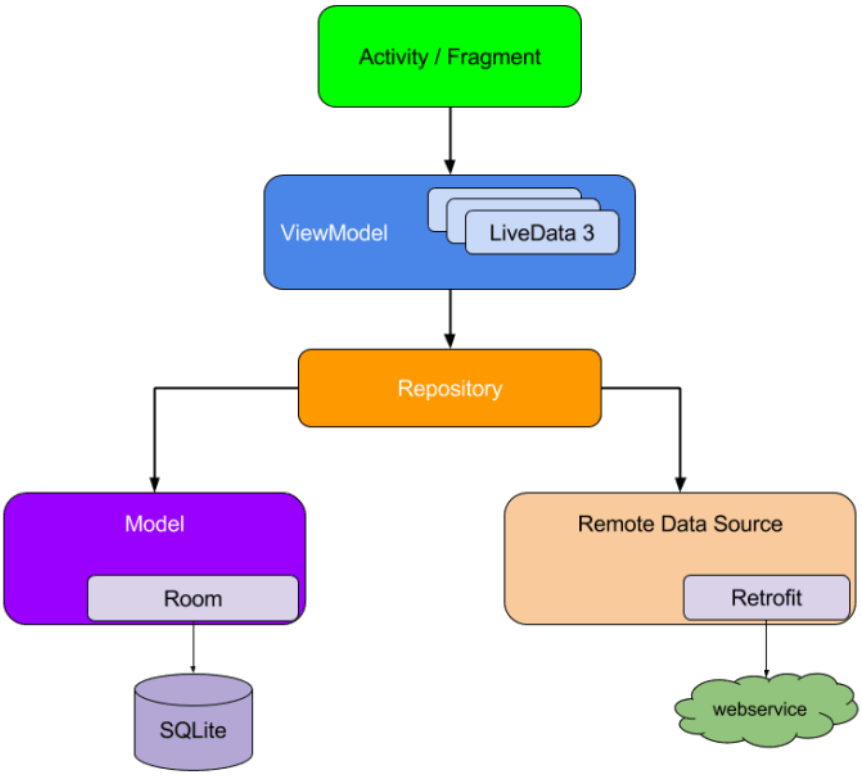


Fig 1.6: android recommended architecture

Hilt

It is a dependency injection library for the android ooperatiing system that decreases the boilerplate code of doing manual reliance infusion in your venture. Doing manual fusion expects you to build each class and its conditions the hard way, and to utilize compartments to use again and notice conditions.

Handle gives a standard method for involving DI in your application by giving compartments to each Android class in your venture and dealing with their lifecycles consequently. Grip is based on top of the famous DI library Dagger to profit from the order time accuracy, runtime execution, versatility, and Android Studio support that Dagger gives. For additional data, see Hilt and Dagger.

This guide makes sense of the essential ideas of Hilt and its created holders. It likewise incorporates a show of how to bootstrap a current application to utilize Hilt.

Dependency Injection

Dependency injection (DI) is a strategy broadly utilized in programming and appropriate to Android improvement. By following the standards of DI, you lay the basis for good application design.

Executing reliance infusion gives you the accompanying benefits:

- Reusability of code
- Simplicity of refactoring
- Simplicity of testing.

3. Working on the proposed idea

- **Project files**

Manifests - It is like the summary of the project. It contains info about apps package name (code's namespace).The components of the app, which include all activities, services, broadcast receivers, and content providers.it contains permissions that app needs.

The equipment and programming highlights the application requires, which influences which gadgets can introduce the application from Google Play.

Java: Contains the Java source code files, separated by package names, including JUnit test code.

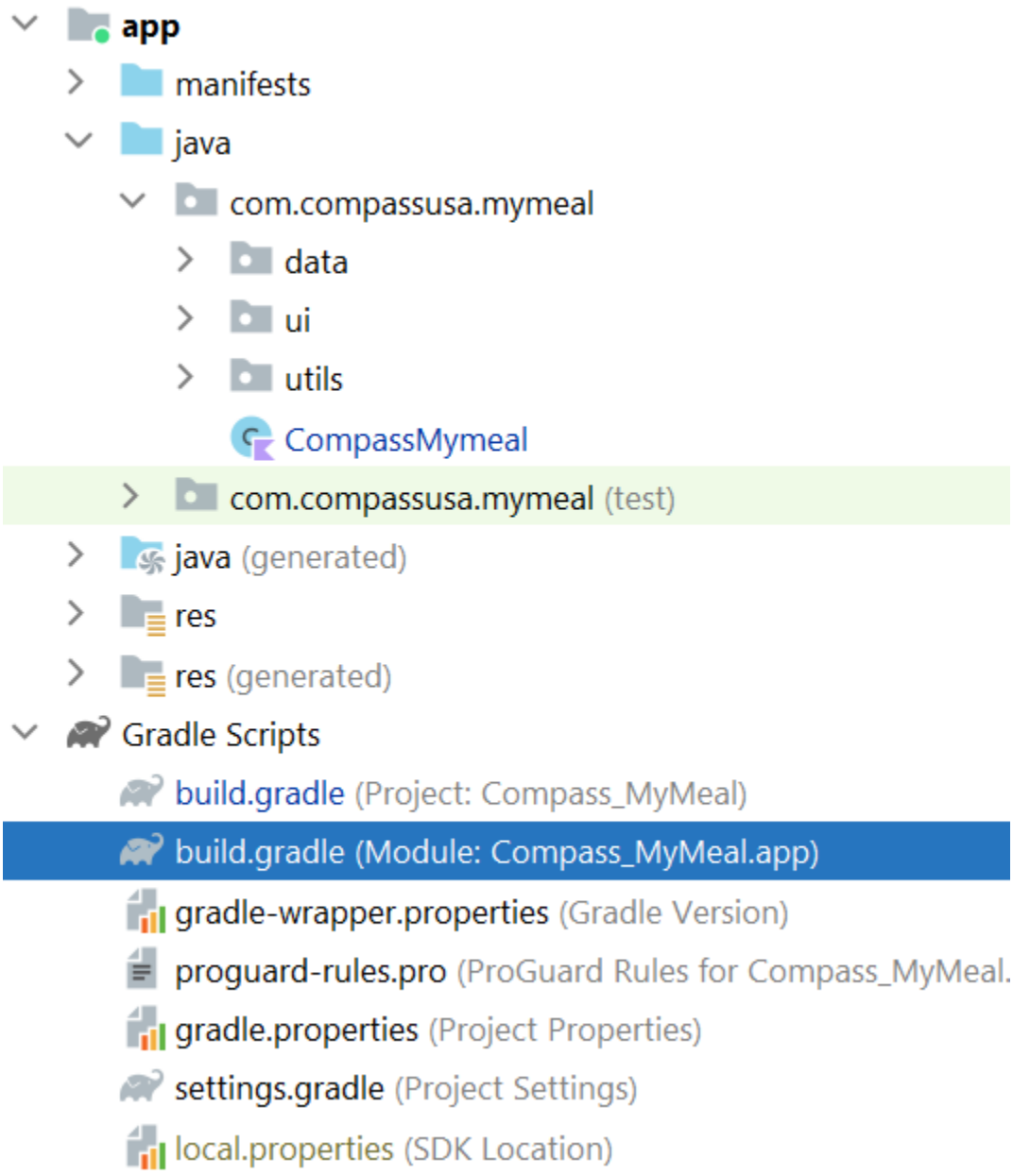
Res:Contains all non-code assets, for example, XML designs, UI strings, and bitmap pictures, isolated into comparing sub-catalogs. For more information about all possible resource types, see Providing Resources.

build.gradle(module): This defines the module-specific build configurations.

build.gradle(project): This file is integral to the project, so you should maintain them in revision control with all other source code.(External libraries or dependencies.)

- **All components**

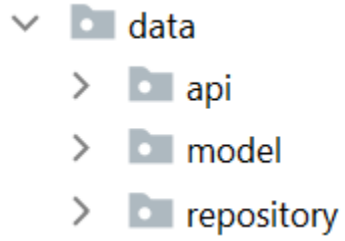
  Here is the flow of the project as you can see the project is divided into other small components to increase singularity and each section is well organized.



- **Data component**

  It contains all the classe responsible for the backend data of the application. It has all the files related to the api calls and the retrofit services.

It has three subrepositories that are responsible for api model and repository.
If you have seen the architecture guidelines for the android applications you will find those similar to this.



Api
It contains all the files for the api service like apiHelper.kt, retrofitBuilder and etc. They connect to the files in the repository and that act like a wrapper for these files.

Model
This repository contains all the object classes which we can see as the tables for the database of the application.

Repository
This folder contains all the repository files which take the data from the api files and this acts like a wrapper for them. This contains a corresponding repo file of each of the activity files in other classes.

- **UI component**

Base
This repository contains the view model factory kotlin file which is responsible for providing viewmodels where ever needed in other classes.

ViewModels

The Android layout interacts with the life cycles of UI controls, such as gymnastics and parts. The layout may choose to turn off or reset the UI control due to certain client functions or gadget times beyond your control.

If the framework destroys or restores the UI control, any temporary UI-related information you end up with is lost. For example, your app might remember a list of clients in one of its exercises. At a time when the action has been redesigned to change the design, a new movement needs to rediscover the customer list. For specific information, the action can use the onSaveInstanceState () process and retrieve its

information from the cookie on onCreate (), but this method makes sense with a limited amount of information that can be serialed and deleted, not because of as much information as possible. such as customer lists or bitmaps.

Another problem is that UI controllers often need to adjust decisions that may require some investment to return. Requirements for UI controller to deal with these calls and ensure that the frame fixes them after they are closed to avoid potential memory loss. This management needs a lot of support, and in the event that an article is redesigned to change the design, it is a misuse of assets as the article may need to recoup the calls it has made continuously.

UI controls, for example, tests and categories are expected to display UI information, respond to client tasks, or handle workbook documents, for example, permit requirements. Requires UI controls also to be responsible for packing information from a data set or organization can add puff to the classroom. Achieving an unreasonable obligation to the UI controllers can bring a single stage that attempts to handle all the work of the app without the help of someone else, rather than stopping the task at different stages. Giving an extra responsibility to the UI controllers in this way likewise makes testing more efficient.

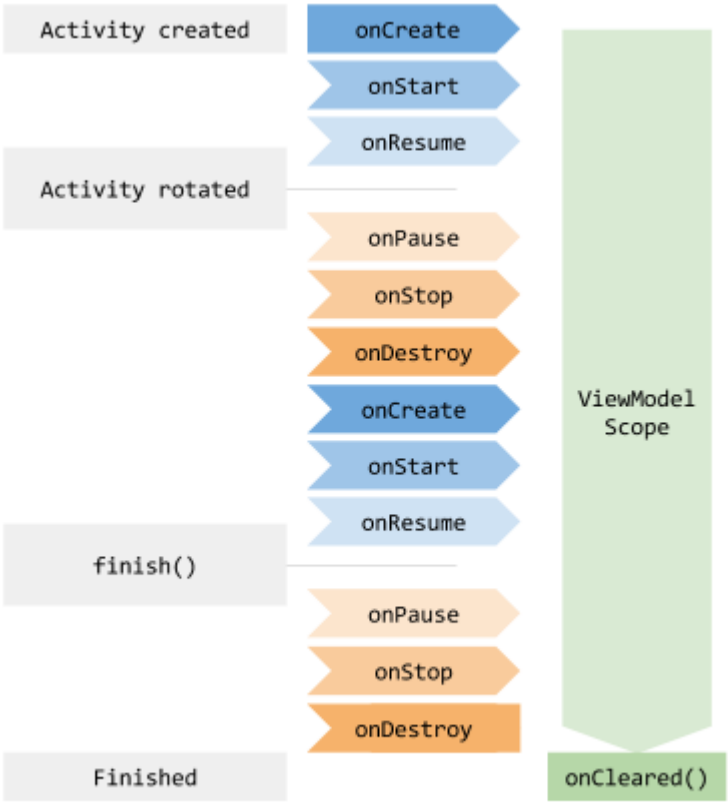


Fig 1.7 : viewmodel lifecycle

Isolating out view information proprietorship from UI regulator logic is simpler and more proficient.

Main

This repository has four sub repositories for adapter ,interface, view and viewmodels .

Adapter

This contains all the classes of adapters that are required by other files in the project. In Android, Adapter is an extension between UI part and information source that assists us with filling information in UI part. It holds the information and send the information to an Adapter view then, at that point, view can takes the information from the connector view and shows the information on various perspectives like as ListView, GridView, Spinner and so forth. For more customization in Views we utilizes the base connector or custom connectors.

To fill information in a rundown or a lattice we want to execute Adapter. Connectors behaves like an extension between UI part and information source. Here information source is the source from where we get the information and UI parts are rundown or matrix things in which we need to show that information.

Interface

The UI (UI) for an Android application is worked as a progressive system of designs and gadgets. The designs are ViewGroup objects, compartments that control how their kid sees are situated on the screen. Gadgets are View objects, UI parts, for example, buttons and text boxes.

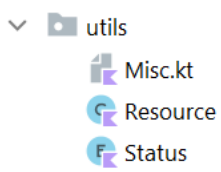
View

This repository contains all the activities and fragments used in the application and each one linked to a layout file in the XML.

ViewModels

This repository contains a viewmodel for each activity or fragment declared in the applicaiton.

- **Utils component**



PERFORMANCE ANALYSIS

- **Code Execution**

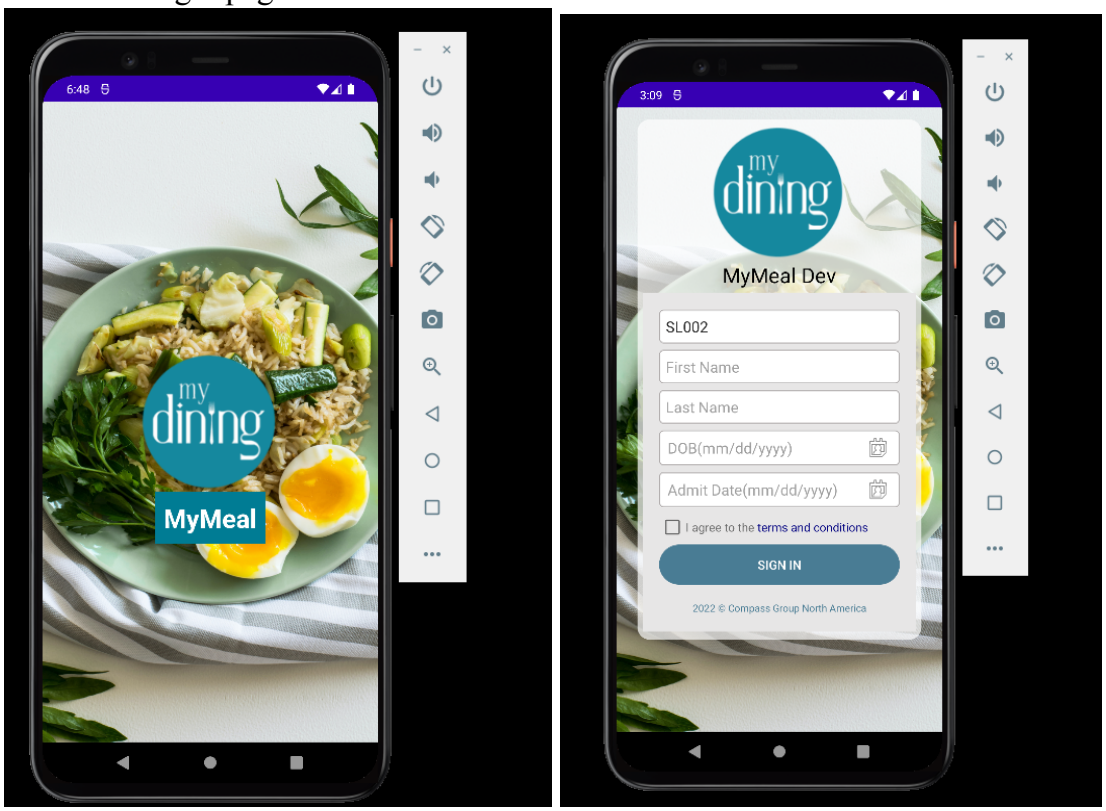
After the implementation of the code as above ,we ran the code using android emulator or a real device to test the application.

- **Output/Screenshots**

Below are the screenshots of all the user interface that this application contains page by page.

A. Login page and welcome page

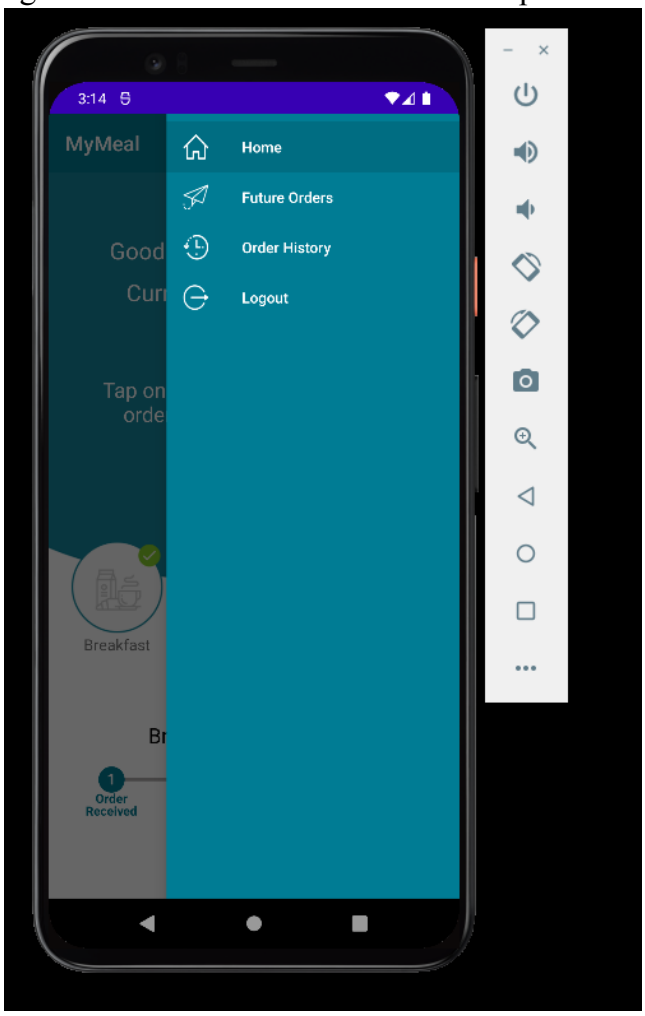
First is the login page that has interface as below:



It has both sign in and sign up options which can be toggled using the yellow button at the bottom right.

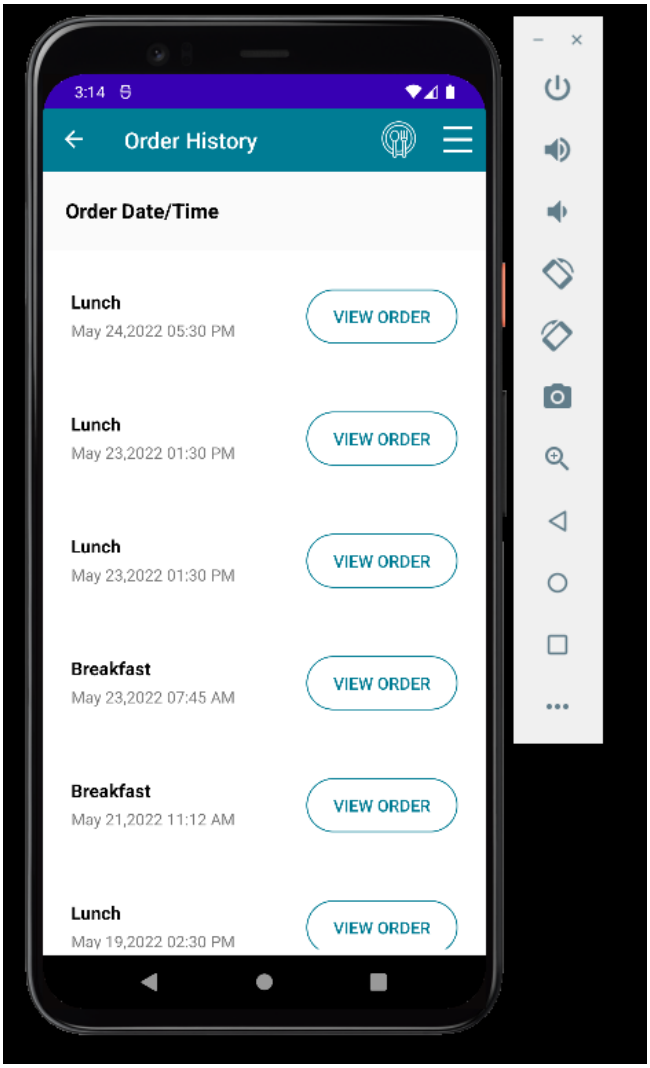
B. Side Bar

This is the sidebar of the application which shows the user currently logged in and the log out button.This contains the menu for future orders that the user have and also a link to the order history page which has all the details about the previous orders.



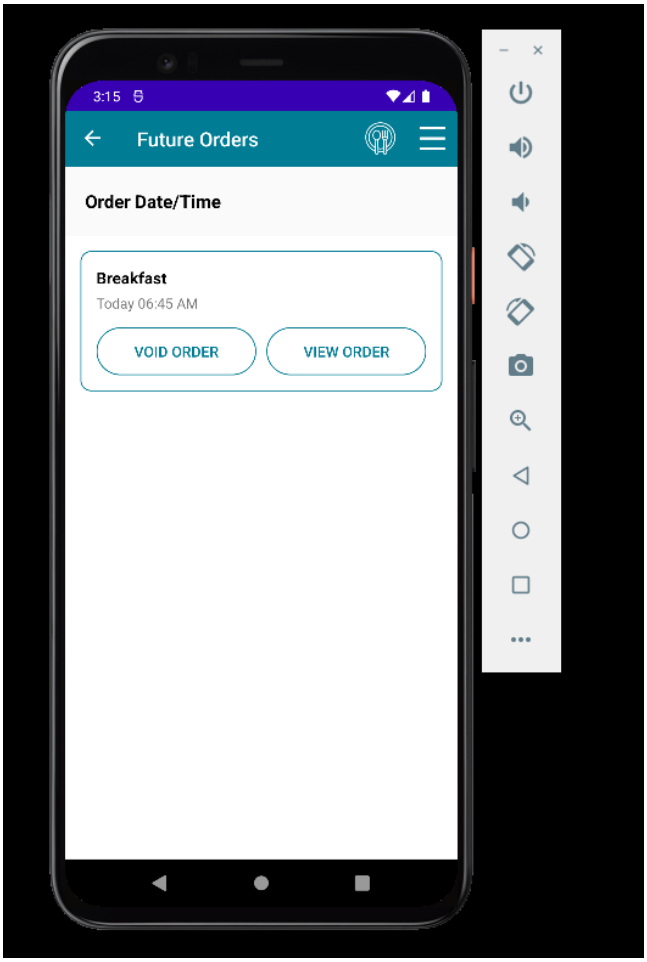
C. Order History

This section contains the previous order history and all the details /nutritional information about the orders that you can see by the view order buttons in the UI



D. Future Orders

This section contains the future orders of the user and they can see the order details and cancel the order using the void order button.

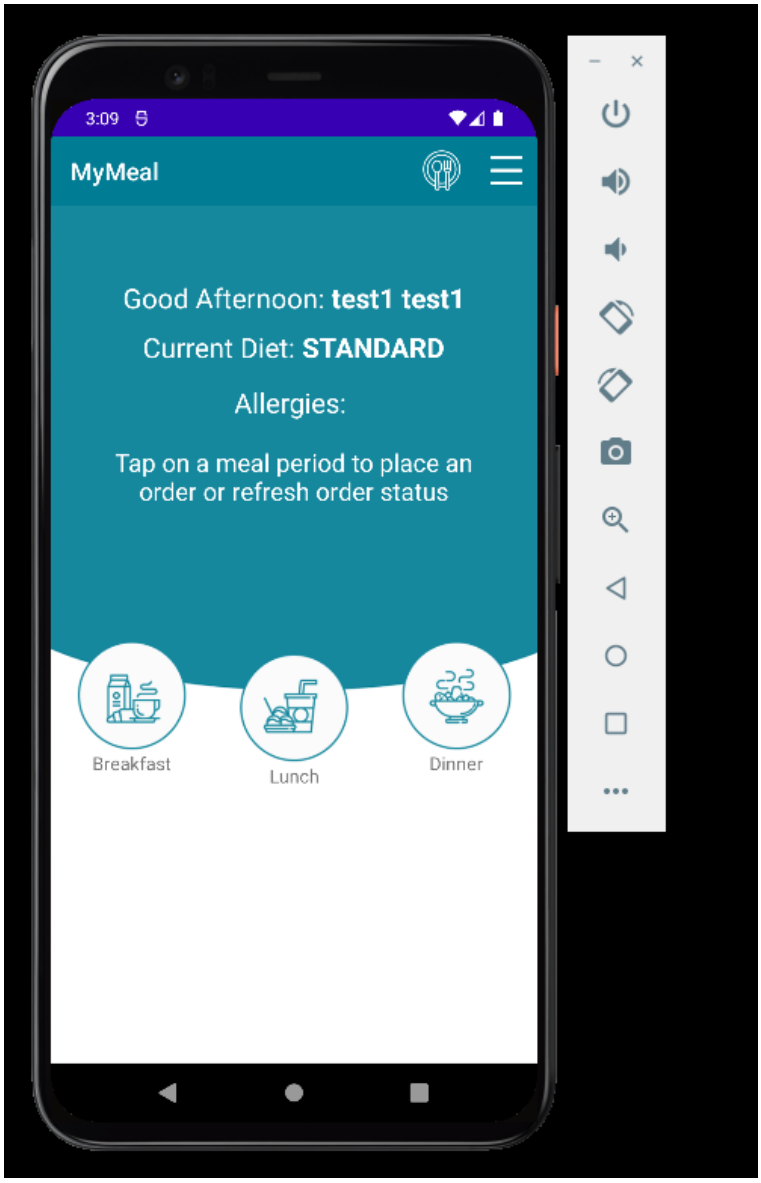


E. Ordering Meals

Now, how to order a meal is shown step by step below .

After successfully login in you will land on the home page. Here you can see many options, you can order breakfast, lunch and dinner. And you can see if there are any items in the cart and you can toggle the navigation menu to go to any other page that is described above.

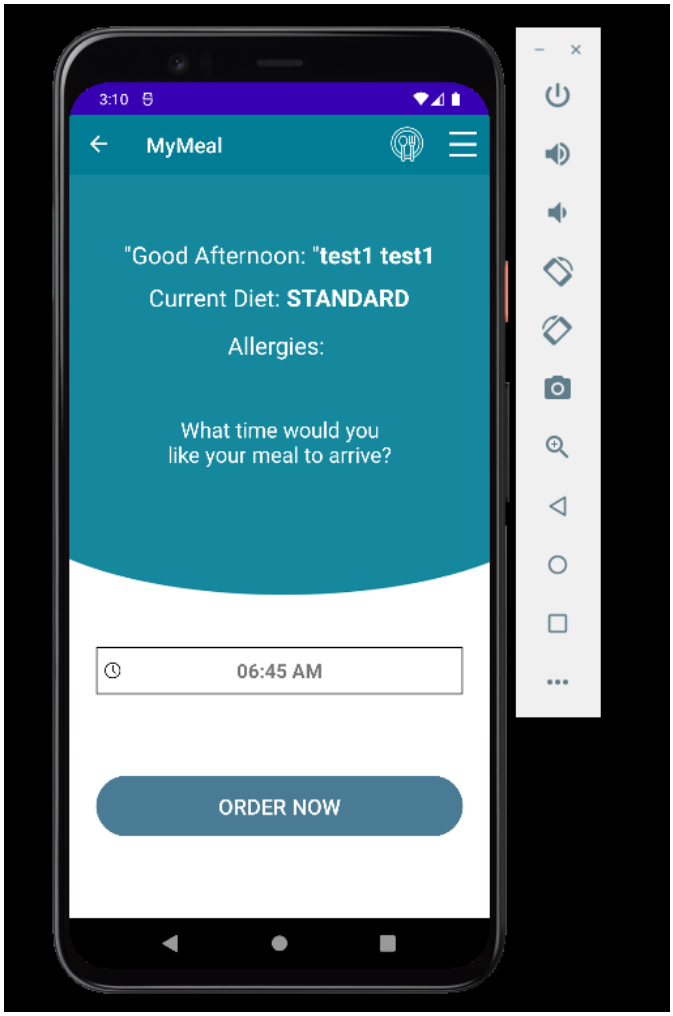
- Home Page



Let's start by ordering a breakfast meal for this example, first you will land on the time slot page to select when you want to order your breakfast.

- Time slot

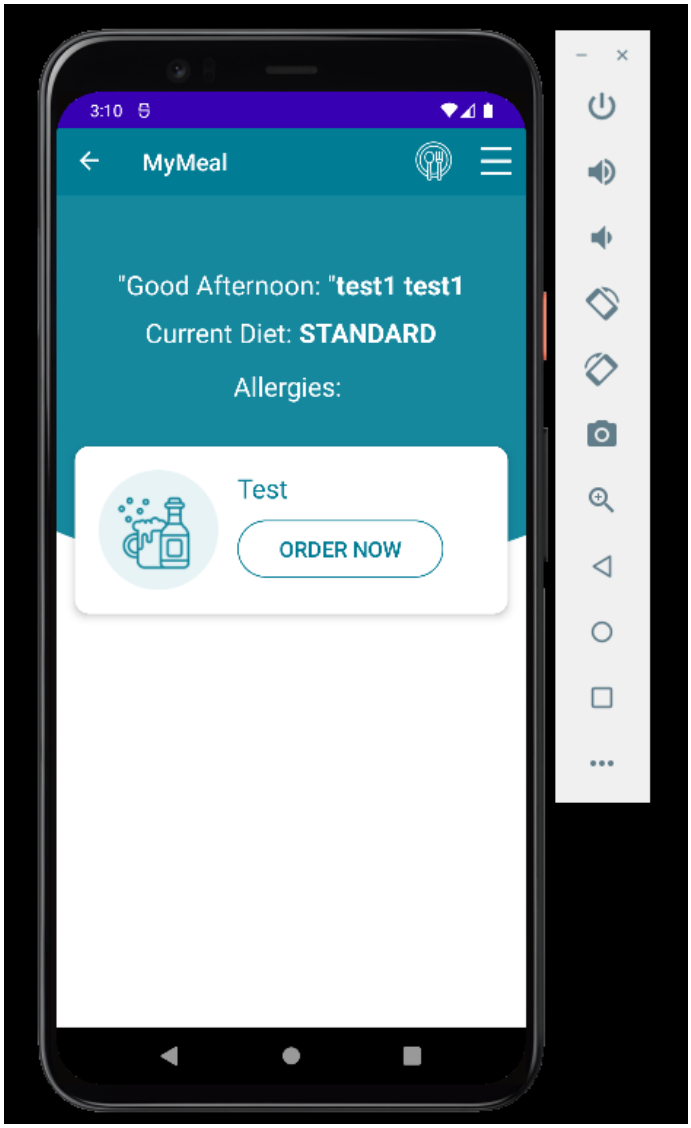
This screen has you current diet details your name and a time picker menu to choose the time slot that you want to order your meal in.



After choosing your time slot you will land on the sub course menu items where you will see all the menu, currently it only says test because the application is in development phase but once it goes for publishing this will be changed.

- Sub Course Menu Items

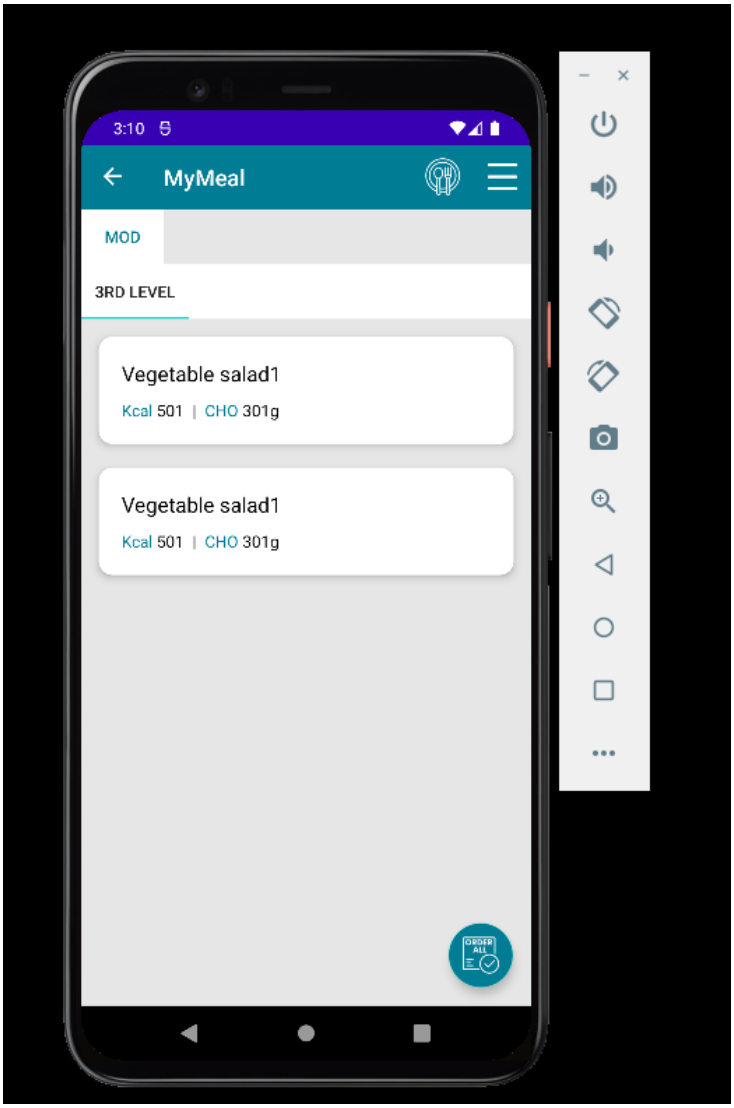
You can choose any meny and order the items by clicking on order now button on the screen.



- Detailed menu

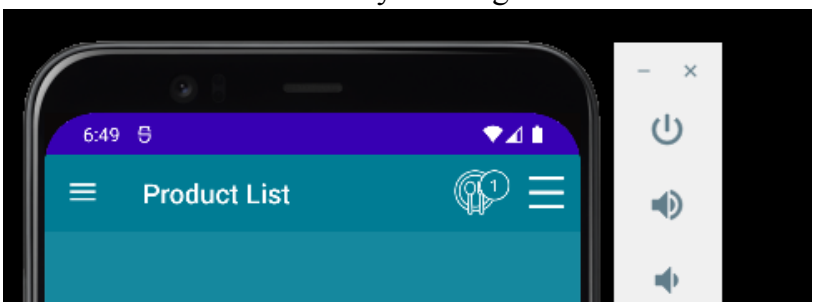
After that you will land on the food menu screen which contains detailed menu of the items you can order. As you can see below that in each item you can see the nutritional details for the food also as it can be very helpful for hospital patient whose diet can be restricted.

At the bottom right you will see a floating button that says order all. This is in case you want to order one quantity of each item.

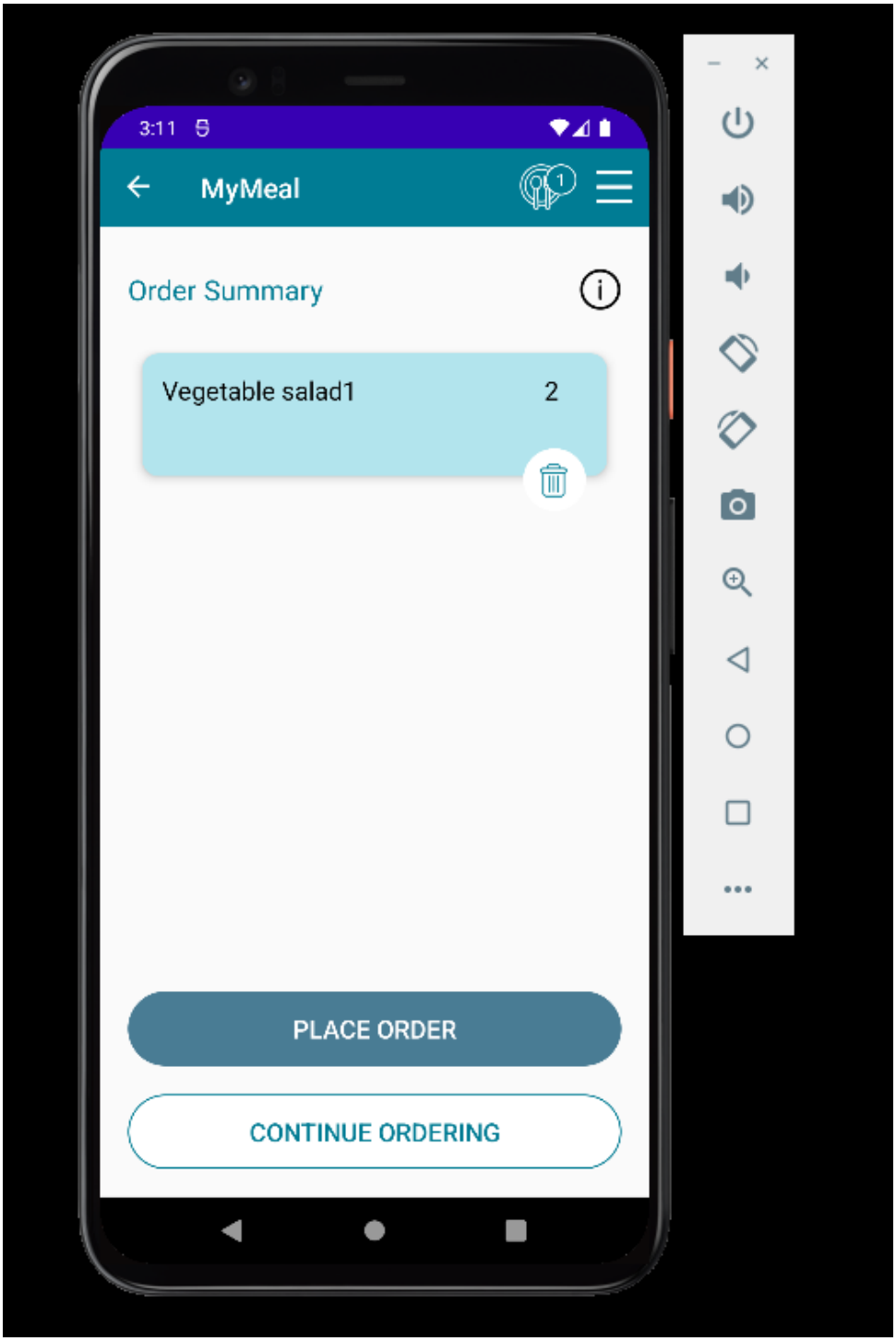


- Order Summary

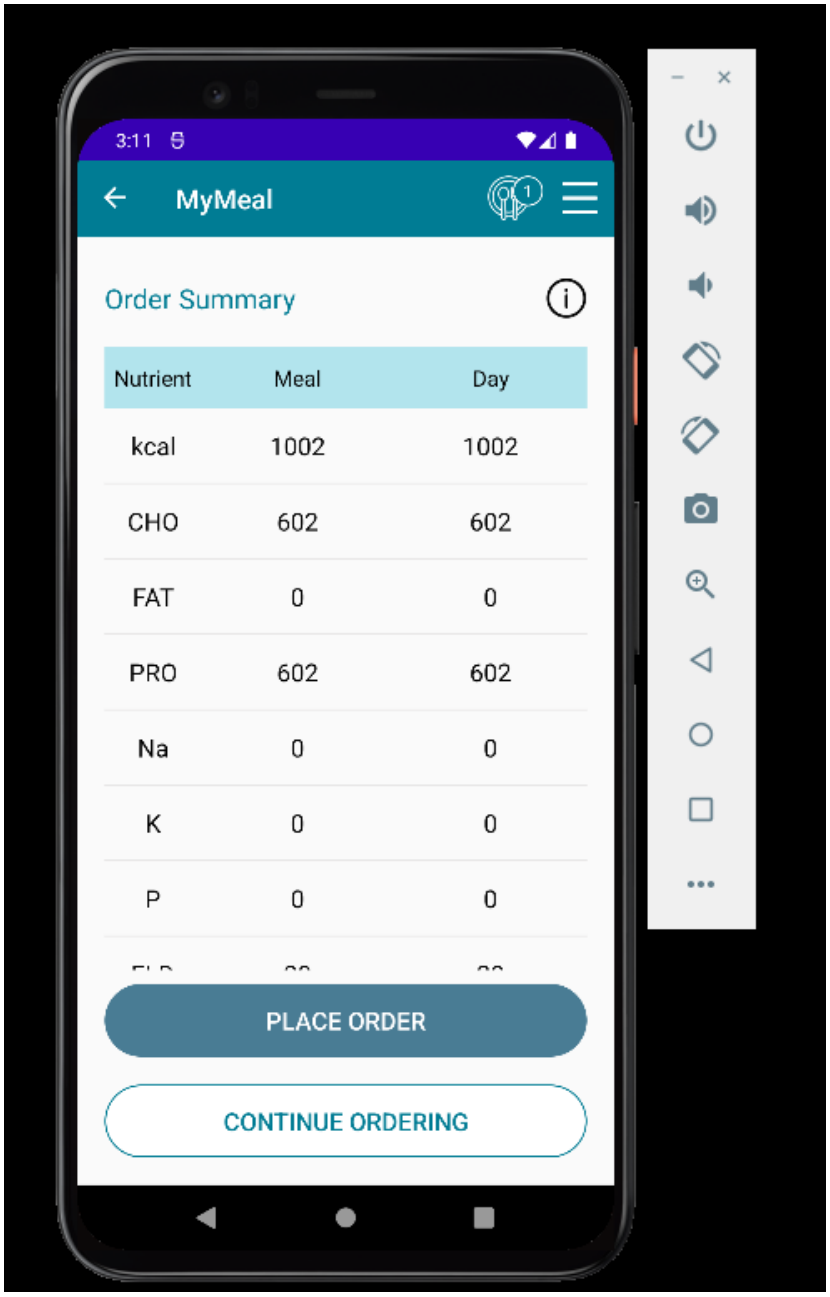
After navigating to next screen you will land here, it is the order summary page where you can reach also form the home screen by clicking on the cart button below.



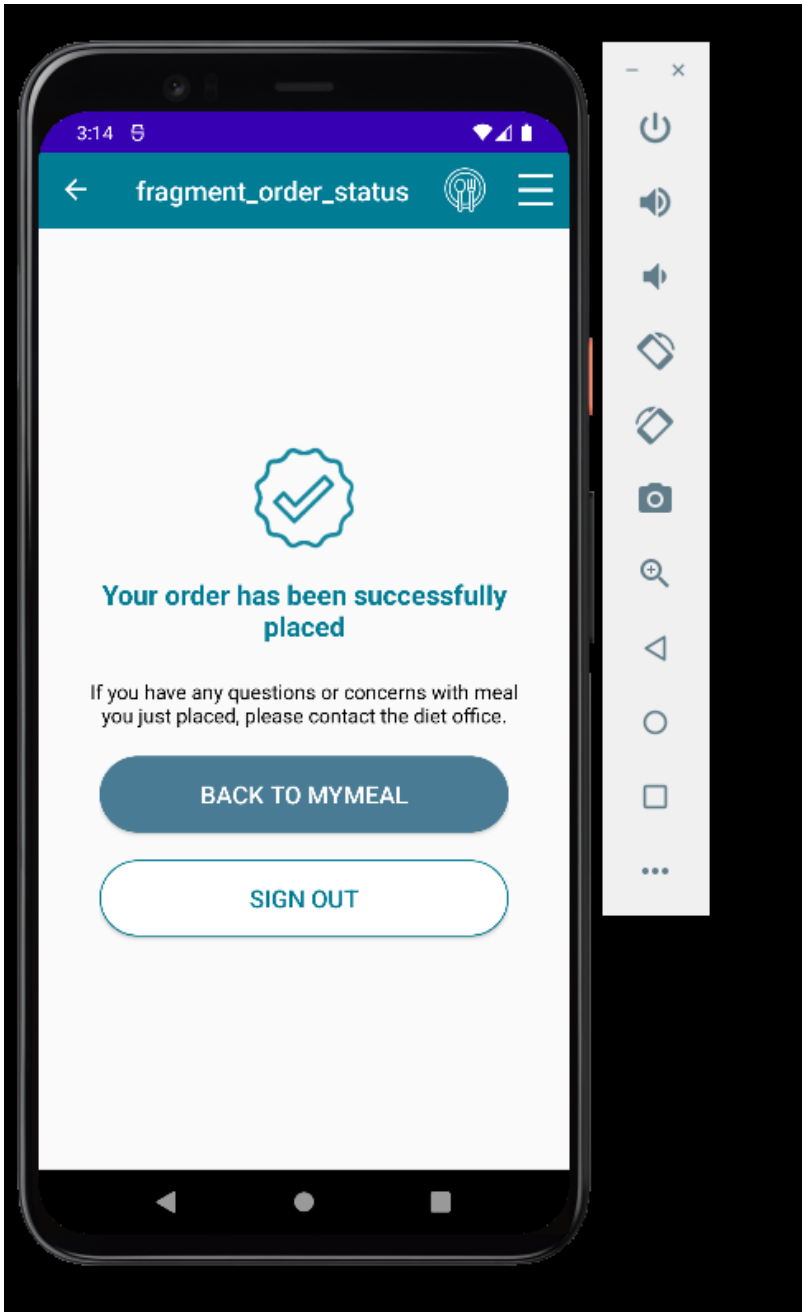
In the order summary screen you can see all the items in you cart you can continue to order and you place the order.



In this page if you see at the top right you can see and info button which will show you all the information about the food that you are about to order.

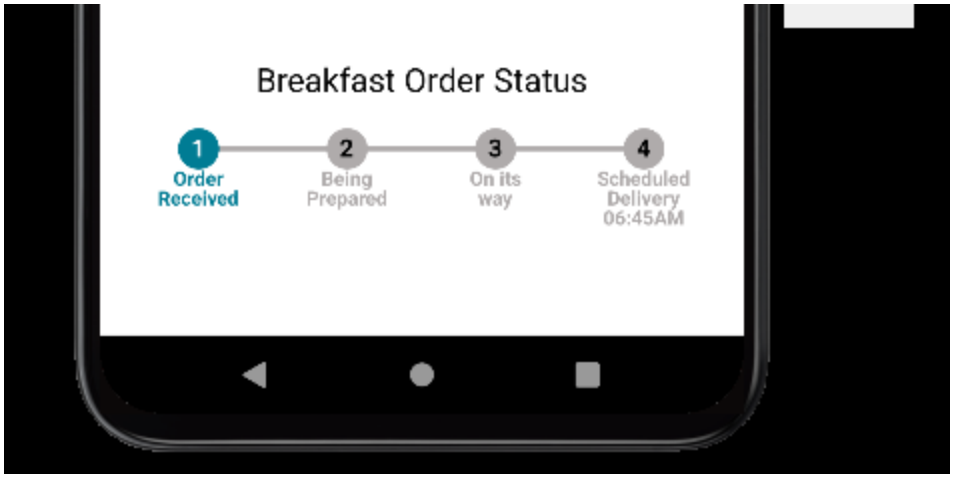


After ordering you will get a success page if your order was successful otherwise you will see an error dialog box with the issue that you are facing.



- Meal order status

To see the order status click on the meal that you have ordered and you see land on pake like below.


Breakfast Order Status
1
Order Received
2
Being Prepared
3
On its way
4
Scheduled Delivery 06:45AM

CONCLUSIONS

5.1 Conclusions

Compass My meal framework is made to help and tackle the one of the major and significant issues of customer. Due to Large number of user can utilize the web and telephone. Different issues connected with other meal Service will be tackled by these framework. Subsequently, execution of meal delivery service is done to help and settle one of the significant issues of client. It helps user in connecting request effectively and gives data required in making request to client place. The meal application made for eatery gigantic one assistance to getting orders.

Advantages

Easy Communicative. The web-based food requesting administration is a neighborhood café and food helpful site or application for clients. Because of the fast development of advanced mobile phone or tablet in the utilization of web and the advances related with the few potential open doors to informative, buyer. so many café are currently attempted into their business with impart on account of the web and phone.One of the organizations that the web launches is an online food request framework. In today's world many cafes have an instant readiness, in addition, fast shipping orders.

Time. The internet based meal requesting is presently days well known in the youthful age agreeable, time saving and advantageous. It is late overview a shopper creates a psyche to buy online meal the person is different food things or menu items. The really distinguished factors are efficient, what's more, accommodation. Individuals look at costs in web-based food conveyance site and applications choice of the dish. the cafés need to make appropriate methodologies to expand the customer level of satisfication

Always open restaurants. Restaurants probably won't be opened all day, every day, except your web based requesting framework most likely. Furthermore, it can assist you with bringing in cash even while you rest. By utilizing an internet based food requesting framework, you give your clients the adaptability to put in and helpful time the requests. Regardless of whether that occurs outside your business hours. Since they can without much of a stretch decide to timetable to like taking pickup conveyance time open up to users the entire day, consistently inside your functioning.

Payment. Any meal from anyplace the web to and should have the products conveyed at house. However, the move strategy cash on installment or installment. All in all conceivable to online compensation computerized payment. A client will Payment can be among others either with Visa, finished the web-based installments benefit rebate, coupen, by the café getting back to alluring a client.

Delivery Place. In the framework plan to allows the user to go on the online and spot request for their meal single or numerous food things. As of late, a large portion of this conveyance orders were set via telephone, a major advancement is the remote to phone framework which comes in wired phone lines or Mobile correspondence and web and have the products conveyed at his/her home. since fundamental capacity his, global positioning system framework ought to be on the office to look through help by any area and house area.

Disadvantages

Cost of increase. Online food requesting framework administration realize days increment your financial plan. Due to require a new conveyance group to offer the types of assistance and you really want to pay additional costs. In this framework all type cost must be move on customers.

Environment change . The principal change between the web-based meal requesting and eating in a café is the climate around us. In the event that one individual eats inside home or he may not feel an adjustment of climate and reward and unwind. However, solace is extremely elevated degree of online food remove. Assuming he eat in extravagance café with gold plan and light sounds that climate gives good unwind contrasted with the next.

5.2 Future Scope

In the fast moving world of today, most of individuals are recurrence request put on the clients of now days are drawn in web-based food requesting framework is extremely helpful. The the vast majority of café need to show on food things and offered, most reduced cost and very worked on route for the request.

This survey included a large demonstration of results from meal delivery internet influencing the range of partners in a variety of ways, as summarized. Although it has taken an effort to classify the results as 'good' or 'bad', in reality, there may be some conflict in order for each outcome to be organized in an unexpected way. For example, during the coronovirus emergency, online MD has had a positive impact by allowing people to have access to food without leaving home (i.e., a positive effect on consumers), but using the web meal service currently means brighter. openness of transmitters (i.e., hopeless impact on referrals)

To conclude, this study created three important bonds. First and foremost, it is the first multidisciplinary audit that includes expert evaluations in a growing field of regions affected by the increased use of online meal service . Other than that, it talked about the potential open doors and the difficulties that exist in these outcomes. Third, it includes

open doors for work by all partners, including food service industry experts on the web, strategic manufacturers, customers, and schools, to maximize positive and minimize its unfriendly influences. The ultimate goal of online food transfers is empowering, as well as ensuring that the site creates by in a sustainable way that serves the interests of all our partners included, we should continue to think about what is happening, and ask if things can get better.

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