

ORDER INN

CHAPTER-1

INTRODUCTION

In present days in the entire world mobiles are used most usually. So the people are expecting some new technologies in mobiles as we know android is an open source.

Our project name is “**Order Inn**”. It is an application which can make order from customer in the hotel/restaurant without waiting for waiter. There are two apps with this name that is used to communicate / sending/ receiving orders from each other. The two apps are modelled as “**Order Inn - Client**” and as “**Order Inn- Server**”. These applications must be installed in the receiving side (Chef) and sending side (customer) of the mobile. When these applications are installed in mobile it automatically runs in the background always.

From customer side, select the table in a restaurant using QR code scans and provides a view of current food information (category, name, price, description etc.) on the website and Android application. The customer can order food from these two platforms. From the Chef in restaurant, this application offers a series of operations to add, update, delete and query the information of food and table order.

The application includes two parts: Server side, Client side. The Server side was implemented with PHP and android framework for interface. The Android Application for customer side is obviously based on Android framework.

The main attraction of this project is changing table colors on every time ordering with different options. So far, all core functions were developed successfully and the progress of the project was most rewarding and generated an excellent experience in programming.

1.1 Problem Statement:

In present days, the entire world using mobiles very rashly so the people are expecting some new technologies in mobiles, as we know android is a open source.

Operating system for mobile by using this we can easily develop applications that are very useful to the people. Customer once enter into the restaurant or hotel they are very hungry and need to wait for much time. To occupy the table and getting menu and to go through the menu for order, to call a waiter, to order food and adding later order, getting bill and making payment, to do all these

activities manually takes time and make diners irritated some times in busy restaurants of present day life. So in order to make all these activities easy to access with single and simple mobile application made easy to order and can manage time.

1.2 Motivation

This project deals when users are on the hotel/restaurant, it is able to provide rich and concise information timely and make them access to the service at anytime and anywhere. From choosing table to ordering will be take care of the management. The proposed system is based on request and response, so that table identity and ordering status will be known through continuous acquisition of the bandwidth using IP address.

1.3 Objective

Main objective of "ORDER INN" is to provide an easy access for its customers to book out the table and to order food what they want and what are available at menu. The intention of this application is provide the information of the menu according to the availability to the food at their fingertips. The another objective includes here is to make the diners to get the information about the availability of the food items and to call waiter to their table. If the app admins are not providing the details of the available features of the app then the customers using this application cannot find the proper items in list and wont be able to send the waiter resulting in failure of the product. This is why the other main objective of this application is to make the product usage and functioning properly.

1.3.1 Proposed System

The proposed system entitled as "Order Inn" is an online application. In this having two sessions for ordering food like client (customer) and chef to manage add, delete and update orders. Along with this, website for the admin is placed to manage all orders. The implementation of core functions is described as

Scanning QR code for choosing table in restaurant, adding food is a core function in the Server side. The food information added here will be displayed on the Website Admin Page and Android Application to the customer. The customer can choose one of the tables provided by the management and management can monitor the customers from table selection to leaving the table through this application.

1.3.2 Advantage of proposed system

- Visibility of table ordering system on changing color codes and selecting menu items from the list of display in app.
- Admin /Reception can manage all the items ordered and mediate to the chef.
- Chef can accept or decline status provided through server side app.
- Using web app can monetize the orders
- Easy and quick access through IP address inside the restaurant.
- QR code scan for the table selection makes easier to identify empty tables.
- Can provide reliable and efficient service to the customers.

CHAPTER 2 : TECHNOLOGIES LEARNT

Android

Android software development is the process by which new applications are created for devices running the Android operating system. Google states that, "Android apps can be written using Kotlin, Java, and C++ languages" using the Android software development kit (SDK), while using other languages is also possible. All nonJVM languages, such as Go (JavaScript, C, C++ or assembly), need the help of JVM language code, that may be supplied by tools, likely with restricted API support. Some languages/programming tools allow cross-platform app support, i.e. for both Android and iOS. Third party tools, development environments and language support have also continued to evolve and expand since the initial SDK was released in 2008. In addition, with major business entities like Walmart, Amazon, Bank of America etc. eyeing to engage and sell through mobiles, mobile application development is witnessing a transformation.

Android is a software package and Linux based operating system for mobile devices such as tablet computers and smartphones. It is developed by Google and later the OHA (Open Handset Alliance). Java language is mainly used to write the android code even though other languages can be used.

Android became the world's leading Smartphone platform at the end of 2010. For the first quarter of 2012, Android had a 59% Smartphone market share worldwide, with a 331 million devices installed base and 85 million activations or 934,000 per day. Analysts point to the advantage to Android of being a multi-channel, multicarrier OS. Android architecture is categorized into five parts

1. linux kernel
2. native libraries (middleware),
3. Android Runtime
4. Application Framework

5. Applications

Linux Kernel is the heart of android architecture that exists at the root of android architecture. **Linux kernel** is responsible for device drivers, power management, memory management, device management and resource access.

Native Libraries: On the top of Linux kernel, there are Native libraries such as Web Kit, OpenGL, Free Type, SQLite, Media, C runtime library (libc) etc. The WebKit library is responsible for browser support, SQLite is for database, Free Type for font support, Media for playing and recording audio and video formats.

Android Run Time: In Android RunTime, there are core libraries and DVM (Dalvik Virtual Machine) which is responsible to run android application. DVM is like JVM but it is optimized for mobile devices. It consumes less memory and provides fast performance.

Android Framework: On the top of Native libraries and android runtime, there is android framework. Android framework includes Android API's such as UI (User Interface), telephony, resources, locations, Content Providers (data) and package managers. It provides a lot of classes and interfaces for android application development.

Application: On the top of android framework, there are applications. All applications such as home, contact, settings, games, browsers are using android framework that uses android runtime and libraries. Android runtime and native libraries are using linux kernel.

XML:

XML programming is used for developing front end for android application.

Extensible Markup Language (XML) is a markup language that defines a set of rules for encoding documents in a format that is both human-readable and machinereadable. The W3C's XML 1.0 Specification and several other related specifications, all of them free open standards define XML.

The design goals of XML emphasize simplicity, generality, and usability across the Internet. It is a textual data format with strong support via Unicode for different human languages. Although the design of XML focuses on documents, the language is widely used for the representation of arbitrary data structures such as those used in web services.

Several schema systems exist to aid in the definition of XML-based languages, while programmers have developed many application programming interfaces (APIs) to aid the processing of XML data.

JAVA:

Java is a general-purpose computer-programming language that is concurrent, classbased, object-oriented, and specifically designed to have as few implementation dependencies as possible. It is intended to let application developers "write once, run anywhere" (WORA), meaning that compiled Java code can run on all platforms that support Java without the need for recompilation. Java applications are typically compiled to bytecode that can run on any Java virtual machine (JVM) regardless of computer architecture. Java is one of the most popular programming languages in use, particularly for client-server web applications.

The latest version is Java 11, released on September 25, 2018, which follows Java 10 after only six months in line with the new release schedule. Java 8 is still supported but there will be no more security updates for Java 9 Versions earlier than Java 8 are supported by companies on a commercial basis.

CHAPTER-3

SYSTEM DESIGN:

3.1 System Architecture:

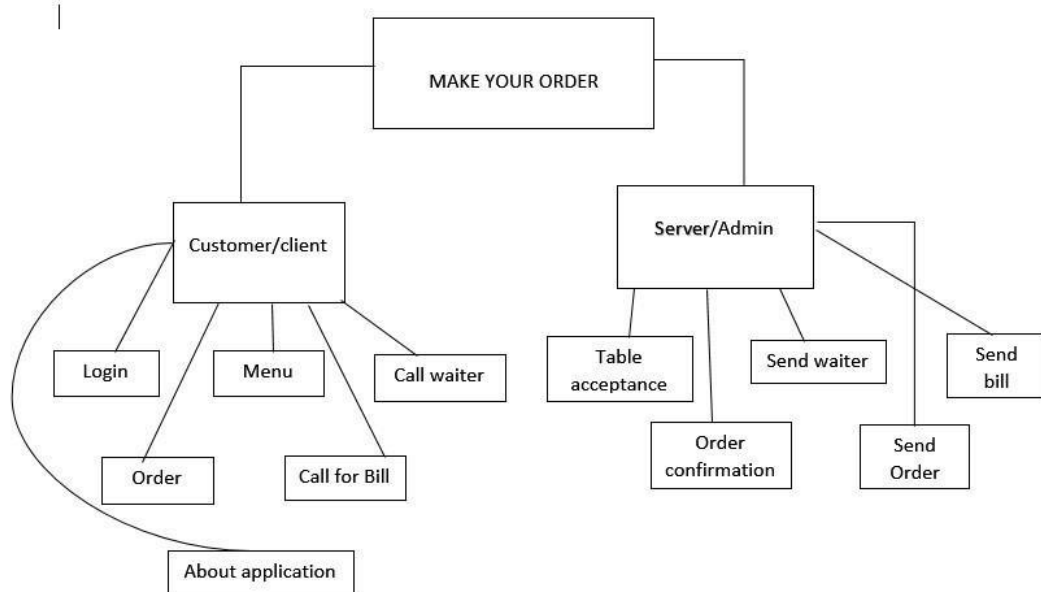


Fig: 3.1 System Architecture

3.2 Modules Description:

Order Inn is an application involving two modules “Customer and Admin” In Customer Module, customer is able to see the availability of the table in the restaurant, they can go to table and login through the barcode scanner in the app with the available barcodes on table, later we can get the menu after login there we can order the items which we want, and we can call the waiter for any necessary purpose through app itself and after all our dine gets over they can ask for bill generation in the app itself.

In Admin Module, now the admin is the accept authority for table and orders, bill etc. Here in this admin side app the tables will be displayed in the screen with changing colours for various activity requests like order items, call waiter, generate bill etc., from customer as per the request from customer side the admin will be send the requested activity.

3.3 System Specifications:

3.3.1 Hardware Requirements:

- Intel Core i5-5200U Processor
- 2.2 GHz Processor
- 4 GB DDR3L SDRAM
- 1024 GB HDD
- 2 GB DDR3 AMD Radeon R5 M330
- 15.6 Inches & 1366 x 768 Pixels
- Android Phone (optional)

3.3.2 Software Requirements:

- Operating System : Android, Linux, Windows XP
- Software : J2SE, ADT plug-in
- Development Tools : Android SDK, Android Emulator, Eclipse Helios

3.4 Detailed Design

3.4.1 Use case Diagram

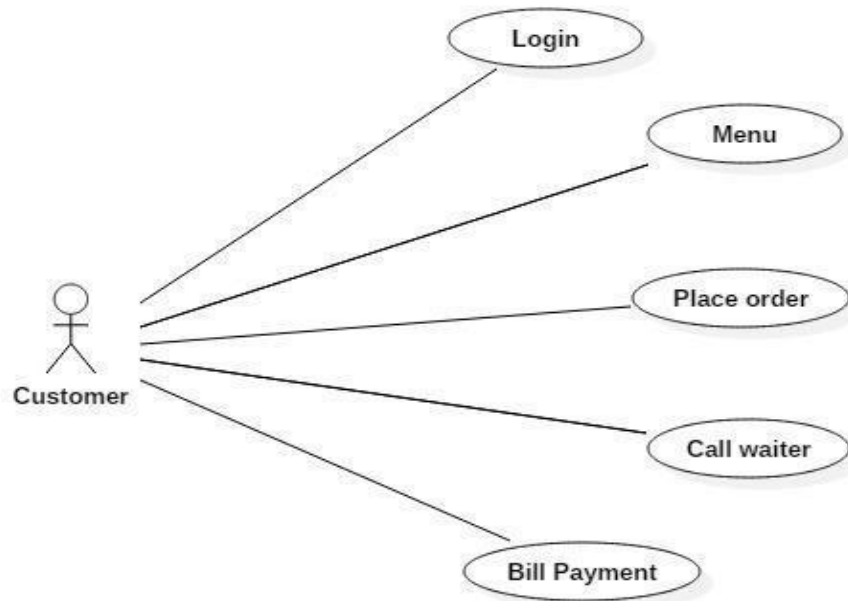


Fig: 3.4.1.a. Use case for Client side

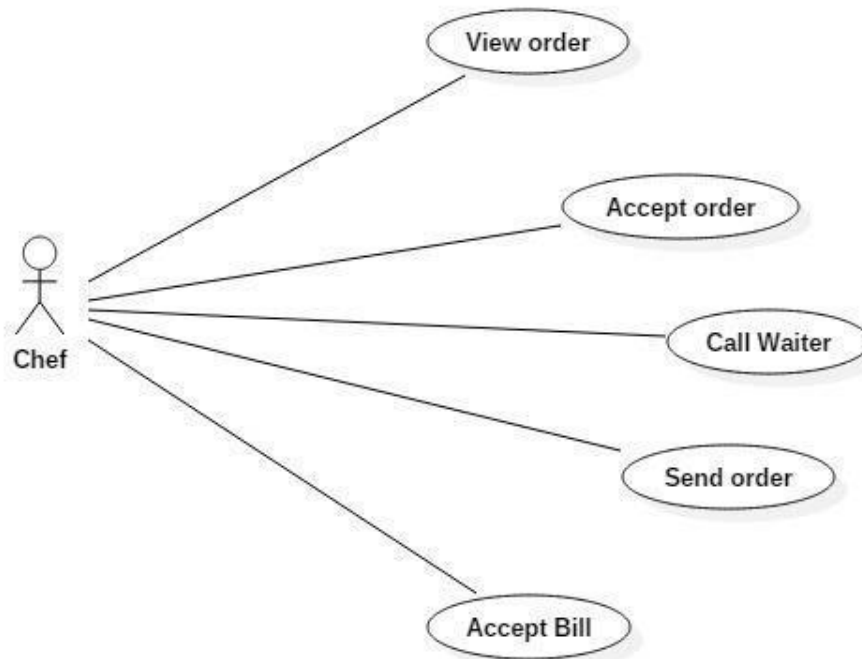


Fig: 3.4.1.b. Use case for Server side

3.4.2 Sequence Diagram

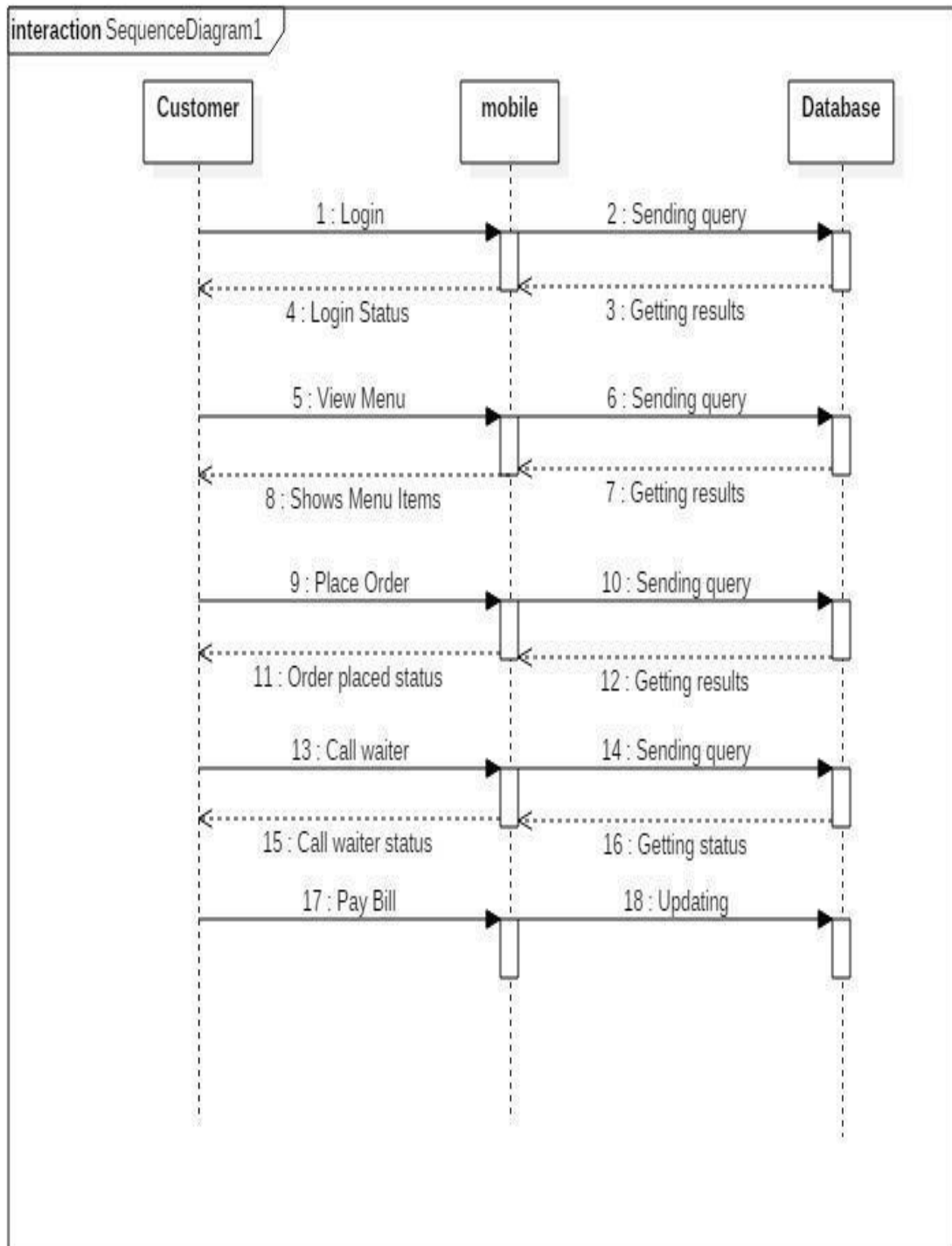


Fig: 3.4.2.a Sequence Diagram for Customer

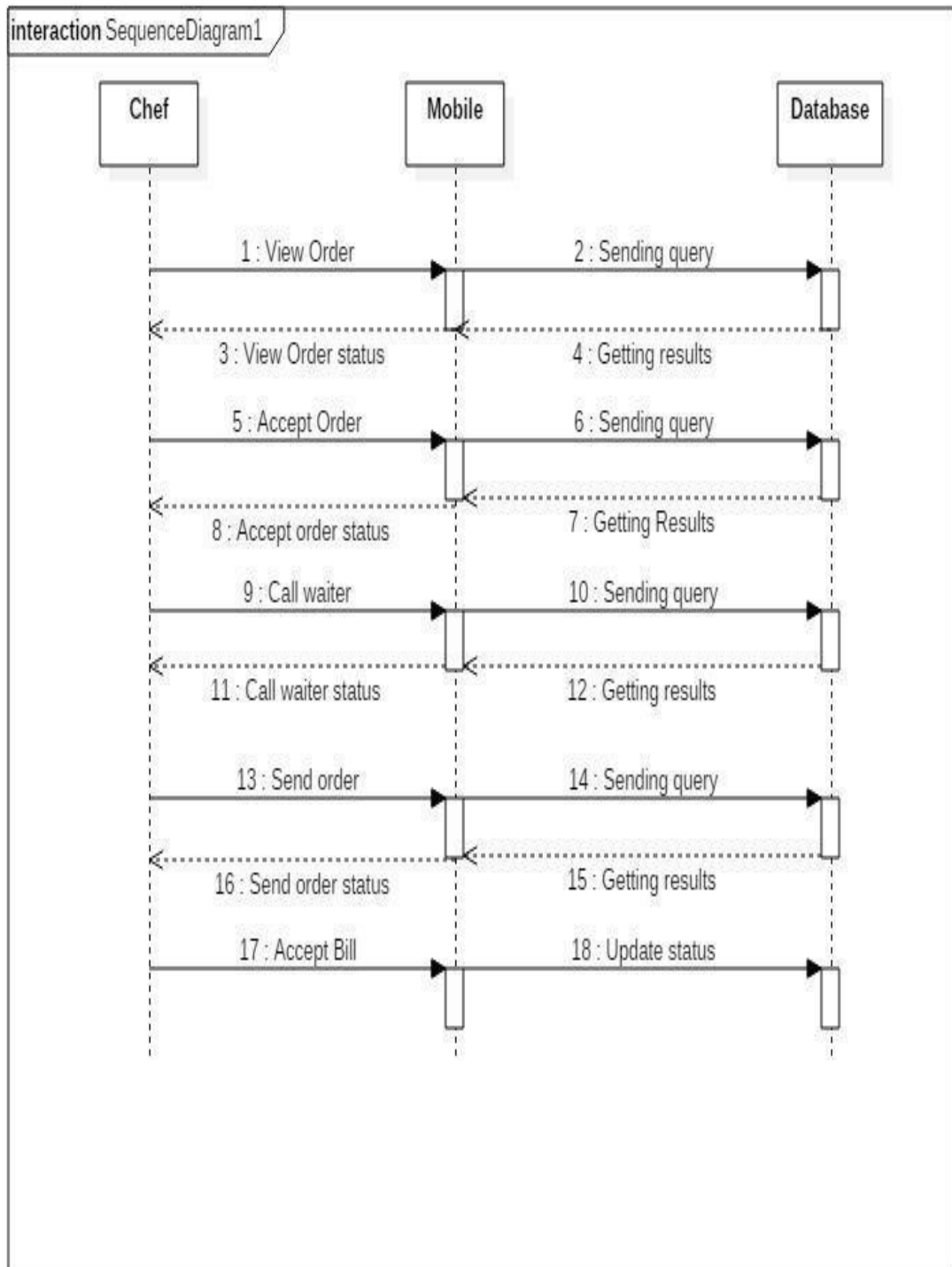


Fig. 3.4.2.b Sequence Diagram of Admin

3.4.3 Class Diagram

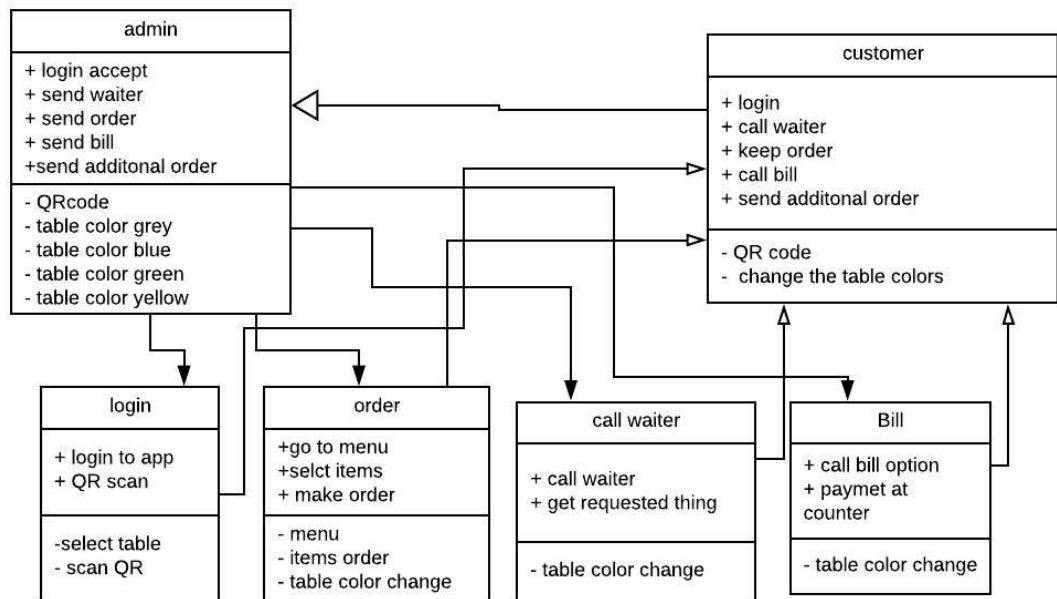


Fig: 3.4.3 Class Diagram

3.4.4 Dataflow Diagram

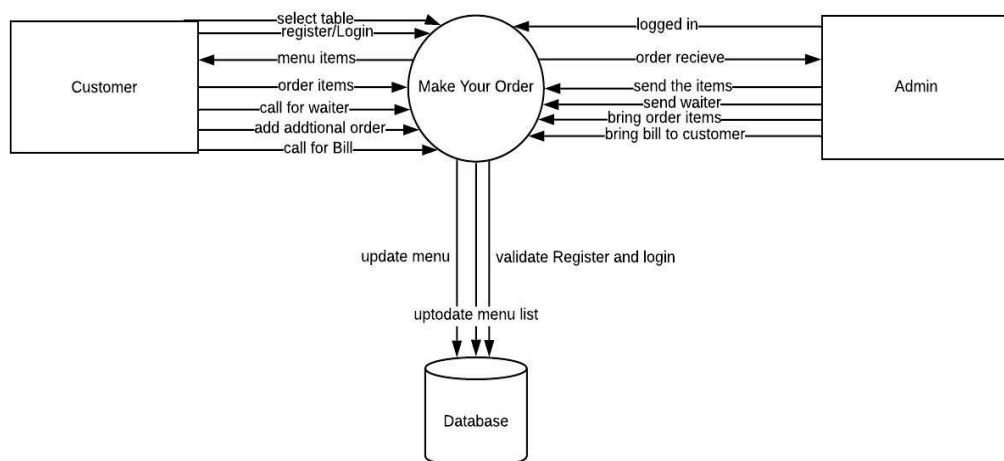


Fig: 3.4.4 Data Flow Diagram

3.4.5 Activity Diagram



Fig: 3.4.5.a
of Customer

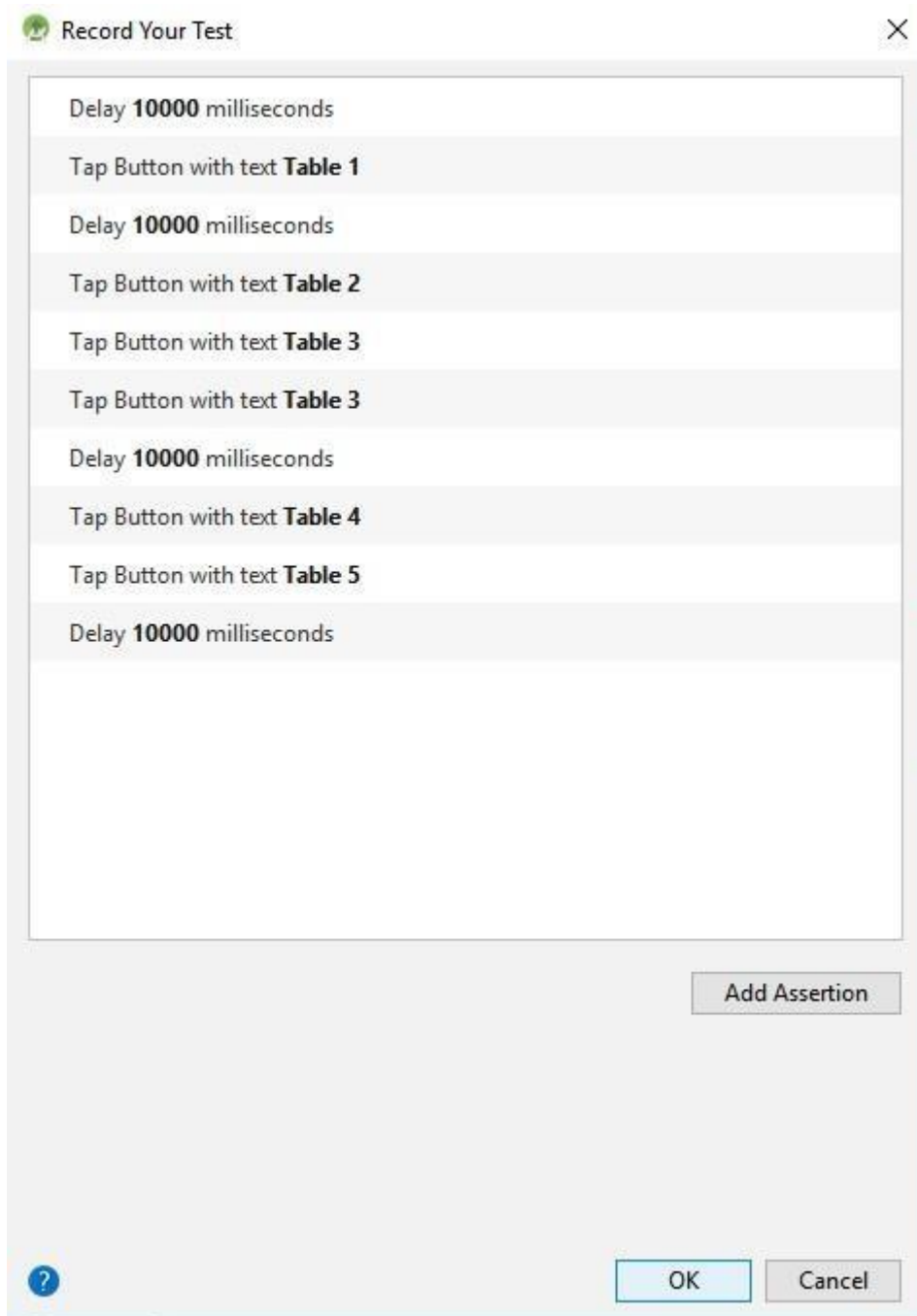
Activity Diagram of Admin



Fig: 3.4.5.b

Activity Diagram

Test Results



CHAPTER-6

RESULT AND DISSCUSSION

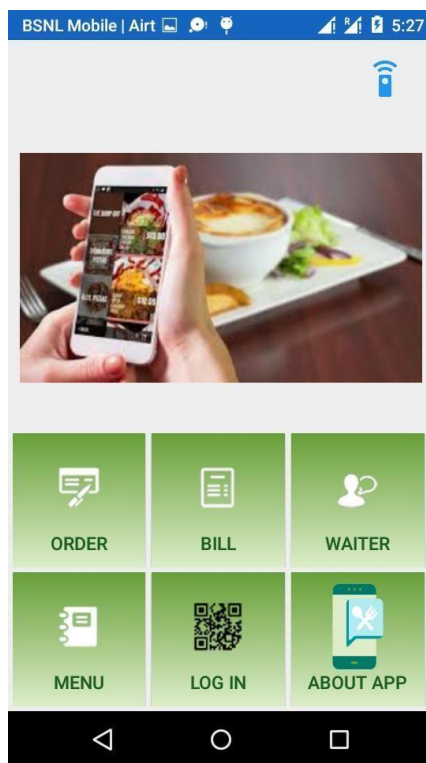
Customer side Splash:-



Make Your Order



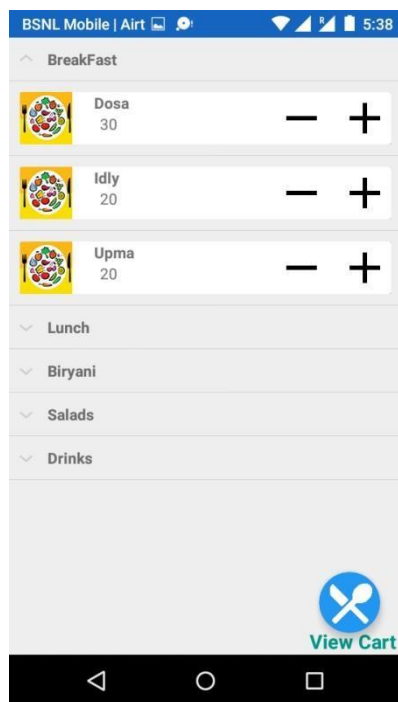
Customer Home Activity:-



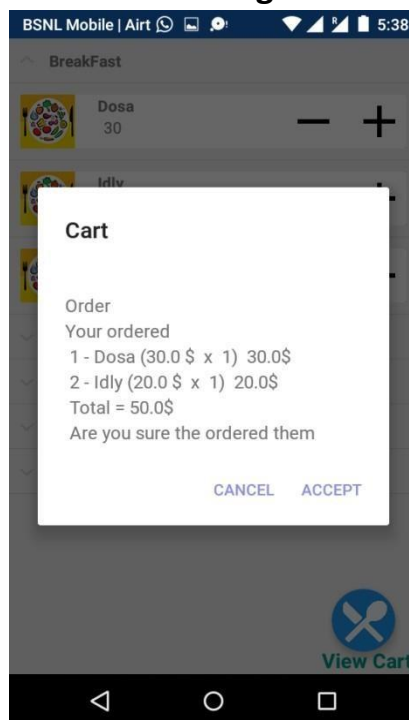
Scan to Login Table:



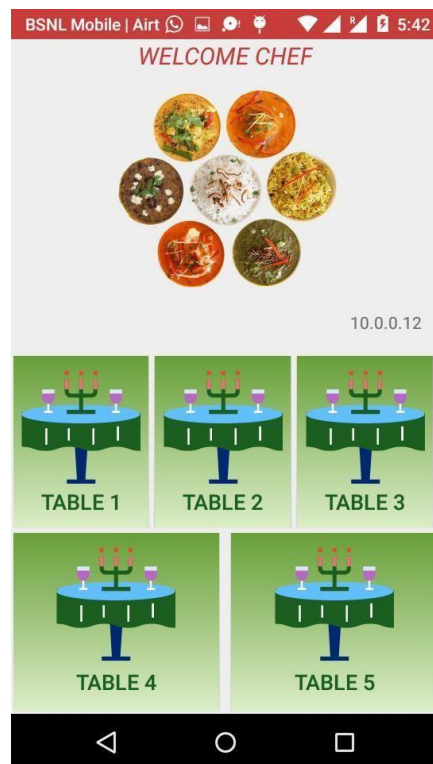
View Menu:



Placing order:



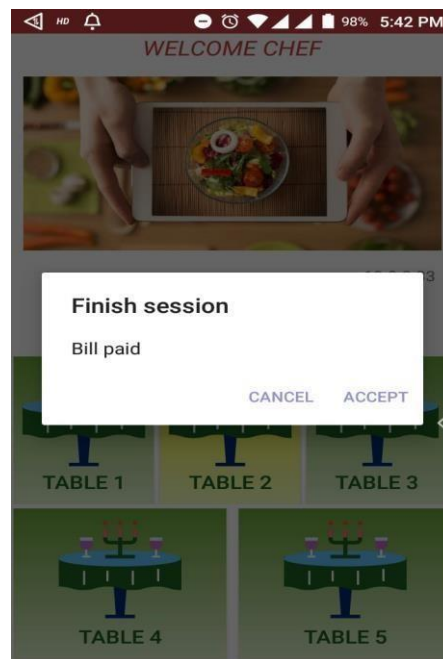
Admin Home Activity:-



Confirming order:-



Accepting Payment:-



CHAPTER-7 CONCLUSION AND FUTURE WORK

7.1 Conclusion

This project was a typical combination between a website and an Android application. The aim of the project was to help the restaurant owner to improve the efficiency of managing, meanwhile, help the customer to purchase dishes in different platforms easily on selecting tables through QR scan.

7.2 Future Work

Later the app is developed fully and deploy to restaurants with all updated functionalities to overcome the crowd problems and managing issues in the restaurant.

8. REFERENCES

- [1] <https://developer.android.com/>
- [2] <https://android-arsenal.com/>
- [3] <https://www.tutorialspoint.com/android/>
- [4] <https://play.google.com/store/apps/details?id=arjuntoshniwal.androidtutorials.advanced> [5]
<http://angrytools.com/>