Web and Android Based
Order & Delivery System

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Certificate

We accept the work contained in this report as a confirmation to the required standard for the partial fulfillment of the degree of BS (CS).

_____	_____
Head of Department	Supervisor
_____	_____
Internal Examiner	External Examiner

Dedication

This Work is dedicated to my parents and my teachers without their hard work and support I would not be able to complete this project. Last but not the least all of my friends who have been with me all the time.

Acknowledgements

First of all I shall thank Al-Mighty Allah the Most Beneficial and the most Merciful Who gave me strength to accomplish my goal. I am very thankful to my family for their support throughout my education. Without their support and motivation, it would not possible for me to complete my education.

I would thank Mr.Saroor Zaidi for his supervision. He provided me guidance for successful completion of the project from beginning to the end. He always gave me his support and help, despite his busy schedule.

Abstract

Android based order and delivery system is basically develop for companies and their vendors to take their orders from shopkeeper by using android application. When salesman takes order and submit it, these details will received on web portal in real time and shopkeeper will receive an alert through mobile phone which include details like (order list, order date/time, and total bill of complete order and expected delivery time). Traditional way of taking orders is manually which is too much time consuming and expensive, and sometimes salesman deliver wrong items to the shopkeeper. This is an online android and web base application. This system can be implemented any type of supplier and retailer in the market.

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Chapter 1

Introduction

This project is based on Android application and web portal which is basically develop for companies and their vendors to take their orders from shopkeeper by using android app. When salesman takes order and submit it, these details will received on web portal in real time and shopkeeper will receive an alert through mobile phone which include details like (order list, order date/time, and total bill of complete order and expected delivery time). This is an Essential Area for Development because traditional way of taking orders is manually which is too much time consuming and expensive, and sometimes salesman deliver wrong items to the shopkeeper. The main aim of this project is to develop an interactive system, in which both wholesalers and vendors of companies have access on this system. This system will help suppliers to maintain their inventory in effective way.

Usually salesman goes to the shopkeepers for taking orders and write down the order manually on page, after collecting whole market's order he goes back to office and give them order list. After shipping supplier update its inventory manually and calculate whole day sale. Inventory of trader can be mismanaged in this way. This is lengthy process and it takes lot of time and resources. Sometimes salesman shipped wrong items and quantity to the shop. This system offers a platform for companies and suppliers in which salesman takes orders through android device and in real time this order received in company headquarter/supplier on their web portal with complete details of shopkeeper and notify the shopkeeper through mobile phone. In this way the supplier can deliver this order on same day within city. This process is fast as compared to manual system.

1.1 Problem Description

The reason for developing this system is basically for the salesman of vendors for taking their orders through mobile App. Usually salesman goes to the shopkeepers for taking orders and write down the order manually on page, after collecting whole market's order he goes back to office and give them order list. After shipping supplier update its inventory manually and calculate whole day sale. Inventory of trader can be mismanaged in this way. This is lengthy process & it takes lot of time and resources. Sometimes salesman shipped wrong items and quantity to the shop.

This system offers a platform for companies and suppliers in which salesman takes orders through android device and in real time this order received in company headquarter/supplier

on their web portal with complete details of shopkeeper and notify the shopkeeper through mobile phone. In this way the supplier can deliver this order on same day within city. This process is fast as compared to manual system.

1.2 Project Objective

The goals of this project were to develop an application that would provide an interface in which vendors interacts with shopkeepers in real time with no error platform which is design and implemented using web programming and android based smart phone application.

1.3 Scope of Project

This is Web Portal and android based mobile application. This application can be used by vendors and suppliers in which salesman takes their orders online through android app and supplier get this order on their web portal in real time. This app helps salesman/company to maintain and update its inventory effectively. It provides the flexibility to manage the products, orders, sales & inventory seamlessly on web portal.

1.4 Business Context

This software can be used by any type of seller and companies to get their orders in efficient way.

1.5 Proposed Solution

Web based and mobile application that provides a platform in which vendors can take order through mobile application and this submitted order updated in web portal in real time. Shopkeeper receives a conformation message on his mobile phone. Admin will add shopkeepers through web portal. He can delete, update an account and he can add new user and delete an existing user.

Chapter 2

Literature Review

“Goods Order Inventory System is mobile application for peoples and for businesses to manage and track their Orders and Sales.GOIS is a standalone application running on SQLite database to store all data on device” [1]. Order Section offers the functionality to meet the needs of business owners. This gives you the facility to add items and their quantity to order and email it to a shop or supplier. “A person just need a list of items to purchase and bring home end of the day and email it to their store, their store will ready all items and a person pick-up while on way back to home” [2]. But in this system there is no use of web portal and order is send by email to the wholesaler and it’s difficult to manage inventory on smart phone. This System should provide security features like add new users and allocating access of each user of the system. “System should be proficient to track all the detailed descriptions of the client and the whole details of services presented by the client” [3].

“E Order is another application which provides online order booking to the customers using android phones. “This application offer online ordering system which will shows on company web portal but this application is basically for home users in which they can order the product which is offered by the company [4]. “Android based restaurant management system is another android application which provides facility to the customers to give order through android device within restaurant premises” [5].

This application linked with Wi-Fi and desk manager can manage the order according to table number and serve.

Usually salesman goes to the shopkeepers for taking orders and write down the order manually on page, after collecting whole market’s order he goes back to office and give them order list. After that a wholesaler makes a list one by one and calculate bills and then salesman take this order to the shopkeeper after shipping supplier update its inventory manually and calculate whole day sale. It takes too much time to manage these thing manually. Inventory of trader can be mismanaged in this way. This is lengthy process & it takes lot of time and resources. Sometimes salesman shipped wrong items and quantity to the shop. This figure 2.1 shows how this application works.

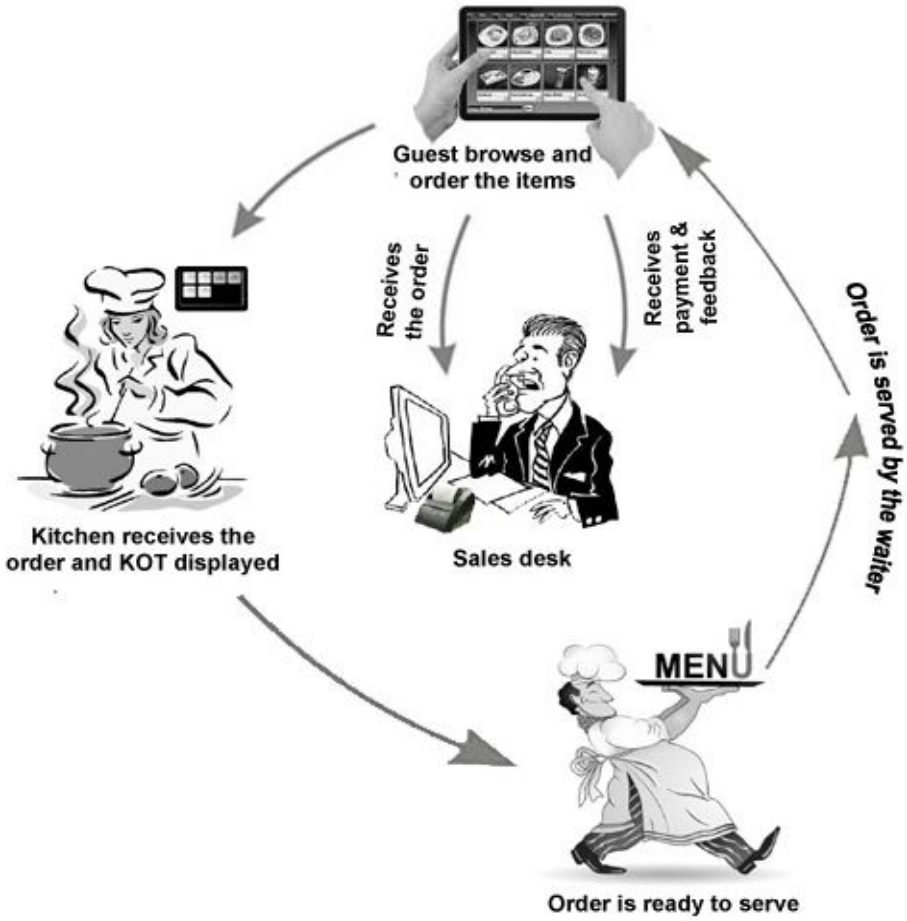

Figure 2. 1 Android based restaurant management system [7]

This application linked with Wi-Fi and desk manager can manage the order according to table number and serve. This figure 2.1 shows how this application works.

Groups and organizations of all sizes ought to manage, control, and track inventory at any time and from everywhere. Today, stock control is even more important to success and sustainability, as business transactions take region on a global scale and cowl multiple locations. Manually entering, monitoring, and counting inventory is almost not possible by using today's enterprise standards, however counting on inventory management, manipulate, and monitoring strategies completely on a laptop pc is not possible.

So, generation corporations and companies have designed and evolved stock control, manipulate, and monitoring apps to make inventory information access, search, and visualization feasible from any place and at any time the use of smartphones and tablets. Loads of stock management, manipulate, and tracking apps are available for iOS and Android devices, and we have selected our top 30 apps based on their integration, scanning, and

simplicity-of-use skills. At the same time as a lot of our top app picks are standalone in nature, some are extensions of stock management software and are free to down load with paid software program subscriptions or purchases. We've listed our top 30 inventory control, manage, and monitoring apps right here, in no unique order.

Rapid Inventory simplifies stocktaking and inventory management obligations with your Android tool!

Create, manage and manipulate your object inventory lists, scroll of articles, part lists, device serial numbers, bodily or constant assets, CD and DVD collections, and so forth. The integrated barcode scanner and the incorporated help for industry-grade Bluetooth scanners permit you to control object records very quickly at all.

Another one is business inventory system which is a primary stock management app for tracking product ranges, orders, income and deliveries. Enterprise stock's features include barcode help, including pics concerned with smartphone digital camera into product listings, and more. To be had on iOS most effective, this app permits you to export to electronic mail or spreadsheet.

Fast inventory turned into optimized for instant and easy operation on smart telephones and tablets; specific emphasis changed into placed on easy and intuitive operation. The integrated records trade features assist you to import existing stock lists or to use the collected statistics for in addition processing. Data import and information export may be carried out the use of CSV documents, XML files or by means of the way of Google doctors

“In these years use of web based platforms and android apps are very common” [6]. Android Based Order & Delivery System is an interactive platform in which salesman takes orders through android device and in real time this order received in company headquarter/supplier on their web portal with complete details of shopkeeper and notify the shopkeeper through mobile phone. In this way the supplier can deliver this order on same day within city. This process is fast as compared to manual system. This project is basically helpful for the salesman of vendors for taking their orders through mobile App. The scope of this project is customized and defined, targeting only the venders, salesman and shopkeepers.

Chapter 3

Requirements Specifications

3.1 Overview

The purpose of this chapter is to collect requirements from user in which what user expect from the system it will helpful us to create the accurate design of the system so that the system is modified according to stake holder requirements.

3.2 General Description

The general features of this project are as follow

3.2.1 User End

Sign Up: Merchant's account can be created by admin (seller) by filling form required Information.

Sign in: Seller's salesmen (representative) can use his ID and Password to login his account to use.

Log out: User can logout his account after use.

Update account: User can update his account information.

Taking order: User can take order from shopkeeper.

Submit Order: User can submit order after taking from shopkeeper.

3.2.2 Admin End

Login: Admin can login his account to use it.

Logout: Admin can logout his account after using.

Add User Account: Admin has access to add new users to register with their company.

Delete User Account: Admin can delete users account who no more working with them.

Update User Account: Admin has authority to update users account.

Inventory Management: Admin can manage his inventory.

Update Inventory: Admin can update their inventory with new products.

Delete Inventory: Admin have access to delete any item which is not available.

3.3 Functional Requirements

3.3.1 User End

- **Sign Up**

Description

New users can be added by admin by filling out registration form. This is compulsory to validate a user.

Criticality

This is critical requirement because user must have all information to use the system. The system will not accept it if user have not required information.

Technical issues

The registration form should be simple and its layout will support all devices.

Risks

Duplicate user cannot be added.

- **Login**

Description

User and Admin must have login Id and password to access his account.

Criticality

This is most major requirement as a user can login to use his system.

Technical issues

User should enter valid ID and password to login to the system, in case of invalid it display a message please enter valid ID and password.

Risks

There is a problem if someone hack or access login ID and password.

- ## Logout

Description

Both the user and admin logout his account after using it.

Criticality

Necessary function of the application.

Technical issues

Users and admin should logout their account because someone can access your account.

Risks

Security risk in which some can access user or admin's account to misuse the system.

- ## Update information

Description

User (sales person) can request to update information.

Criticality

Necessary function of the application.

Technical issues

User may have request with wrong details.

Risks

Security risk in which some can access user or admin's account to misuse the system.

- ## Submit Order

Description

User can submit the collecting order from shops.

Criticality

This is critical requirement because user should have android mobile to submit order.

Technical issues

System should send efficient response after submitting the order.

Risks

Security risk in which someone access the account and submit order.

3.3.2 Admin End

- **Login**

  Description

  Admin must be login to access his account.

  Criticality

  This is essential requirement because admin can login to access his account.

  Technical issues

  Admin login should work efficiently.

  Risks

  Security risks if admin account is hack.

- **Logout**

  Description

  Admin must be logout after using his account.

  Criticality

  This is essential requirement of this application.

  Technical issues

  If admin did not logout someone can hack his account.

  Risks

  Security risks if admin account is hack and misuse it.

- **Inventory**

  Description

  Admin must be login to view any type of inventory which is saved in system.

  Criticality

  This is essential part because admin needs to manage inventory time by time.

  Technical issues

  Admin can view saved inventory by login to the system.

  Risks

  Security risks if someone hack admin account and access inventory.

- ## Update Inventory

Description

Admin must be login to update any type of inventory.

Criticality

This is essential part because admin needs to update inventory time by time.

Technical issues

If admin change or update some inventory it should reflect all the database.

Risks

Security risks if admin's change in inventory did not reflect to whole system.

- ## Delete Inventory

Description

Admin must be login to delete inventory from system.

Criticality

This is essential part because admin needs to delete inventory time by time.

Technical issues

If admin delete some inventory it should delete from all the database.

Risks

Security risks someone access admin account and delete whole inventory.

- ## Add User Account

Description

Admin should login to add new user (shopkeeper) in system.

Criticality

This is critical requirement because admin need to add user into system.

Technical issues

If admin add new user account it should be update all the system.

Risks

Security risks if admin account is hack and someone change the information.

- **Delete User Account**

Description

Admin should login to delete user (shopkeeper) in system.

Criticality

This is critical requirement because admin need to delete user from system.

Technical issues

If admin delete user account it should be deleted from all the system.

Risks

Security risks if admin account is hack and someone change the information.

3.4 Non Functional Requirements

3.4.1 Dependability:

The user should easily depend on system because the outputs which is given by the system are accurate in which user can more dependent on the system rather self-assessment.

3.4.2 Maintainability

This application should easy to maintain and it has a flexibility to add new features easily. It should be user friendly and user should not hesitate to use it.

3.4.3 Availability

System must be available when ever user want to use it. There will be no network failure or something like that. User must be connected to the internet whenever user

3.4.4 Portability

This application will have responsive layout and portable and works with all type of android mobiles, laptops and desktops. Front end of this application will be user friendly.

3.4.5 Security

This application will only allow users which are registered and admins approval. No one allow to use this system and application without authentication.

3.4.6 Response Time

This system provide competent response time to the user to use it and it can accommodate any user at same time.

3.4.7 Flexibility

This application has a flexibility to handle unexpected situation.

3.5 System Level Requirements

This project is being developed on a machine that has

- Intel core 2.4 GHz processor
- 512 RAM
- Windows 8 operating system.

3.6 Use Cases

3.6.1 Operational Scenarios

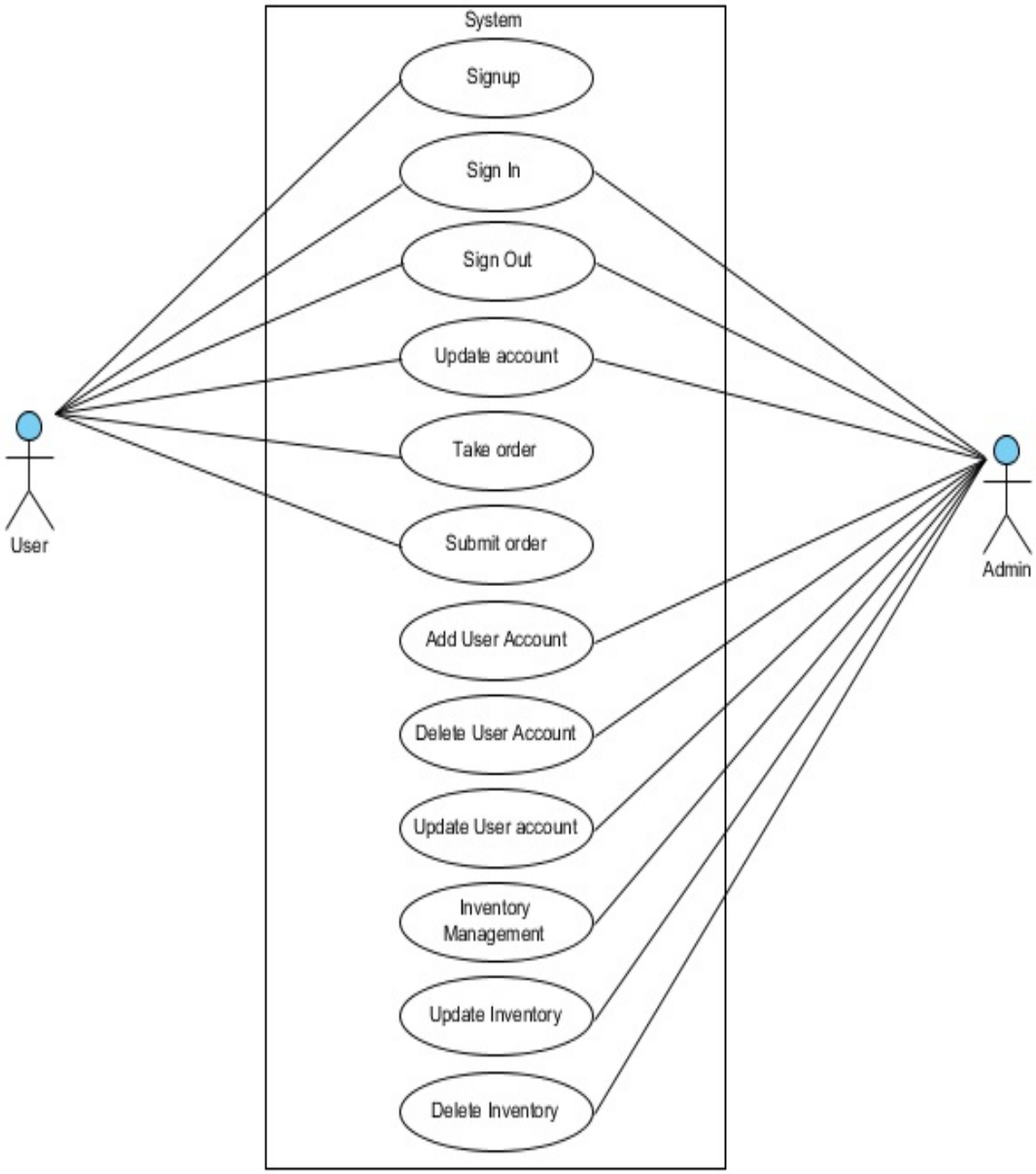

Figure 3. 1 System View

3.6.2 USER USE CASES:

USE CASE#1 :Sign Up

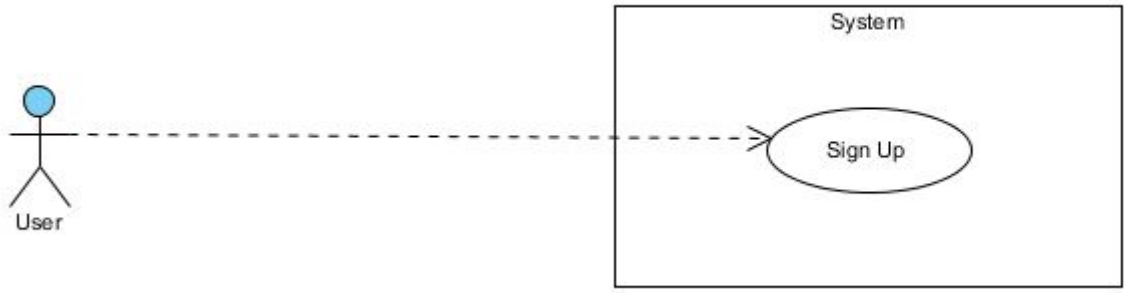

Figure 3. 2 Use Case # 1

Use Case Section	**Comments**
Use Case Name	Sign Up
Version No.	1.0.1
Actors	User
Description	This use case show how to Sign Up to the main screen.
Trigger	System will display Home screen.
Main Success Scenario	User sign up successfully to access his account.
Post Condition	User account Successfully created

Table 3.1 Use Case 1: Sign Up

USE CASE#2 : Sign In

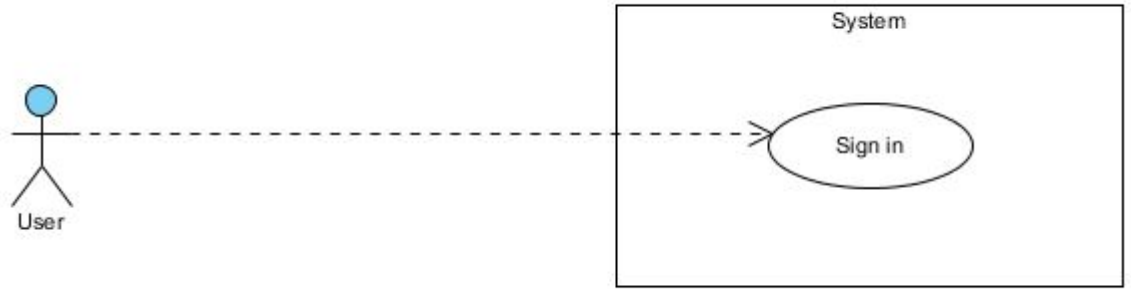

Figure 3. 3 Sign In Use case

Use Case Section	**Comments**
Use Case Name	Sign In
Version No.	1.0.1
Actors	User, wholesaler
Description	This use case show how to Sign In to the main screen.
Trigger	Press the Sign in Button.
Main Success Scenario	User will login successfully to his account.
Pre-Condition	User must be authorized sales person
Post Condition	User account Successfully created

Table 3.1 Use Case 2: Sign In

USE CASE#3 : Logout

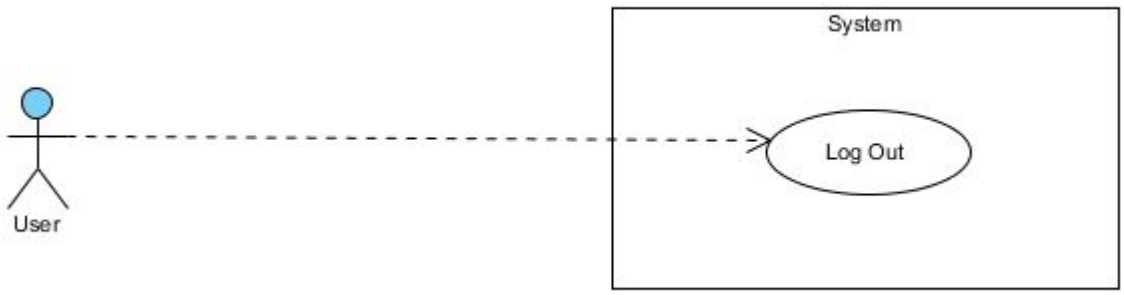

Figure 3. 4 Logout Use case

Use Case Section	**Comments**
Use Case Name	Logout
Version No.	1.0.1
Actors	User
Description	This use case show how to Log Out from the system.
Trigger	Press the Log Out in Button.
Main Success Scenario	User will successfully logout from his account.
Pre-Condition	User must be authorized sales person or wholesaler
Post Condition	User account Successfully Log Out

Table 3.3 Use Case 3: Logout

USE CASE#4: Update Account

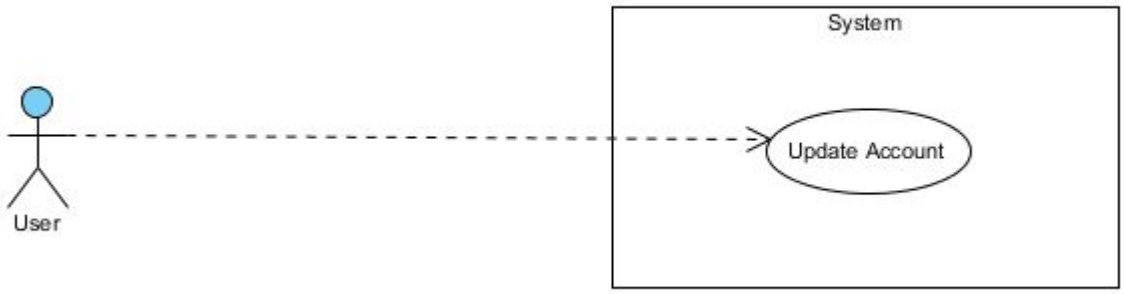

Figure 3.5 Update Account Use case

Use Case Section	**Comments**
Use Case Name	Update Account
Version No.	1.0.1
Actors	User, wholesaler
Description	User can update shopkeeper's information.
Trigger	Press the Update Account Button.
Main Success Scenario	User will successfully update account information.
Pre-Condition	User must be authorized sales person or wholesaler.
Post Condition	User account Successfully updated.

Table 3.4 Use Case 4: Update Account

USE CASE#5: Taking Order

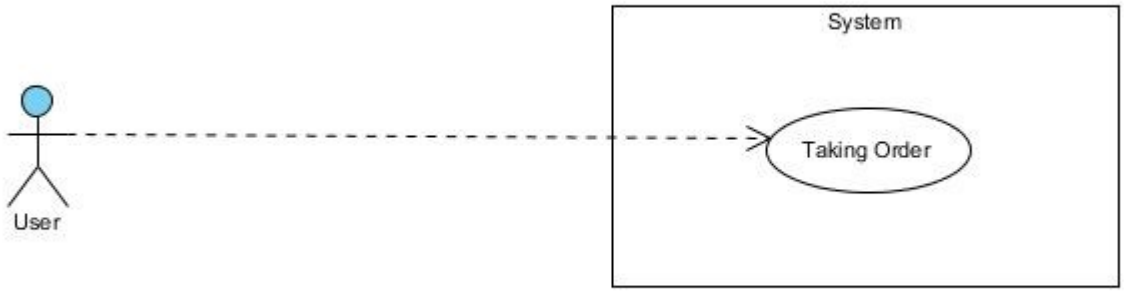

Figure 3.6 Taking Order Use case

Use Case Section	**Comments**
Use Case Name	Taking Order
Version No.	1.0.1
Actors	User, wholesaler
Description	User can take order using mobile app.
Trigger	Press the taking order Button.
Main Success Scenario	User will successfully take Order from shopkeeper.
Pre-Condition	User must be authorized sales person or wholesaler.
Post Condition	User account Successfully updated.

Table 3.5 Use Case 5: Taking Order

USE CASE#6: Submit Order

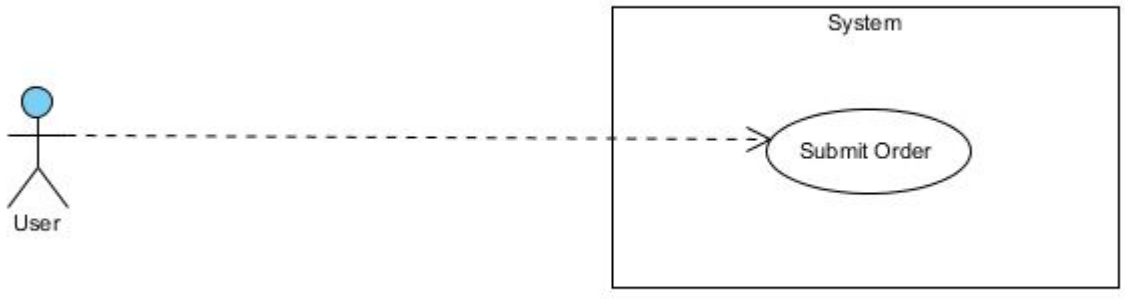

Figure 3.7 Submit order Use case

Use Case Section	**Comments**
Use Case Name	Submit Order
Version No.	1.0.1
Actors	User, sales representative
Description	User will take the order from shopkeepers in available products list and submit it to the main office online by pressing submit button.
Trigger	Press the submit Order Button.
Main Success Scenario	After submitting the order a conformation message displays that your order is submitted successfully.
Pre-Condition	User must be authorized sales person or wholesaler.
Post Condition	Shopkeepers order placed and conformation message is send to the shopkeeper.

Table 3.6 Use Case 6: Submit Order

Chapter 4

System Design

4.1 Introduction

This system offers a platform for companies and suppliers in which salesman takes orders through android device and in real time this order received in company headquarter/supplier on their web portal with complete details of shopkeeper and notify the shopkeeper through mobile phone. In this way the supplier can deliver this order on same day within city. This process is fast as compared to manual system. The advantage of this project lies in its simplicity and flexibility.

4.2 System Architecture

There are three layers in this system, each of the layer dependent on another layer. Figure 4.1 shows system architectural design.

4.2.1 Interface layer

Interface layer basically presentation layer. This layer include Graphic user Interface in which user interact with system.

4.2.2 Application layer

This layer controls Application functionality and perform processing.

4.2.3 Data link layer

In this layer data will be store. When user request to access this data it will retrieve from this layer.

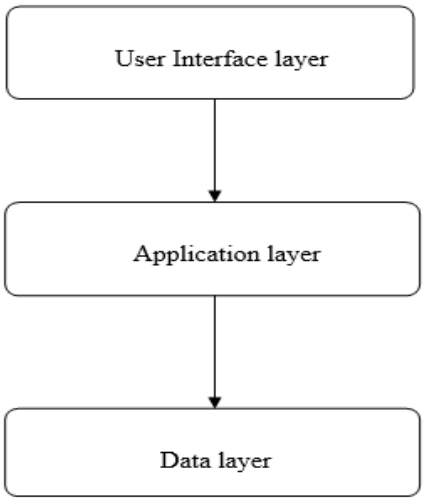

Figure 4. 1 Architecture Design

4.3 Assumptions

In this application user's may either trader or his salesman. Trader is the admin who can add his salesman to the application and generate their login information. Salesman get order from shopkeepers and submit this order to the database. Trader can view this order from their web portal, manage the orders and update inventory. He can add new users, delete users, manage inventory, add new inventory.

- **Software related assumptions:**

  Users (salesman, trader) and admin, should have access to use this application. Android users requirement include android 4.0 or above on the device to install the application.

- **Hardware related assumptions:**

  Web portal can access through any laptop or computer with minimum 512mb of RAM and 2.0 GHz processor. Android application will run with processor of 1GHz and 512MB of RAM.

4.4 Constraints

The dependences of Web Portal and mobile app are below:

Availability of Internet

Internet must be available on mobile to access mobile application or 3G should be working on android phone.

Android device

This application is based on android therefore user must have an android device to install the application.

Valid Entry

New user should registered via admin. Only registered user can access this system. The information which is provided by the user while login should valid.

Phone Memory

This is small application so user have and at least 25 MB space on their smart phone to download and install the application.

4.5 System Environment

This mobile application is for users and salesmen and the web portal can only be accessed by the admin or owner of company. The admin panel of this web portal is developed using PHP, HTML, CSS, and Bootstrap with MySQL on backend.

4.6 Sequence Diagrams:

Sequence Diagram 1: Sign Up

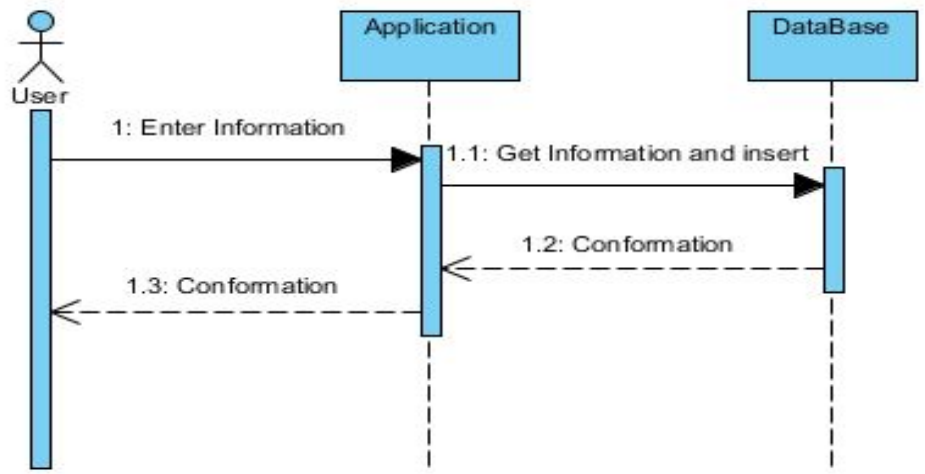

Figure 4.2 Sequence Diagram 1: Sign Up

Sequence Diagram 2: Sign In

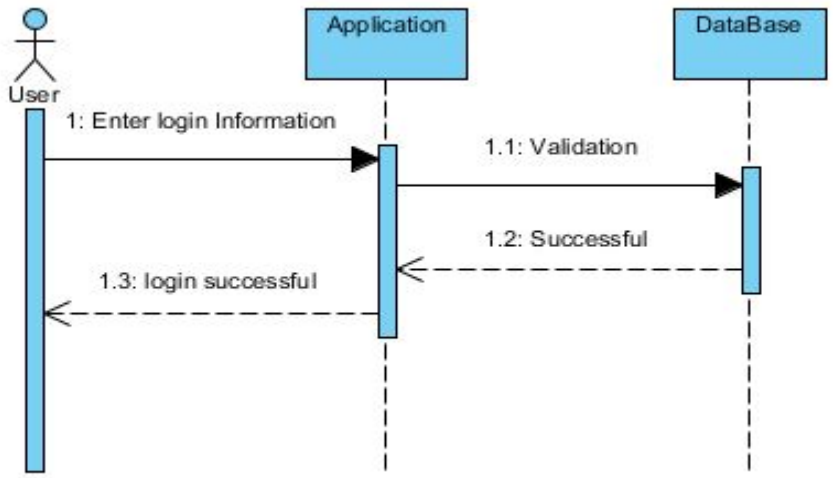

Figure 4.3 Sequence Diagram 2: Sign In

Sequence Diagram 3: Logout

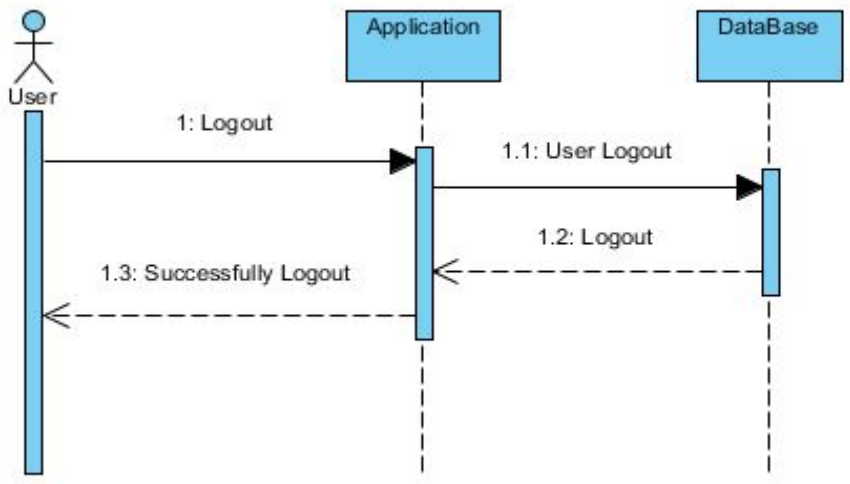

Figure 4.4 Sequence Diagram 3: Logout

Sequence Diagram 4: Delete User Account

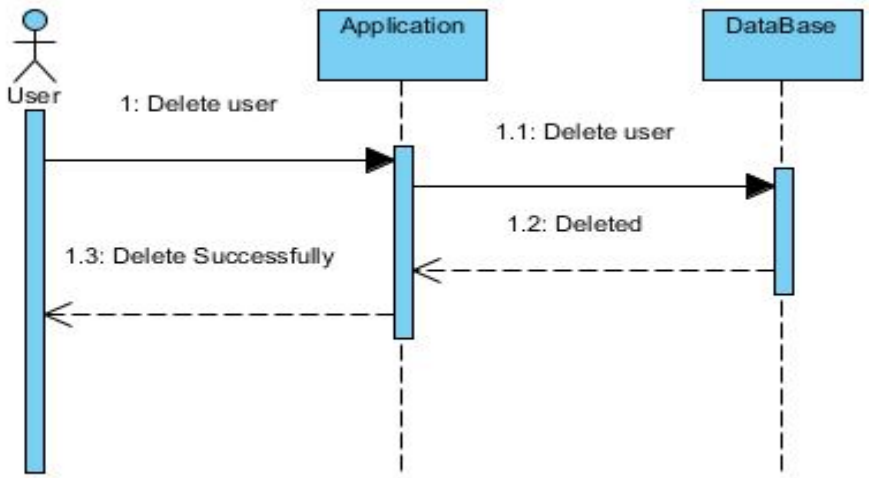

Figure 4.5 Sequence Diagram 4: Delete User Account

Sequence Diagram 5: Add User Account

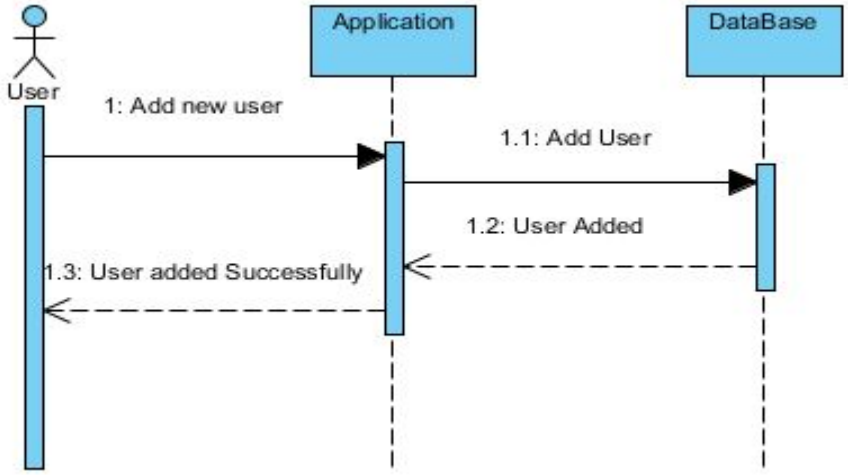

Figure 4.6 Sequence Diagram 5: Add User Account

Sequence Diagram 6: Update Inventory

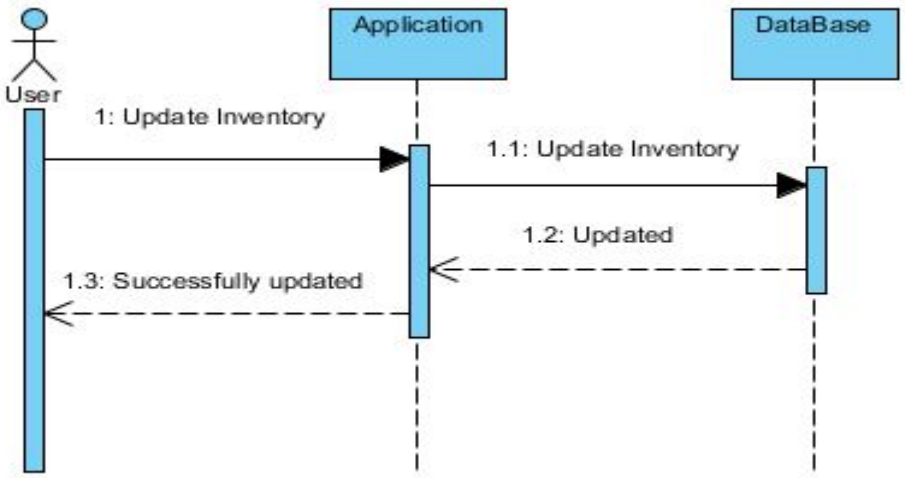

Figure 4.7 Sequence Diagram 6: Update Inventory

Sequence Diagram 7: Delete Inventory

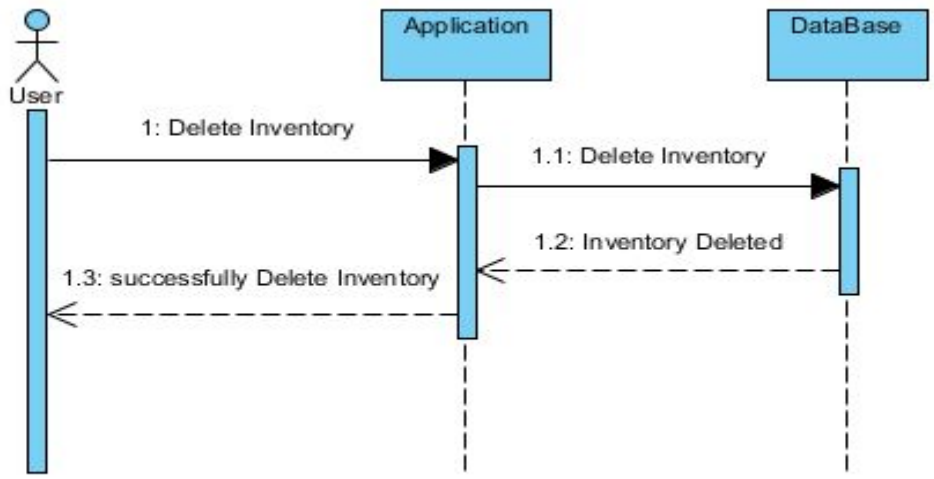

Figure 4.8 Sequence Diagram 7: Delete Inventory

Sequence Diagram 8: Add New Inventory

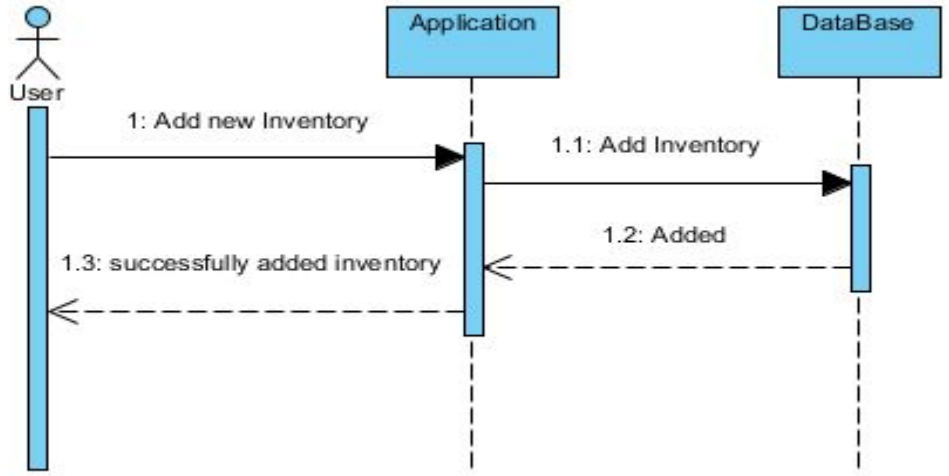

Figure 4.9 Sequence Diagram 8: Add New Inventory

4.7 Low Fidelity Prototype

These are some fidelity prototypes of this application which refers the workflow and functionality to get system overview.

Start up

Figure 4.10 Low Fidelity diagram 1: Start Up

Web Portal

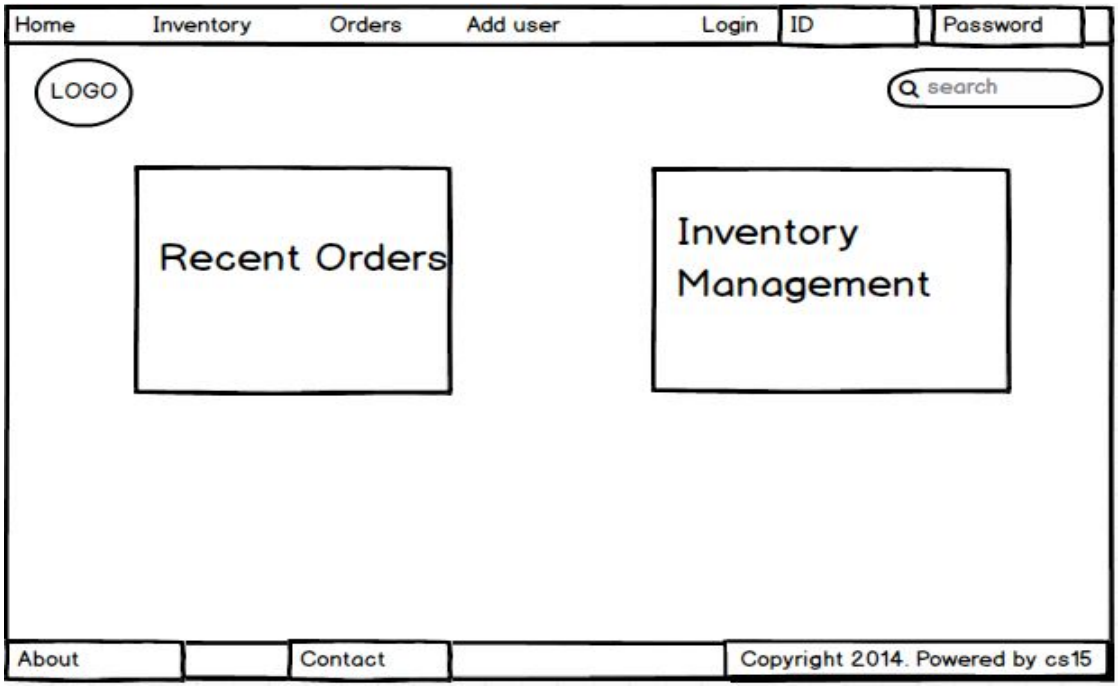

Figure 4.11 Low Fidelity diagram 2: Web portal

Sign Up

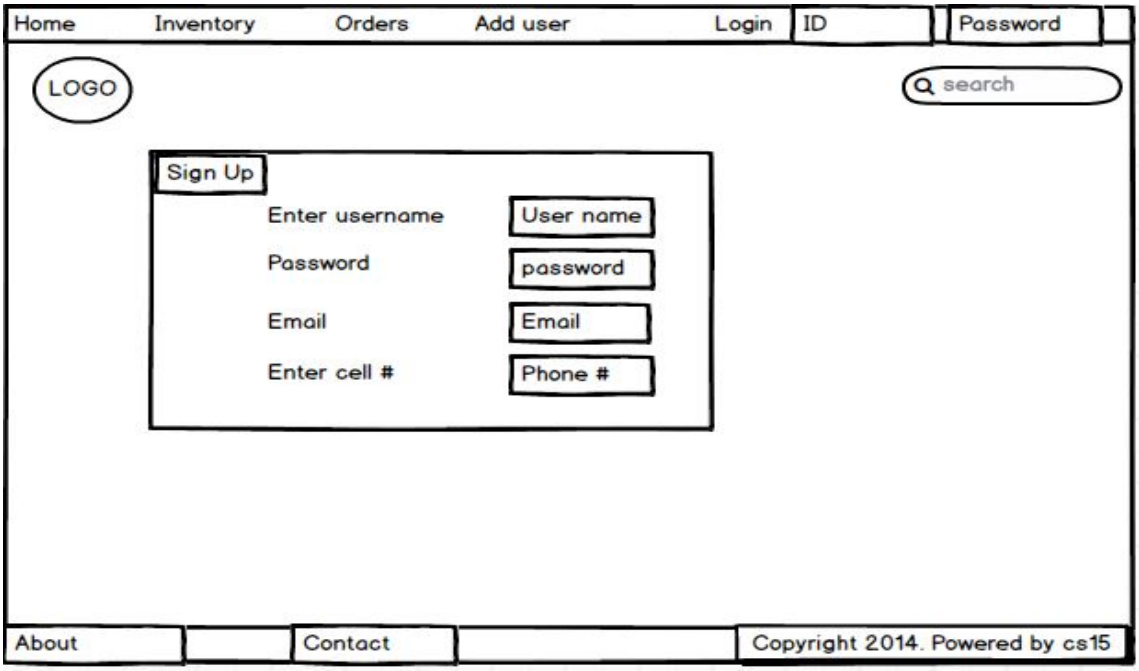

Figure 4.12 Low Fidelity diagram 3: Sign Up

Chapter 5

System Implementation

5.1 System Architecture

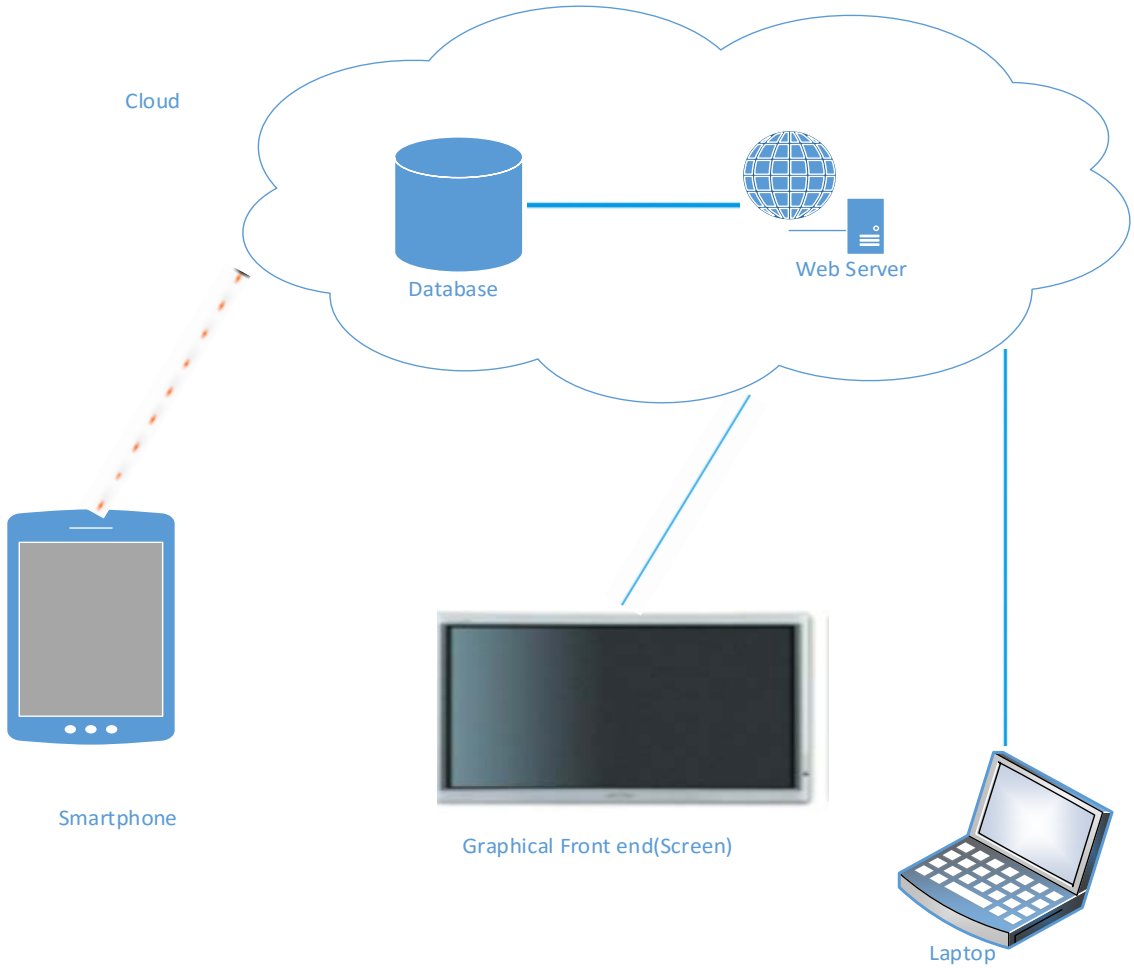

Figure 5.1 System Architecture

These are two main components of this system Architecture.

- **Mobile application**: Mobile application is the main part of this system. All the orders will take through this mobile application. Admin will give id and password to access this app. This application is Android based which can be installed any Android device.

- **Web Portal**: Admin can manage orders, users, Inventory through this web portal which is installed on webserver. Users may not have privileges to access or use this web portal.

5.2 Tools and Technology Used

- **Adobe Phone Gap**

  Adobe Phone Gap is open Source platform which provides developer to develop an application that run various mobile IOS. “The developer compose the user interface portion of application with HTML, JavaScript and CSS platform-specific development packages” [8].

- **Adobe Dreamweaver CC**

  Adobe Dreamweaver is the application which provides code editor with web design “It provides visual WYSIWYG editor (Design view)” [9].

- **MySQL**

  It is open source RDBMS that uses Structured Query language (SQL).

- **Cake-PHP:**

  It is a free open-source development framework of PHP. “It follow Model-View-Controller (MVC) [10].

- **Bootstrap:**

  “Bootstrap is front end development framework. It contains HTML and CSS design based templates and java script that provides user interface controls and it makes web interface responsive for different types of screen resolutions” [11].

- **WampServer**

  WampServer is a Windows web development environment.” It allows you to create Web Portals with Apache2, PHP and a MySQL database”. Using Wamp server we can run website virtually without buying webserver [12].

5.3 Application Access Security

In this application only authorized personals can access web Portal and mobile App. Admin can create user account and give them access to login to mobile application.

5.4 Methodology

Phase 1

In first phase, Web Portal have been developed, through this Web Portal admin gives a permission to the users to access the application. Admin manage all the activities through this web portal.

Phase 2

In second phase, mobile application was developed, which allow user/salesman to take orders and submit it to the vendor.

Phase 3

Proper web and app interface was designed and implement all of its components. Android and web apps were integrated.

Chapter 6

System Testing and Evaluation

6.1 Introduction

Software testing and evaluation is necessary part of software development. It ensure that everything is developed according to requirement. Testing should be completed in different phases before launching the product so that each functionality of the system is working and have no error.

6.2 Usability Testing

This testing is used to determine how much this system is user friendly. The application and its interface should easily understandable by the user.

6.3 Software Performance Testing

Software Performance test is perform to check the performance and efficiency of the system. Both the web portal and mobile application is reliable and works in efficient way.

6.4 Compatibility Testing

In this testing we check either the application is compatible with the system or platform in which this application will run. Web portal run on any browser e.g. Safari, Chrome, Firefox, and IE.For mobile application it will run on Android platform with 4.0 version.

6.5 Security Testing

Security Testing used to reveal the flaws in the application. In both web portal and Mobile application, login module will be tested when the application connected to the internet when there is no internet there will be error.

6.6 Load Testing

Load testing is used to determine the system's behavior under expected load and what is the system behavior when too much users are connected. These application response time is good when 10 users are connected at the same time.

6.7 Installation Testing

Installation Testing is used to install new software successfully. This application is tested on android platform 4.0 and it works fine.

6.8 Graphical user interface testing

Test case 1: Sign In without password

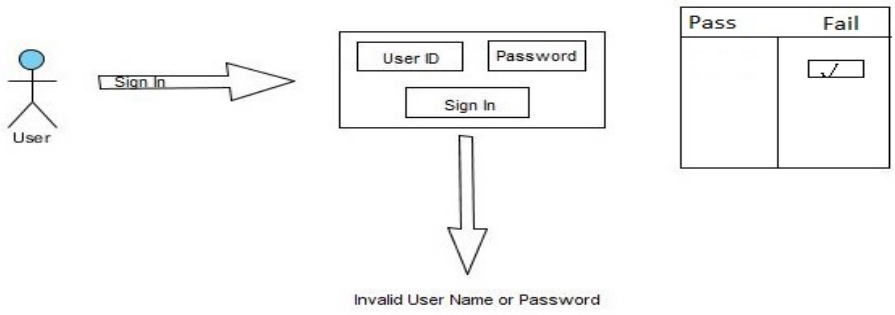

Figure 6.1 : Sign in test case

Result: User cannot sign in without password. Test case passed.

Test case 2: Sign in with password

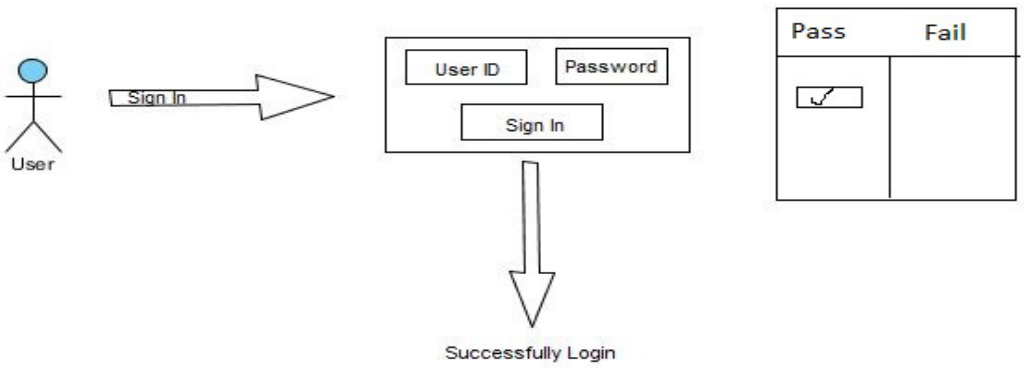

Figure 6.2: Sign In test case

Result: User can sign in with correct email and password.

Test case 3: Incomplete form submission.

.

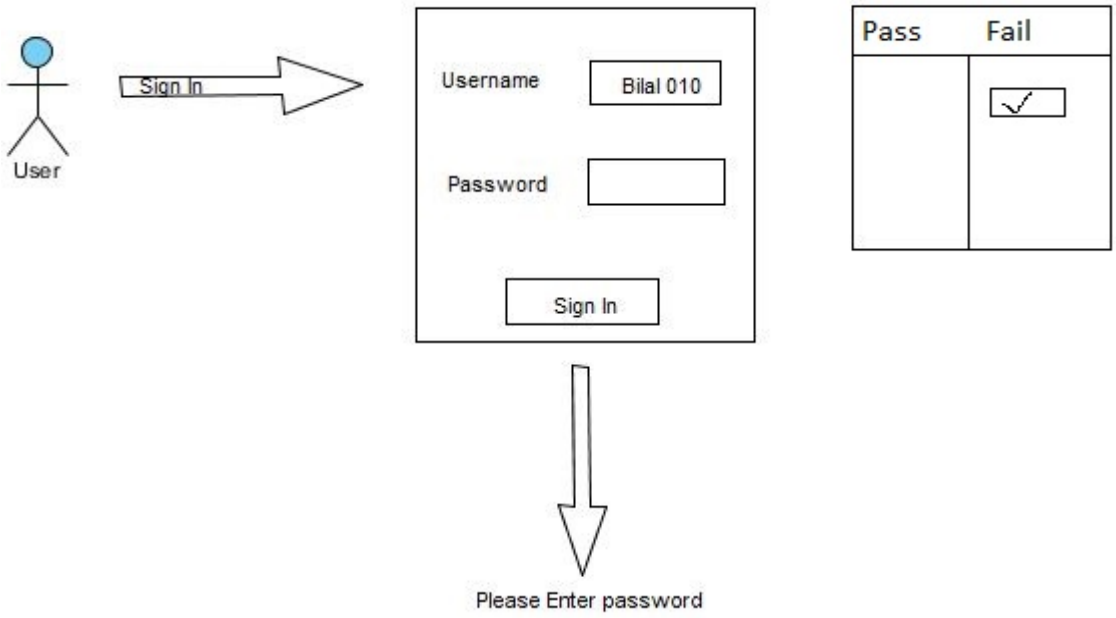

Figure 6.3: User registration test

Result: Test case passed. User cannot register until form is complete.

Test case 4: Complete form submission.

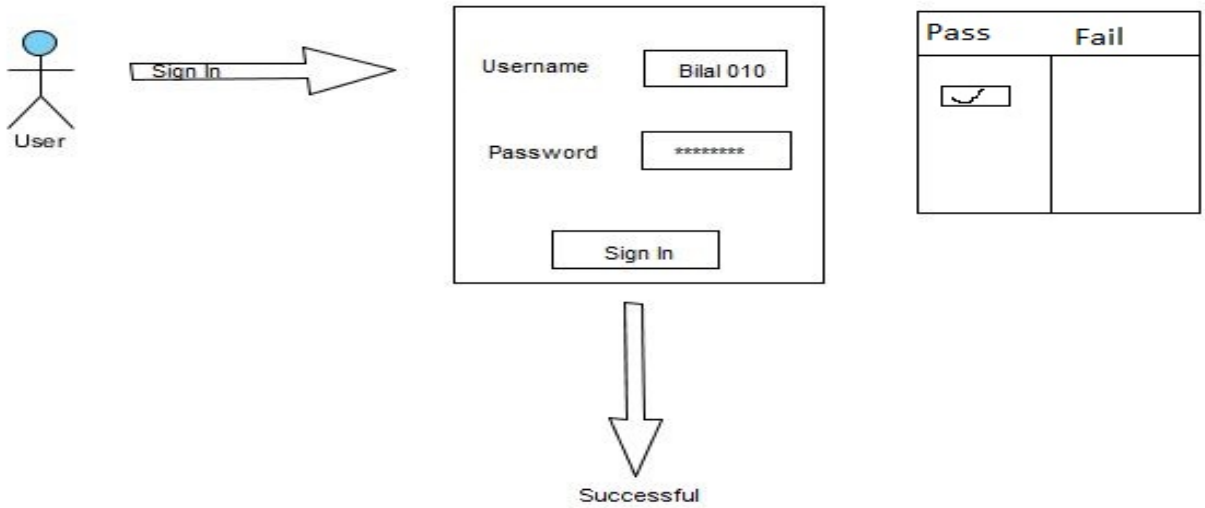

Figure 6.4: User registration test

Result: Test case passed. User cannot register until form is complete.

6.9 Test Cases

Test Case 1: Sign Up

Test Case ID	TC_FUNCT_01
Unit of Test	Verify user fields of in the form correctly.
Steps to be Executed	Create Account. Fill the sign up form. Enter username in valid format Enter full name Enter e-mail in valid format.
Expected Result	User should register successfully.
Actual Result	User registered successfully.
Status	Success

Table 6.1 Test Case 1: Sign Up

Test Case 2: Sign In

Test Case ID	TC_FUNCT_02
Unit of Test	To verify user Id and password
Steps to be Executed	Try Sign In. Enter correct user id Enter valid password. Click Sign In button.
Expected Result	User should sign In successfully.
Actual Result	User Sign In successfully.
Status	Success

Table 6.2 Test Case2: Sign In

Test Case 3: Sign Out

Test Case ID	TC_FUNCT_03
Unit of Test	To Verify that whether user sign out.
Steps to be Executed	Try Sign out. Click Sign Out.
Expected Result	User redirect to Sign In page successfully.
Actual Result	User redirect to sign In page successfully.
Status	Success

Table 6.3 Test Case 3: Sign Out

Test Case 4: Update User Information

Test Case ID	TC_FUNCT_04
Unit of Test	Update the user password.
Steps to be Executed	- Enter current password - Enter the new password. - Re-confirm password. - Click Submit button.
Expected Result	Password change successfully.
Actual Result	User password change successfully.
Status	Success

Table 6. 4 Test Case 4: Update user information

Test Case 5: Add New User

Test Case ID	TC_FUNCT_05
Unit of Test	Add new user
Steps to be Executed	- Enter name. - Enter password - Enter email address. -Enter cell number.
Expected Result	User add successfully.
Actual Result	New user successfully.
Status	Success

Table 6.5 Test Case 5: Add New User

Test Case 6: Delete user

Test Case ID	TC_FUNCT_06
Unit of Test	Delete user.
Steps to be Executed	- Enter name. - Enter the correct Email.
Expected Result	User should delete successfully.
Actual Result	User deleted successfully.
Status	Success

Table 6.6 Test Case 6: Delete user

Chapter 7

Conclusion

7.1 Conclusion

Android smart phones are very commonly used in these days. These android devices are currently used in hotels for taking order through android app. Android based order and delivery system is project which is helpful for marketing companies and their wholesalers for taking order online from shopkeepers instead of manually written the order, salesman write down the order by using android app and in real time this order received in company headquarter/supplier on their web portal with complete details of shopkeeper and notify the shopkeeper through mobile phone. In this way the supplier can deliver this order on same day within city. This process is fast as compared to manual system and it is cost efficient and reliable.

Before this, I have no idea for development of this kind of application and didn't have much knowledge of PHP. The main benefit of this application is I have learned PHP and android development. I have learned many thing during development of this project. I have learn how to manage and complete the project within deadline.

7.2 Future Enhancement:

In the second version of this application it will be compatible for Windows phone and Apple IOS.

Next thing is location based service in which location of every client is shown through GPS.

References

[1] ”Google Play Store” [online]
Available:
https://play.google.com/store/apps/details?id=com.metaoption.goodsorderinventory&hl=en.
[Accessed 16 March 2015].

[2] ”Android based order system for restaurant” [online]
Available: http://www.quorion.com/pos-software/portable-ordering-system-restaurants.htm.
[Accessed 19 March 2015].

[3] “Android based online mobile ordering platform,” [online]
Available: http://techcrunch.com/2012/11/30/teburu-debuts-an-android-based-online-mobile-ordering-platform-for-restaurants/ [Accessed 16 March 2015].

[4] ”Mobile Ordering,” [online]. Available: http://menudrive.com/mobile-ordering. [Accessed 19 March 2015].

[5] “eOrder,” [online]. Available: http://www.bizztrax.com/eOrder. [Accessed 26 March 2015].

[6] ”Android POS,” [online]. Available: http://www.kcss oftware.com/android-pos.html. [Accessed 26 March 2015].

[7] ” Portable restaurant Ordering system,” [online]. Available: http://www.quorion.com/pos-software/portable-ordering-system-restaurants.htm. [Accessed 28 March 2015].

[8] “PhoneGap,” [online]. Available:http://www.smashingmagazine.com/2014/02/11/four-ways-to-build-a-mobile-app-part3-phonegap/. [Accessed 7 APRIL 2015].

[9] “Adobe Dreamweaver,” [online]. Available: http://en.wikipedia.org/wiki/Adobe_Dreamweaver

[10] "CakePHP," [Online]. Available: http://en.wikipedia.org/wiki/CakePHP. [Accessed 7 APRIL 2015].

[11] "Bootstrap_(front-end_framework)," [Online]. Available: http:// en.wikipedia.org/wiki/Bootstrap_(front-end_framework). [Accessed 7 APRIL 2015].

[12] "wampserver," [Online]. Available: http://www.wampserver.com/en. [Accessed 12 APRIL 2015].

APPENDEX

Appendix A

User Manual

A.1 Introduction

This user manual will deliver an appropriate way to use web portal and android App.

This application and web portal is used by vendors and suppliers for taking order online from shopkeepers through android app, this order will receive web portal in real time and client will notify through text message with complete details of order.

A.2 Select warehouse

- This is main page of web portal and android app in which vendor select warehouse from the list.
- This page appears in screen as main page of this application.
- Android app have two option, salesman can Add sale or Add new client.

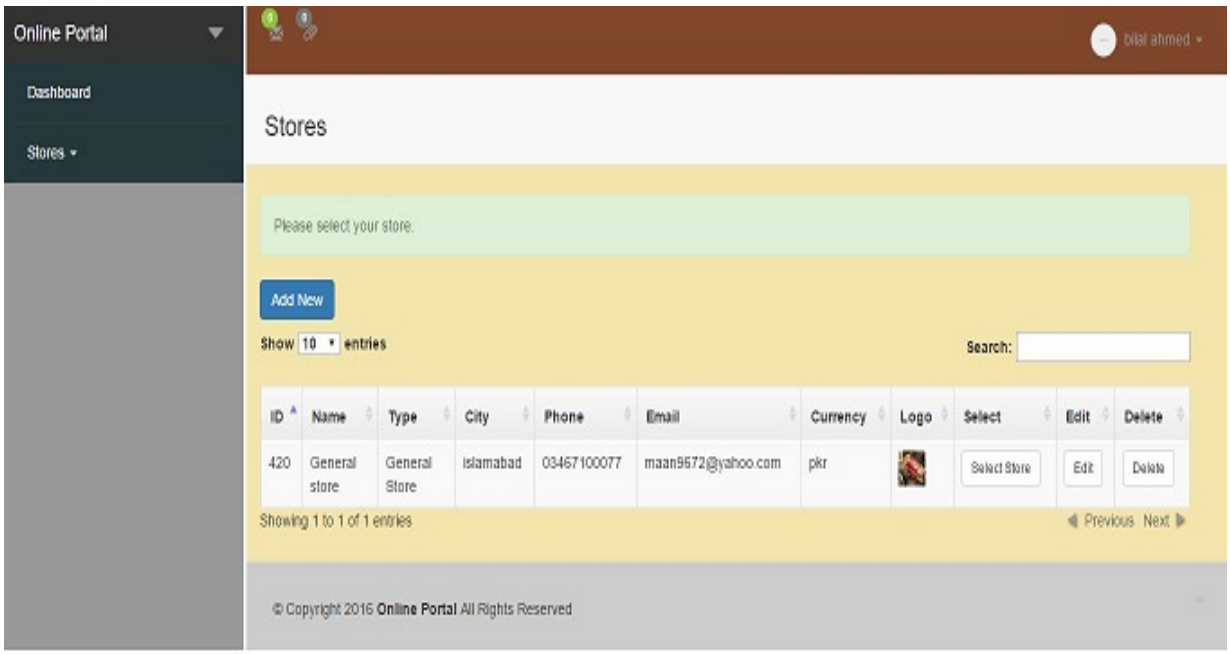

Figure A 2 warehouse selection

A.3 Store overview

After selecting warehouse, store menu will be display in which supplier

- View sale history
- Purchases
- Clients
- Product details

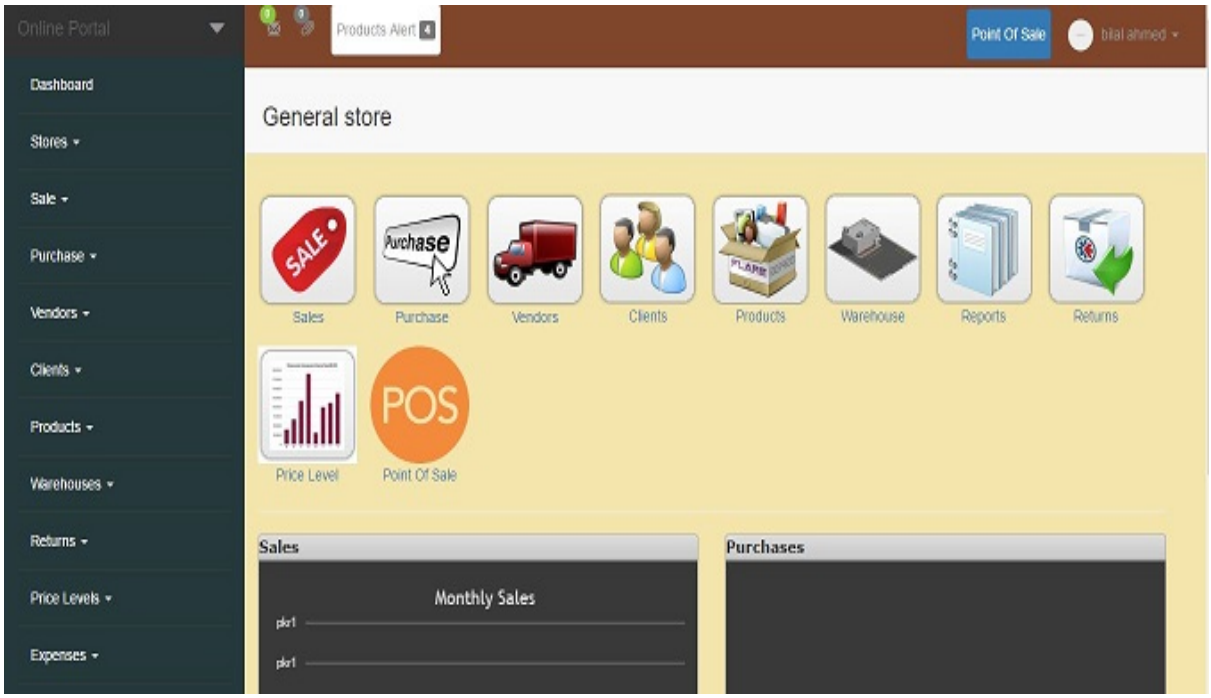

Figure A 3 store Overview

A.4 Manage clients

In this Menu supplier can manage clients by.

- Delete client
- Update their information
- Add new client

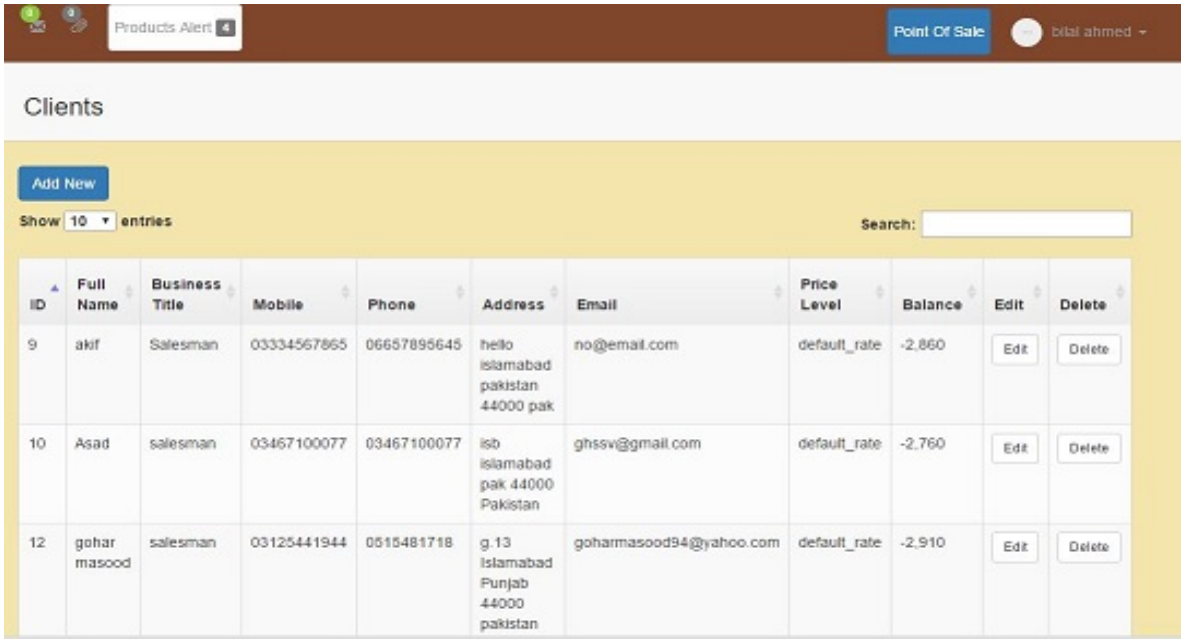

Figure A 4 Manage client

A.5 Manage Products

In this Menu supplier can manage all of their products by.

- Add new products
- Delete existing products
- Update product information and quantity

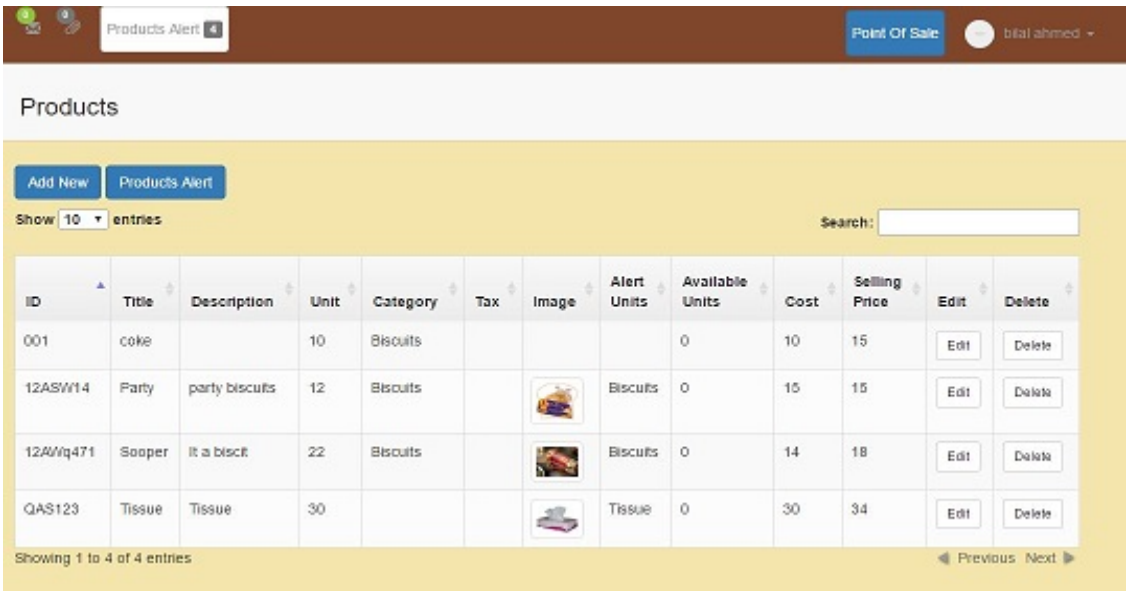

Figure A 5 Manage product

A.6 Taking order

Salesman will take order through android application by selecting.

- Client
- Products
- Product quantity
- Warehouse

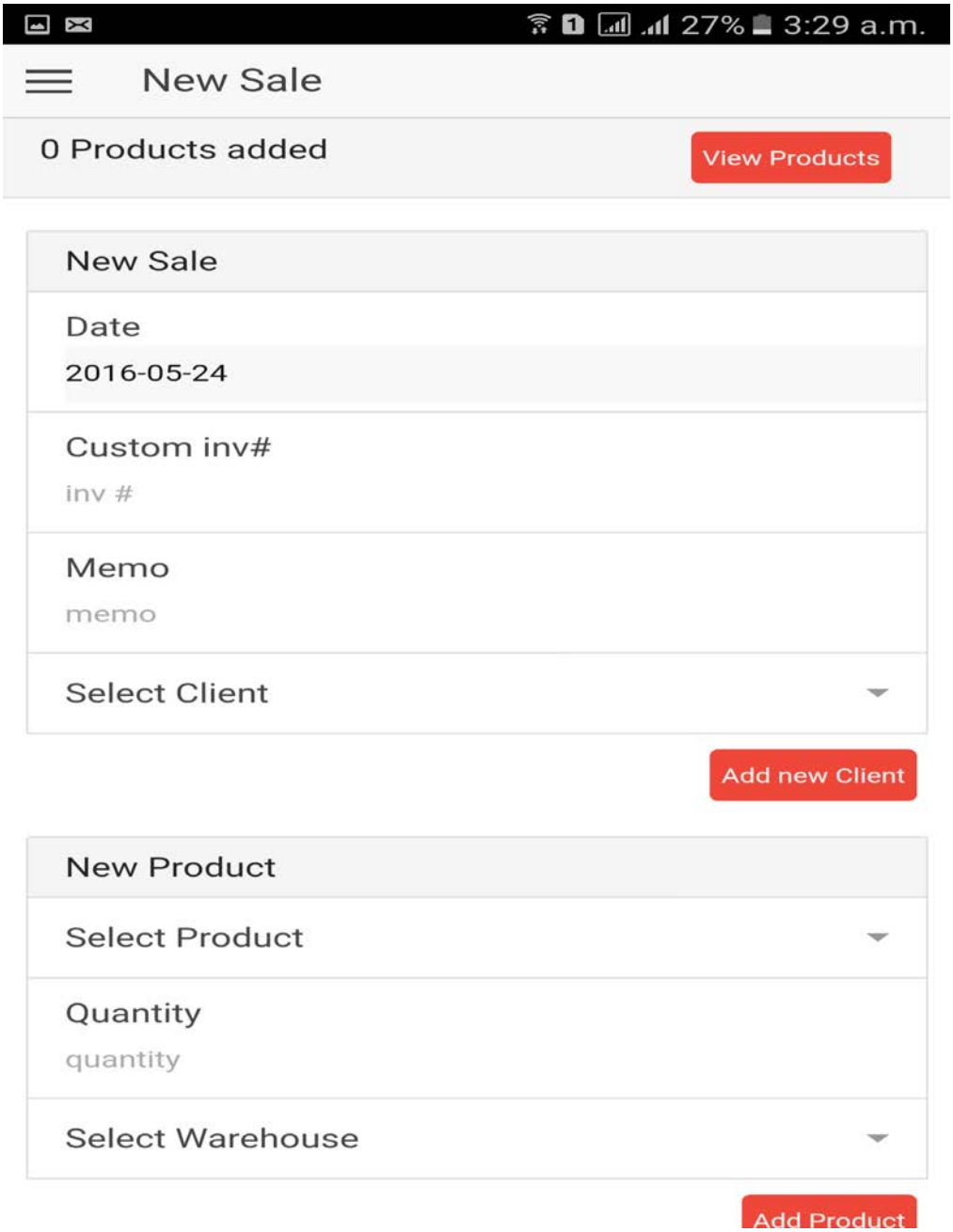

Figure A 6 Taking Order