Online Pizza Ordering System

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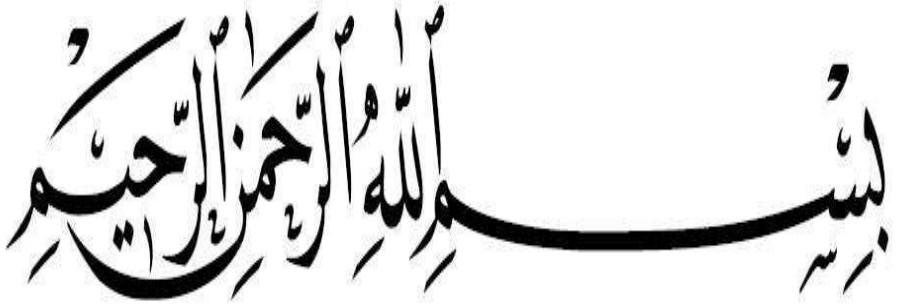

In the Name of Allāh, the Most Gracious, the Most Merciful

DECLARATION:

I, the undersigned hereby declare that the Online Pizza Ordering System is my own work, that it has not been submitted for any degree or examination in any other university to my knowledge, and that all sources I have used or quoted have been indicated and acknowledged by complete references.

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Project in Brief

Project Title:	**Online Pizza Ordering System**
Undertaken By:	Muhammad Awais Shafique
Internal Supervisor:	**Ms.Bushra Almas**
Started:	February 2018
Completed:	September 2018
Languages:	JavaScript, Java, HTML, CSS , XML
Database:	Mongo DB
Tool*:*	Visual Studio Code, Android Studio
Documentation:	Microsoft Office 2010, Microsoft Visio 2010
Operating System:	Windows 10
System Used:	Core i5, 2.60GHz, Hard Disk 320 GB

Dedicated To

My beloved parents & inspiring Teachers for their endless support & encouragement.

ACKNOWLEDGEMENT

First and foremost I am thankful to Almighty ALLAH for giving me the opportunity, courage and strength to successfully complete this project within the specific time duration. I am thankful to my parents, specially my mother for her prayers, and my beloved father for his prayers and financial support during my educational career, whose love and affection has been inspirational throughout my life. I also thank to my brother and sister for their help and prayers.

I wish to express my deepest appreciation to my supervisor Ms.Bushra Almas. Her sounding advice helped me steer this project in the right direction. Her supervision guided and supported me from initial to the final level and enabled me to develop an understanding of the project.

Finally, my classmates whose technical and moral support throughout my stay at the IT department was of great help.

Muhammad Awais Shafique

Abstract

This project is aimed to provide a customized solution of quicker and more satisfying online pizza ordering system under the digital business trend. For the online pizza ordering system website and mobile applications are implemented for customers to view pizzas and place orders. Meanwhile, restaurant managers are able to manage pizza, orders, and comments by logging in the website management dashboard. By using this application user can order anything in any quantity, this option is not available in any existing application. This application is customers friendly and has socially accepted norms. It is an innovative idea in the boom of global village. It is the discovery of wheel in this fast pace world. My project will open new window for the corporate world. It will be also add values in consumer value market.

Keywords. Software, Application, Database, Users/customers, and Android.

Thesis Organization:

The thesis is organized in the following manner:

Chapter 1 gives the complete overview of the project, organization and project planning activities. Chapter 2 comprise of the system requirement analysis. Chapter 3 focuses on the design phase of the system with its characteristics. Chapter 4 contains the system implementation details. Chapter 5 provides details about testing carried out for this project. Chapter 6 includes conclusion. In the last portion of the thesis includes references.

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Chapter No .01

Introduction

- Project Introduction
- Scope
- Existing solution
- My solution
- Objectives
- Motivation
- Advantages of new system

1.1 Introduction:

This project has been developed on Node.js and Android. The main aim of this project online pizza ordering system is to sell pizza online order. In this project online pizza ordering system customer can give order any place and pay the cash on delivery time. This project provides information of customer before making order. This project online pizza ordering system is very helpful for customers in ordering custom pizzas. This project provides a lot of features to manage in very well manner. In current system we have integrated a single payment system cash on delivery but in future we will enhance it with online payment system. When an order has been confirmed by a customer order processing beings. Throughout the order processing the order status will be updated and the customer will be notified. New order will be show up in a list for the employee in the kitchen.

1.2 Scope:

The online pizza order system is an online mobile application that permits new users to place their orders online. The scope of the system is represented by general diagram. General diagram is the highest level view of the system.
It represents the actors outside a system that could interact with that system.

- The system provides administrator login facility and administrator can add, update, delete and view all categories of information about pizzas.
- Application contains information like price of pizza, size of pizza, Quantity, and other products.

1.3 General diagram of project:

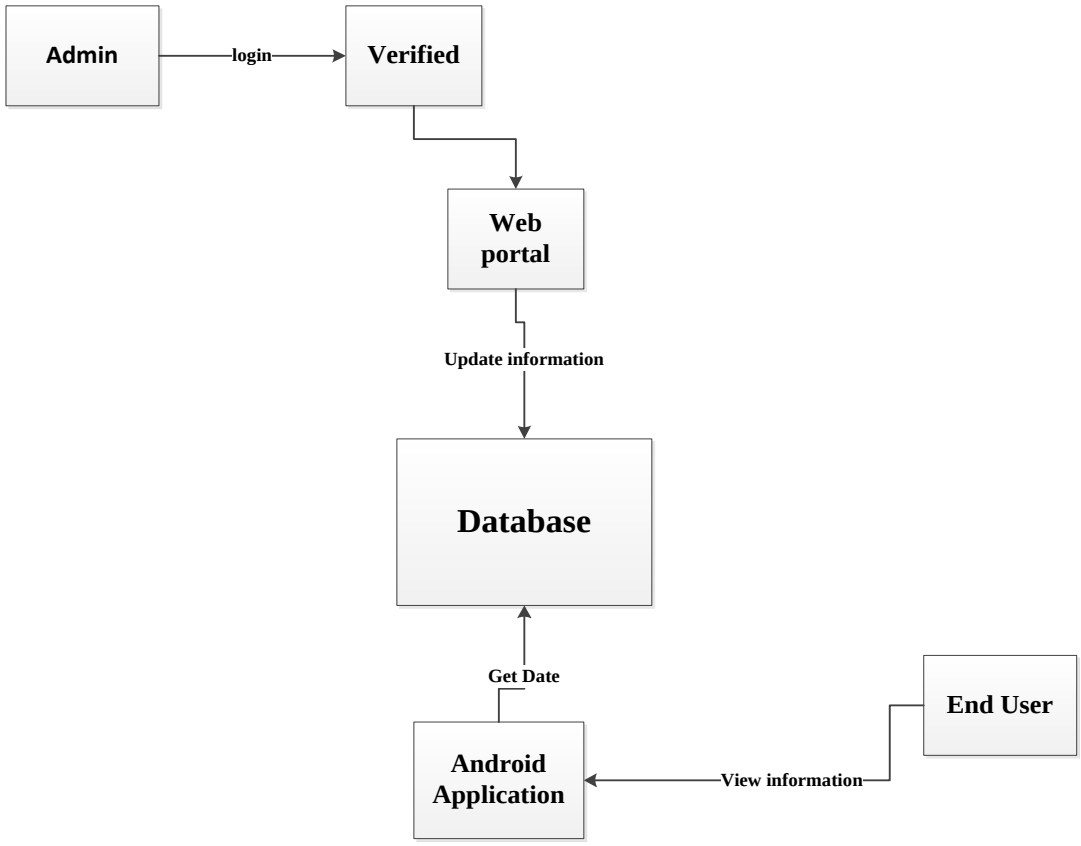

Figure 1.1

1.4 Existing solutions:

There are many different web based ordering systems. Those systems do not offer all the functionality that is needed for a pizza shop. Ordering systems usually allow people to add products and separate them in different categories and subcategories. Pizza shop sells pizzas, and most of them also offer clients to customize their own pizzas by picking their own choice. At the same time they offer other products that do not need customization like the side orders. That does not fit into the general category-subcategory differentiation.

1.5 My solution:

My solution is to make an ordering system that separates ordering pizzas from ordering the side dishes (non-pizza products) in an intuitive way. The ordering system provides the user with three tabs: one for customizing pizzas, one for side orders, and one for delivery details. Customers can switch to any tab anytime. Hence the system will decrease workload of the employees and benefit the pizza shop due to the database / information system. Information will be stored in the system and can be viewed at any time. The system will be able to guide a user through the application and make then complete their pizza order. When they are done with filling in all information regarding their order they can complete the order to send it to the pizza shop.

1.6 Objectives:

The main objective of the pizza ordering system is to manage the detail of payments, Pizza, Customer and Order status. It manages all the information about payments online order, Order status. The project is built administrative end and thus only the administrative guaranteed the access. The purpose of the project is to build an application program to reduce the manual work for managing the payments, Customer, Online order. It tracks all the details about the pizza and order status.

1.7 Motivation:

In this fast paced digital world where mobiles are gaining popularity, there is a need for an online Pizza ordering application that will help people to enjoy pizza purchasing at home, and use that time and effort in some other constructive work.

1.8 Advantages of new system:

- This application can be accessed by multiple users at a time.
- Provide pizza and non-pizza product on app and user give the order using mobile app.
- No need of any external effort for getting information.
- Just need some knowledge to operate the phone only.
- Do not need any type of external hardware or software.

Chapter No .02

Requirnment Analysis

- Introduction
- Functional Requirements
- Non-Functional Requirements
- Project Requirements
- Resource Requirements
- User Classes and Characteristics

2.1 Introduction:

Requirements analysis is also called requirements engineering. Requirement engineering reduces the risk of schedule and cost overruns and increases the likelihood that the implementation will meet the user's requirements. All the information accessible is associated the developments.

The purpose of requirements analysis is to setup common understanding among project stakeholders, the output of analysis is a requirement document, and the document can be business requirement specification, technical requirement specification, user stories, some screen shots drawings, or any other documents.

2.2 Functional Requirements:

Functional requirement describe the main functionality of the system. These requirements are requested by the customer to the developer. The presences of functional requirements are very important for the system because if any one of the functional requirement is missing in the system, our system will be incomplete. Functional requirements deal with what the system should do or provide for users. They include description of the requirement functions, outlines of associated reports, online queries or detail of data to be held in the system.

2.3 Project Requirement:

Three types of users should be able to use the system: customer, employee and administrator. Customers are users who visit the application and can create orders by customizing pizzas, selecting products and entering customer details. Employees are the group of users that work with the ordering system on a daily basis. They are the ones responsible for processing orders. The administrator, or super user, has the ultimate control of the system; he can add, change or delete products.

2.3.1 User Requirements:

- User Requirements of the system are as follows:
- The user should be able to use the android application from any android phone.
- The user must be able to create a new order.
- The user must be able to view a list of available pizzas.
- The user must be able to add a custom pizza to an order.
- The user must be able to view a list of available non-pizza products.
- The user must be able to add non-pizza products to an order.
- The user must be able to change the amount of a custom pizza.
- The user must be able to change the amount of a non-pizza product.
- The user must be able to delete a custom pizza from an order.
- The user must be able to delete a non-pizza product from an order.
- The user must be able to see the total price of an order.
- The user must be able to add the name and address of the customer.

- The user must be able to clear the current order to start a new one.

2.3.2 Administrators Requirements:

Administrative Requirements of the system are as follows:

- Administrator should be able to manage android application data through web application using web browsers.
- The administrator must be able to log in and out.
- The administrator must be able to add/delete/edit orders.
- The administrator must be able to add/delete/edit pizzas.
- The administrator must be able to add/delete/edit non-pizza products.
- The administrator must be able to add/delete/edit other users.
- The administrator must be able to view an order log.
- Only users with respective rights (administrators) must be able to use all these "Administrators" features.

2.3.3 Employees Requirements:

Employees Requirements of the system are as follows:

- The employee must be able to view a list of available orders and their custom pizzas.
- The employee must be able to mark orders as "prepared".
- The employee must be able to mark order as "delivered"
- The employee must be able to mark order as "failure to deliver"
- Only users with respective rights (employee) must be able to use all these "Employees" features.

2.4 Non-Functional Requirements:

Non-functional Requirements describe the overall qualities and attributes of the proposed or modified system. These requirements place restrictions on the product being developed, the development process, and specify external constraint that the product must meet. Non-functional requirements include performance, safety, security, usability, reliability, and maintainability requirements.

2.4.1 Performance:

Performance requirements define acceptable response times for system functionality. This means that the retrieval speeds of any information, data about projects and commands should be fast to perform the actions quickly.

The performance of system includes:

- The load time for user interface screens shall not take longer than two seconds.
- The log in information shall be verified within five seconds.
- Queries shall return results within five seconds.

2.4.2 Security and privacy:

System must be developed in such a way that it would provide security and privacy. It should prevent any unauthorized access to system. Security and privacy of system will be:

- A manger's password used for login must have strong password e.g.; password should be combination of characters, symbols and letters.
- A manager's password used for login must be changed after every week.
- The display shall not require any unauthorized user to log-in e.g.; biometric authorization system should be there.

2.4.3 Usability:

Usability is very important non-functional attribute which help the new user to understand the system. This means system should be designed in an interactive way so that our system should be easy to use, easy to learn and easy to handle. Usability of this system includes:

- The interface is easy to understand as it contains images of every dish.
- The interface appears easy to use rather than demanding and frustrating.

2.4.4 Reliability:

System should be reliable and it must perform all the tasks for what it is made. It should not be accepted if system crashes during run time. System will have said to be more reliable that how fast it recovers from the abnormal conditions. This functionality can be achieved by adding exception handling techniques in implementation.

- The system shall be capable of restoring itself to its previous state in the event of failure e.g. a system crash or power loss.
- The system shall be able to display menu at times to facilitate manual order taking.

2.4.5 Availability:

The system should available all the time. When the user makes any query the database can send the result within the milliseconds. The systems will available 24/7.

2.4.6 Maintainability:

The database may crash at any certain time due to virus or an operating system failure. Therefore, it is required to keep a backup of all the data on the database to avoid any data loss.

2.4.7 Multi-platform delivery:

Since there is a wide variety of operating systems by which it will be used, so, this android application would be accessible by any platform having any type of browser.

2.5 Resource Requirement:

The resources which are needed to achieve the objectives of the business plans. Resource requirements most likely include equipment's and materials, technologies and availability of external services.

2.6 Software Requirement:

These are the software requirements of our project.

Table 2.1 Software Interface

Operating System	Window 10
Environment	Android Studio
Android Version	3.1
Language used	Java, JavaScript, Html, CSS

2.7 Hardware Requirement:

These are the hardware requirements of our project.

Table 2.2 Hardware Interface

System	64-bit Operating System
Processor	1.70 GHz
RAM	4 GB
Hard disk	320 GB

2.8 User Classes and Characteristics :

The system can be classified as follows:

- **Admin**
- **User**

Admin:

Admin can login/logout the system

Admin would be able to add any type of Pizza

Admin can update all information about pizza and non-pizza product.

Admin can view the uploaded the information in tables.

Admin can delete the information after date is expired

User:

User can use Android Application to get information about pizzas.

User can view any type of information related to specific category.

User can view all information about pizzas at any place and any time.

Chapter No .03

System Analysis And Design

- Introduction
- Use Case Diagram
- Uses cases description
- Activity Diagram
- Class Diagram

3.1 Introduction

System analysis and design deal with planning the development of pizza ordering systems through understanding and specifying in detail what a system should do and how the components of the system should be implemented and work together. System analysts solve business problems through analysing the requirements of information systems and designing such systems by applying analysis and design technique

3.2 Use Case Diagram

A use case is a description of steps or actions between a user, actor and software system which leads the user towards something useful. The graphical overview of the functionally provided by the system in terms of actors, their goals and any dependencies between them are shown in use cases.

Use case analysis is an important and valuable requirement analysis technique that has been widely used in modern software engineering since it's a formal introduction of system.

The purpose of a use case diagram can be as follows:

- Used to gather requirement of a system.
- Used to get an outside view of a system.
- Identify external and internal factors influencing the system.
- Shows the interaction among the requirements are actors.

Use Case Diagram Admin:

Figure 3.1 shows the use case diagram of Admin.

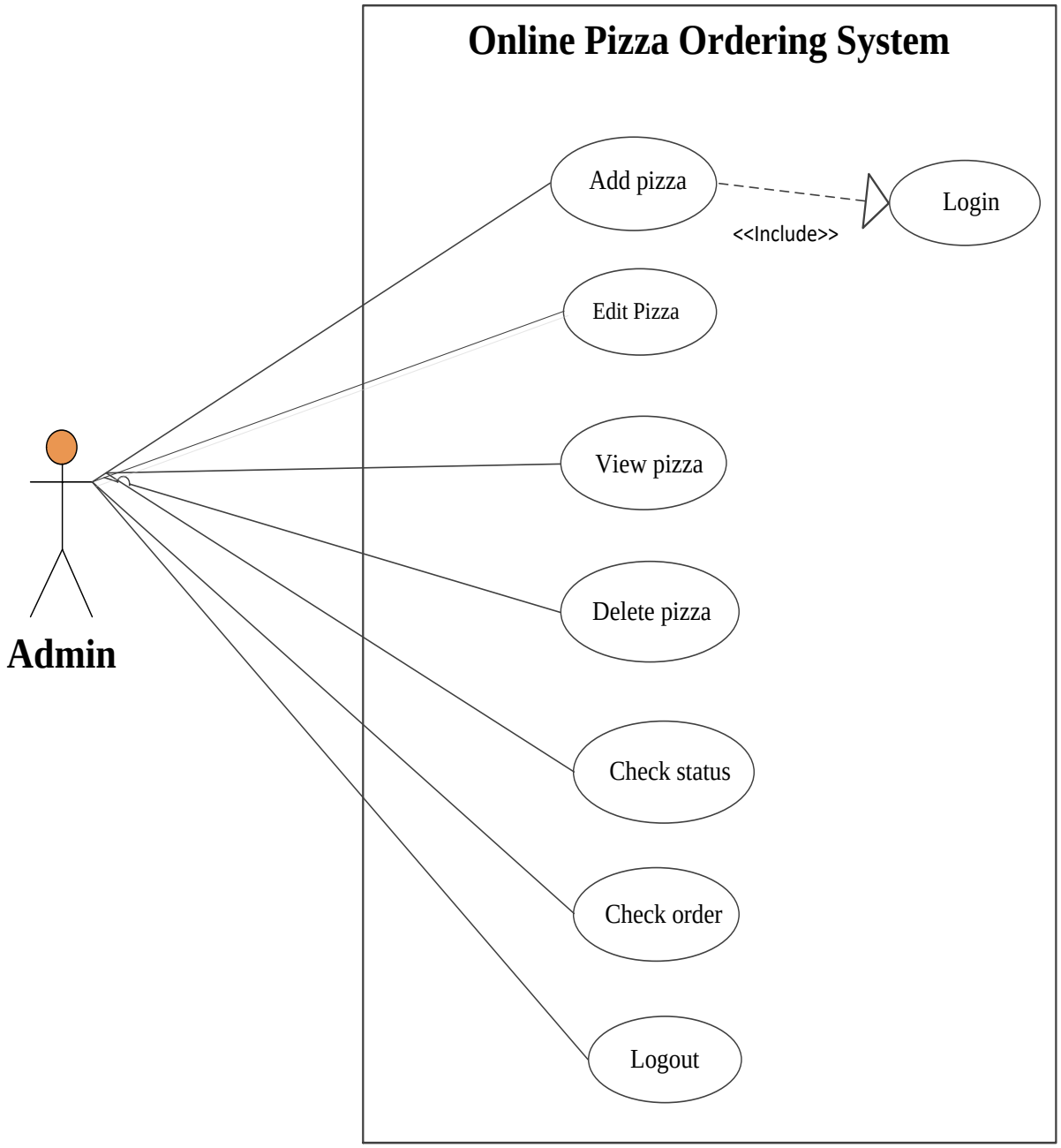

Figure3.1 Use case Diagram Admin

Use Case Diagram User:

Figure 3.2 shows the use case diagram of user.

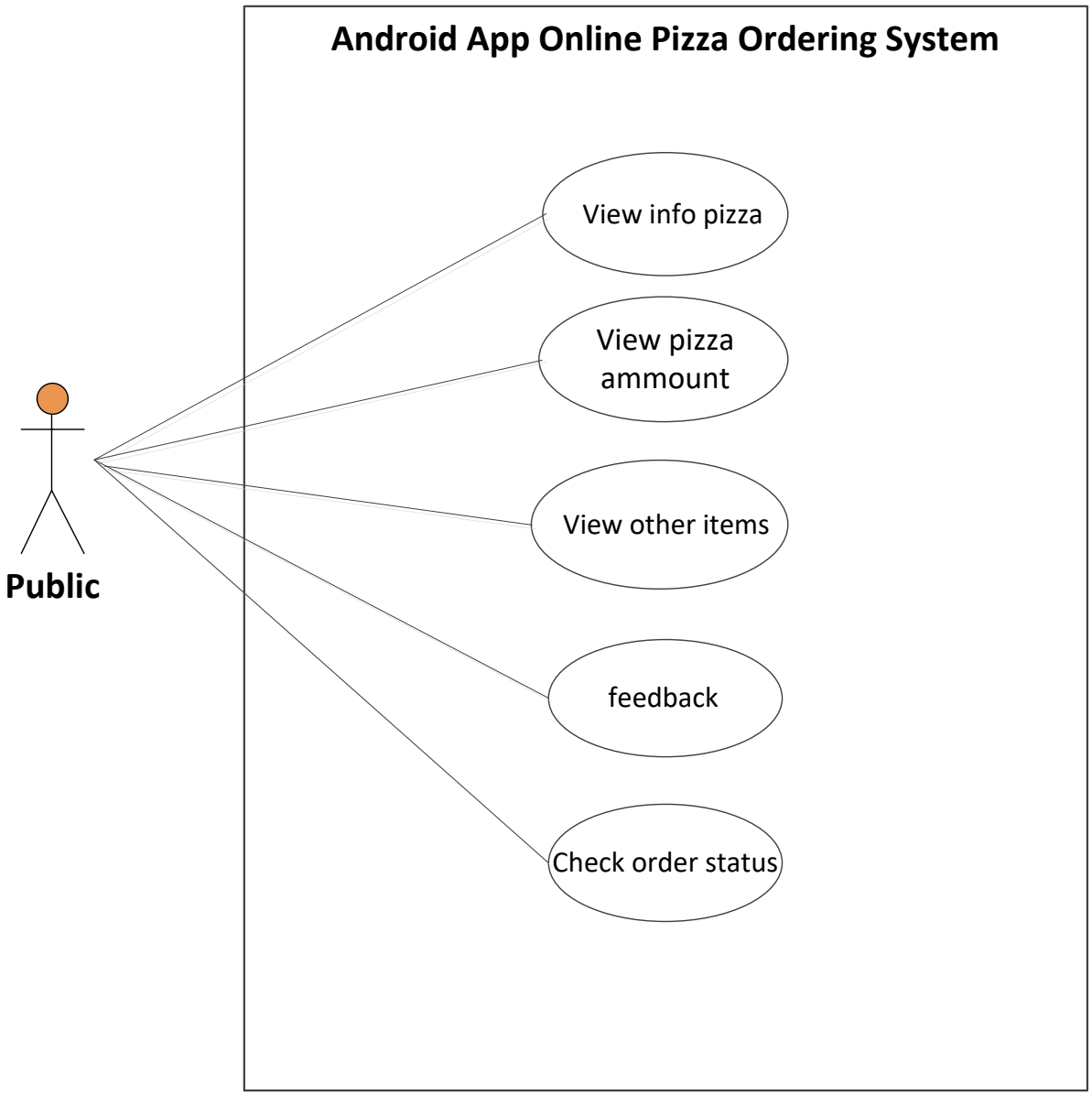

Figure3.2 Use Case Diagram User

Uses cases description:

Use case is a type of textual requirements specifications to describe how users interact with the system to complete their specific goals. Use case captures all the possible ways the user and the system can interact that result the user achieving their goals. They describe the step by step process the users goes through to complete their goals.

Table 3.1: Use Case Login

Use Case ID	1
Use Case Name	Login
Actor	Admin
Description	Admin login to the system by providing username and password.
Precondition	Admin should have an internet connection and connected to the system.
Post Condition	Logged in.
Basic Flow	Admin should enter username, password and press login button. 1. System should display two input fields with login option username and password. 3. System validates their username and password. 4. User is logged into the system after validate.
Exceptional Flow	Admin cannot login to the system if they have Wrong password.

Table 3.2: Use Case Add Pizza information

Use Case ID	2
Use Case Name	Add pizza Information
Actor	Admin
Description	Admin upload pizza information in the system.
Precondition	Users should have an internet connection and connected to the system.
Post Condition	Admin can upload pizza information
Basic Flow	Admin can view the details.
Exceptional Flow	Disconnection of internet or wrong login password.

Table 3.3: Use Case View pizza information

Use Case ID	3
Use Case Name	View pizza information
Actor	Admin/public
Description	Admin/public should be able to view pizza information.
Precondition	User should have an internet connection and connected to the system.
Post Condition	Admin can view pizza information after login.
Basic Flow	Public can view pizza information through Android Application.
Exceptional Flow	Disconnection of internet or wrong login password.

Table 3.4: Use Case Update pizza information

Use Case ID	5
Use Case Name	Update Information
Actor	Admin
Description	Admin will be updated information.
Precondition	Admin should have an internet connection and connected to the system.
Post Condition	Admin should be able to update information.
Basic Flow	Admin interact with the system and update the information about Pizza.
Exceptional Flow	Disconnection of internet or wrong login password.

Table 3.5: Use Case Delete pizza information

Use Case ID	5
Use Case Name	Delete Information
Actor	Admin
Description	Admin should be able to delete any type of information.
Precondition	Users should have an internet connection and connected to the system.
Post Condition	Admin should be able to delete any type of information about pizza from the system.
Basic Flow	Admin can view the details.
Exceptional Flow	Disconnection of internet or wrong login password.

3.4 Activity Diagram

The activity diagram represents the scenario for each use case in a use case diagram. The requirements are well defined using activity diagrams and this increased interest on generation test scenarios using activity diagrams. The activity diagram is the graphical representation of workflows of stepwise activities or actions. The activity diagram shows the overall flow of the system.

These are the activity diagrams according to our system:

- Activity Diagram Admin
- **Scenario 1: Activity Diagram Admin**
- The Admin logs in by providing correct username and password.
- If admin name and password are not found on the database access into the system is denied.
- If the credentials are identical to the ones found on the database, access is granted.
- Admin enters the details of the new Pizza.
- The Admin input is written to the database.
- Admin Add new pizza, Update pizza information and Delete pizza information.

Activity Diagram Admin:

Figure 3.3 shows the activity diagram of Admin.

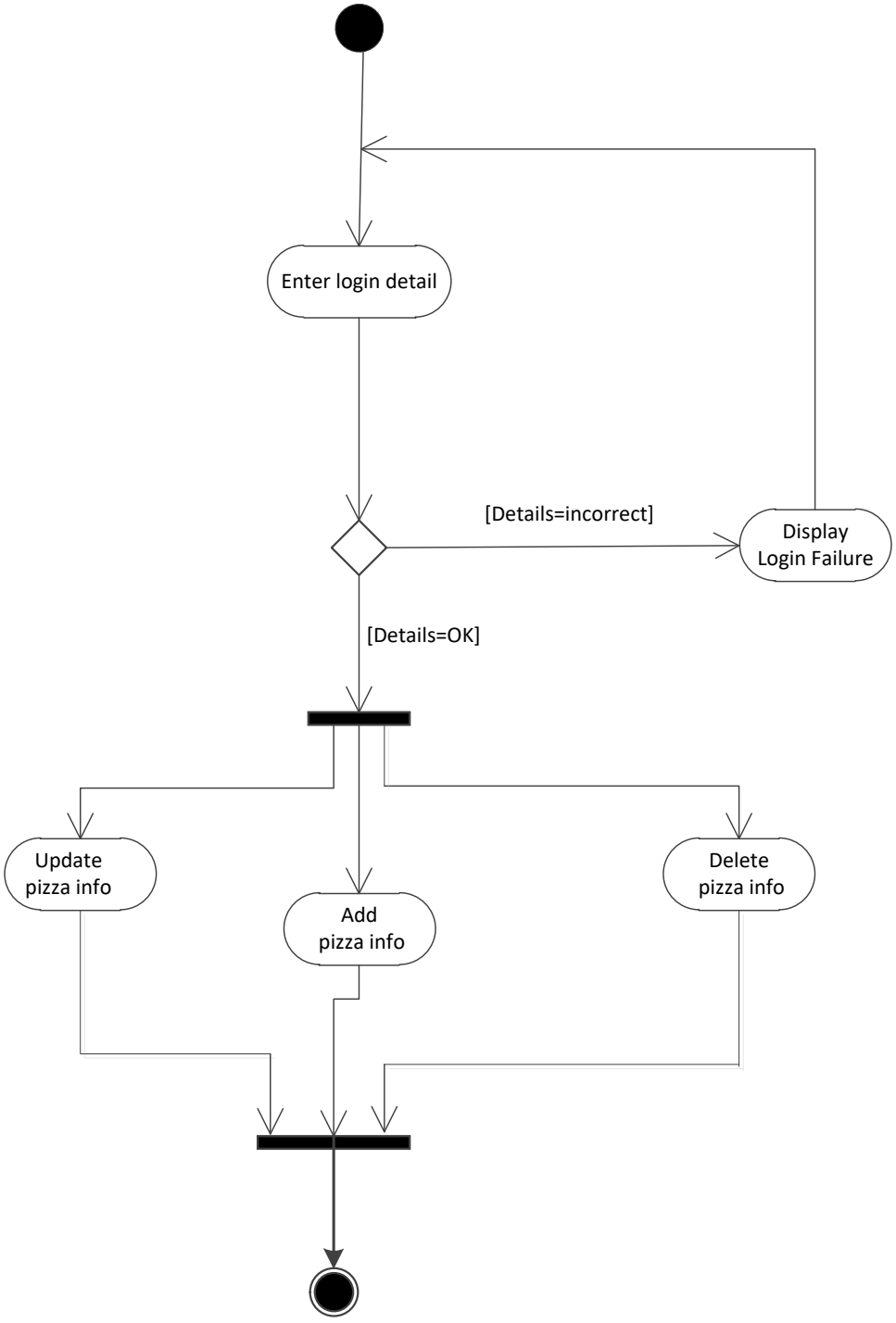

Figure3.3 Admin activity Diagram

3.5 Class Diagram:

The class diagram is a static diagram. Class diagram shows the static view of an application. It is not only used for visualizing, describing and documenting different aspects of a system but also for constructing executable code of the software application. The class diagram describes the attributes and operations of a class and also the constraints imposed on the system. The class diagrams are widely used in the modeling of object oriented systems because they are the only UML diagrams which can be mapped directly with object oriented languages.

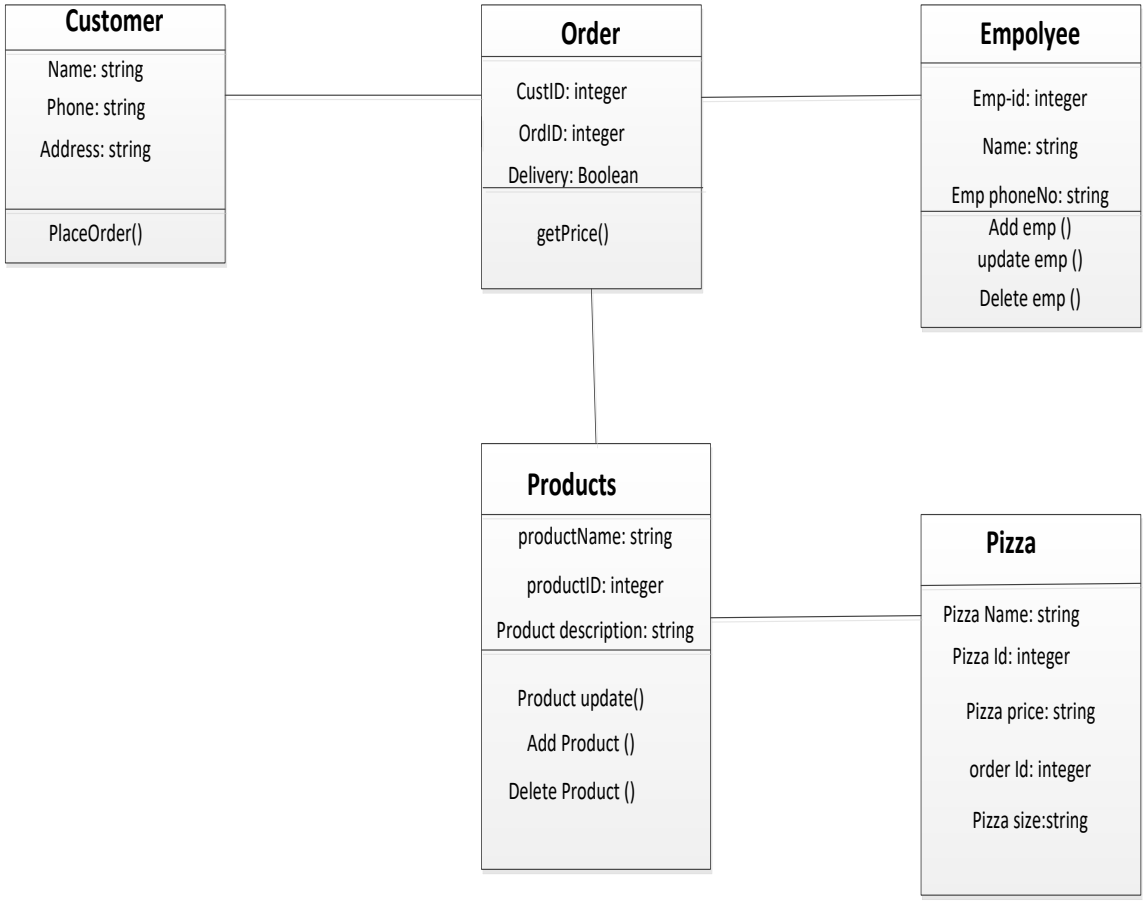

Figure3.4 Class Diagram

3.6 Sequence Diagrams:

Sequence diagrams help in the identification of a detailed level of the operations required to implement the functionality depicted by a use case model.

Scenario 1: Admin add new Pizza

- The Admin logs in by providing correct username and password.
- If admin name and password are not found on the database access into the system is denied.
- If the credentials are identical to the ones found on the database, access is granted.
- Admin enters the details of the new Pizza.
- The Admin input is written to the database.

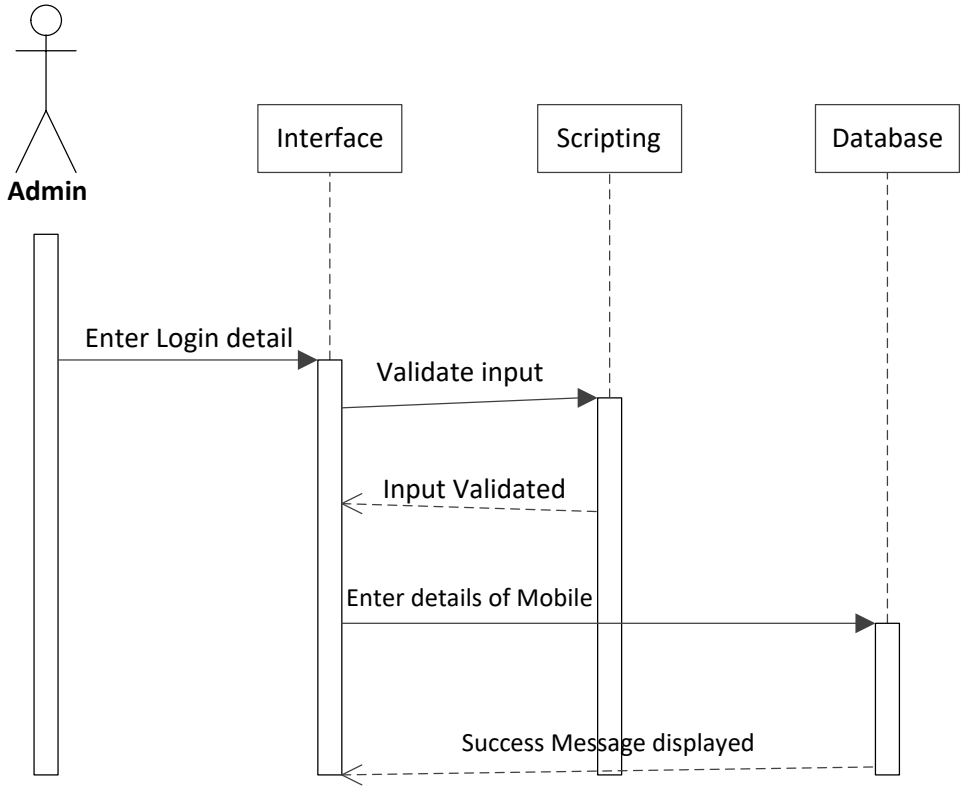

Figure3.5 Add new pizza

Scenario 2: Customer Ordering Pizza

- First customers view all categorize pizza items on mobile app.
- Select any pizza and non-pizza items.
- After select pizza item then confirm the order.
- After confirm the pizza order then admin give time to customer for delivery.
- Pizza delivery guy deliver pizza on delivering time.
- Pizza delivery guy receive the cash on delivery time.

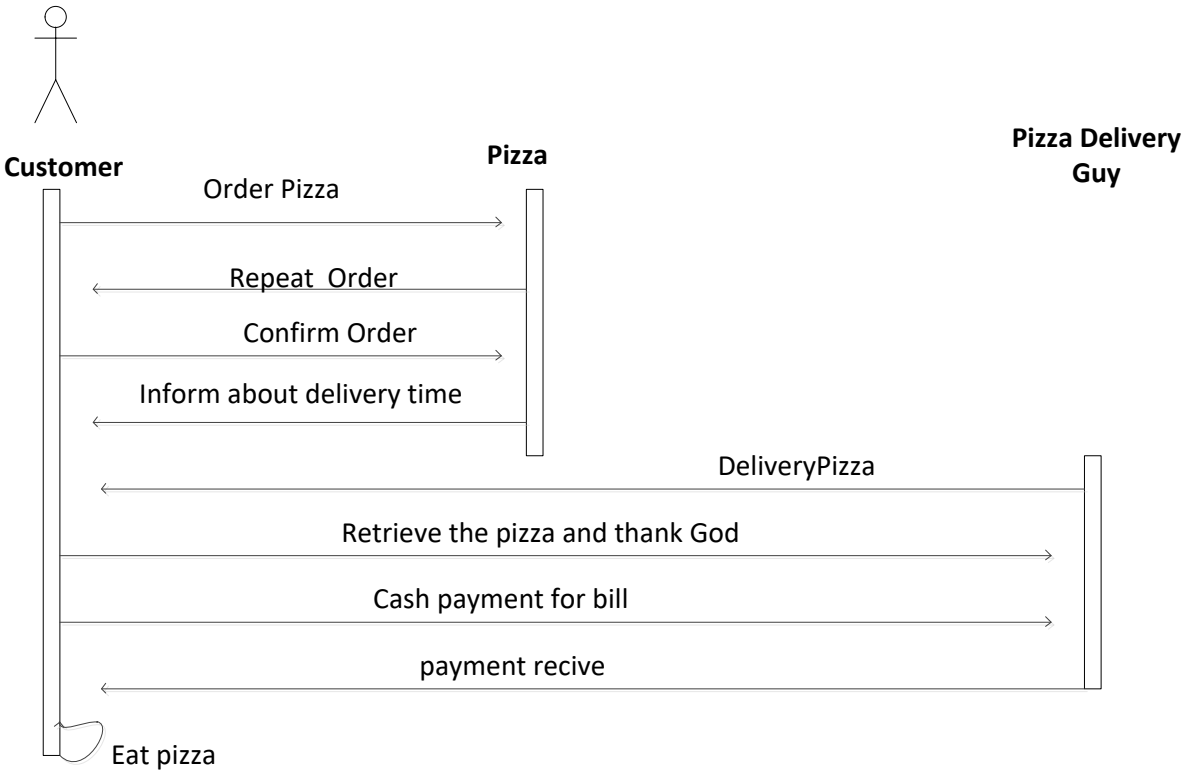

Figure3.6 User Ordering Pizza

3.7 ERD Diagram:

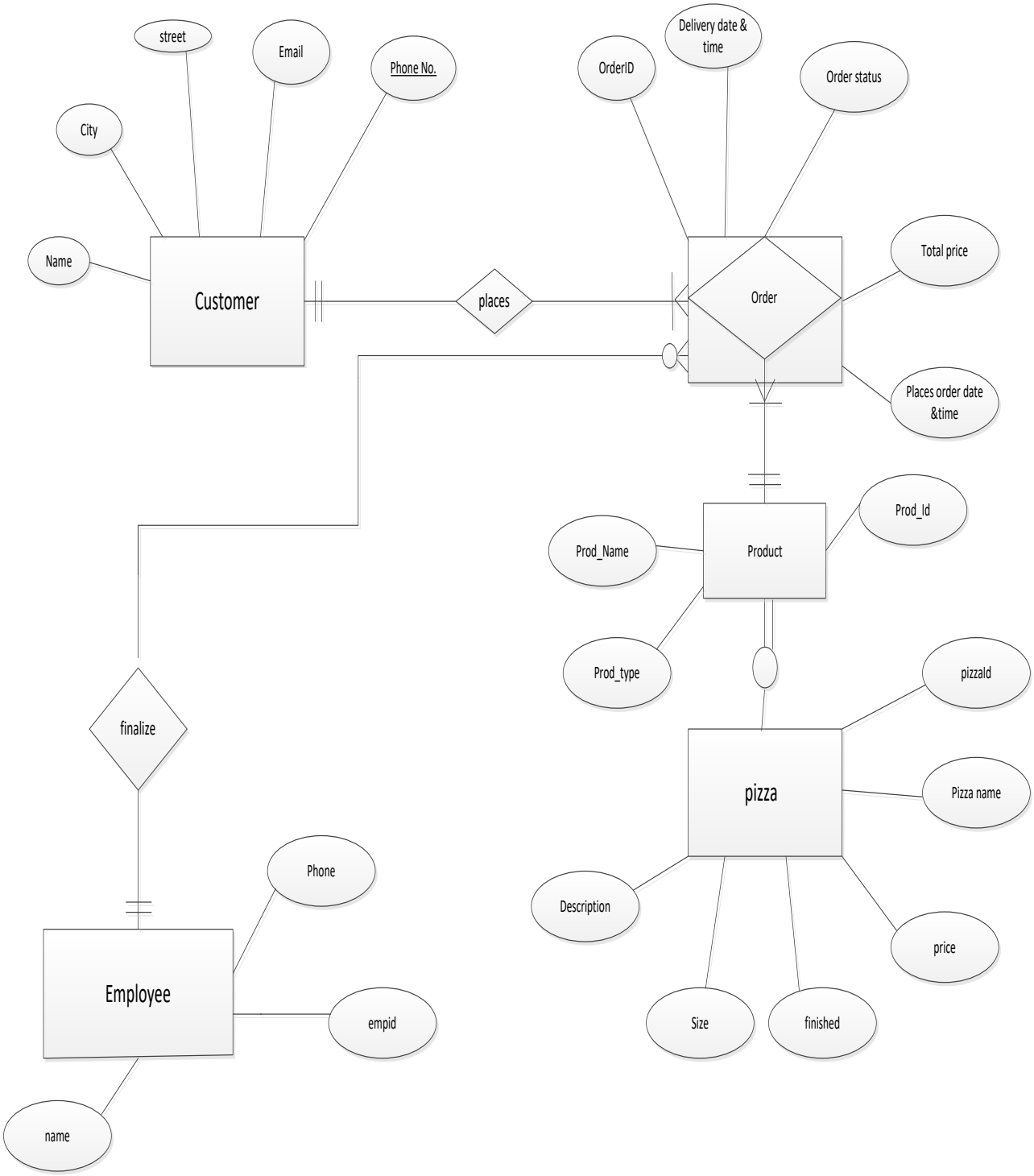

Figure3.7 ERD

Chapter No .04

System Implementaion

- Software Requirement
- Three tier Architecture
- Selections
- Web Services
- JSON
- Why we choose Android
- Database Tool Selection
- Mongo DB

4.1 Introduction:

In implementation we should decide which deign pattern and which tools are used for development. We have understanding that what languages and tools used to develop the system. We should very careful for the selection of the system because wrong selection can bring a lot of problems. Design pattern is very important phase along the languages which play very wide role in the development of the project. We should select such languages that provide maximum support for building of the desired project/functions.

4.2 Selection of pattern:

Patterns are very important in development they provide us well defined solution for our problems. Although they are old but they are still in use. They do not solve problem but they can help to solve the problems. Question is arise why design patterns are so important? The answer is very simple when we want to connect I interface with business login then how can? Patterns allow us to waste time to think about it because developers suggest solution of that problem. Then why should not use them.

4.3 Three tier Architecture:

We will use three tier architecture in our development. In this architecture there are three layers. Figure 4.1 shows 3-tier architecture.

User interface

Presentation layers shows at the side of the client.

Logic

Server contains the logic.

Database

Data is stored in database.

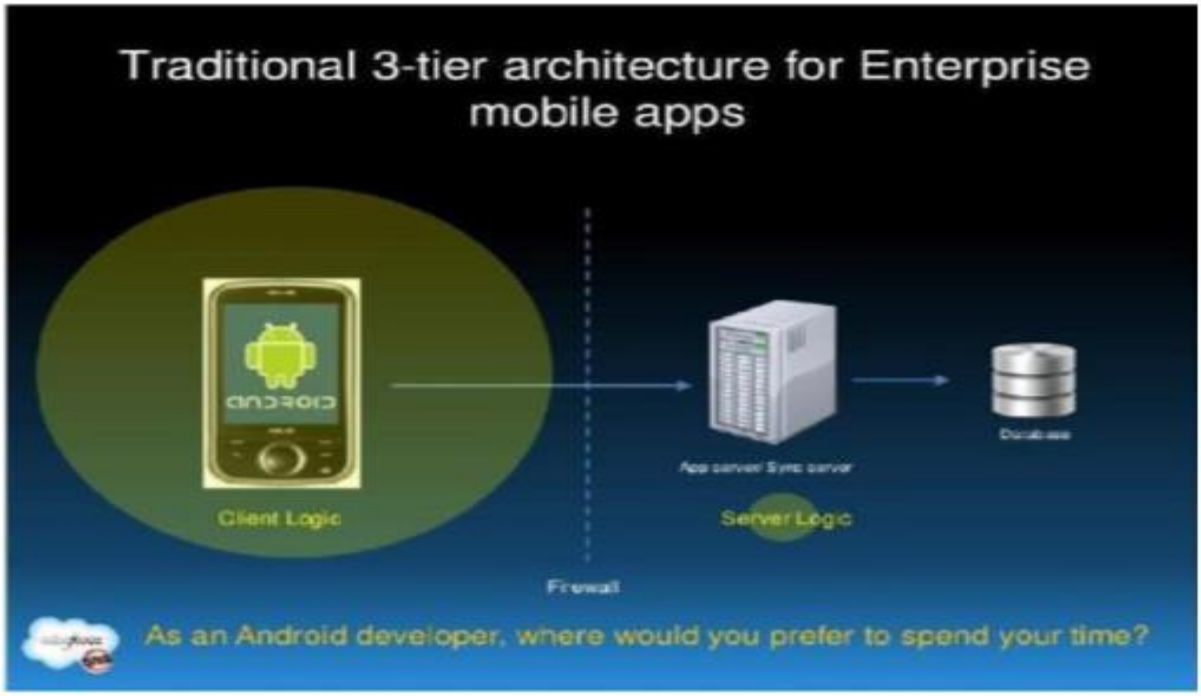

Figure 4.1 Traditional 3-tier architecture for enterprise mobile app

4.4 Architecture Layers

There are three layers in architecture.

1. Presentation tier
2. Application tier
3. Data tier

- **Presentation tier:**

  This is the most visible part of the application which is visible to the user and user interacts through this with the application. It provides the interface to the user to can input data and there is no logic require. It is dependent on the platform like web applications, windows applications, android applications etc. in our project there is an android platform.

- **Application tier:**

  The middle layer of the 3 tier architecture (middleware), this tier performs calculations and operations between input-output requirements. This layer also known as the application server. This tier respond all the queries and request form the user and respond sent through the presentation tier.

- **Data tier:**

  The last tier of the 3 tier architecture, it ensures all operations with data, i.e. database management system and basic database operations for functional storage, selection, processing and integrity. All database and tables are stored in this tier and we can communicate with this layer with the help of queries.

4.5 Selections:

- **Hardware selection:**

  Hardware selection tells us about smart phone that is required to test our system except computer. Since, proposed system is an android application, so hardware selection for my system is an android mobile Samsung Galaxy Grand Prime. By using android mobile, the testing of our application becomes easy since Android emulator does not tell us about the entire functionality of the system. In other words we can say that the hardware selection enables to verify the functionality of our system.

  - Personal computer Dell Core i5
  - 4GB RAM
  - 64-bit Operating system
  - 320 GB Hard Disk

- **Software selection:**

  In software selection we have to describe that which platform used to develop the system and why we have chosen that platform. The selection of programming languages that we have to be used for the development.

- **Operating system selection:**

  - Windows 10pro.

- **4.6 Development Tools:**
    - Android studio

Android studio provides the fastest tools for buildings apps on every type of android device. World-class code editing, debugging, performance tooling, a flexible build system, and an instant build/deploy system all allow you to focus on building unique and high quality apps.

- Java JDK

  The **Java Development Kit (JDK)** is an environment for writing java applets and applications. It is run time environment.

4.6 Programming Language Selection:

In order to make an application there are many languages that we can choose but for language selection we must have too careful because it can create many problems for us. In case of desktop development it might be C++, java# or VB.Net use. In case of web application it might be php, JS, C# or HTML. But in case of mobile development there are limited numbers of languages before the latest language like Android mobile apps ware developed in Java, c++, Java script.
In our project development I have used Java (Android) language because all mobile support java languages. And now days it is most popular programming language. It is easy to use and simple and object oriented language. The main reason behind this selection is that in future the maintenance will be easy. Figure7.3 shows the sequence.

- **Java**

  Java is an object oriented language and simple language. It is also secure. I coding of application java is used, in client as well as server.

- **XML**

  XML (Extensible Mark-up Language) is used to make interface for android.

  Extensible Mark-up Language (XML) is a simple, very flexible text format derived from SGML (ISO 8879). Originally designed to meet the challenges of large-scale electronic publishing, XML is also playing an increasingly important role in the exchange of a wide variety of data on the Web and elsewhere.

- **Visual Studio Code:**

Visual Studio Code running on Windows 10, with the Search function shown. **Visual Studio Code** is a source **code** editor developed by Microsoft for Windows, Linux and macOS.

It includes support for debugging, embedded Git control, syntax highlighting, intelligent **code** completion, snippets, and **code** refactoring.

- **JavaScript**

JavaScript is a cross-platform, object-oriented scripting language. It is a small and lightweight language. Inside a host environment (for example, a web browser), JavaScript can be connected to the objects of its environment to provide programmatic control over them.

- **Feature of JavaScript**

JavaScript runs on the client side of the web, which can be used to design / program how the web pages behave on the occurrence of an event. JavaScript is an easy to learn and also powerful scripting language, widely used for controlling web page behavior.

- JavaScript is a object-based scripting language.
- Giving the user more control over the browser.
- It Handling dates and time.
- It Detecting the user's browser and OS,
- It is light weighted.
- JavaScript is a scripting language and it is not java.
- JavaScript is interpreter based scripting language.
- JavaScript is case sensitive.
- JavaScript is object based language as it provides predefined objects.

- **HTML/CSS**

Intro to HTML/CSS: Making webpages. Learn how to use **HTML** and **CSS** to make webpages. **HTML** is the markup language that you surround content with, to tell browsers about headings, lists, tables, etc. **CSS** is the style sheet language that you style the page with, to tell browsers to change the color, font, layout, and more.

- **Web Services**

  Web services are used to transfer data from one application to another. Postman is used to validate the web services. Figure5.4 shows the result of the web services validation.

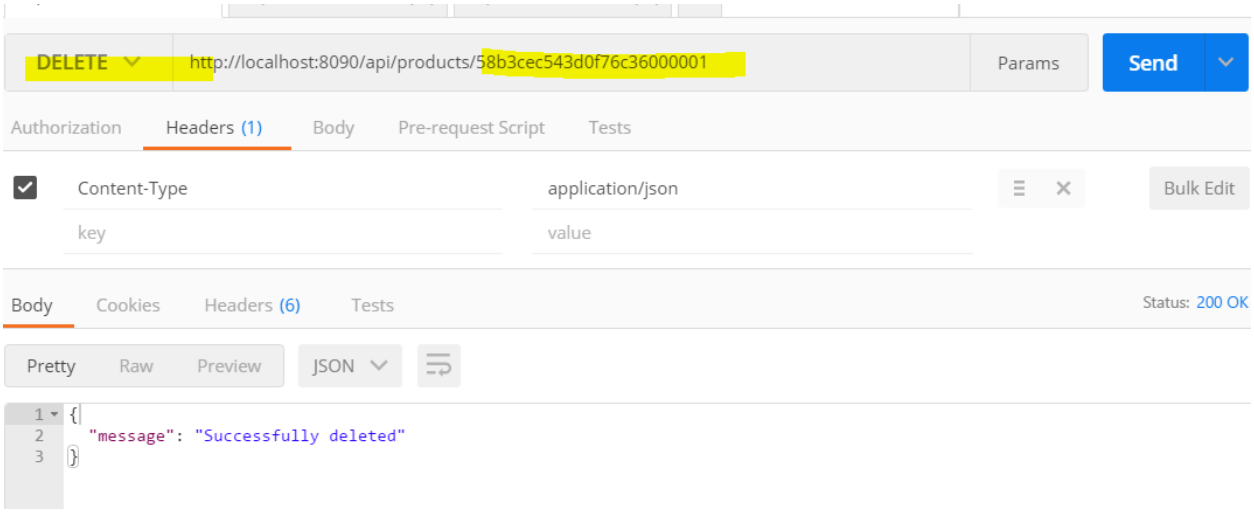

Figure4.4 web Server

4.7 JSON:

JSON (JavaScript Object Notation) is a light weight data-interchange format. It is easy for humans to read and write. It is easy for machines to parse and generate. It is based on a subset of the JavaScript Programming Language, Standard ECMA-262 3rd edition – December 1999. JSON is a text format that is completely language independent but uses conventions that are familiar to programmers of the C-family of languages, including c, c++, c#, Java, JavaScript, Perl, Python and many others.

4.8 Why Android choose?

Now a days there are many operating systems of mobile like windows, IOS, Symbian, blackberry and Android etc. but the value of android in the market is more than any other operating system of mobile. And other operating system like windows, RIM, Bada value are reduced. We can show it through the graph that android has more value than others.so I selected android because it covers a big market. Figure5.5 shows the android rating graph.

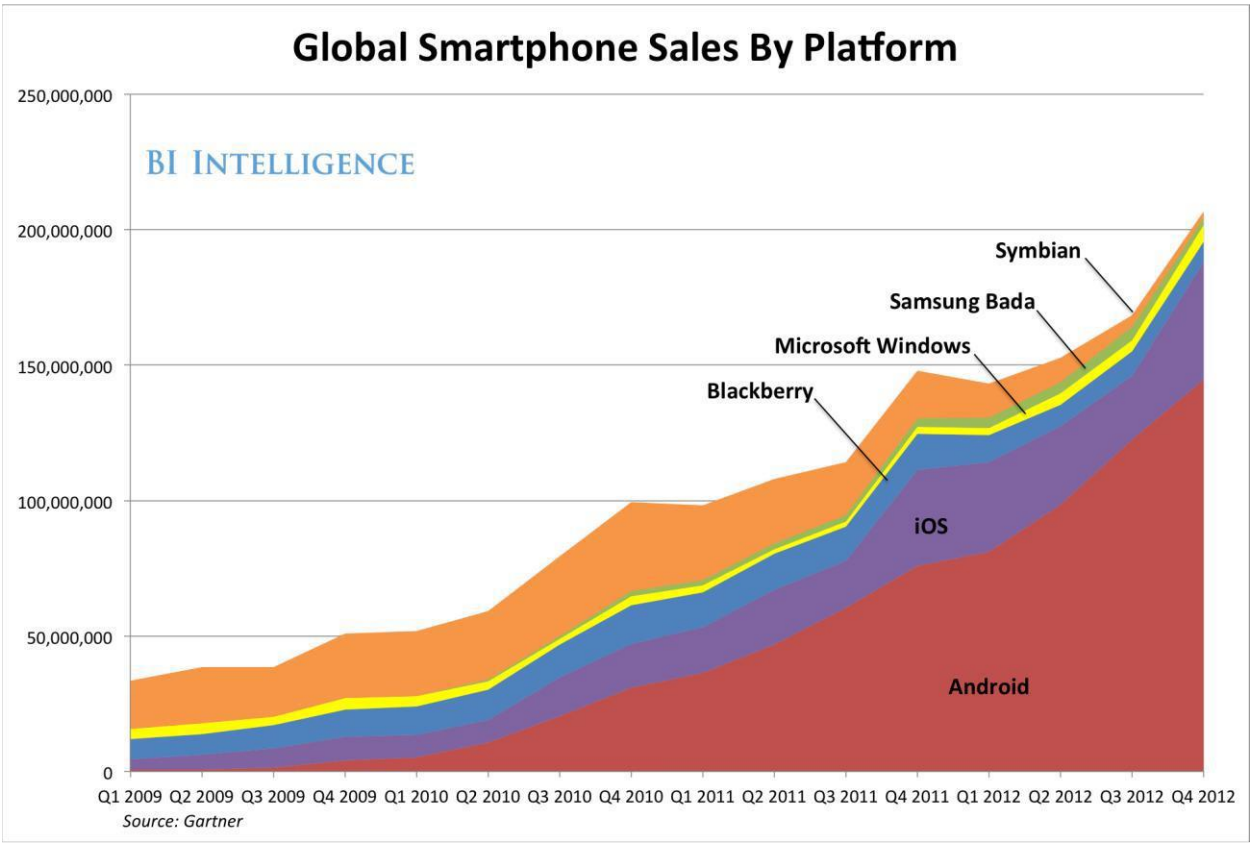

Figure4.5 web Server

We can develop android application using java language and android (SDK) software development kit. Android software development kit contains the android libraries, debuggers and emulators. Android uses its own virtual machine rather than Java virtual machine.

4.9 Database Tool Selection:

There are different methods that are used to store information/data. One kind is database has one or more distinct APIs for creating, accessing, managing and searching the data. And other kind of data store is file, but data writing and fetching would not be so fast and easy with those types of systems.

Now a days , used MongoDB to store data and manage large volume of data. In MongoDB we can store data in tables. Fetch and store data in these tables.

4.8 MongoDB :

MongoDB is an open-source *document database* that provides high performance, high availability, and automatic scaling. MongoDB obviates the need for an Object Relational Mapping (ORM) to facilitate development.

A record in MongoDB is a document, which is a data structure composed of field and value pairs. MongoDB documents are similar to JSON objects. The values of fields may include other documents, arrays, and arrays of documents.

MongoDB stores documents in collections. Collections are analogous to tables in relational databases. Unlike a table, however, a collection does not require its documents to have the same schema.

4.9 Interface:

An interface is the set of commands, instructions and menu through which a user can communicate through a system. The user interface allows the user to communicate with the system. Interface make connection between user and software. It is the most important aspect of the programming. An attractive, easy interface is appraisable

4.10 Home Page:

Figure4.6 Home page

4.11 Admin login:

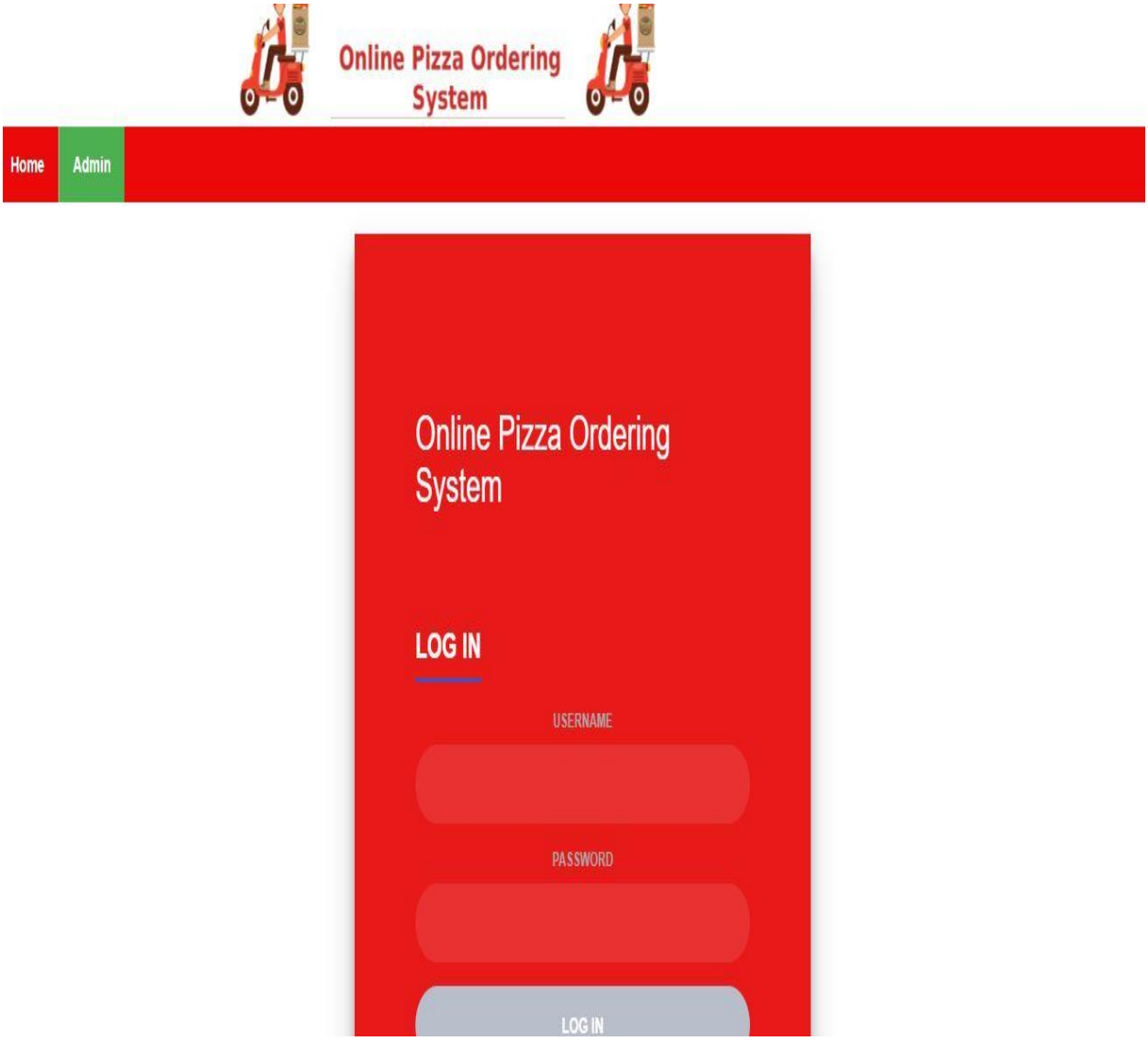

Figure 4.7 Amin login page

4.12 Admin Add Pizza:

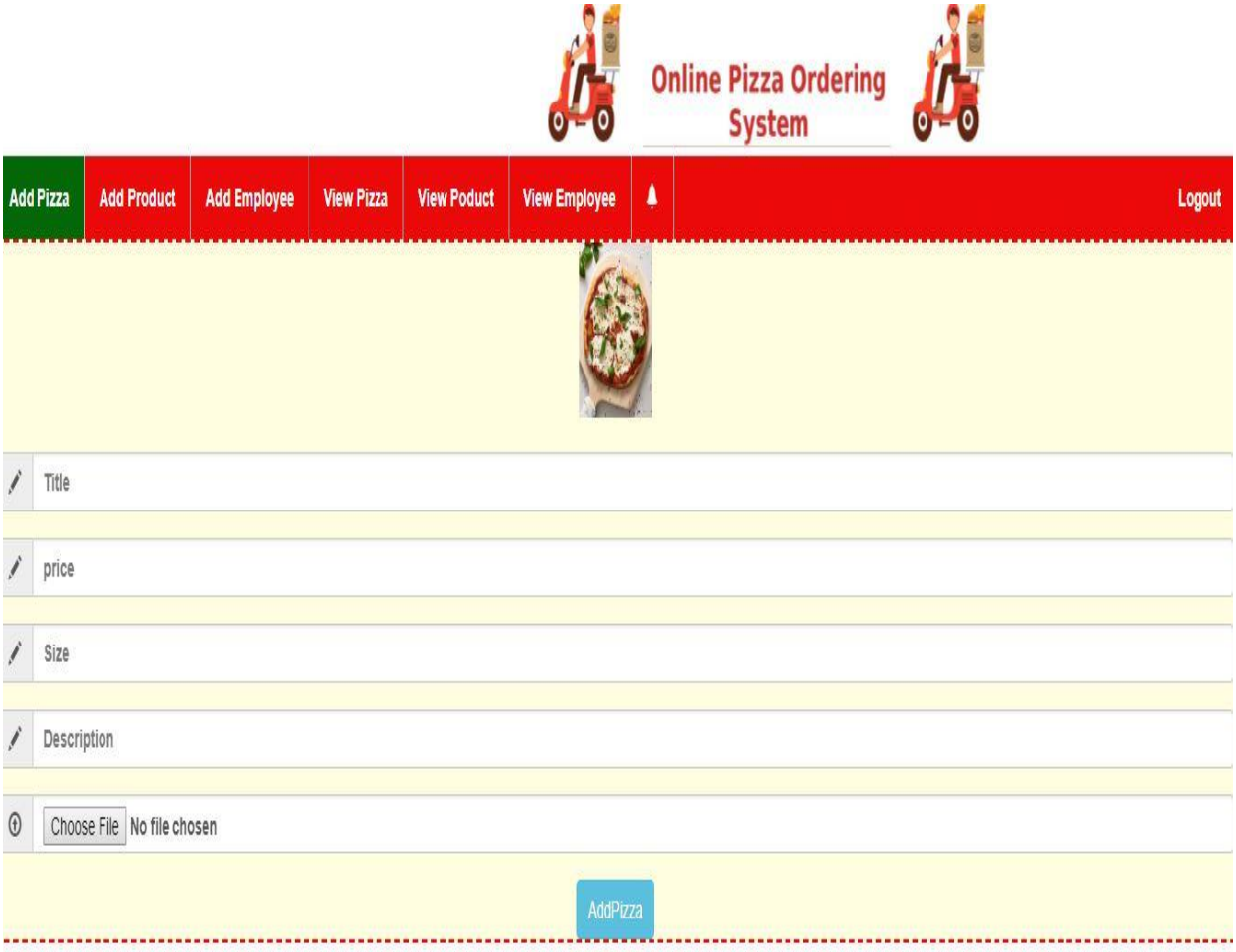

Figure 4.8 Admin Add pizza

4.13 Admin View pizza:

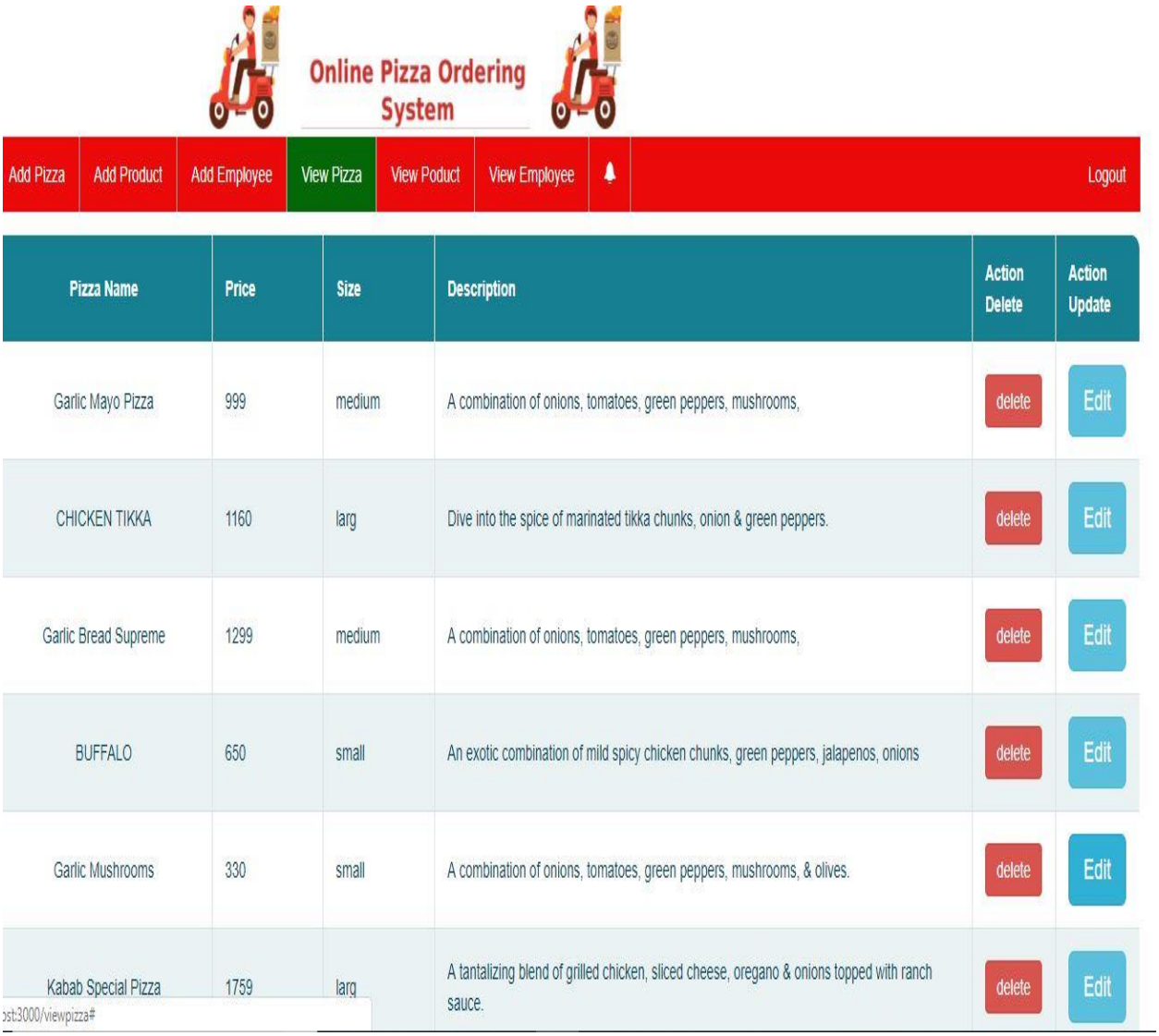

Figure 4.9 Admin View pizza

4.14 Admin view notification:

Figure 4.10 Admin View notification

4.15 User Interface:

4.15 .1 Main Screens:

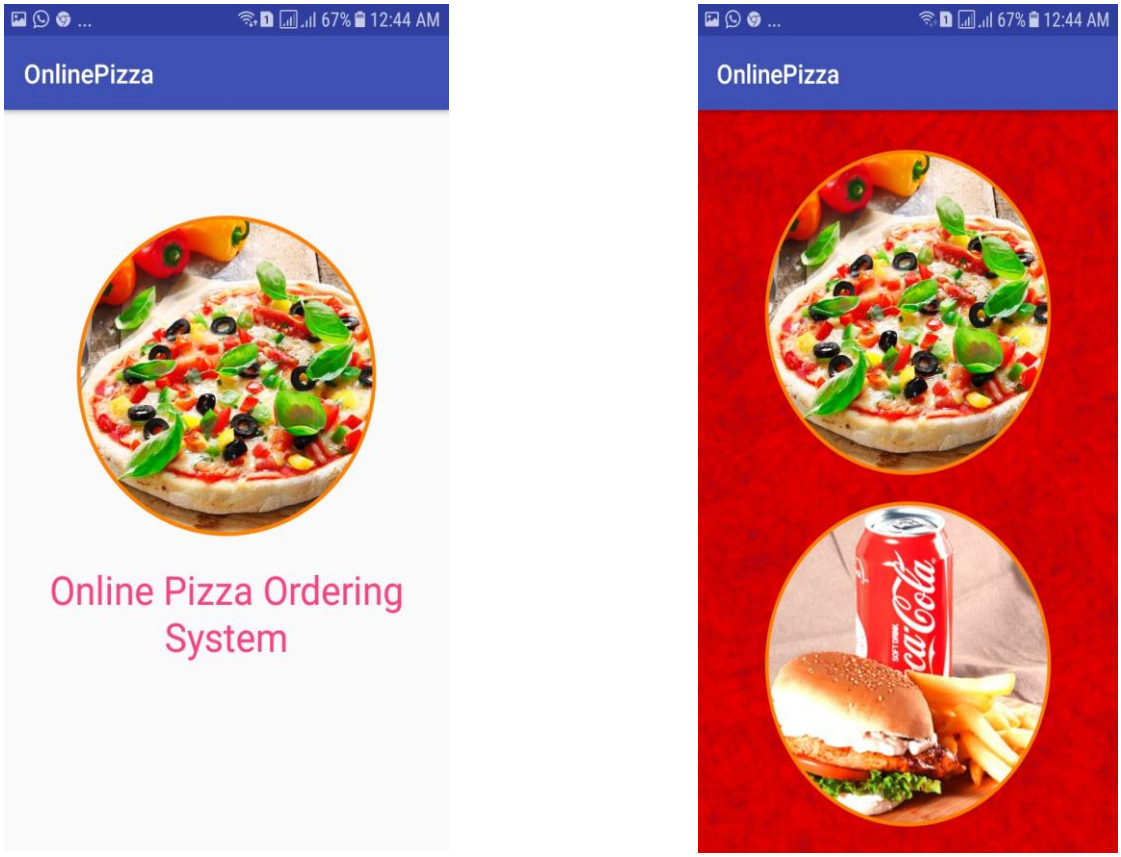

Figure 4.11 Main Screen

4.15. 2 Pizza and Other product Screens:

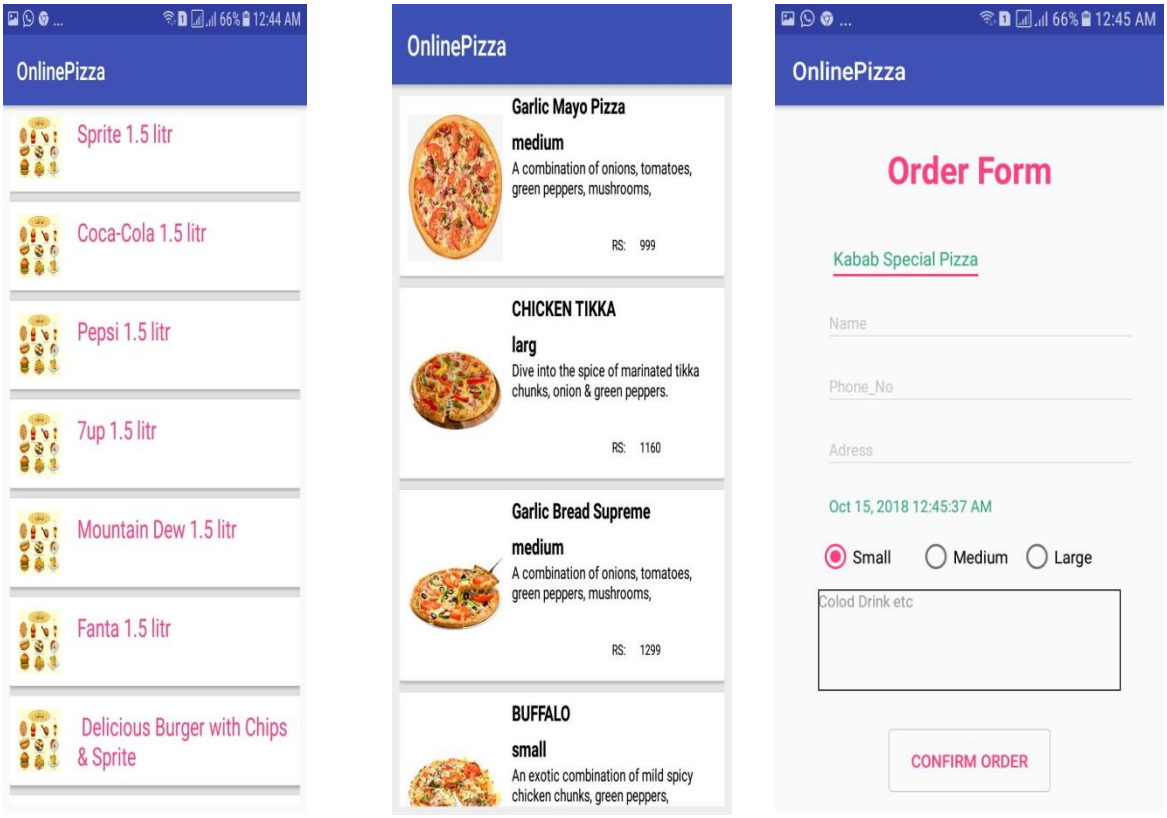

Figure 4.12 pizza and other product Screens

4.16 Microsoft word 2013:

The Microsoft word is used for the whole documentation of the project.

4.17 Visio:

Visio 2007 is used to create UML diagrams.

Chapter No .05

System Testing

- **General introduction**
- **Software Testing**
- **Goals**
- **Android Application Testing**
- **Testing Techniques**
- **Testing Cases**

5.1 Introduction:

After the development phase of software completes, the next step is to run the software to determine, whether it conforms to its specification and executes successfully in its intended environment.

It is the final process that the system to be delivered meets its requirements and specifications. System testing is done by the specialized tester. The main purpose of testing is quality assurance, reliability and verification. It is the process of analysing a software item to detect the difference between existing and required conditions and to evaluate the features of the software item. It attempts to make things go wrong to determine if things happen when they should. It mainly includes unit and integration testing. It is most important part of the project because we have to test the system to validate before the deployment.

5.2 Software Testing:

Software testing is any activity aimed evaluating an attribute or capability of a system and defining that it meets is required results. Software testing provides and objective, independent views of the system to understand the risks of software implementation.

Testing software is to operate the software under controlled conditions, to verify the requirements of the system that system that it behaves as specified. Software specifications and requirements are validated and verified while the software is getting designed or developed. Software testing involves verification and validation which are defined as:

5.3 Goals:

System testing is most important part of the project. Without this we cannot get confidence to fully deploy it. The main goals are:

- To find the defects in the system.
- To prevent defects.
- To make sure that the end results meet the given requirements and specification.
- To gain the confidence of the customer to provide best product.

It is very important tester has good coverage in order to test the software application completely and make it sure that it is working properly.

5.4 Android Application Testing

In this, I test that all information related to specific module or icon are shown properly in list, or all the information is populated in list.

5.5 Testing Techniques:

There are different testing techniques are used to test the system, which are following:

- Black box testing
- White box testing
- Gray box testing

But the most important is black box testing and the white box testing.

5.5.1 Black Box Testing:

In Black box testing we don't test data structure and variables. We just give input to the systems and checks its output if the output is similar to the expected results then the test is successful. Otherwise, unsuccessful. In Black box testing we discover interface errors and terminations errors. In this, the tester does not have access to the source code.

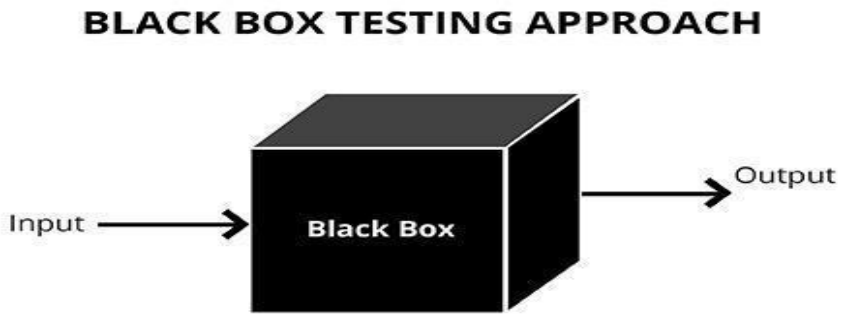

Figure5.1 Black Box Testing

5.5.2 White Box Testing:

White box testing is the detail investigation of internal structure code and logic. White box testing is also called glass testing or open-box testing. In this, the tester have to access to the internal structure of the system.

5.5.3 Gray Box Testing:

Gray box testing is a technique to test the application with having a limited knowledge of the internal workings of an application. In software testing, the phrase the more you know, the better carries a lot of weight while testing an application.

5.6 Testing Cases:

A test case has components that describe an input, action or event and an expected response, to determine if a feature of an application is working correctly. Test cases can be described in a tabular form like the following.

Table 5.0 #, caption

Test case ID	Id of test case
Test case	Tester name
Testing type	What testing technique is used
Test Case Name	Name of the test case
Description	Description of functional requirement
Procedure	Describes the steps of that function
Expected Result	What should it do
Actual Result	What it did?
Status	Success or fail

All the test cases planned for testing this system are as follows:

Table 5.1 Admin Login

Test case ID	01
Tester	Admin
Test Type	Black Box testing
Test Case Name	Login
Description	In this test case login process is to be tested.
Procedure	Admin enters username and password. • Username: Admin • Password: Admin123
Expected Result	Admin is logged in successfully.
Actual Result	Successful
Status	Pass

Table 5.2 Admin Add Pizza Information

Test case ID	02
Tester	Admin
Test Type	Black Box testing
Test Case Name	Add any type of Information about pizza
Description	Add any type of Information in system is to be added.
Procedure	Add any type of Information in system form admin.
Expected Result	Add any type of Information.
Actual Result	Successful
Status	Pass

Table 5.3 Admin Delete Pizza Information

Test case ID	03
Tester	Admin
Test Type	Black Box testing
Test Case Name	Delete any type of Information about pizza.
Description	Delete any type of Information from admin panel is to be tested.
Procedure	Delete any type of Information from admin panel.
Expected Result	Information deleted.
Actual Result	Successful
Status	PASS

Table 5.4 Admin Update Pizza Information

Test case ID	04
Tester	Admin
Test Type	Black Box testing
Test Case Name	Update any type of Information about Pizza
Description	Update any type of Information in system is to be added.
Procedure	Update any type of Information in system form admin.
Expected Result	Update any type of Information
Actual Result	Successful
Status	PASS

Table 5.5 App Interface

Test case ID	5
Tester	User
Test Type	Black Box testing
Test Case Name	View any type of pizza
Description	View any type of pizza page on application is to be tested.
Procedure	Open any type of pizza page and check the pizza which is post form admin.
Expected Result	Pizza page opened.
Actual Result	Successful
Status	PASS

Table 5.6 Admin Logout

Test case ID	6
Tester	User
Test Type	Black Box testing
Test Case Name	Logout
Description	Logout process is to be tested.
Procedure	User click on logout button.
Expected Result	Successfully logout form application
Actual Result	Successful
Status	PASS

Chapter No .06

Conclusion

6.1 Conclusion:

The software product produced was fairly good, it achieved most of the user requirements, the user interface is good, attractive and is very easy to navigate, and even novice users can find their way around the web application easily. The client side Application is look excellent. Pizza ordering system is a highly integrated and advanced pizza order and delivery system. From customers' perspective, they have multiple choices to access our service either by website, mobile application and get pizza in a relatively shorter time. In conclusion, online pizza ordering system would provide a convenient, thoughtful and reasonable way for customers to order pizza. This was all about online pizza ordering system. You know the importance of this system in our day-to-day lives as we all prefer online ordering on phone. All these modules can be implemented in the mobile application and web application (android, windows).

6.2 Future Enhancements:

- **GPS Module**

  Through GPS trace the user location and pizza guys deliver the pizza.

- **IOS Application**

  This Application is only for Android phone. Convert this Application on IOS. So that IOS user can also facilitate.

Reference:

- https://pizzaonline.dominoslk.com/
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- https://www.tripadvisor.com/
- http://www.famousbenspizzanyc.com/
- http://www.bucadipizza.com/
- http://www.json.org