# One Clicks Picks

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COMSATS UNIVERSITY ISLAMABAD,
ATTOCK CAMPUS – PAKISTAN

SESSION 2017-2021

# One Clicks Picks

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A DISSERTATION SUBMITTED AS A PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF BACHELOR OF SCIENCE IN SOFTWARE ENGINEERING

DEPARTMENT OF COMPUTER SCIENCES
COMSATS UNIVERSITY ISLAMABAD,
ATTOCK CAMPUS – PAKISTAN

SESSION 2017-2021

# UNDERTAKEN

We certify that this is my/our own work. The work has not, in whole or in part, been presented elsewhere for assessment. Where material has been used from other sources it has been properly acknowledged. If this statement is untrue, we acknowledge that we will have committed an assessment offence and shall be liable to punishable action under the plagiarism rules of HEC.

_____
Rimsha Arshad
FA17-BSE-051

Dated: _____

_____
Zainab Sajjad
FA17-BSE-053

Dated: _____

# FINAL APPROVAL

Certified that we have read this project report submitted by Miss. (Rimsha Arshad and Zainab Sajjad ) and it is, in our judgment, of sufficient standard to warrant its acceptance by Department of Computer Science, COMSATS UNIVERSITY ISLAMABAD , ATTOCK CAMPUS, for the (BS/MSc degree) in Software Engineering.

***Committee:***

1. External Examiner _____
   (Examiner Name)
   Designation
   University Name

2. Supervisor _____
   (Muhammad Kamran)

3. Chairperson _____
   (Chairperson Name)

4. Dean/Director _____
   (Dean/Director Name)

# DEDICATION

We dedicate our work to our loving parents, teachers, brothers and sincere friends who always encourage us. We also dedicate this project to my few classmates who helped us throughout this process. We will appreciate all they have done especially for helping us to develop our technology skills.

# ACKNOWLEDGEMENT

All praise to Allah Almighty, the omnipotent and the most compassionate. His prophet **"HAZRAT MOHAMMAD"** (peace be upon him), the most perfect and exalted among and of ever born on the surface of earth, who is forever torch of guidelines and knowledge for humanity as a whole.

Through this acknowledgement, we are obliged to our beloved parents and batch fellows for their guidance and co-operation during this task. Their help and guidance was a deep inspiration for us.

At last, we would like to express deep sense of gratitude to our final year project supervisor **Mr. Muhammad Kamran** for his cordial support and exemplary guidance. Whenever we needed his help he was there to help us.

# PROJECT BRIEF

| | |
|---|---|
| PROJECT NAME | ONE CLICKS PICKS |
| ORGANIZATION NAME | COMSATS UNIVERSITY ISLAMABAD, ATTOCK |
| OBJECTIVE | DELIVER GROCERIES HOME VIA ONLINE SHOPPING THROUGH ANDROID APP |
| UNDERTAKEN BY | RIMSHA ARSHAD<br>ZAINAB SAJJAD |
| SUPERVISED BY | MR. MUHAMMAD KAMRAN<br>LECTURER<br>COMPUTER SCIENCE<br>COMSATS UNIVERSITY ISLAMABAD, ATK |
| STARTED ON | /* START DATE */ |
| COMPLETED ON | /* END DATE */ |
| COMPUTER USED | LAPTOP HP PROBOOK 440 G5 |

| | |
|---|---|
| SOURCE LANGUAGE | JAVASCRIPT |
| | BOOTSTRAP |
| | JAVA |
| | PHP |
| OPERATING SYSTEM | 64-bit |
| TOOLS USED | VISUAL STUDIO CODE |
| | ANDROID STUDIO |
| | MICROSOFT WORD |
| | MICROSOFT OFFICE |
| | VISUAL STUDIO |

# ABSTRACT

As we know in this area (Attock) there is no service of grocery Home Delivery. Although Old systems exist but in this area no existing system is in used. So if we order groceries or any other items from those systems we have to wait long for delivery. So We are working on a system which is android and web based platform project which provides daily services to users in form of online shopping. It allows users to buy different category of products i.e., grocery, crockery and other items. It contains 2 main modules i.e., admin, user. The user panel is android based while the admin panel web based and using MYSQL server for database implementation. It provides it users to avails services in attock and nearer colonies located in attock e.g., wapda colony. Its services include online shopping, online complain registration shows nearer mall based on location or user can select shop of their own interest and recommend grocery based on user previous history. It also includes the services of comparing shop items. It has two basic advantages from user end and from developer/business end. From user end it provides a facility of online grocery stop at door step through easy access or by just few clicks. While from developer end it provides a way to developer to polish their developer skills and from business prospective it's difficult for to start new business where competition is too high so it's best approach to develop this system.

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# Chapter 1
# INTRODUCTION

# 1 Introduction

In Today's market it's very difficult to start a new business especially it's tough competition with the well-established brand Owners. Even if the quality of your products is good, but due to many reasons such as lack of advertisement or any other reason products doesn't reach to a maximum no of customers. In fast paced life of today, life getting busier day by day so they don't manage their time to do physical shopping and specially in a situation like covid19 when government announced lockdown so in this area(attock) we don't have any such system who offer online grocery shopping. So at this situation logistically customer finds more interesting and attractive when they find such services on application and are able to see the products online and can get the services of online grocery shopping from their favorite shop/mall.

## 1.1 Over View

The main aim ***"One Clicks Picks"*** is to facilitate the customers of attock or nearby towns to provide fast access of online grocery shopping at their door step. It is cross platform (android and web based) system that facilitates its users by providing a services of online grocery shopping in a lockdown situation as well as in daily routine and customer finds it's easy because they have border selections of products and better product description.

This system is developed by using android studio, HTML5, CSS3 and bootstrap for front end purpose, database to main record, and PHP for back end.

## 1.2 Scope

***"One Clicks Picks"*** Online grocery shopping system is built for the people around the attock or colonies (not too far from the attock) /around the attock which delivery groceries faster by searching the nearest shop through location or select shop of their own interest they can easily check the comparison of items between shop i.e., shop of category A Product A price in shop is Rs.X while on the B shop it's price is Rs. Y.

## 1.3 Limitation

Only provide services for the residents of attock.

## 1.4 Relevance to Course Modules

### 1.4.1 Project Domain

As our project is related to business domain provides online grocery shopping in specific (attock) area. So we must have basic knowledge of marketing and financial strategies which we learned in following subject:6666

- INTRODUCTION TO MANAGEMET (ITM)

### 1.4.2 Modules

This project consists of two modules:

- Admin
- End User / Customer

## 1.5 Project Background

As there are many systems already present online who provide same services but they take week or more than week to deliver products /grocery at home. We proposed system ***"One Clicks Picks"*** which is a cross platform system (android and web based) and customized for specific area of attock and provides many services to its users in one platform:

- Online complaints / reviews
- Order grocery online

With the help of "One Clicks Picks" Application user can search for the items from the nearest shop via location or select any other shop / mall of their own interest. This application shows the comparison of items of between both shops.

## 1.6 Literature Review

Many applications related to our applications already exist but they deliver products worldwide and takes a lot of time to deliver product online e.g., Carrefour app and some of them deliver products only related to food such as food panda but don't deliver groceries and don't exist in a small city like attock.

- Carrefour Application (For grocery shopping)
- Pakistan citizen portal (For complaints)
- Food Panda (for food delivery)

So we combined two main malls (Naseem Mart and Zaman Sons) of attock in a single platform to provide grocery shopping services online in attock or areas near attock.

## 1.7 Analysis from Literature Review

To develop system which is faster than manual and provides a facility of online grocery shopping in a local area like attock where such facility is no available. ***One Clicks Picks*** is a system which provide facility of online grocery shopping to customers / users and allow them to shop to online by selecting the shop of their own interest. From business prospective its main purpose is related to business purpose / affiliate marketing. While on the other hand as its made for the peoples of attock so it's main purpose is to provide facility of fastest privileges to its users.

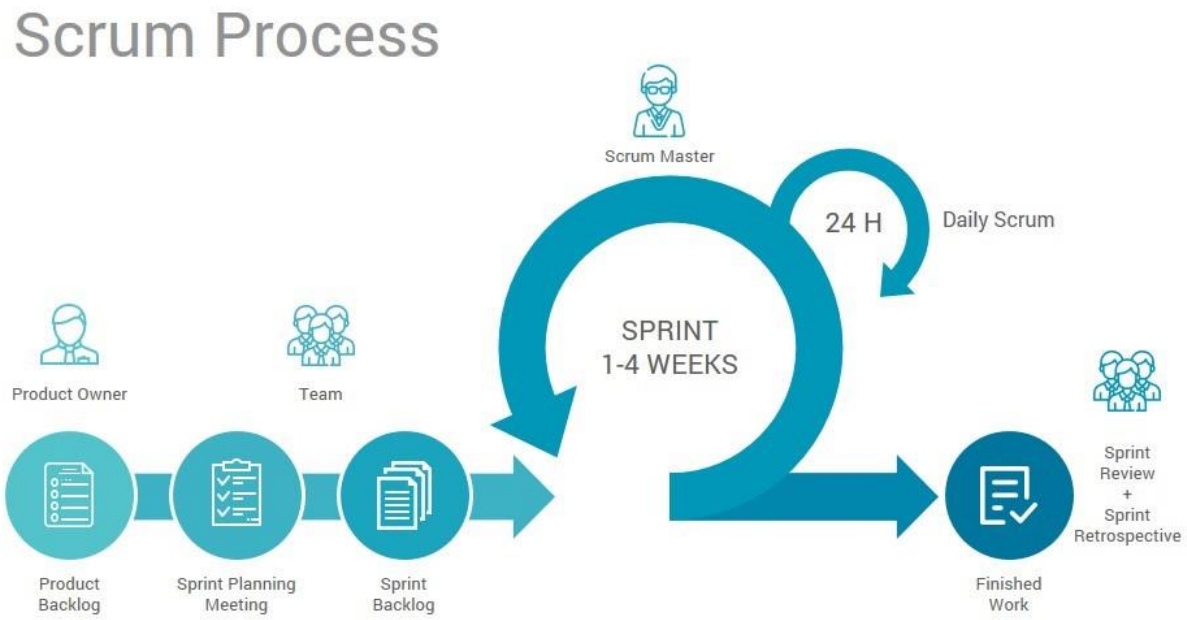
As it is only developed for the residential of attock so they provide fastest delivery services to its users and users no longer have to wait for weeks or more days for their product from other platforms.

## 1.8 Methodology and Software Lifecycle for this Project

### 1.8.1 Methodology

We are using Scrum methodology in this project.

### 1.8.2 SDLC




### 1.8.3 Relational Behind Selected Methodology

We select this model because our application is e-commerce based and we need more meeting with our user for product description and prices. This basic advantage of this model is having more meetings with the supervisor.

# Chapter 2

# PROBLEM DEFINATION

# 2 Problem Statement

## 2.1 Problem Statement

Main issue is that in a small city / area like attock there is no facility of online grocery shopping. Specially in a quarantine or lockdown situation there is no such facility of providing home delivery services of online grocery shopping. Although many applications / platform already exist who provides a facility of online grocery shopping but they take almost week or more than that to deliver project online so if we need grocery on urgent basis so we don't have choice to wait or go outside which is risky.

Secondly, as we know this is the era of technology so customer finds more interesting and attractive when they find such services logistically and are able to see the products online and can get the services of online grocery shopping from their favorite shop/mall. So It is a need of the community of attock to cope with today world and find these services of online grocery shopping under the roof of just on clicks. These services include grocery shopping from the mall of their own interest or any nearest mall from the registered mall.

## 2.2 Proposed Solution

Keeping in view all the issues we developed this application named as ***"One Clicks Picks"***. This application provides a facility of online grocery shopping in attock area. This application is a cross platform (web and android) user panel is on android and admin panel is on web. This application shows nearer malls based on location API or have a feature of mall/shop of their own interest of use and recommend items to users based on their history and also shows shop comparison between items.

## 2.3 Deliverables and Development Requirements

### 2.3.1 Deliverables

#### 2.3.1.1 Web and Android Based System

- **WEB DASHBOARD**

  This consists of dashboard which is under the control of admin who store and remove data from the system according to the mall/shop items and also generate sales reports and perform profit analysis based on that reports.

- **ANDROID APPLICATION**

  This android application will allow the residents of attock to use this application and shop groceries online through ***"One Clicks Picks"*** Platform and get groceries at their door steps through just few clicks and can also make complaints /reviews.

- **CENTRAL XAMPP DATABSE SERVER**

  This application is based on XAMPP which act a central database. This application /System uses MySQL as a database to retrieve data and can also perform CRUD operations on data.

#### 2.3.1.2 Reports / Documentation

This part consists A complete project reports which include SRS (software requirement specification documents), Software Design Specifications, GUI mockups, Test cases designs, Tables and other major requirements documents. It includes document of how to use an application and the testing requirements.

### 2.3.2 Development Requirements

Following are the requirement of the system which a user must address in order to use a system:

#### 2.3.2.1 OS REQUIREMENT

Window XP, Window 7, Window 8.1, Window 10 or any other operating which has the same power as that of Window 7 OS is enough /Sufficient. We can run it on Mac also.

#### 2.3.2.2 HARDWARE REQUIREMENT

Any machine which has minimum power to run IDE is sufficient.

#### 2.3.2.3 APPLICATION REQUIREMENT

Android Studio, Visual code Studio, Xampp, SQL Server Management Studio

#### 2.3.2.4 OTHER REQUIREMENTS

For presentations, documentation and mockups we use Microsoft word, Microsoft power point and Adobe Photoshop CC2017. For designing UML diagrams we use Microsoft Visio.

## 2.4 Related System / Work

### 2.4.1 Food Panda App

https://play.google.com/store/apps/details?id=com.global.foodpanda.android

Food panda connects customer with restaurants that offer online delivery but there's limitations in it. It only delivers bakery items but only large cities or specific areas such as Rawalpindi, Islamabad. There is still no such service available in our area to deliver food to home .On the basis of vouchers, they offer discount and deals.

### 2.4.2 Carrefour Pakistan

https://play.google.com/store/apps/details?id=com.mafcarrefour.pakistan

Carrefour Pakistan is all in one shopping app. Carrefour Pakistan app offers its valued customer which offers free points on every purchased and you get a My Club card to become of member of it. Upon Reaching a threshold of 5000 or 2500 points, you can get free shipping of PKR 500 or PKR 2500. They also offer 100 of free points on special promotion offers. This service is only available for big cities not for local areas of Pakistan. In exclusive offers a convenient shopping list can be share with anyone.

### 2.4.3 HUM Mart

https://play.google.com/store/apps/details?id=com.matechco.hummart

Hum Mart is a grocery online shopping app which deliver only grocery products and Ramadan offers in Karachi city not for local areas of Pakistan. To register yourself on Hum Mart app you need to enter your contact number. But this service is only for Karachi.

### 2.4.4 Pakistan Citizens Portal

https://play.google.com/store/apps/details?id=com.govpk.citizensportal

It is one of the popular system provided to user to put complains about any government institute.

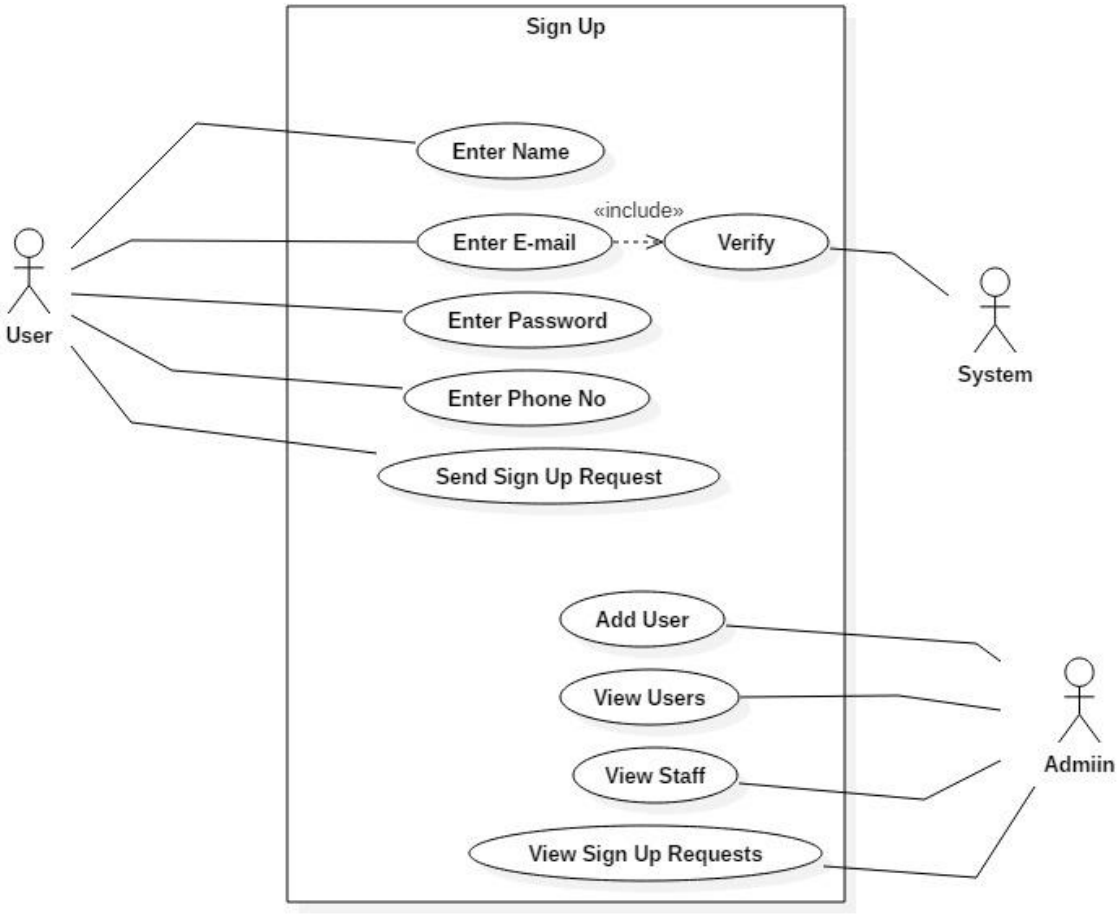
# Chapter 3

# REQUIREMENT ANALYSIS

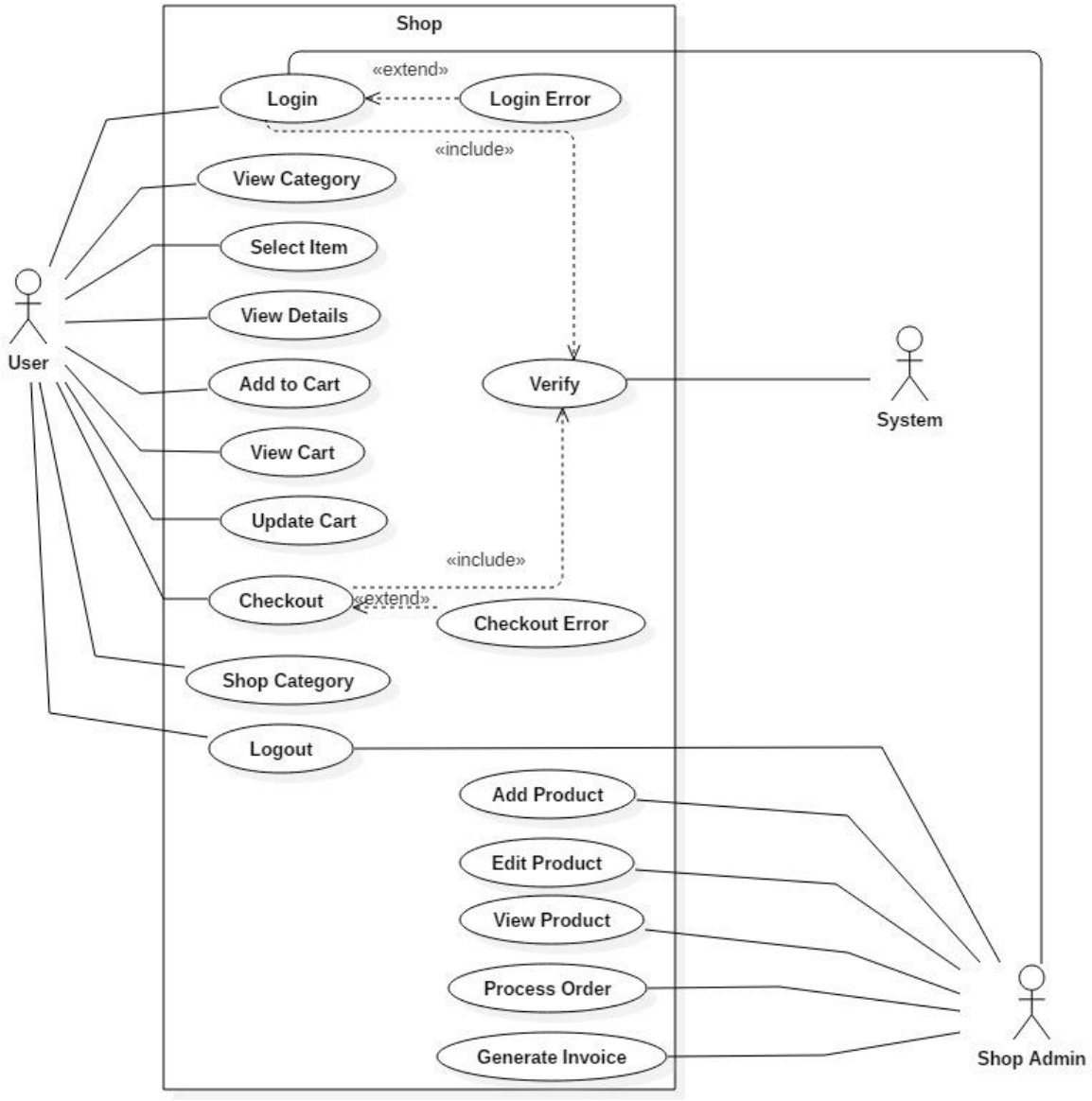
# 3 Requirement Analysis

## 3.1 Use Cases Diagrams

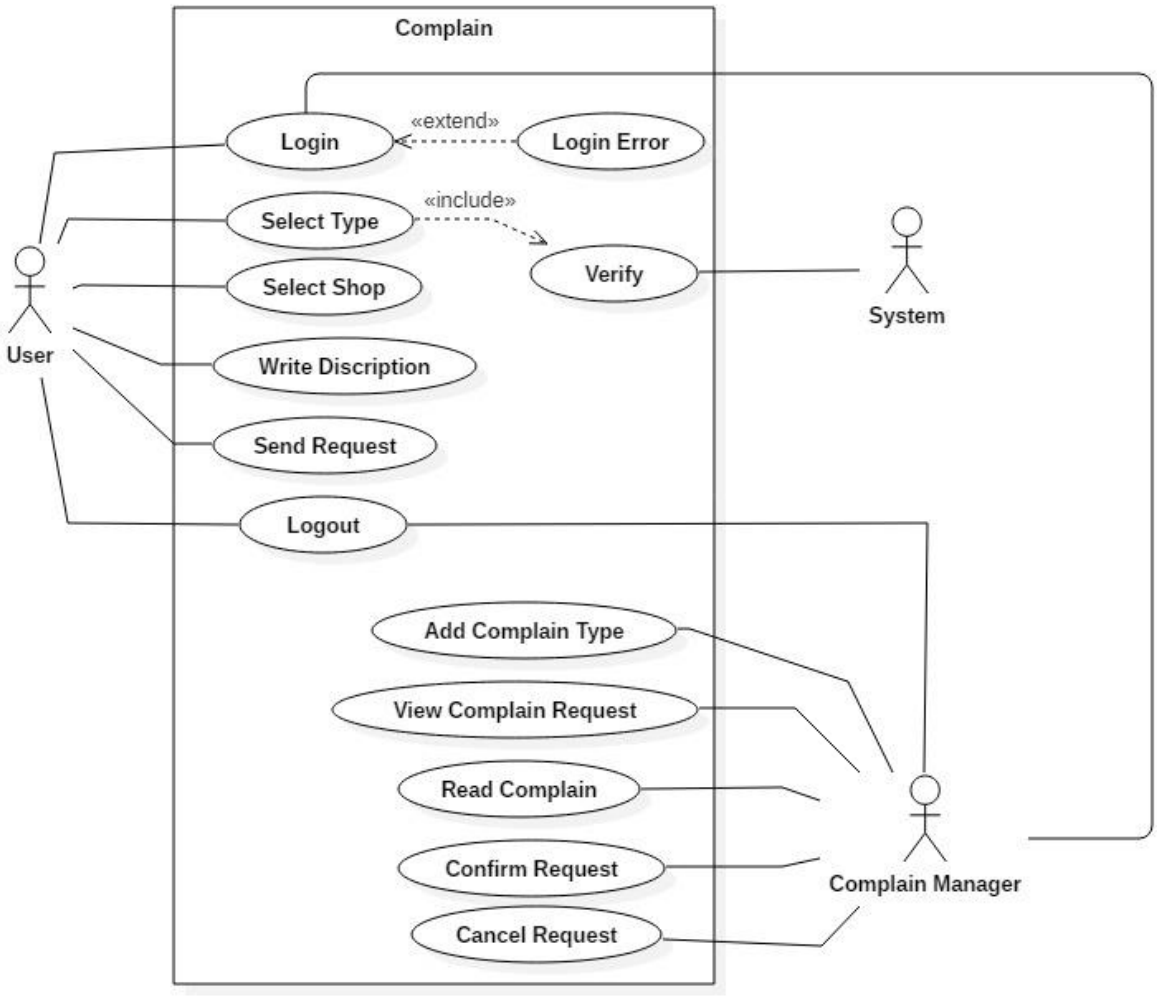
### *3.1.1 Sign Up*




### *3.1.2 Online grocery Shop*




### *3.1.3 Online Complain/Reviews*




## 3.2 Detailed Use Case

### 3.2.1 Signing Up

| **Use Case Name** | **Enter E-mail** |
|---|---|
| **Actor** | **User** |
| **Description** | An email is provided by the user |
| **Pre-condition** | The email is not already registered. |
| **Post-condition** | Nil |
| **Extend** | Nil |
| **Workflow/Action** | 1. Open Android app<br>2. press new user? Signup |

| | |
|---|---|
| | 3. Enter valid email address |

| **Use Case Name** | **Enter Username** |
|---|---|
| **Actor** | **User** |
| **Description** | User provides their username. |
| **Pre-condition** | New user , user must not registered already. |
| **Post-condition** | Nil |
| **Extend** | Nil |
| **Working flow** | 1. Open Android app<br>2. press new user? Signup<br>3. Enter username within range between 8 to 15 characters |

| **Use Case Name** | **Enter Password** |
|---|---|
| **Actor** | **User** |
| **Description** | To protect their profile user enter some privacy password. |
| **Pre-condition** | User must not be registered password contains alphabets numeric characters etc. |
| **Post-condition** | Nil |
| **Extend** | Nil |
| **Work flow** | 1. Open Android app<br>2. press new user? Signup<br>3. Enter Password |

| **Use Case Name** | **Enter Phone No** |
|---|---|
| **Actor** | **User** |
| **Description** | Phone number is provide by the user. |
| **Pre-condition** | No other account is using this phone no |
| **Post-condition** | Nil |
| **Extend** | Nil |
| **Workflow** | 1. Open Android app |

| | |
|---|---|
| | 2. press new user? Signup<br>3. User enter their personal phone no. |

| **Use Case Name** | **Press Signup / Create Account** |
|---|---|
| **Actor** | **User** |
| **Description** | To register themselves user Click on create account /Sign up /Go button. |
| **Pre-condition** | Ensure User fill all the necessary details and the account with these details are not already registered. |
| **Post-condition** | Nil |
| **Extend** | Nil |
| **Work flow** | 1. Open Android app<br>2. press new user? Signup<br>3. Ensure User enter all the necessary details such as username, password etc.<br>4. Click on Go or Sign up /create account button. |

| **Use Case Name** | **Verify** |
|---|---|
| **Actor** | **System** |
| **Description** | User registered himself by clicking the create account / Sign up /Go button. |
| **Pre-condition** | Ensure user fill all the valid credentials and account with these details not present already. |
| **Post-condition** | To get register user click on Sign up / create account / Go button. |
| **Extend** | Nil |
| **Work Flow** | 1. Open Android app<br>2. press new user? Signup<br>3. User fill all the credentials<br>4. User click on signup button |

### 3.2.2 Online Grocery shopping

| **Use Case Name** | Login |
|---|---|
| **Actor** | User |
| **Description** | User enter their login credentials. |
| **Pre-condition** | User must be registered into the application. |
| **Post-condition** | Nil |
| **Extend** | Nil |
| **Work Flow** | 1. Open app<br>2. Enter Email<br>3. Enter password<br>4. Click on GO / Sign In |

| **Use Case Name** | View Details |
|---|---|
| **Actor** | User |
| **Description** | User select item category to view item details . |
| **Pre-condition** | User must login into the application. |
| **Post-condition** | Nil |
| **Extend** | Nil |
| **Work Flow** | 1. Open the app<br>2. Fill all the login credentials.<br>3. Click on Go/ Sign in button<br>4. Home screen appear<br>5. Select product category<br>6. Select items |

| **Use Case Name** | Add to Cart |
|---|---|
| **Actor** | User |
| **Description** | User add selected items into cart which he want to buy. |
| **Pre-condition** | User must login into the system and select product category. |
| **Post-condition** | Nil |
| **Extend** | Nil |
| **Work Flow** | 1. Open the app<br>2. Fill all the login credentials. |

| | |
|---|---|
| | 3. Click on Go/ Sign in button<br>4. Home screen appear<br>5. Select product category<br>6. Add selected items into cart |

| | |
|---|---|
| **Use Case Name** | Check Out |
| **Actor** | User |
| **Description** | User press the checkout/ buy button to buy products added into the cart. |
| **Pre-condition** | User must have added items/product into the cart. |
| **Post-condition** | Nil |
| **Extend** | Nil |
| **Work Flow** | 1. Open the app<br>2. Fill all the login credentials.<br>3. Click on Go/ Sign in button<br>4. Home screen appear<br>5. Select product category<br>6. Add selected items into the cart.<br>7. Click on checkout to buy items. |

| | |
|---|---|
| **Use Case Name** | Select Shop |
| **Actor** | User |
| **Description** | User selects shop category. |
| **Pre-condition** | User must add at least one or more than one products into the cart. |
| **Post-condition** | Nil |
| **Extend** | Nil |
| **Work Flow** | 1. Open the app<br>2. Fill all the login credentials.<br>3. Click on Go/ Sign in button<br>4. Home screen appear<br>5. Select product category<br>6. Add selected items into the cart. |

| | |
|---|---|
| | 7. Click on checkout to buy items<br>8. User choose option to which shop they want to buy items i.e., nearest shop by using location or select shop of their own interest from menu. |

| | |
|---|---|
| **Use Case Name** | Logout |
| **Actor** | User /Admin |
| **Description** | User logout from the application /website. |
| **Pre-condition** | User must be login . |
| **Post-condition** | Nil |
| **Extend** | Nil |
| **Work Flow** | 1. Open the app/website<br>2. Fill all the login credentials.<br>3. Click on Sing in /go button<br>4. Perform some actions<br>5. Click on Logout in app/ website to go back from home page . |

| | |
|---|---|
| **Use Case Name** | View Orders |
| **Actor** | Shop Admin |
| **Description** | Admin view the order details placed by the user. |
| **Pre-condition** | Admin must be login into the system. |
| **Post-condition** | Nil |
| **Extend** | Nil |
| **Work Flow** | 1. Open the website<br>2. Fill all the login credentials.<br>3. Click on sign in.<br>4. Click on View order details cart. |

| | |
|---|---|
| **Use Case Name** | Generate Invoice |
| **Actor** | Shop Admin |
| **Description** | Admin generate invoice of placed orders. |
| **Pre-condition** | Admin must log in into the system and have placed orders into the new orders card/list. |

| | |
|---|---|
| **Post-condition** | Nil |
| **Extend** | Nil |
| **Work Flow** | 1. Open the website<br>2. Fill all the login credentials.<br>3. Click on sign in.<br>4. Click on View order details cart.<br>5. Select an order<br>6. Generate invoice. |

| | |
|---|---|
| **Use Case Name** | Verify |
| **Actor** | System |
| **Description** | System verify the login and checkout credentials. |
| **Pre-condition** | Nil |
| **Post-condition** | Nil |
| **Extend** | Nil |

### 3.2.3 Online Reviews/Complains

| | |
|---|---|
| **Use Case Name** | Complain/Review Subject |
| **Actor** | User |
| **Description** | User enter subject of an complain about specific services. |
| **Pre-condition** | User must login into the system and select reviews tab. |
| **Post-condition** | Nil |
| **Extend** | Nil |
| **Work Flow** | 1. Open the app<br>2. Fill all the login credentials.<br>3. Click on login button.<br>4. Select complain/Review category.<br>5. Select shop from list.<br>6. Select complain category i.e., product, late delivery etc. |

| | |
|---|---|
| **Use Case Name** | Write Complain/Review |

| | |
|---|---|
| **Actor** | User |
| **Description** | User write complain /Reviews. |
| **Pre-condition** | User must login into the system and selected reviews category. |
| **Post-condition** | Nil |
| **Extend** | Nil |
| **Work Flow** | 1. Open the app<br>2. Fill all the login credentials.<br>3. Click on login button.<br>4. Select complain/Review category.<br>5. Select shop from list.<br>6. Select complain category i.e., product, late delivery etc.<br>7. Write complain /reviews. |

| | |
|---|---|
| **Use Case Name** | Send Request |
| **Actor** | User |
| **Description** | User can send request to the shop. |
| **Pre-condition** | User must login into the system and fill all the tabs / text fields. |
| **Post-condition** | Nil |
| **Extend** | Nil |
| **Work Flow** | 1. Open the app<br>2. Fill all the login credentials.<br>3. Click on login button.<br>4. Select complain/Review category.<br>5. Select shop from list.<br>6. Select complain category i.e., product, late delivery etc.<br>7. Write complain /reviews.<br>8. Click on Send request . |

## 3.3 Requirements

### 3.3.1 Functional Requirement

#### *3.3.1.1 Sign Up*

Following are the functionally requirements for signup follows as:

- FR-1: *User shall be able to enter their username.*
- FR-2: *User shall be able to enter their email address.*
- FR-3: *User shall be able to enter their password.*
- FR-4: *User shall be able to enter their phone no.*
- FR-5: *User shall be able to enter their present address.*

#### *3.3.1.2 Online Grocery Shop*

Following are the functional requirements for online grocery shop:

- FR-6: *User shall be able to select category of their choice.*
- FR-7: *User shall be able to view items.*
- FR-8: *User shall be able to search items.*
- FR-9: *User shall be able to add and delete items from the cart.*
- FR-10: *User shall be able to checkout.*
- FR-11: *User shall be able to select shop of their own interest i.e., nearest shop or any other shop from menu.*
- FR-12: *Admin shall be able to add /delete / Update existing items.*
- FR-13: *Admin shall be able to generate invoice.*
- FR-14: *Admin shall be able to generate sales report.*
- FR-15: *Admin shall be able to keep record of staff working.*

#### *3.3.1.3 Complains/Reviews*

Following are the functional requirements for complains/reviews:

- FR-16: *User shall be able to go to complain /review portal through app.*
- FR-17: *User shall be able to select complain category.*
- FR-18: *User shall be able to select shop from the list.*
- FR-19: *User shall be able to write complain/review.*
- FR-20: *User shall be able to send request*
- FR-21: *User shall be able to logout.*

- FR-22: *System shall be able to receive complain/reviews of users.*
- FR-23: *Admin shall be able to view complains.*

### 3.3.2 Non-functional Requirements

Rather than specific behavior of system these requirements specify criteria which is used to judge operations of system. It specifies how the system behave. It ensures the quality of the system and specifies constraints upon the system and related to the environment in which it is used. They are not directly related with the functionalities of the system.

#### *3.3.2.1 NR-1: Security Requirements*

System must ensure the security of user personal details such as phone no, email and password etc.

#### *3.3.2.2 NR-2: Availability*

This application is available 24/7.

#### *3.3.3.3 NR-3: Reliability*

It is secure application so user can provide their details without any doubt.

#### *3.3.3.4 NR-5: Maintainability*

In future if any shop wants to register themselves then this system can be modified easily and easily handled errors and maintain them.

#### *3.3.3.5 NR-6: Usability*

UI design of One Clicks Picks is easily understandable by the user and easy to user. One clicks Picks android application and web portal has effortless and essay to understand.

#### *3.3.3.6 NR-7: Performance*

Without creating any issues or disrupting the working of system this system can easily handle workload.

#### *3.3.3.7 NR-8: Portability*

The web portal is easily accessible on all platform such as Linux, Windows, Mac while mobile application is only accessible on android.

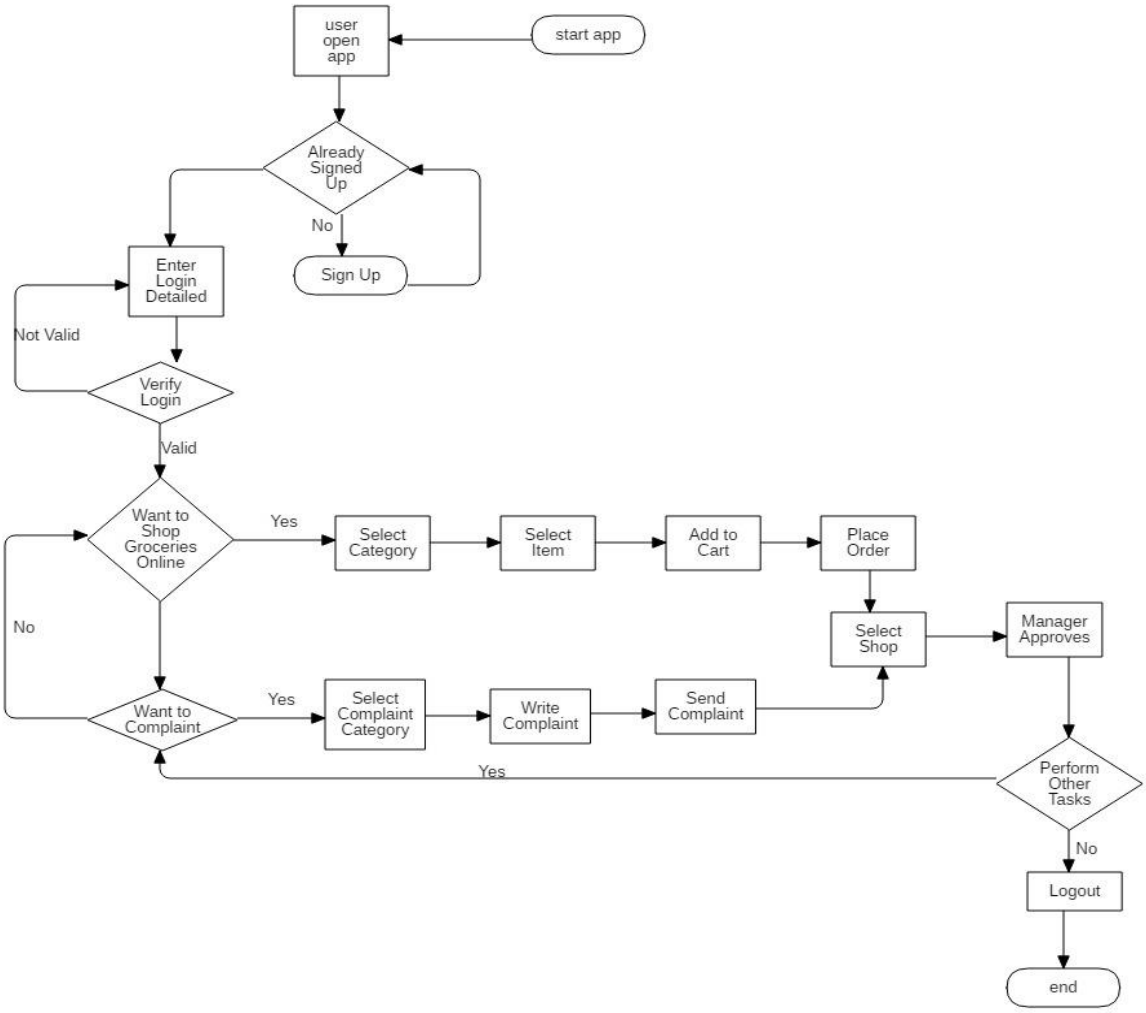
# Chapter 4

# Design and Architecture

# 4 Design and Architecture

## 4.1 System Architecture

### 4.1.1 Flowchart Diagram




**Description:**

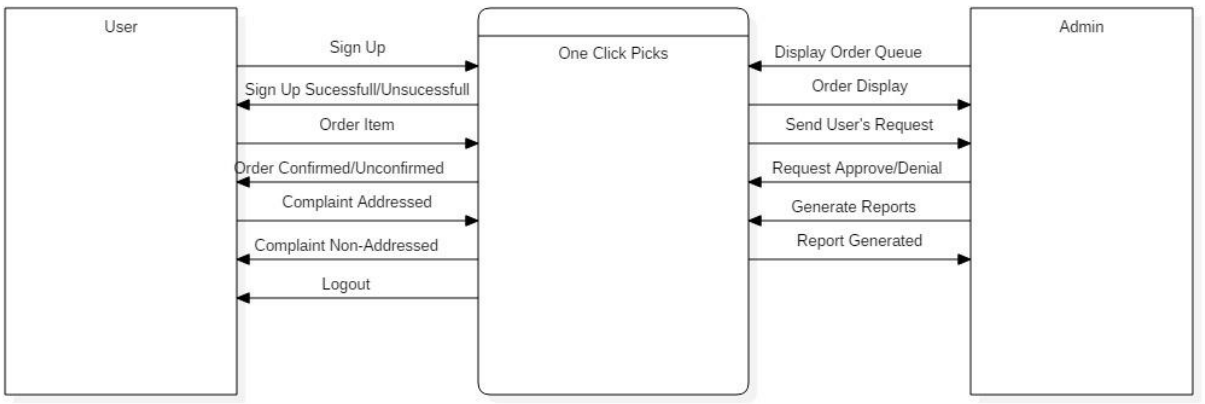
This figure is flow chart diagram of our system which shows the flow of one click picks system. User interact with the system by opening the application. If he is new user, they he first signs up into the system by providing the necessary signup credentials. After signing up user can access the application through login. Firstly, they login into the application by providing login credentials. If login credentials are valid then user can easily get access of home page. Once user can get access

of home page he can perform various actions such as he/she can shop groceries online and put the complains if any by using the system controls.

So mainly we have Two categories / sub modules i.e., shop groceries and put complains. In online grocery shopping, user select the items categories and then view details of sub categories and select items then add them into the cart. After the user checkout /place order then he had category shop choices where he has to select shop of their own interest i.e., Naseem mart [1], Zaman sons [2] or select the nearest shop by using the location API. If user want to put complain regarding any subject i.e., delivery services or product. He / she select the complains tab and write complain and send it the shop by selecting the shop category. At last if user doesn't to perform any other action the they logout from the application.

## 4.2 Data Representation

### 4.2.1 Data Flow diagram (Level 0)

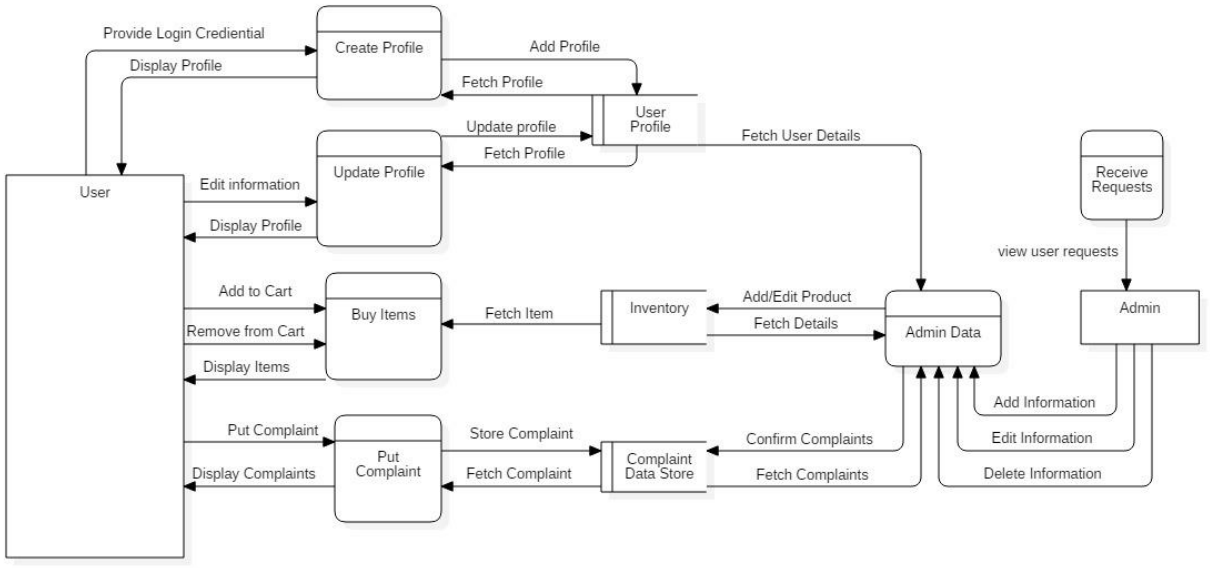



**Description:**

This Diagram shows the higher-level data flow of system and overall implementation. This large set of DFD contains

- Flow of user towards the System When a user who is not already registered, put Sign up request to register themselves, place orders and put complaints.
- Flow of Admin towards the System when Manager's input queries to system such as view order, generate invoice and registered new users.
- Flow of System towards Manager show the flow of system outputs user's placed orders, generated reports etc.

### 4.2.2 Data Flow diagram (Level 1)




## Description:

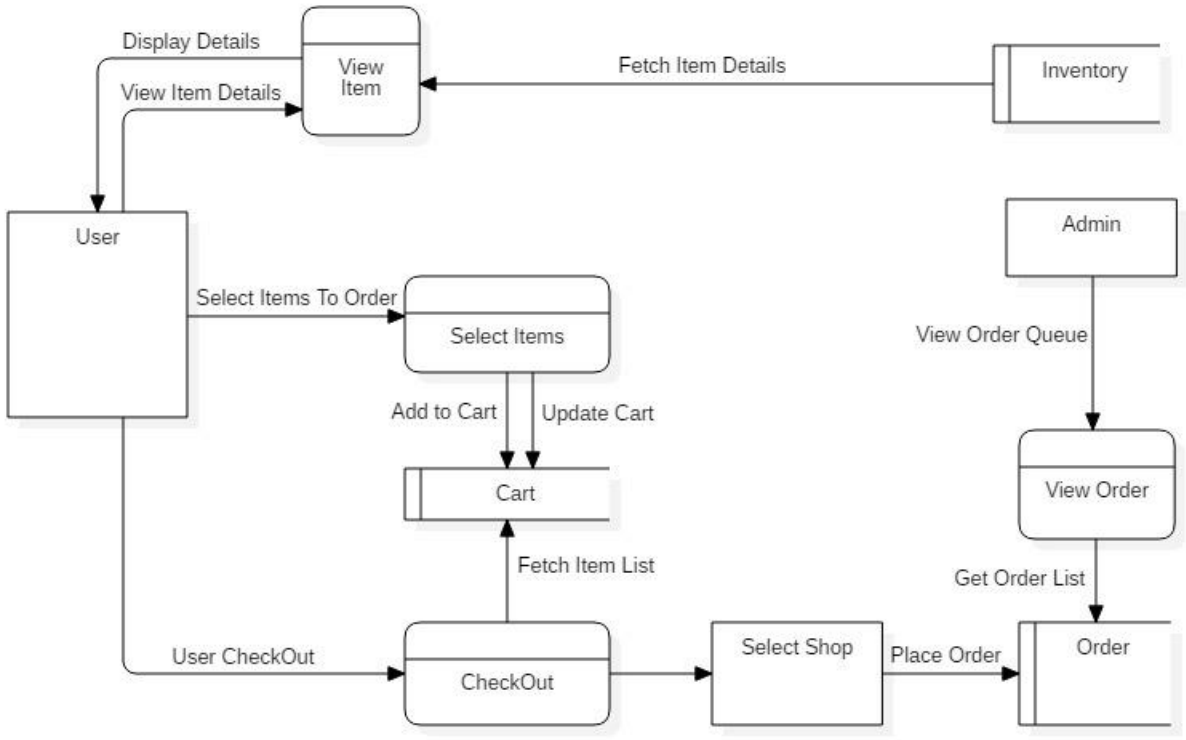
This diagram is level-1 DFD of our system ***"One Clicks Picks"***. The data present in this application /level of abstraction flows as user and also contains manager role:

- User provide signup credentials to sign up into the system that data which is provided by user stored into the database.
- User can easily add and remove items from the cart and then at later stages all the request put by user stored into the database admin can fetch that details.
- If user is not satisfied with anything they can put complaint regarding products or delivery services.

The admin role is also included in the data flow level diagrams in which their tasks is to manage all data in data store i.e., update data, store data, retrieve data etc. He approves all the tasks which is totally dependent on his approval.

### 4.2.3 Data Flow diagram (Level 2)

#### 4.2.3.1 Online shopping

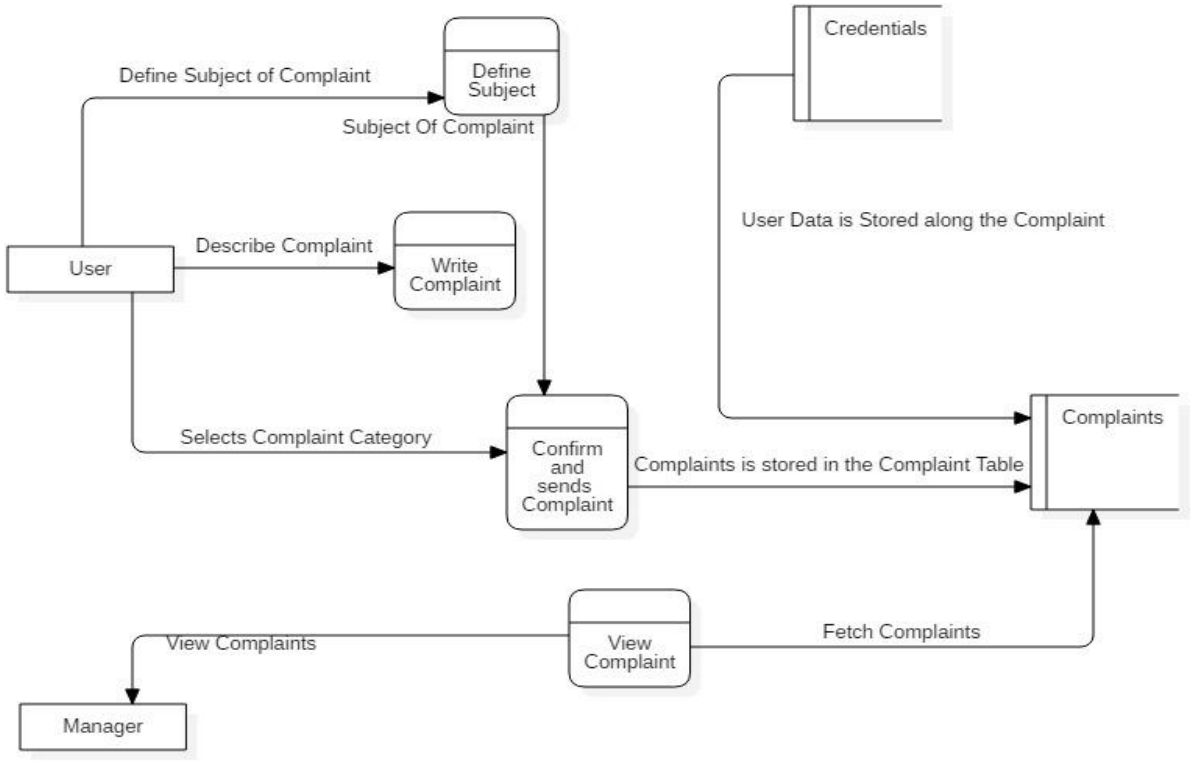



## Description:

This Following diagram shows the DFD-level 2 which is the lowest level of the system. In this data flow diagrams, the data flows from:

- Flow of User towards System when user select the item category and then choose items of each category and add it into the cart, then checkout and select shop from which they want to order groceries.
- Flow of Admin towards System when Admin put commands for view orders and perform crud operations on products/items and its categories.
- Flow of System to database When system add/update/remove items from the cart table. place user's orders in orders table of the selected shop.
- Flow of Database to System when the responses for fetching item details and lists, order lists are generated.
- Flow of System to User and Manager when system displays details to the respective users and redirect to different pages.

### 4.2.3.2 Online Complains




## Description:

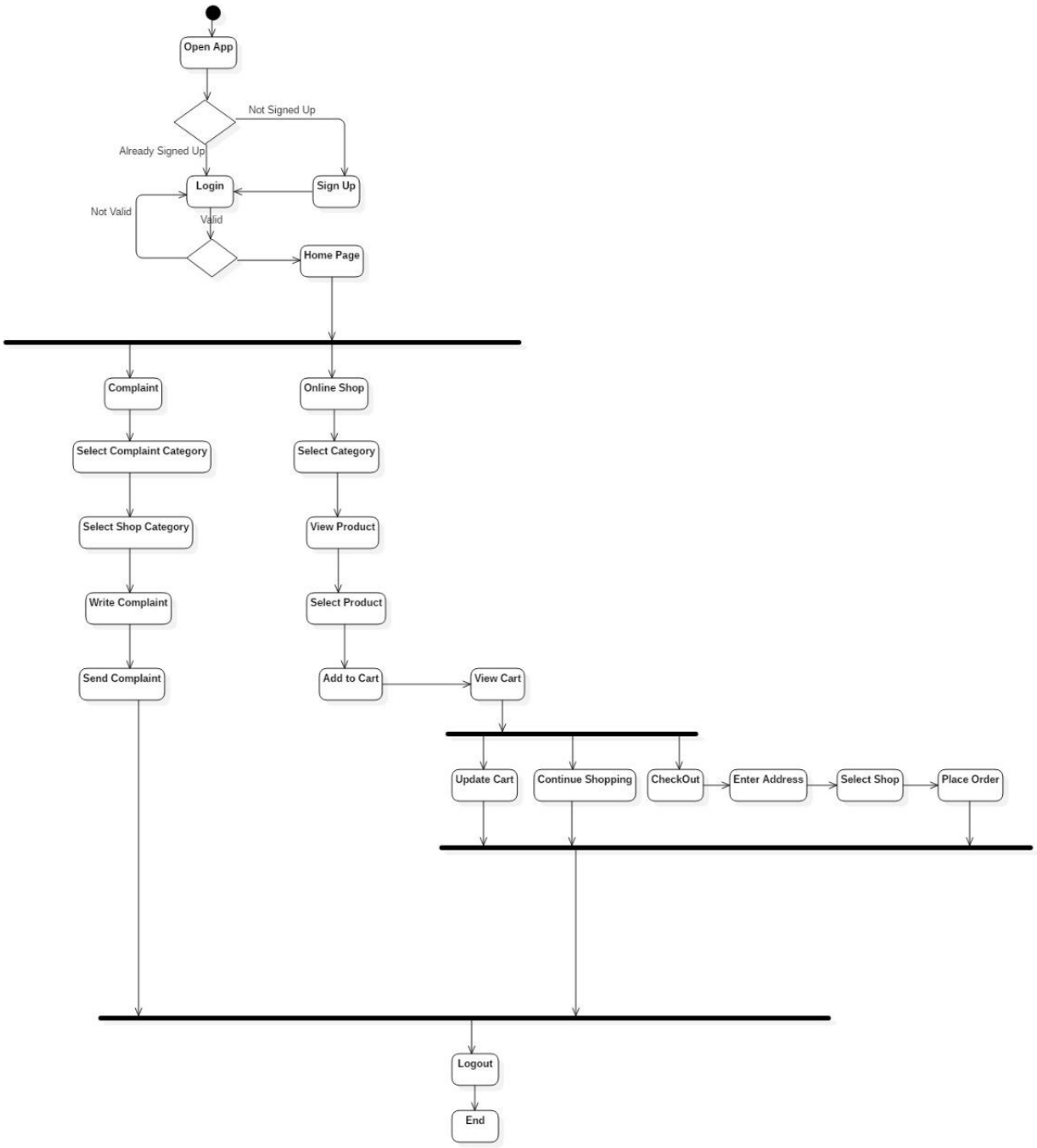
This Following diagram shows the DFD-level 2 which is the lowest level Architecture of the system. In this data flow diagrams, the data flows from:

- Flow of User towards system if user want to complaint about something user go into the category activity/window and selects a Complain type i.e., related to delivery services or related to items, defines its subject and writes/describes complaint Manager to System when manager commands for viewing Complaints, confirms complaints, updates status of complaints select shop and then send.
- Flow of System to Database when system adds user's credentials along with the complaint details into complaints table.
- Flow of System to shop Admin to view complains which user puts.

## 4.3 Process Flow/Description

### 4.3.1 Activity Diagram

#### *4.3.1.1 User End*



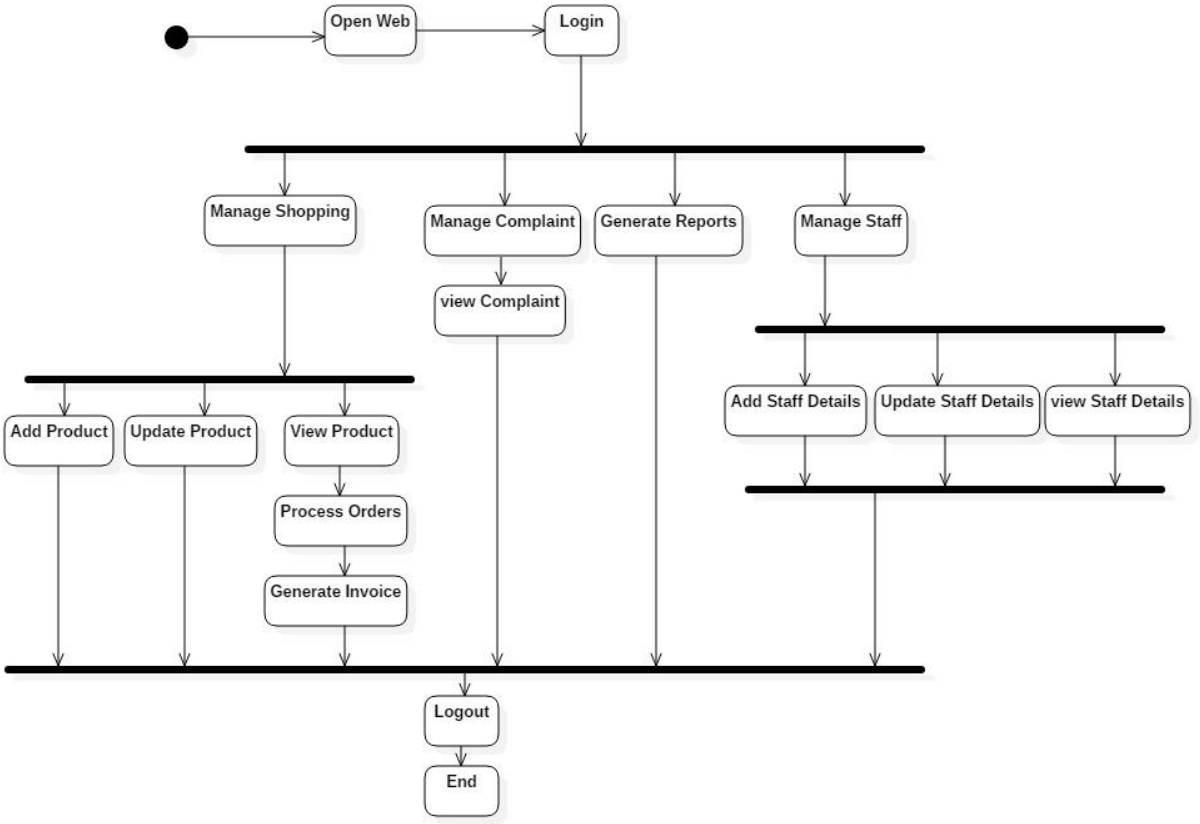
### Description:

The following activity diagram describes the user and system interaction. Firstly, user open the application, If he /she is a new user they first signup then login to access the system if he/she is already registered then they login into the app by entering the required login credentials. If system, verify user details then they go into the home page otherwise the user is reverted back to login page. In homepage user has two main services such as:

- **Shop Grocery items online;** select category/ search, select items, add to cart, checkout, enter details, select shop category, place order.
- **Put Complaints**; user selects complaint category i.e., delivery services or product, defines subject, select shop, writes complaint, and send it to the admin.

. After performing these activities user can easily logout from the system.

#### *4.3.1.2 Admin End*



### Description:

The diagrams show the interaction of each shop admin with the system. Both shops have the same login page but have different dashboards. This diagram is according to dashboard of each shop. At first admin open the web and get access of the dashboard by logging in. Once admin login into the system he can check/view the complaints/reviews put the users. He can also check how many new users have been registered, generate sales reports such as profit etc. or any other type. Manage the record of staff are working in the shop or delivery boys etc. He can add/update/remove items categories and subcategories into the database

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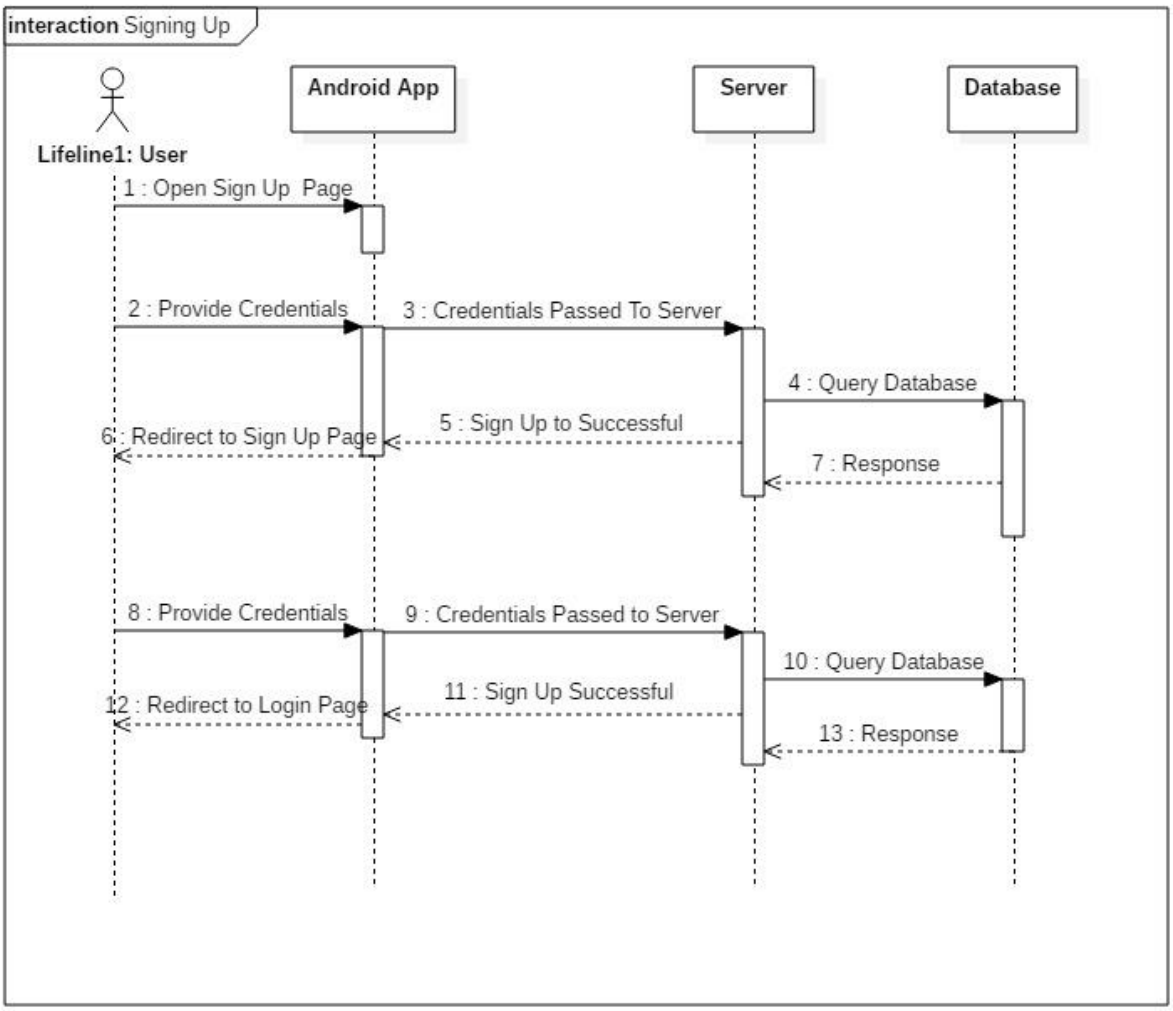
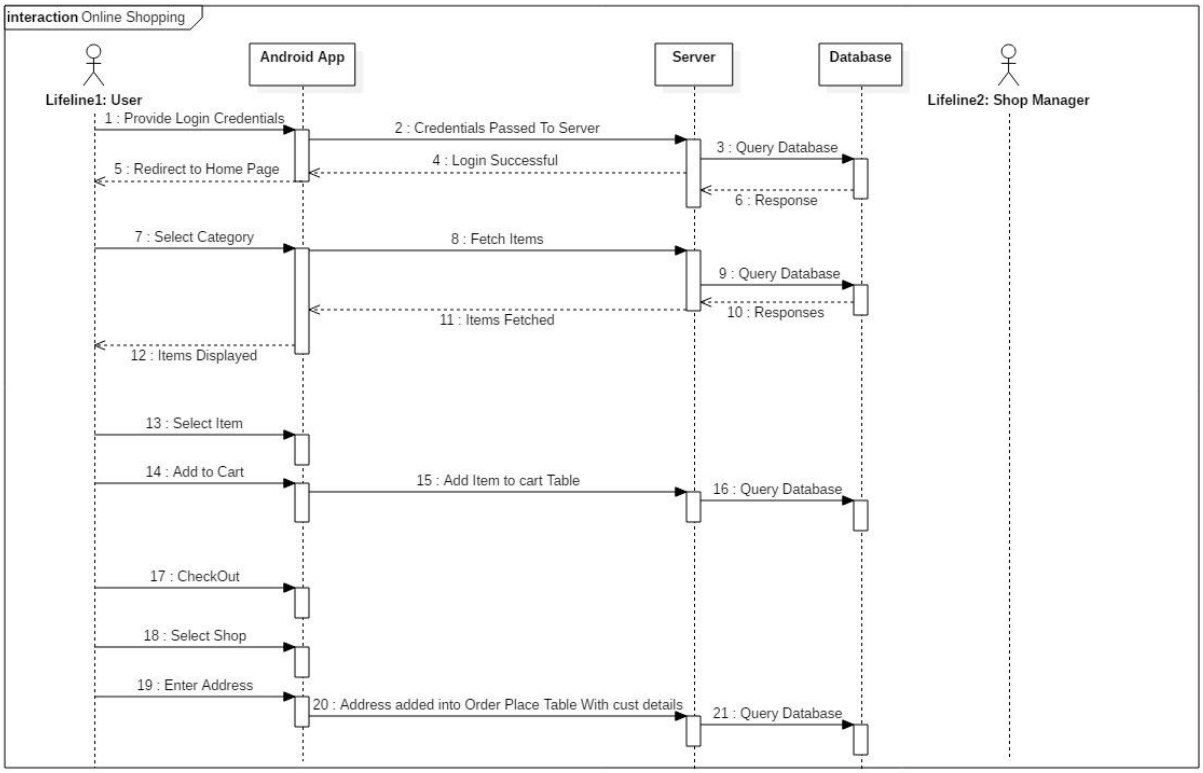
## 4.4 Sequence Diagram

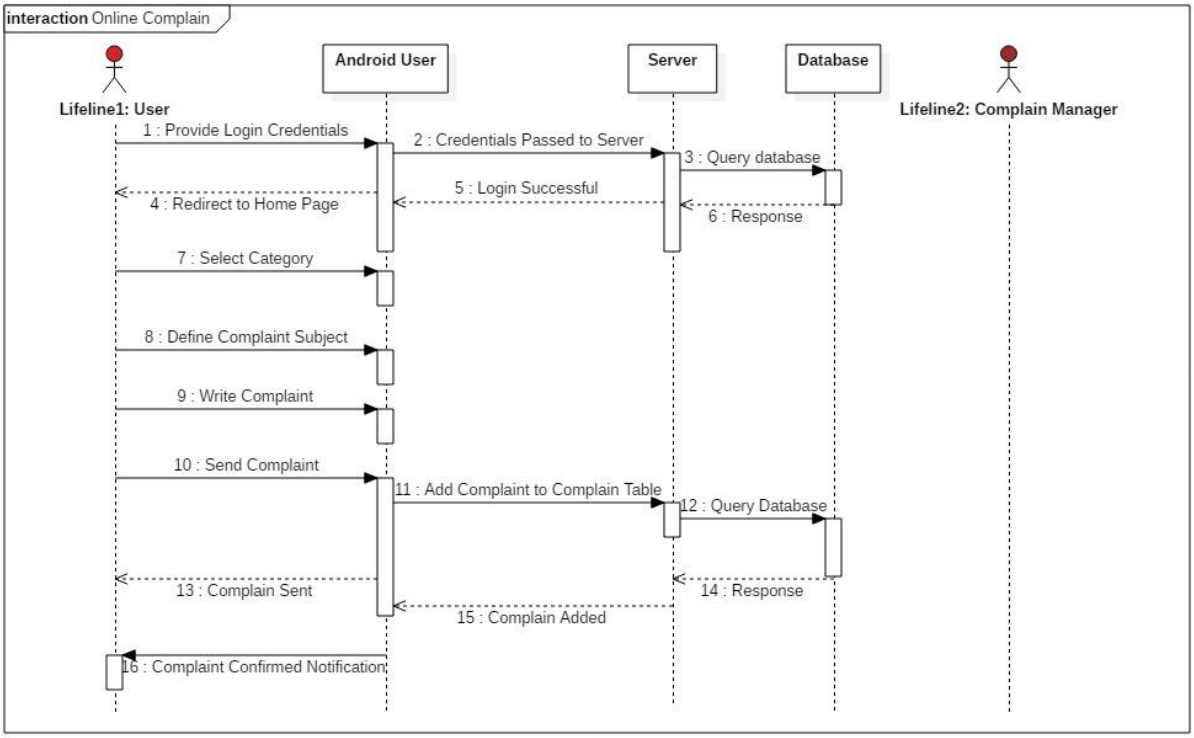
### *4.4.1 Sign up*



### *4.4.2 Online Grocery Shopping*

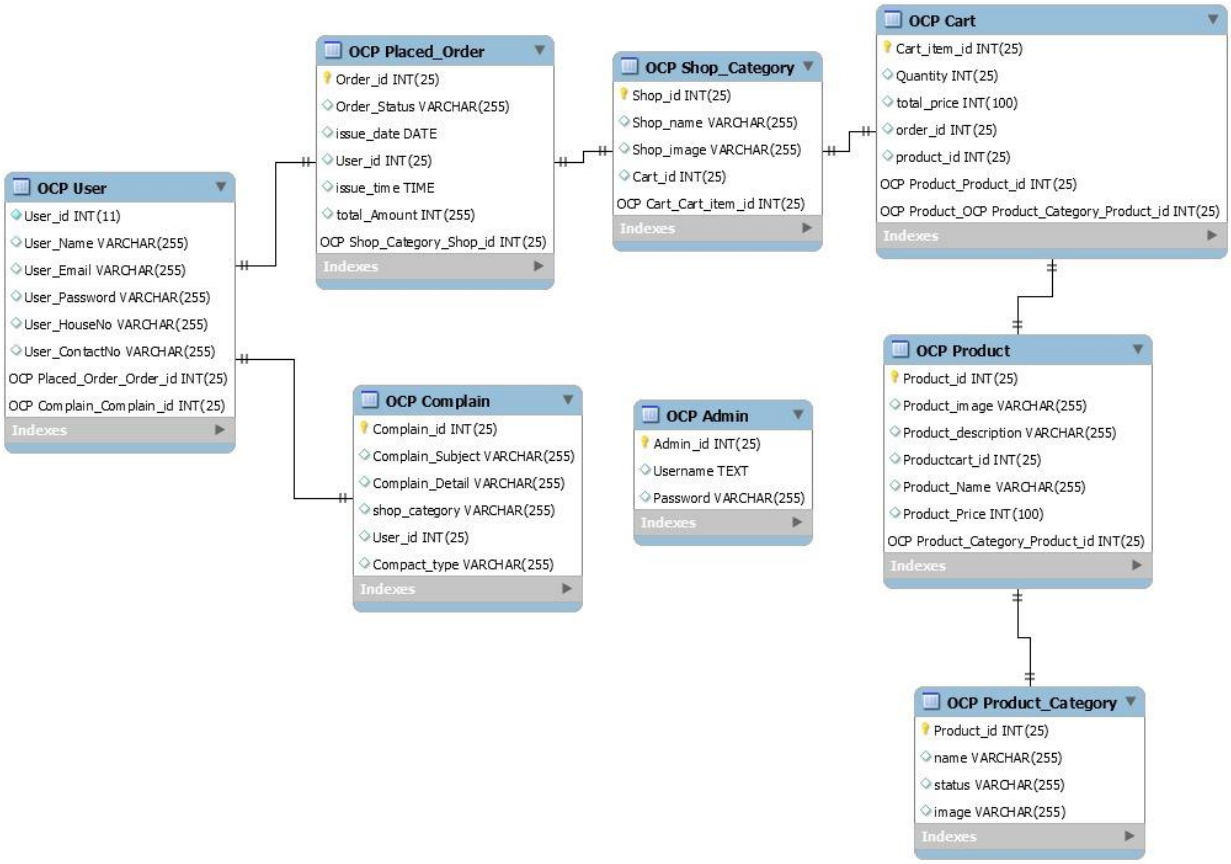



### *4.4.3 Online complains*


interaction Online Complain
Android User
Server
Database
Lifeline1: User
Lifeline2: Complain Manager
1 : Provide Login Credentials
2 : Credentials Passed to Server
3 : Query database
5 : Login Successful
4 : Redirect to Home Page
6 : Response
7 : Select Category
8 : Define Complaint Subject
9 : Write Complaint
10 : Send Complaint
11 : Add Complaint to Complain Table
12 : Query Database
13 : Complain Sent
14 : Response
15 : Complain Added
16 : Complaint Confirmed Notification

## 4.5 Design Model

### *4.5.1 ERD (Entity Relationship Diagram)*



# 5 REFERENCES

[1] Retrieved from Pakistan Citizen Portal

https://play.google.com/store/apps/details?id=com.govpk.citizensportal&hl=en&gl=US

[2] Retrieved from food panda Pakistan

https://play.google.com/store/apps/details?id=com.global.foodpanda.android&hl=en&gl=US

[3] Retrieved from Carrefour Pakistan

https://play.google.com/store/apps/details?id=com.aswat.carrefouruae&hl=en&gl=US