INSTITUTE FOR ADVANCED
COMPUTING AND
SOFTWARE DEVELOPMENT
AKURDI, PUNE

Documentation On

"ECOMMERCE WEBSITE FOR MOBILE STORE"

PG-DAC SEPT 2020

Submitted By:

Group No: 25
2037_Devyani Shahu
2068_Nilesh Kadam

Prashant Karhale
Centre Coordinator

Mr.Chetan Pardeshi
Project Guide

Table of Contents

1. Introduction 1-7
Document Purpose 2
Problem Statement 3-4
Product Scope 5
Aim & Objectives 6
2. Overall Description 7-13
Product Perspective..... 7
Proposed System……..... 8
Benefits Of Ecommerce Mobile Store Application……..9
User and Characteristics 10
Operating Environment 11-12
Design and Implementation Constraints 13
3. Requirements Specification 13-15
Functional Requirement…….....13
Non-Functional Requirements 14-15
4. System Diagram 15-21
Activity Diagram 15-16
Data Flow Diagram 17-18
Class Diagram 19
Use Case Diagram 20
ER Diagram 21
5. Table Structure 22-24
Customer 22
Admin 22
New Product 23
Mycart..... 22
Orders..... 23
Order_details..... 24
6.Output ScreenShots……..25-32
Home Page…….25

About Us Page…….25
Contact Us Page……..26
Sign UP Page……26
Customer Login……27
Product Catalog…….27
Product Details……..28
Show Cart Page…….28
Address Page…….29
Order Confirmation Page……..29
Admin Login ……29
Admin Page……..30
Add Product…….30
Manage Order…….31
Order Details……31
Update Status……..32
Showing Updated Status……32

7.Conclusion 33

8.Future Scope 33

9.References 34

List Of Figure

Figure 1 Admin Activity Diagram 15
Figure 2 User Activity Diagram…….....16
Figure 3 Data Flow Diagram For Mobile Store….....17
Figure 4 Data Flow Diagram For User.....18
Figure 5 Data Flow Diagram For Admin..... 18
Figure 6 Class Diagram……..... 19
Figure 7 Use Case Diagram For User…….……..... 20
Figure 8 Use Case Diagram For Admin……..21
Figure 9 ER Diagram…….....22

Introduction

E-commerce is fast gaining ground as an accepted and used business paradigm. More and more business houses are implementing web sites providing functionality for performing commercial transactions over the web. It is reasonable to say that the process of shopping on the web is becoming commonplace.

The objective of this project is to develop a general purpose e-commerce store where product like Mobiles can be bought from the comfort of home through the Internet. However, for implementation purposes, this paper will deal with an online shopping for Mobiles.

An online store is a virtual store on the Internet where customers can browse the catalog and select products of there interest. The selected items may be collected in a shopping cart. At checkout time, the items in the shopping cart will be presented as an order. At that time, more information will be needed to complete the transaction. Usually, the customer will be asked to fill or select a billing address, a shipping address, a shipping option, and payment information such as credit card number. An notification is sent to the customer as soon as the order is placed.

Document Purpose

The purpose of this document is to build an online shopping Application for Mobile Store by using Internet Connectivity and provide the flexibility to the user to purchase their product from their own places.

Enhance Shopping Processes:

To be able to use internet technology to project to the global world instead of limiting their services to their local domain alone. In this scenario the online mobile store has a great future scope.

Online Shopping Management:

A tool through which admin can register in this application and provide many functionalities to them. The admin also receives some set of functionalities which help in managing the product stock. Admin can add, remove, update the product list.

Visitors And Sellers:

Visitors can get all the details about particular phone its price & specification. If the customer want to buy a new mobile they can visit it on the other side a customer who want to sell old mobile they can also go through this website.

Problem Statement

E-commerce provides an easy way to sell products to a large customer base. However, there is a lot of competition among multiple e-commerce sites. When users land on an e-commerce site, they expect to find what they are looking for quickly and easily. Also, users are not sure about the brands or the actual products they want to purchase. They have a very broad idea about what they want to buy. Many customers nowadays search for their products on Google rather than visiting specific e-commerce sites. They believe that Google will take them to the e-commerce sites that have their product.

The purpose of any e-commerce website is to help customers narrow down their broad ideas and enable them to finalize the products they want to purchase. For example, suppose a customer is interested in purchasing a mobile. His or her search for a mobile should list mobile brands, operating systems on mobiles, screen size of mobiles, and all other features as facets. As the customer selects more and more features or options from the facets provided, the search narrows down to a small list of mobiles that suit his or her choice. If the list is small enough and the customer likes one of the mobiles listed, he or she will make the purchase.

Product Scope

The basic functionality delivered by the application features two main factors, product listing and a product detail page.

Two changes were made

- web services were modified in order to show complete data in our mobile application.
- The functionality needed so that the mobile application can list products by requesting web services provided by the E-commerce application was added.
- The functionality of the mobile application was improved to show complete information on a product by requesting a second web-service from the E-commerce application. Best practices were employed for making the user interface of the mobile application functional.

Aims & Objective

The primary objective for most Ecommerce teams is to generate revenue – to be very efficient at selling through understanding complex consumer behaviour to maximise conversion rates; and up-sell and cross-sell products and services to maximise value over the lifetime of the customer.

Overall Description

Any member can register and view available products. Only registered member can purchase multiple products regardless of quantity. ContactUs page is available to contact Admin for queries. There are three roles available: Visitor, User and Admin.

- Visitor can view available products.
- User can view and purchase products.
- An Admin has some extra privilege including all privilege of visitor and user.
    a. Admin can add products, edit product information and add/remove product.
    b. Admin can add user, edit user information and can remove user.
    c. Admin can ship order to user based on order placed by sending confirmation mail.

Product Perspective

The mobile shopping-cart application is a web-based system. It can be accessed using internet.
This product aimed toward a person who don't want to visit the shop as he might don't get time for that or might not interested in visiting there and dealing with lot of formalities.

1.1. User Interface

The two interface types found in the online shopping-cart application are as follows:

1. User Interface: Users are able to view the home page of the shopping-cart application, browse the different categories, browse and add any number of items from any categories in the shopping cart, look for information about each product, delete the items in the shopping cart, save the cart for later viewing, check out or continue shopping after adding the item to the cart, and check out the items by completing the required information in the order form.
2. Admin Interface: The administrator is able to view the users' information that was entered during checkout in the database, can update the information, price, shipping costs of the items, add or remove items from the main display.

1.2. Hardware Interface

The online shopping-cart application shall provide minimum hardware requirements. The following hardware configurations are required for a PC using the online shopping-cart application:

- Pentium processor10

- 32 MB of free hard-drive space
- 128 MB of RAM

1.3. Software Interface

This section lists the requirements that are needed to run the system efficiently. The operating system needed for the system to run effectively, the interface to run the application, the driver for running Java web applications, the integrated development environment to develop the application, and the third-party tool used for editing purposes are as follows:

1. Operating System: Windows (Vista/Windows 7) or MAC OS
2. Web Brower: Internet Explorer (8.0 and above), Mozilla Firefox (3.0 and above), or Google Chrome
3. Drivers: Java Runtime Environment
4. Integrated Development Environment: Eclipse Juno or Apache Tomcat.

Proposed System

The E-commerce Management System has many advantages, compare to traditional store as one can compare the cost of a product with other e-commerce websites, and if a user dislikes any product he/she can return it. While we can make use of the current technology to overcome the problem with the existing system. The E-commerce Management System companies can use a flying robot, so when a user places an order, the company will send the product through the robot. The robot will find the user by using the GPS, and in this way, we can reduce the time to deliver a product. While before sending a product the e-commerce company will check the product that it is same or not with the requested order.

Functional Requirement

This section provides requirement overview of the system. Various functional modules that can be implemented by the system will be:

1] Customer Authentication and Registration:

1.This system will allow to create customer profile by providing customer registration functionality.

2.Customer can create or update his profile information.

3.System will also authenticate user credentials if customer is already registered.

2] Product Catalog:

1.System will provide various categories of products for endusers.

2.Endusers can choose any product according to category of his choice.

3.product reviews and rating will be available for each product for enduser.

3] Order Processing:

1.System will allow customer to place order for particular products .The orders will be available for customer till the confirmation.

2.System will provide facility for customer to cancel order after the confirmation.

3.Order history will be maintain for each endusers.

4] Shopping Cart facility:

1.System shall provide shopping cart for online purchase.

2.Customer will be able to add/remove the products from cart.

5] Shipping:

1.Customer will be able to choose different shipping options provided.

2.System will display the shipping charges and the duration required for product delivery.

6] Confirmation:

1.System will display the bill of order once it is confirmed.

2.A mail regarding the order bill will be sent to customer mail id.

7] Billing:

1.System will display available payment methods for payment processing.

2.Customer can choose his/her method of payment for orders like cash on delivery.

8] Promotions and Rewards:

1.Available promotions ,offers and discount will be displayed to users.

2.Enduser can select the available promotions.

Non-Functional Requirements

1] Security:

In Online mode security is a core issue that must be considered. Viruses and hacking are threatening e-commerce. to avoid hackers and viruses attack we need to provide a security solution. Security can be provided by encryption, firewall and secure Socket layers. To prevent unregistered users to place orders in system, the use of session object can be made for verification. Only system admins can change or update the data in the application and no access will be given to unauthorized person.

2] Usability:

System will be efficient to use, easy to use.

Information about best seller products will be given to customers.

System will provide correct messages so that user can use system easily.

3] Reliability:

Backup is useful in recovering your data in the case of an electronic disaster like hardware failure or server crashes.

System will maintain a failover server with the replica of all data, so that data can be restore at disaster situation.

4] Extensibility:

System can easily extend the functionality can be flexibly added functional modules.

5] Availability:

The System will be available all the time except at downtime.

Downtime will be on every sunday at 1:00 am to 1:30 am.

Alternate page should be displayed to user at time of downtime.

6] Maintainability:

System will not be shut down for more than once in 24 hours of period for maintainance.

7] Portability:

This system can be used on Windows or Linux OS.

System is easy to port on any other server.

8] Performance:

The online shopping system has adequate performance requirements.

It does not take more than 10 seconds to load new pages.

9] Integrity:

Whenever the changes are made related to customer data and his orders, it shall be reflected in database as well.

Benefits of Ecommerce Mobile Store Application

Mobile commerce is growing exponentially these days. If you want to build a successful trading enterprise and focus on attracting customers and increasing sales, the importance of having mobile e-Commerce solutions should be obvious. Actually, there are numerous reasons why you should have a mobile solution for your webshop. We've picked out the four most important benefits of e-Commerce apps for your business.

1.Loyal Customers:

Although a mobile app is a copy of the existing website, it is highly optimized, personalized and well-designed, which significantly improves customer experience and facilitates the acquisition and retention of new clients. They find themselves in a convenient online store where they can choose goods and purchase them without the hustle and bustle.

2. Brand Recognition:

Mobile apps support strong connections between brands and customers. For example, users willingly share links to their favourite sites, ask for feedback and describe their customer experience in social networks. You can integrate popular social media platforms into your application to let customers discuss your products and services.

3.Better Efficiency and Increased Revenues:

As a rule, mobile applications are more flexible and user-friendly. Although their implementation is quite expensive, they are likely to quickly pay off and increase sales. The correlation is simple: a good app with the right concept and functionality brings more clients; more clients result in more orders, consequently, your earnings are increasing.

4. Detailed Analytics:

Data is easy to gather and track in the application. Mobile functionality allows you to monitor users' interaction and gives you useful information about them, such as responsiveness to particular content and features, feedback, session length, audience composition. This may help deliver improvements and updates, create personalized content, develop an advanced marketing strategy and efficient promotional campaigns and. Do make use of mobile analytics.

Users and Characteristics

Admin:

- Admin can login to the system.
- View the list of all the product.
- Add new product.
- Delete the product.
- Update the product.

Existing Users:

- view/modify his personal info.
- view latest products.
- add products to a cart.
- remove product from a cart.
- view the cart.
- confirm an order.

Visitors:

- Visitors can visit the website
- They can Register as new login account

- They can login and purchase the the product
- Add the product to their cart
- Buy the added item to the cart

Operating Environment

Server Side:

Processor: Intel® Xeon® processor 3500 series
HDD: Minimum 500GB Disk Space
RAM: Minimum 2GB
OS: Windows 8.1, Linux 6
Database: MySql ,Oracle
Backend Technology :Spring Boot Mvc

Client Side (minimum requirement):

Processor: Intel Dual Core
HDD: Minimum 80GB Disk Space
RAM: Minimum 1GB
OS: Windows 10, Linux
Front End Technology: React Js, HTML,CSS, Bootstrap

Design and Implementation Constraints

- The application will use Ajax, JavaScript, jQuery and css as main web technologies.
- HTTP and FTP protocols are used as communication protocols. FTP is used to upload the web application in live domain and the client can access it via HTTP protocol.
- Several types of validations make this web application a secured one and SQL Injections can also be prevented.

- Since Online Mobile Store is a web-based application, internet connection must be established.

- The Online Mobile Store will be used on PCs and will function via internet or intranet in any web browser.

Specific Requirement

External Interface Requirements:

User Interfaces:

- All the users will see the same page when they enter in this website. This page asks the users a username and a password.
- After being authenticated by correct username and password, user will be redirect to their corresponding profile where they can do various activities.
- The user interface will be simple and consistence, using terminology commonly understood by intended users of the system. The system will have simple interface, consistence with standard interface.

Hardware Interfaces:

- No extra hardware interfaces are needed.
- The system will use the standard hardware and data communication resources.
- This includes, but not limited to, general network connection at the server/hosting site, network server and network management tools.

Application Interfaces:

OS: Windows10, Linux

Web Browser:

The system is a web-based application; clients need a modern web browser such as Mozilla Firebox, Internet Explorer, Opera, and Chrome. The computer must have an Internet connection in order to be able to access the system.

Communications Interfaces:

- This system uses communication resources which includes but not limited to, HTTP protocol for communication with the web browser and web server and TCP/IP network protocol with HTTP protocol.
- This application will communicate with the database that holds all the customer and product information. Users can contact with server side through HTTP protocol by means of a function that is called HTTP Service. This function allows the application to use the data retrieved by server to fulfil the request fired by the user.

System Design

Activity Diagram

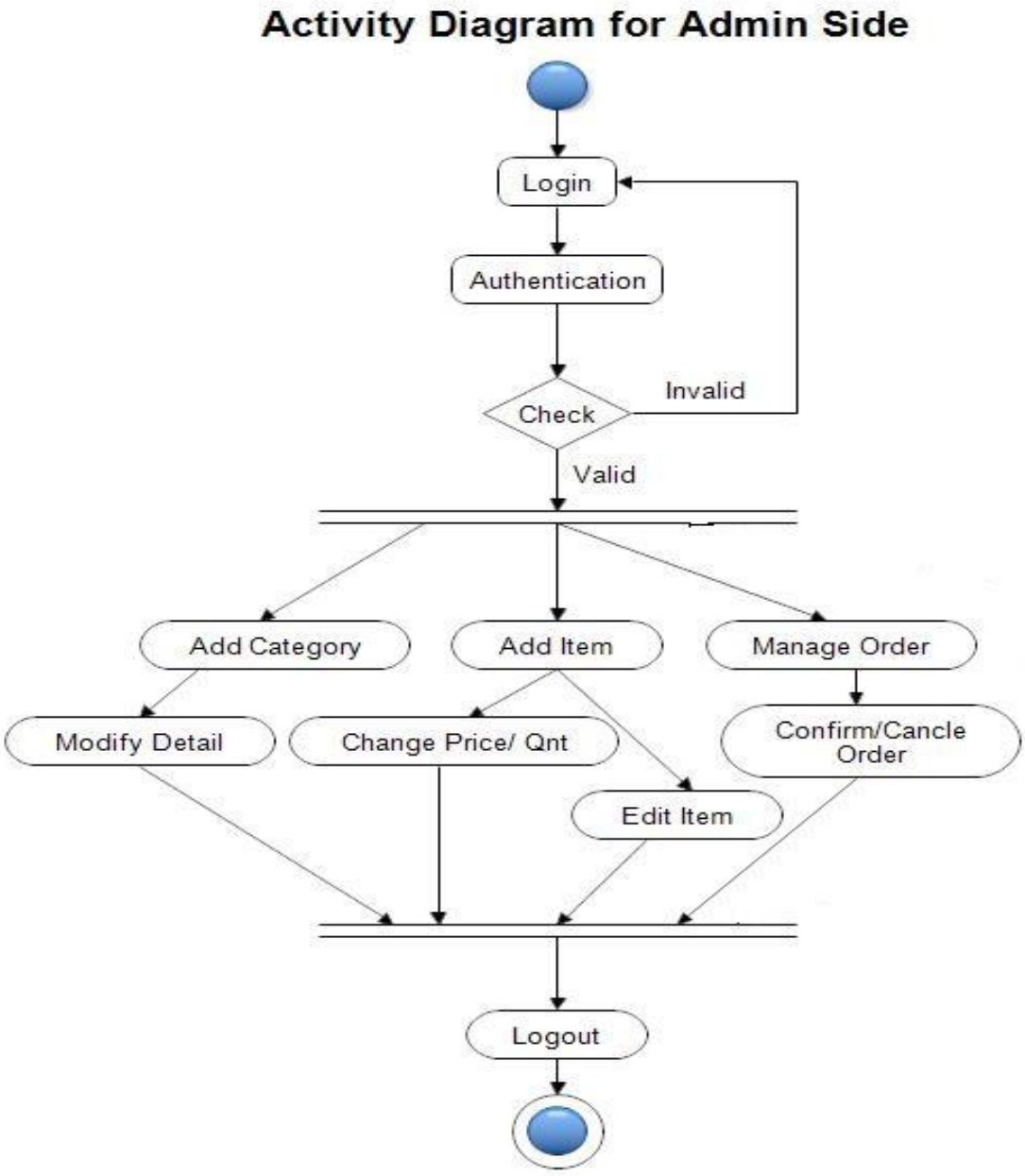


Figure 1: Admin Activity Diagram

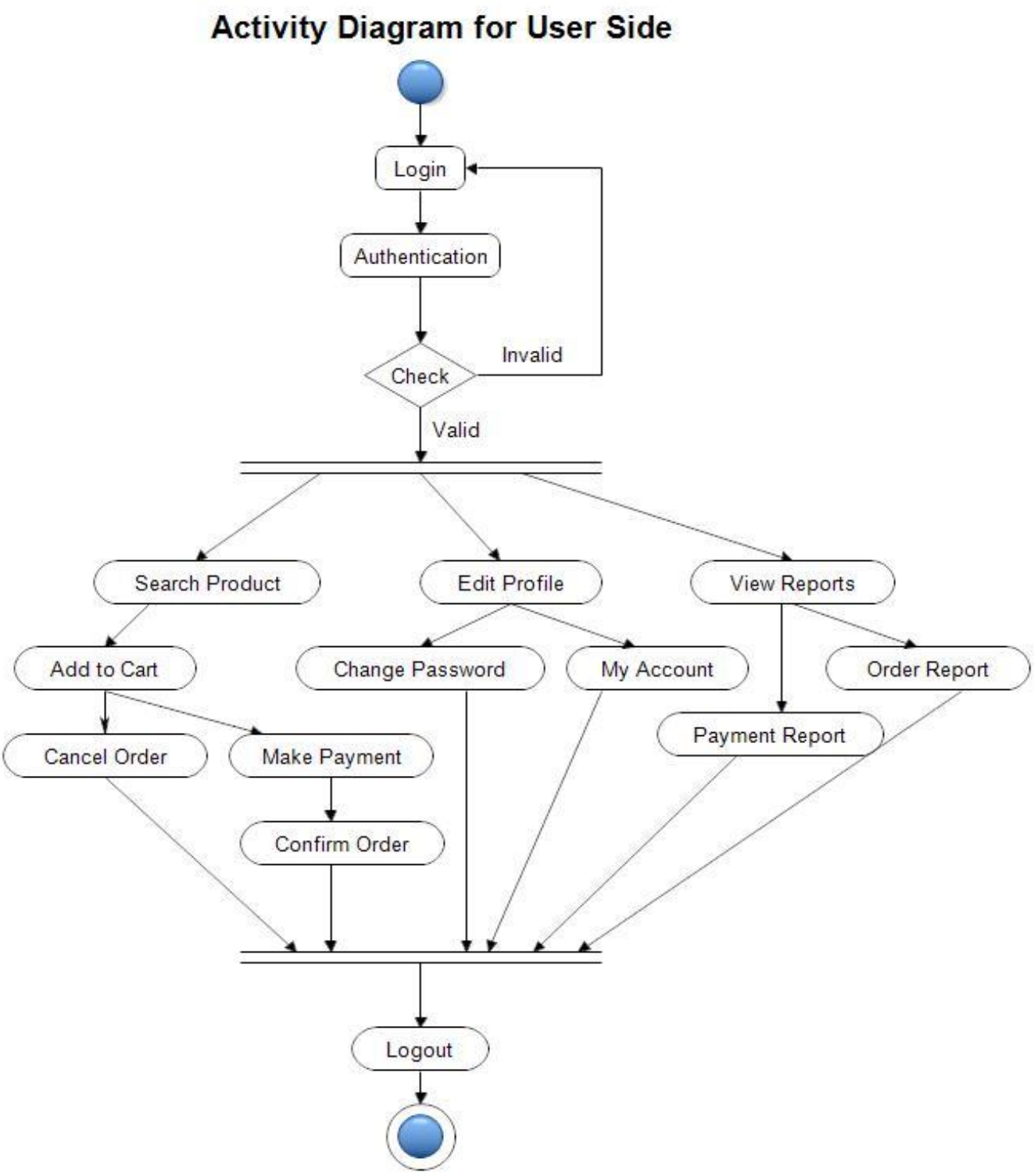


Figure 2: User Activity Diagram

Data Flow Diagram

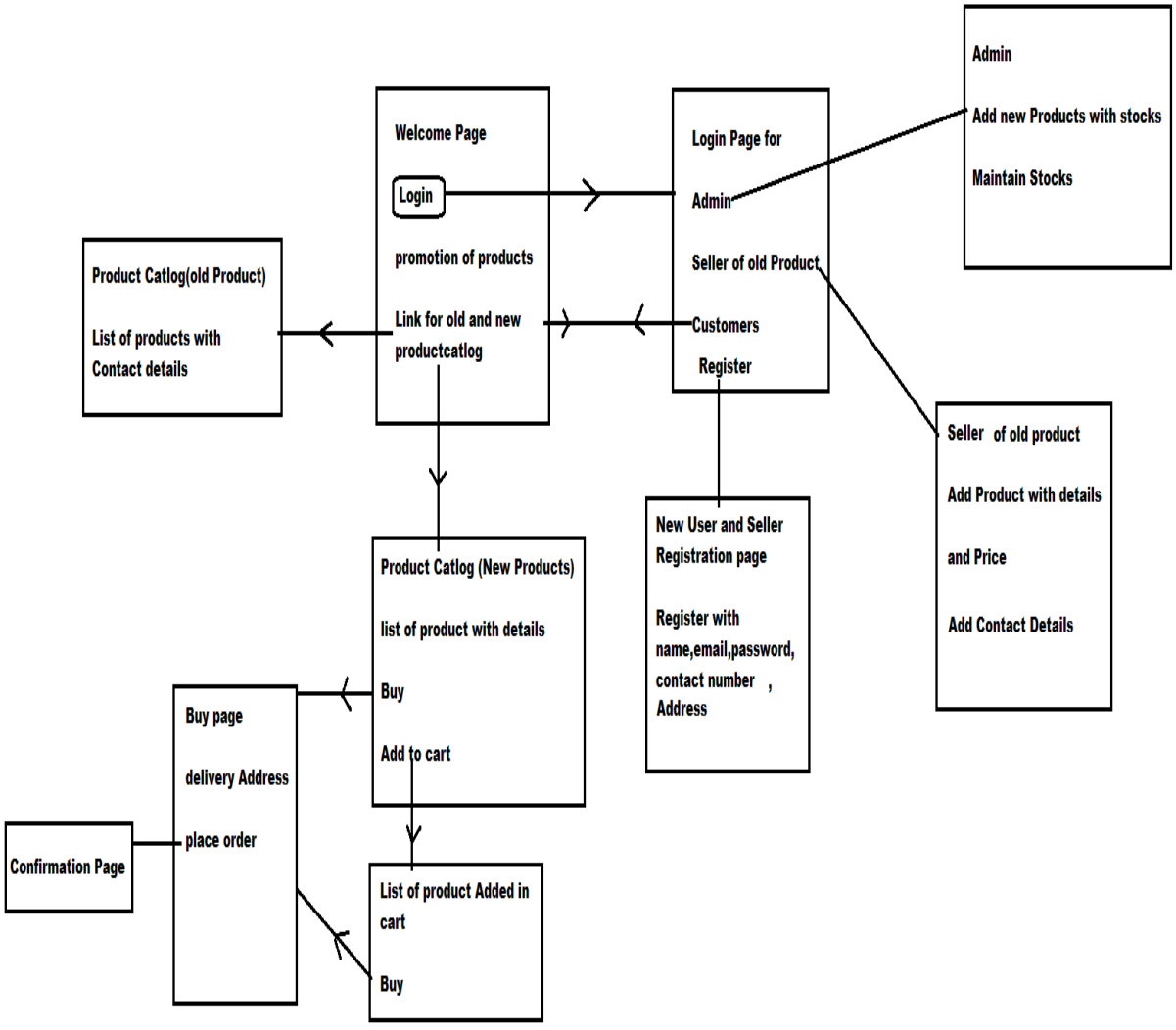


Figure 3 : Data Flow Diagram For Mobile Store

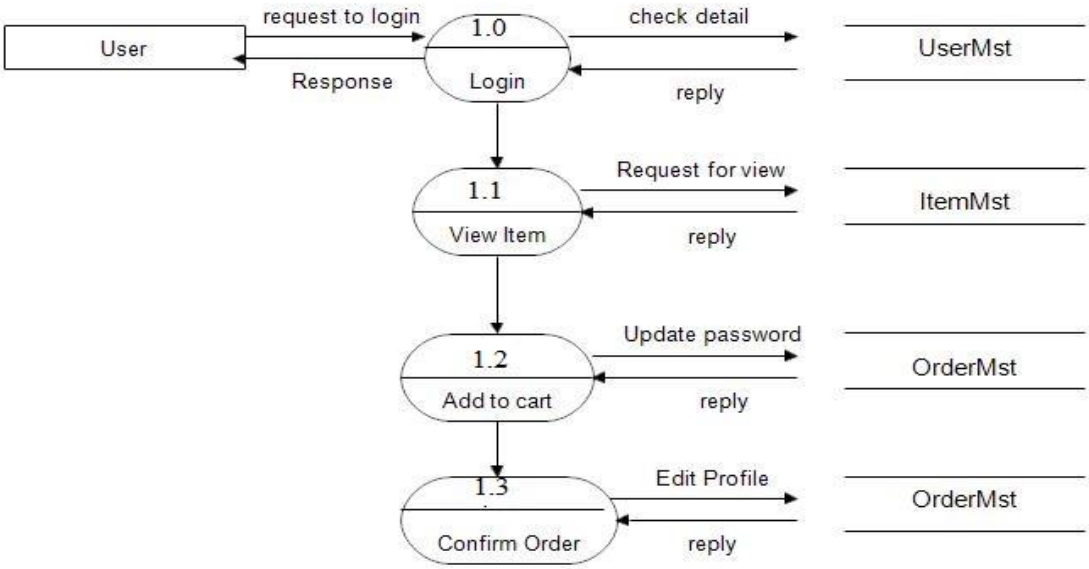


Figure 4: Data Flow Diagram For User

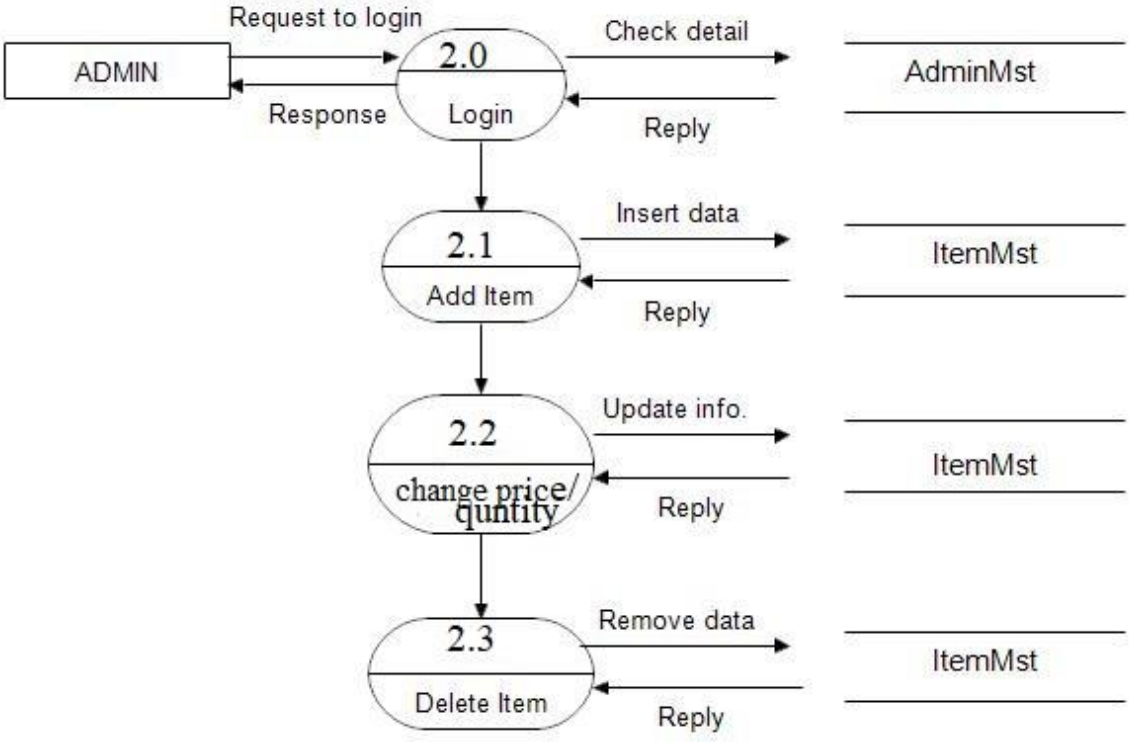


Figure 5: Data Flow Diagram for Admin

Class Diagram

Figure 6: Class Diagram

Use Case Diagram

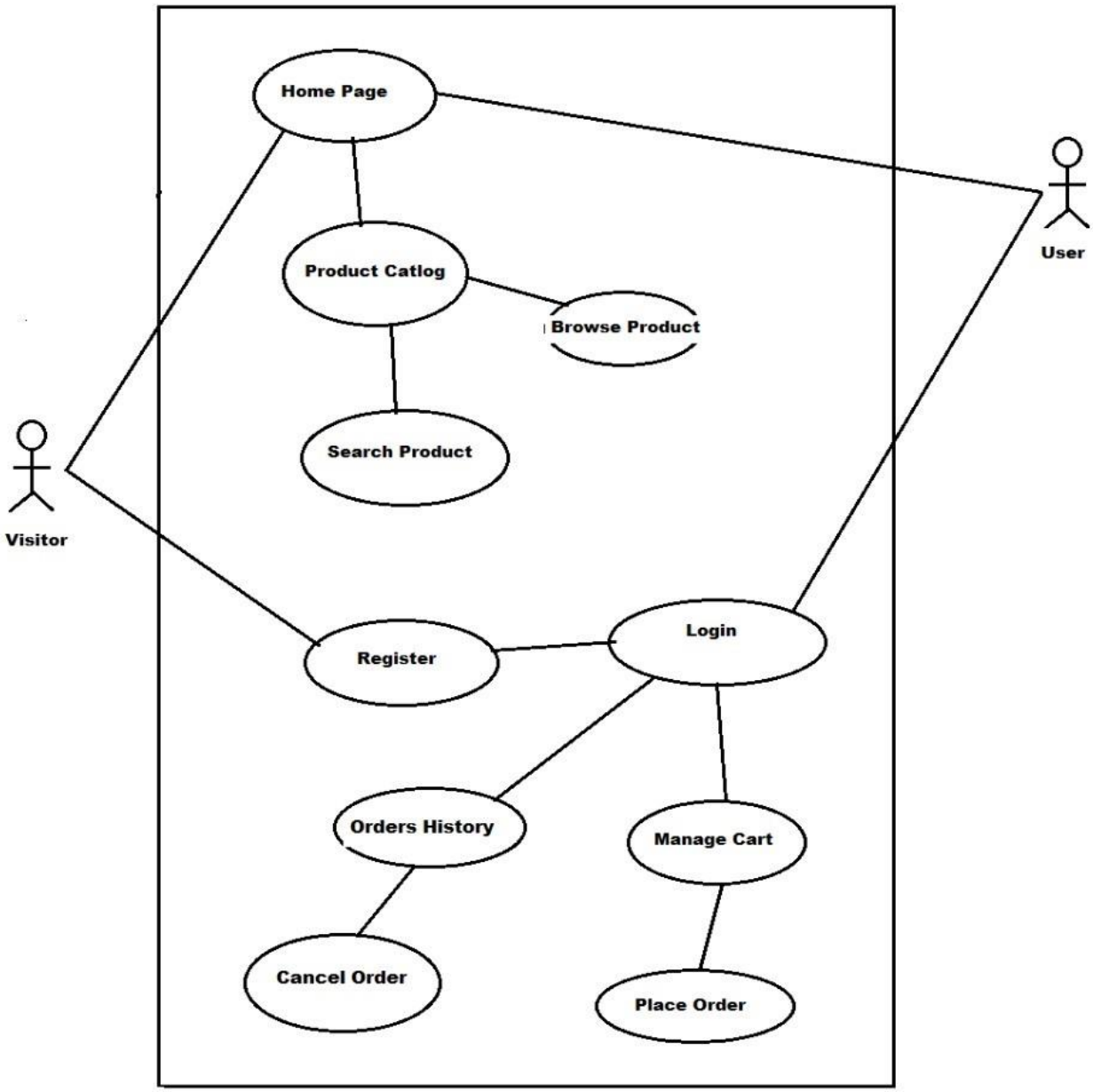


Figure 7: Use Case Diagram For User

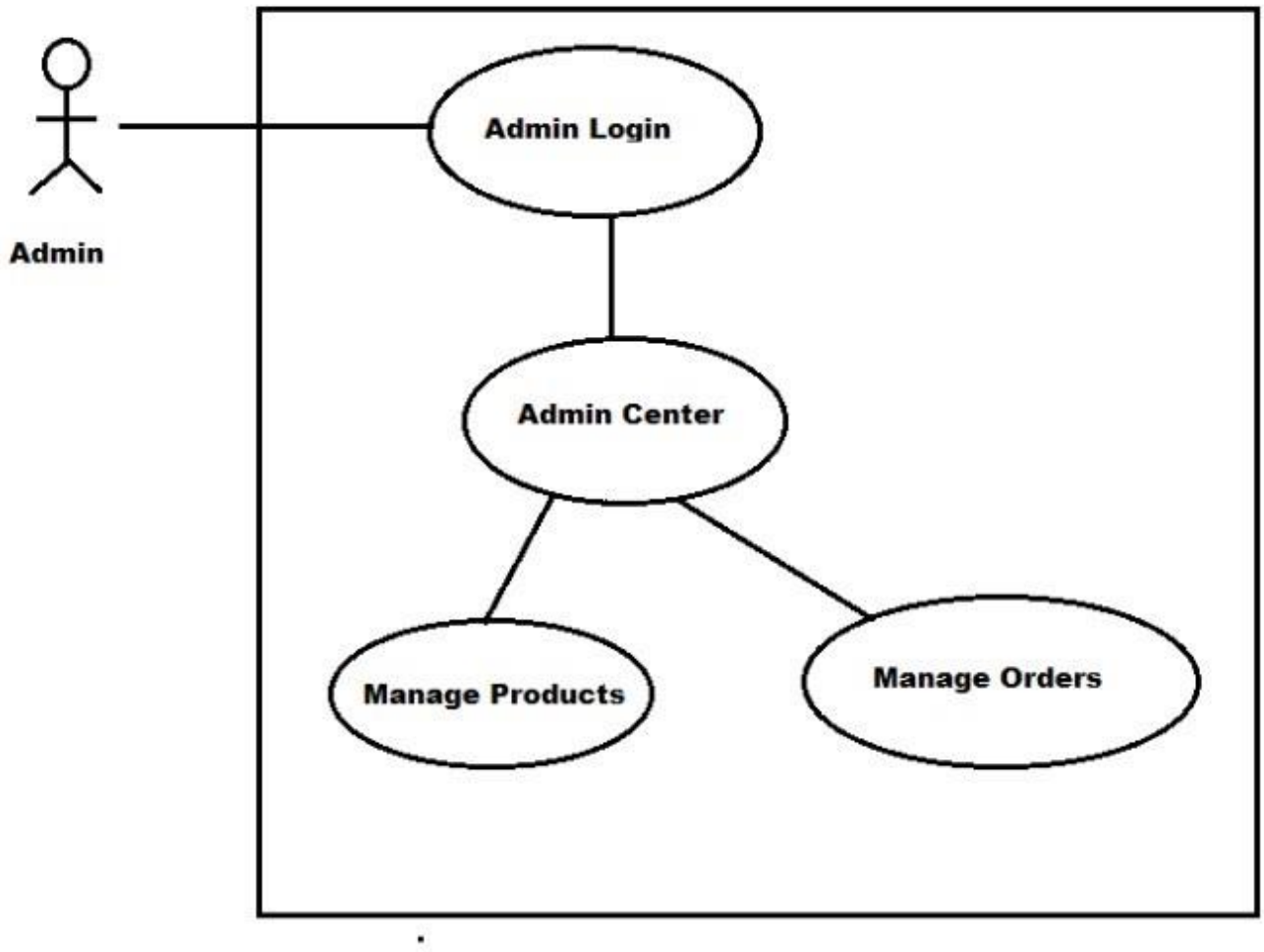


Figure 8: Use Case Diagram For Admin

ER Diagram

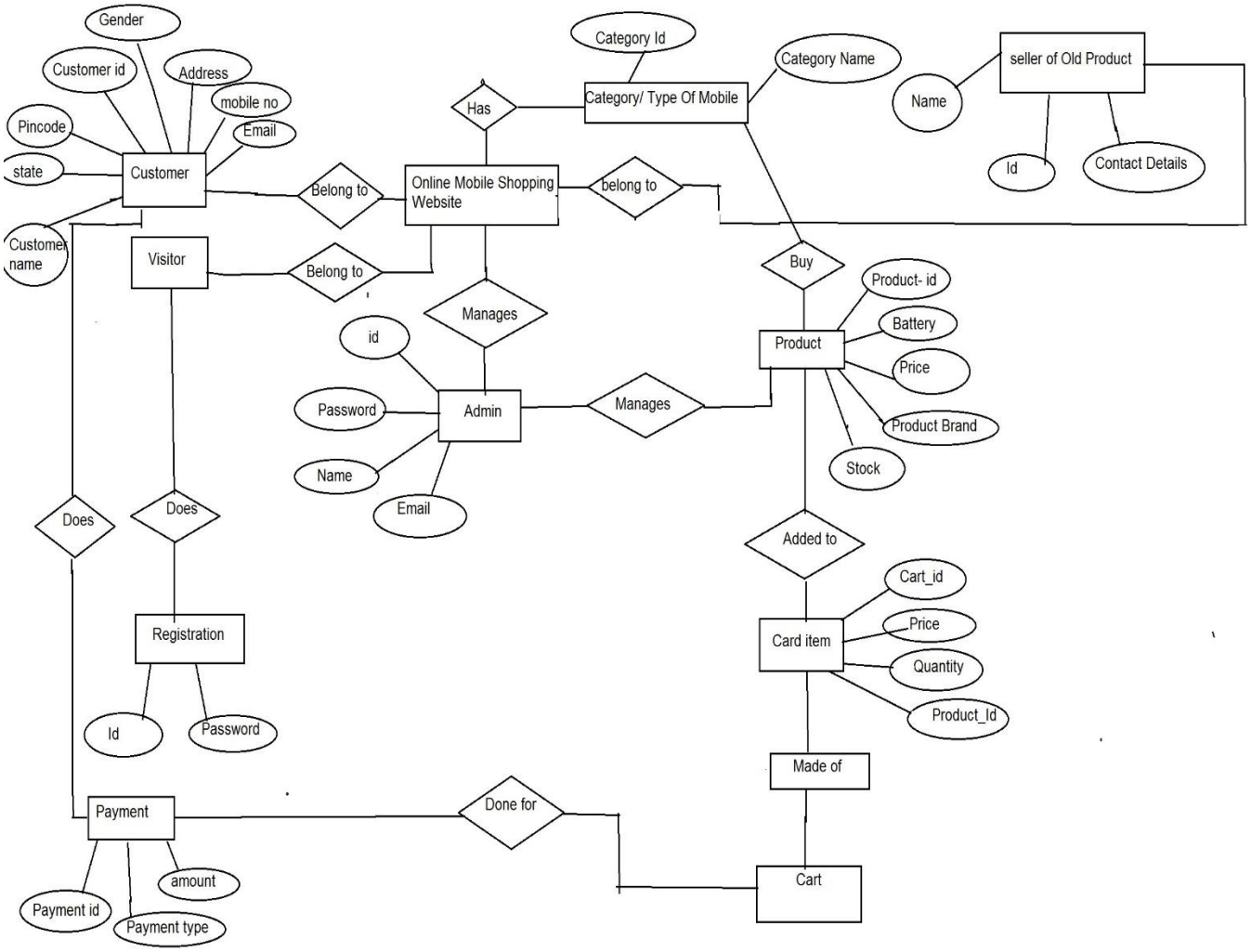


Figure 9 : ER Diagram

Table Structure

Customer:

Field	Type	Null	Key	Default	Extra
customer_id	int	NO	PRI	NULL	auto_increment
address	varchar(255)	YES		NULL	
dist	varchar(255)	YES		NULL	
pincode	varchar(255)	YES		NULL	
state	varchar(255)	YES		NULL	
tal	varchar(255)	YES		NULL	
cust_name	varchar(255)	YES		NULL	
email	varchar(255)	NO	UNI	NULL	
gender	varchar(255)	YES		NULL	
mobile_no	int	NO		NULL	
password	varchar(20)	NO		NULL	

Admin:

Field	Type	Null	Key	Default	Extra
id	int	NO	PRI	NULL	auto_increment
email	varchar(255)	NO	UNI	NULL	
name	varchar(255)	YES		NULL	
password	varchar(20)	NO		NULL	

Mycart:

Field	Type	Null	Key	Default	Extra
cart_id	int	NO	PRI	NULL	auto_increment
price	double	NO		NULL	
quantity	int	NO		NULL	
customer_id	int	YES	MUL	NULL	
product_id	int	YES	MUL	NULL	

NewProduct:

Field	Type	Null	Key	Default	Extra
product_id	int	NO	PRI	NULL	auto_increment
battery	varchar(255)	YES		NULL	
camera	varchar(255)	YES		NULL	
cpu	varchar(255)	YES		NULL	
display	varchar(255)	YES		NULL	
image	mediumblob	YES		NULL	
memory	varchar(255)	YES		NULL	
price	varchar(255)	YES		NULL	
product_brand	varchar(255)	YES		NULL	
product_color	varchar(20)	YES		NULL	
product_name	varchar(255)	YES		NULL	
size	varchar(255)	YES		NULL	
stock	int	NO		NULL	
weight	varchar(255)	YES		NULL	

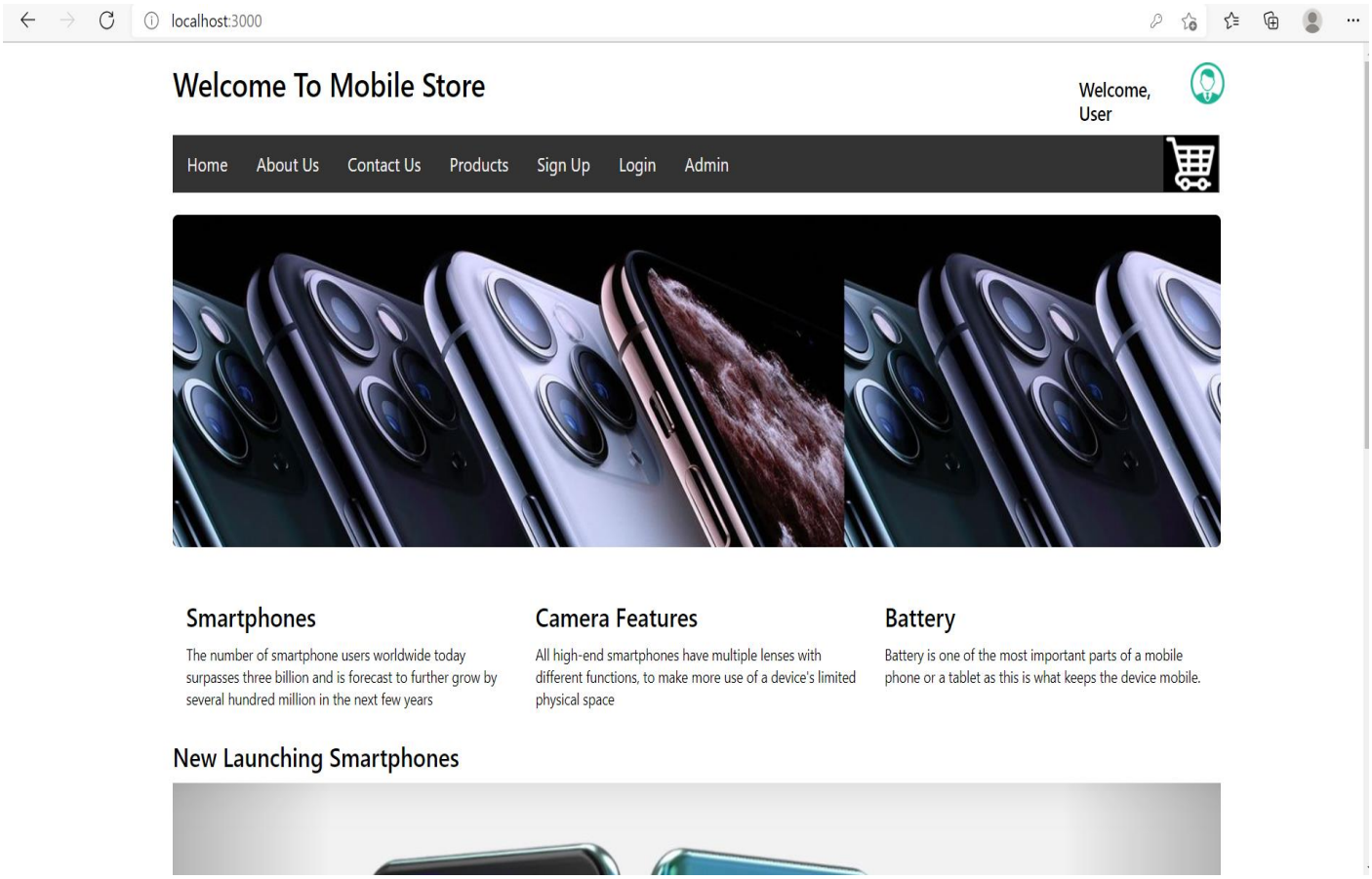
Orders:

Field	Type	Null	Key	Default	Extra
order_id	int	NO	PRI	NULL	auto_increment
amount	double	NO		NULL	
customer_address	varchar(255)	YES		NULL	
customer_email	varchar(255)	YES		NULL	
customer_name	varchar(255)	YES		NULL	
c_id	int	NO		NULL	
customer_phone	varchar(255)	YES		NULL	
order_date	date	YES		NULL	
status	varchar(255)	YES		NULL	

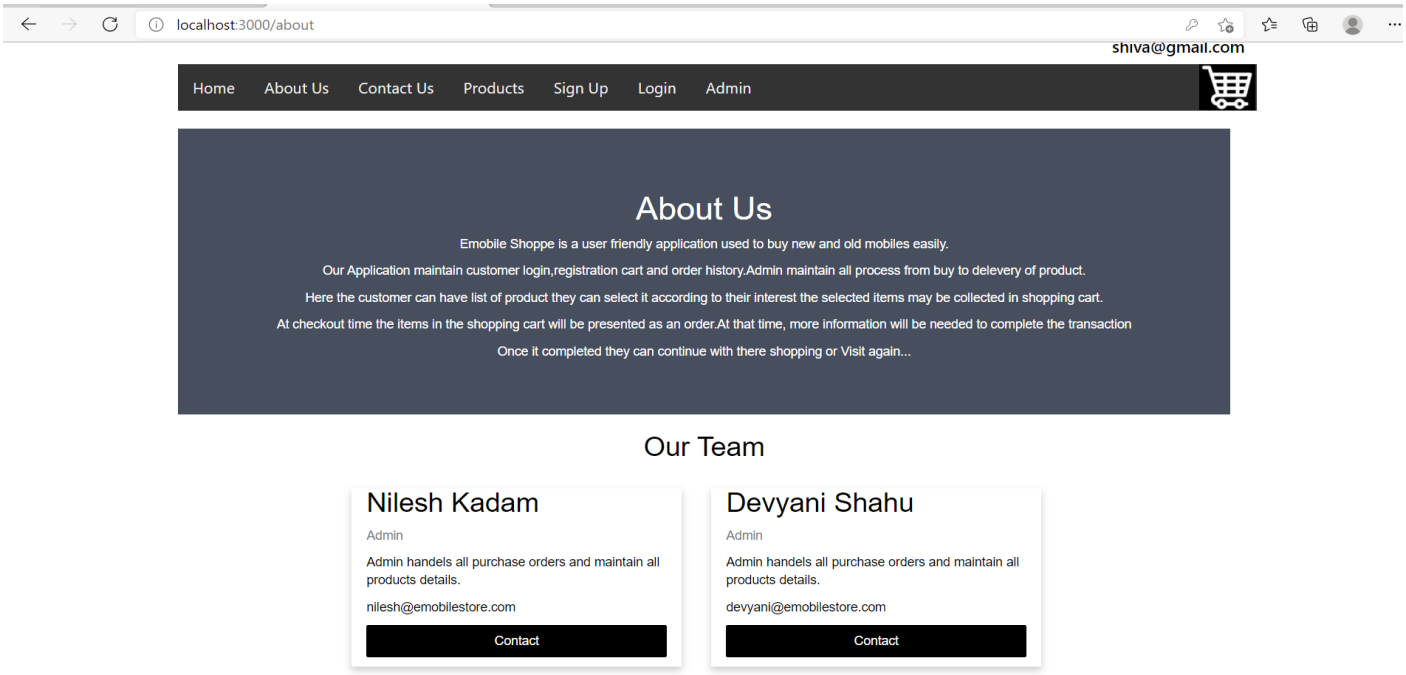
Order_details:

Field	Type	Null	Key	Default	Extra
id	int	NO	PRI	NULL	auto_increment
amount	double	NO		NULL	
price	double	NO		NULL	
quantity	int	NO		NULL	
order_id	int	YES	MUL	NULL	
p_id	int	YES		NULL	

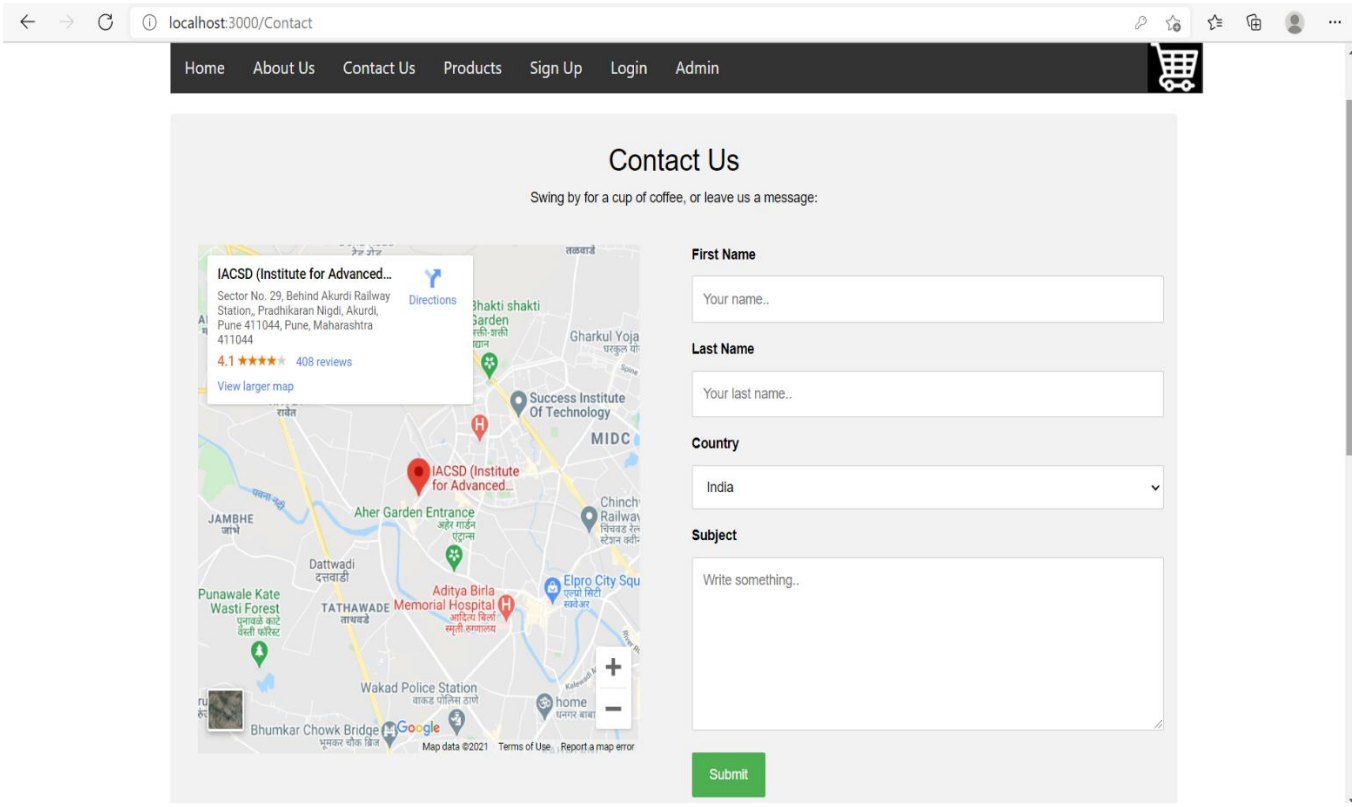
Output Screenshots



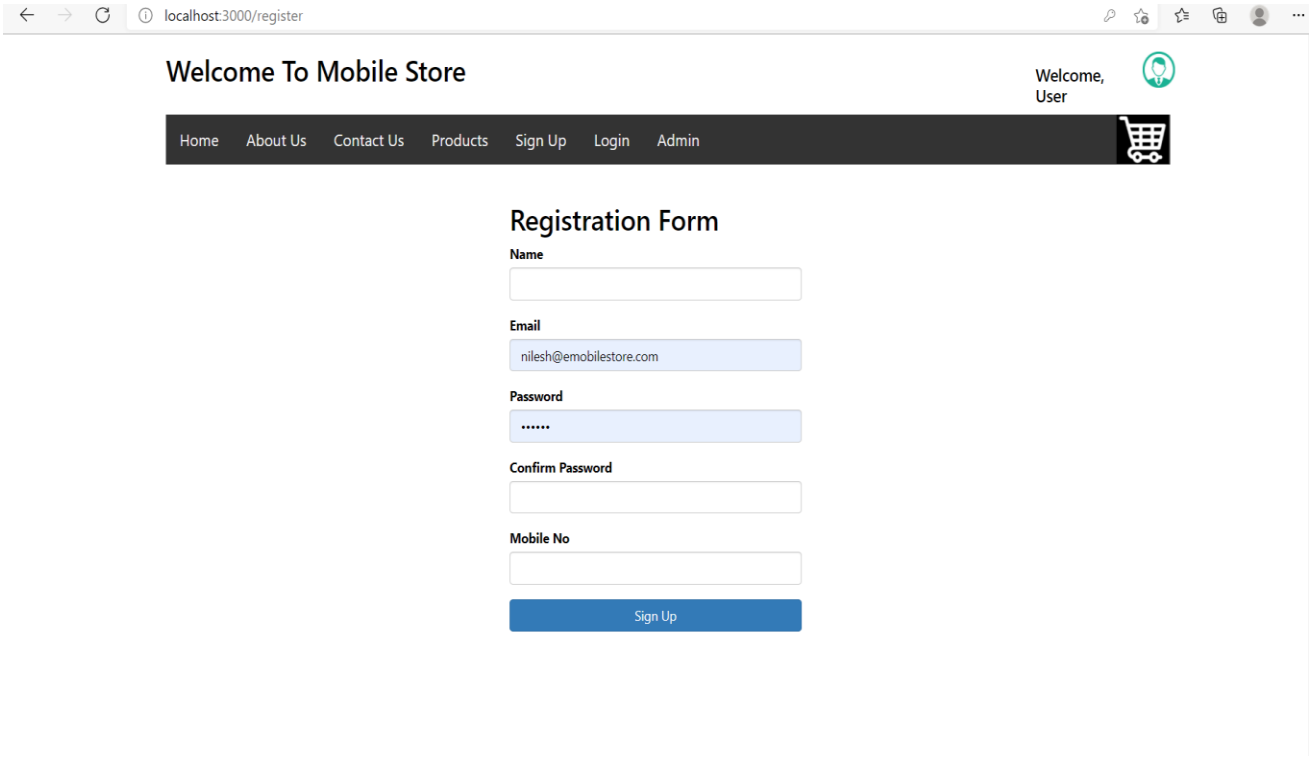
1.Home Page



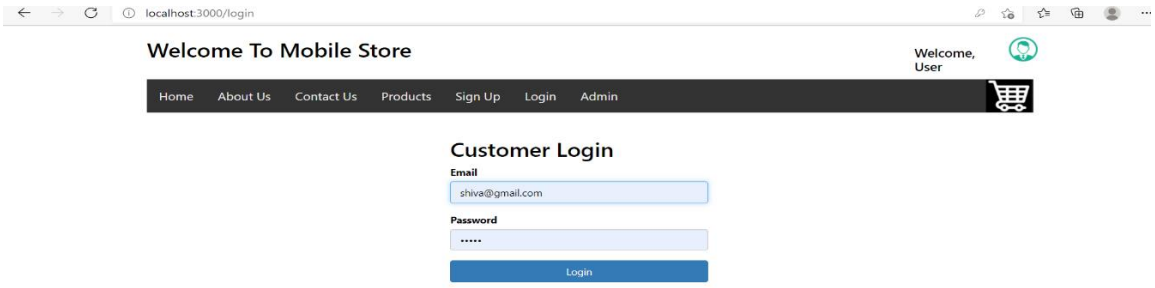
2.About Us Page



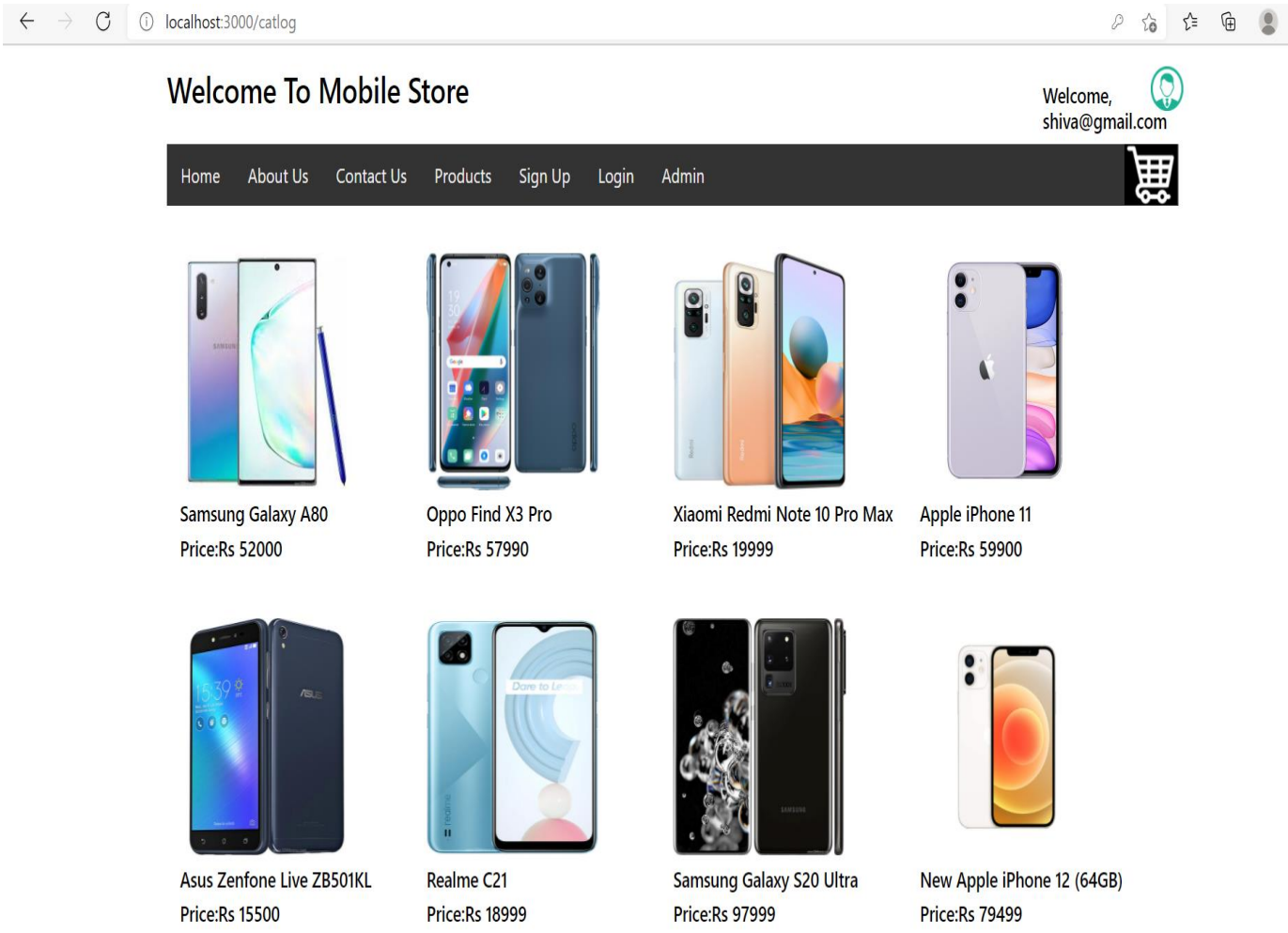
3.Contact Us Page



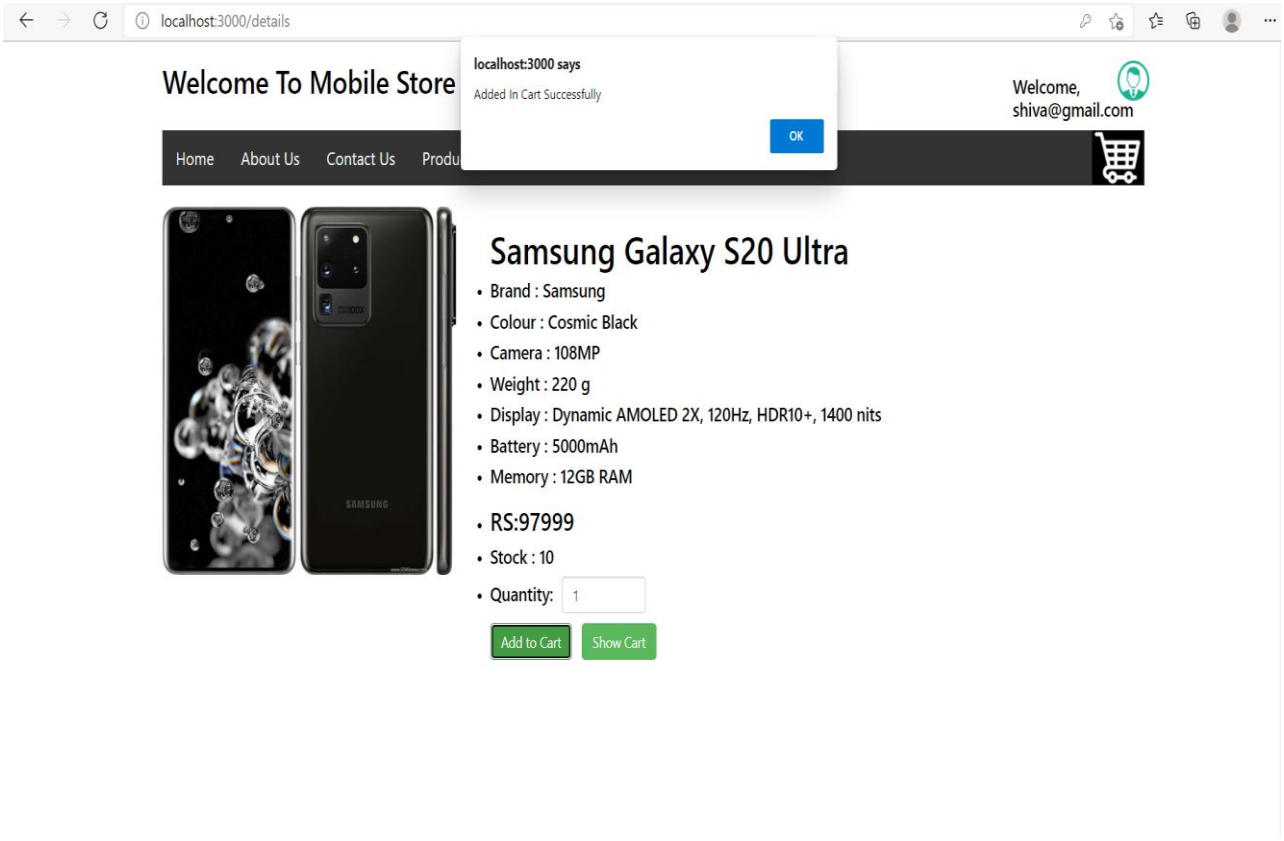
4.Sign Up Page



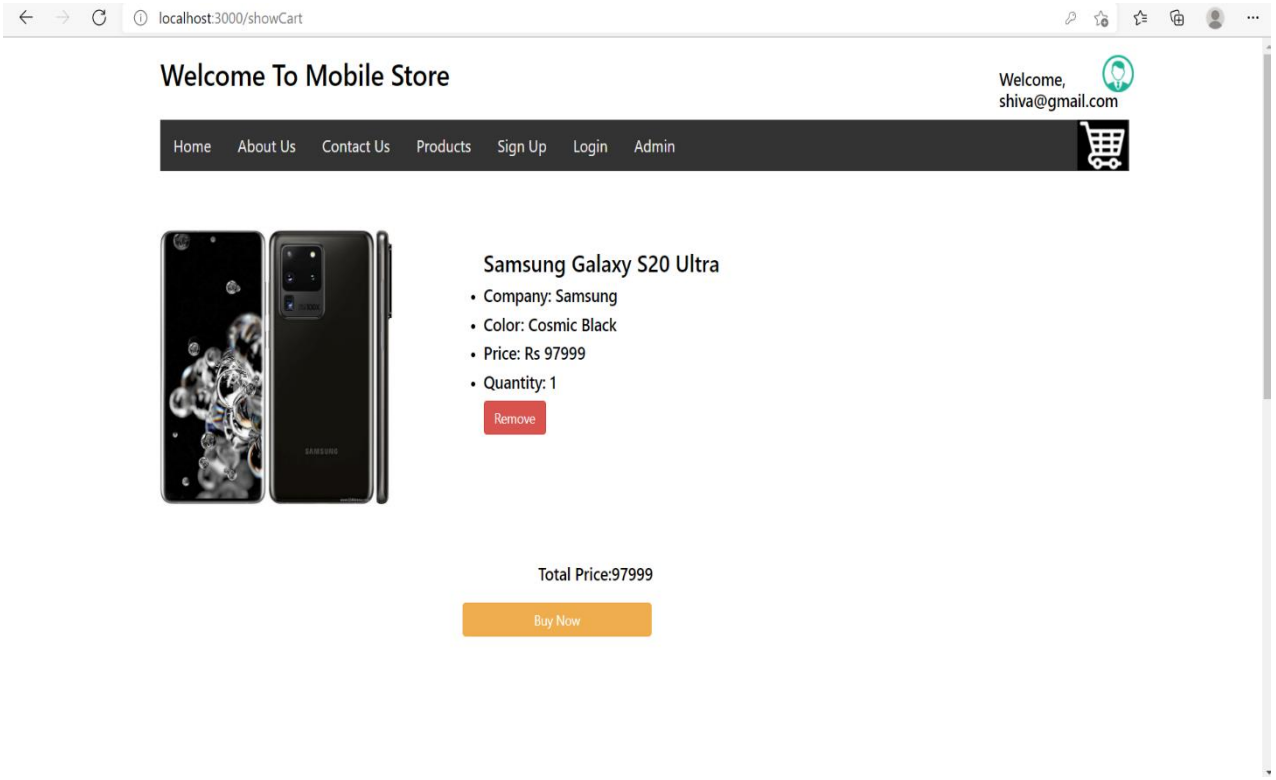
5.Customer Login



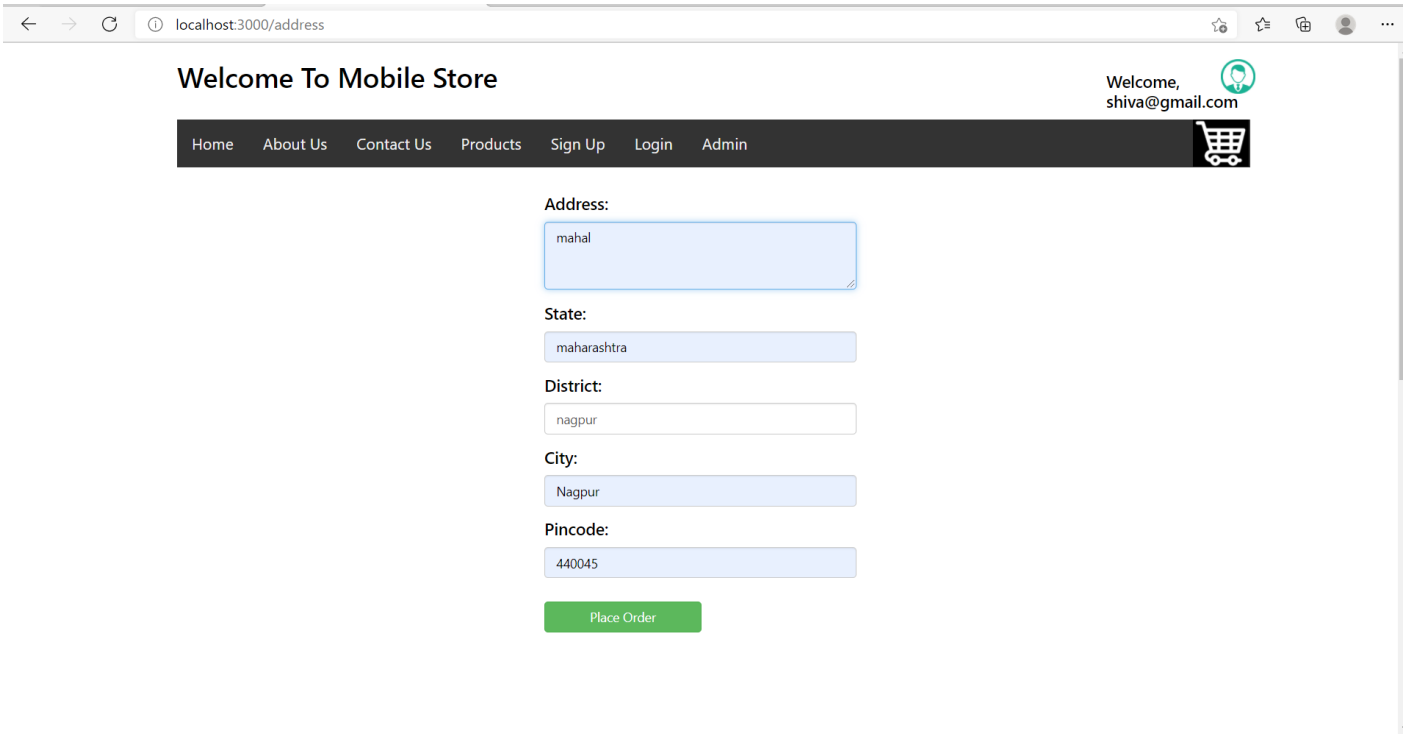
6.Product Catlog



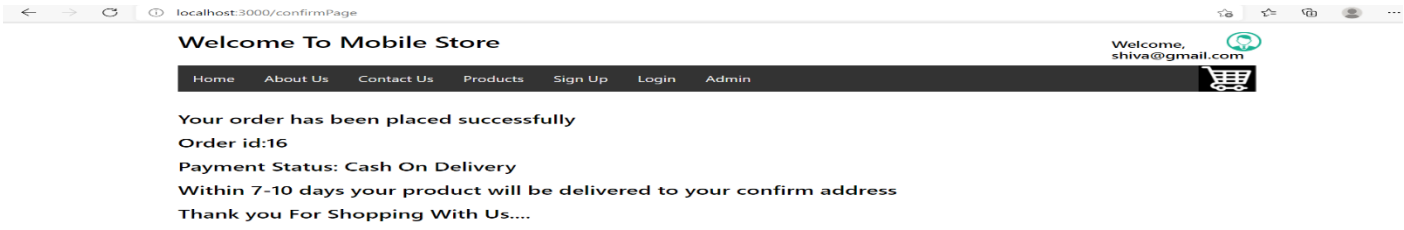
7.Product Details



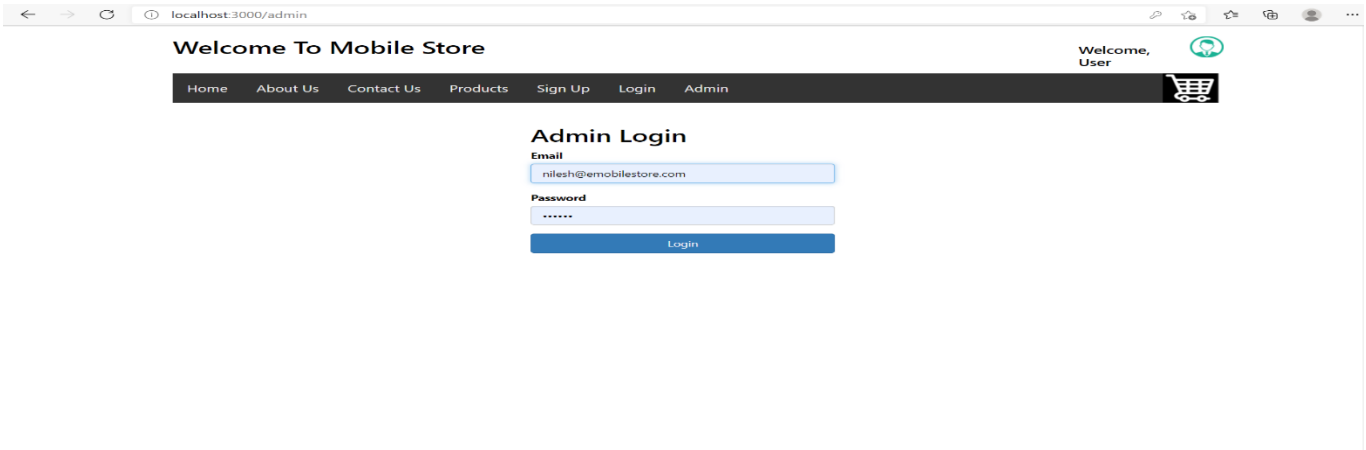
8.Show Cart



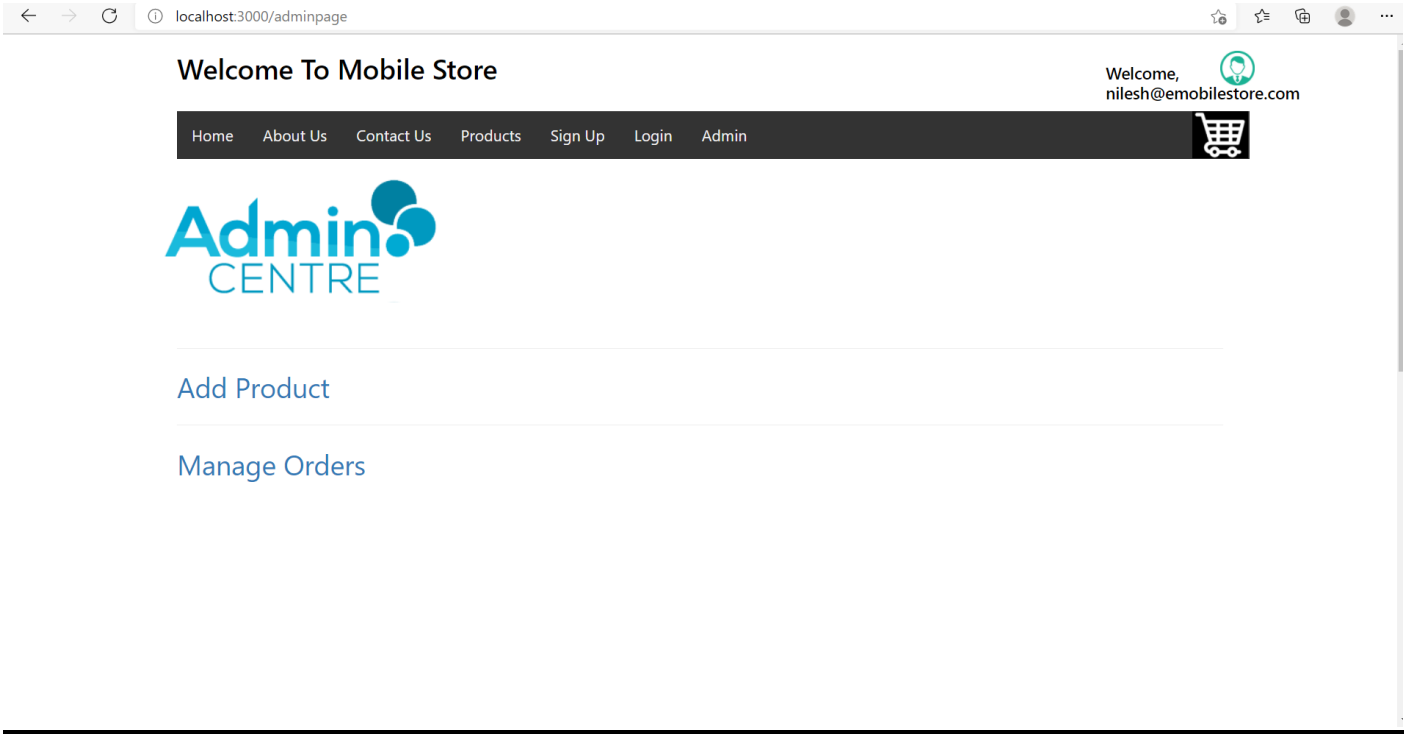
9.Address Page



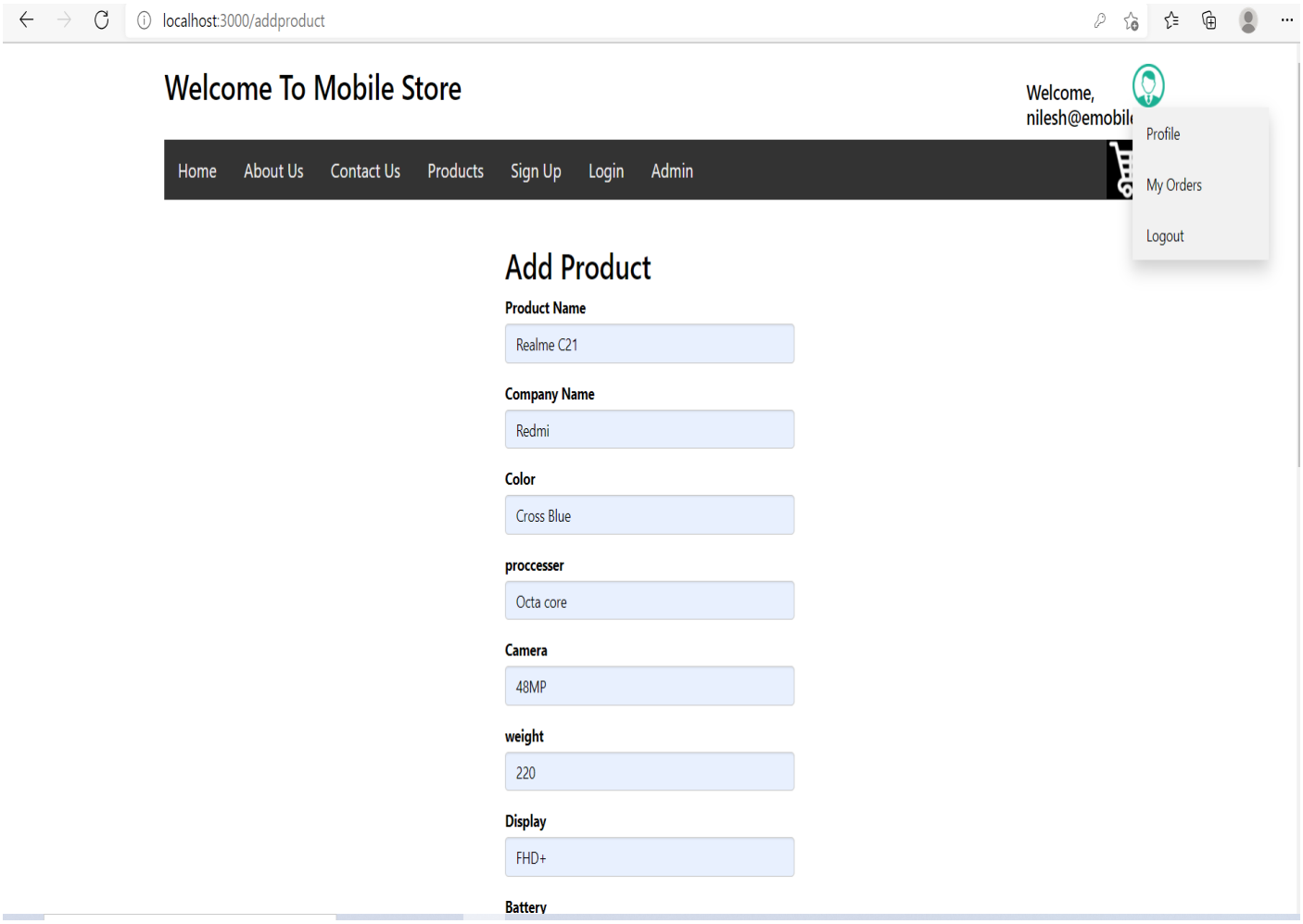
10.Order Confirmation Page



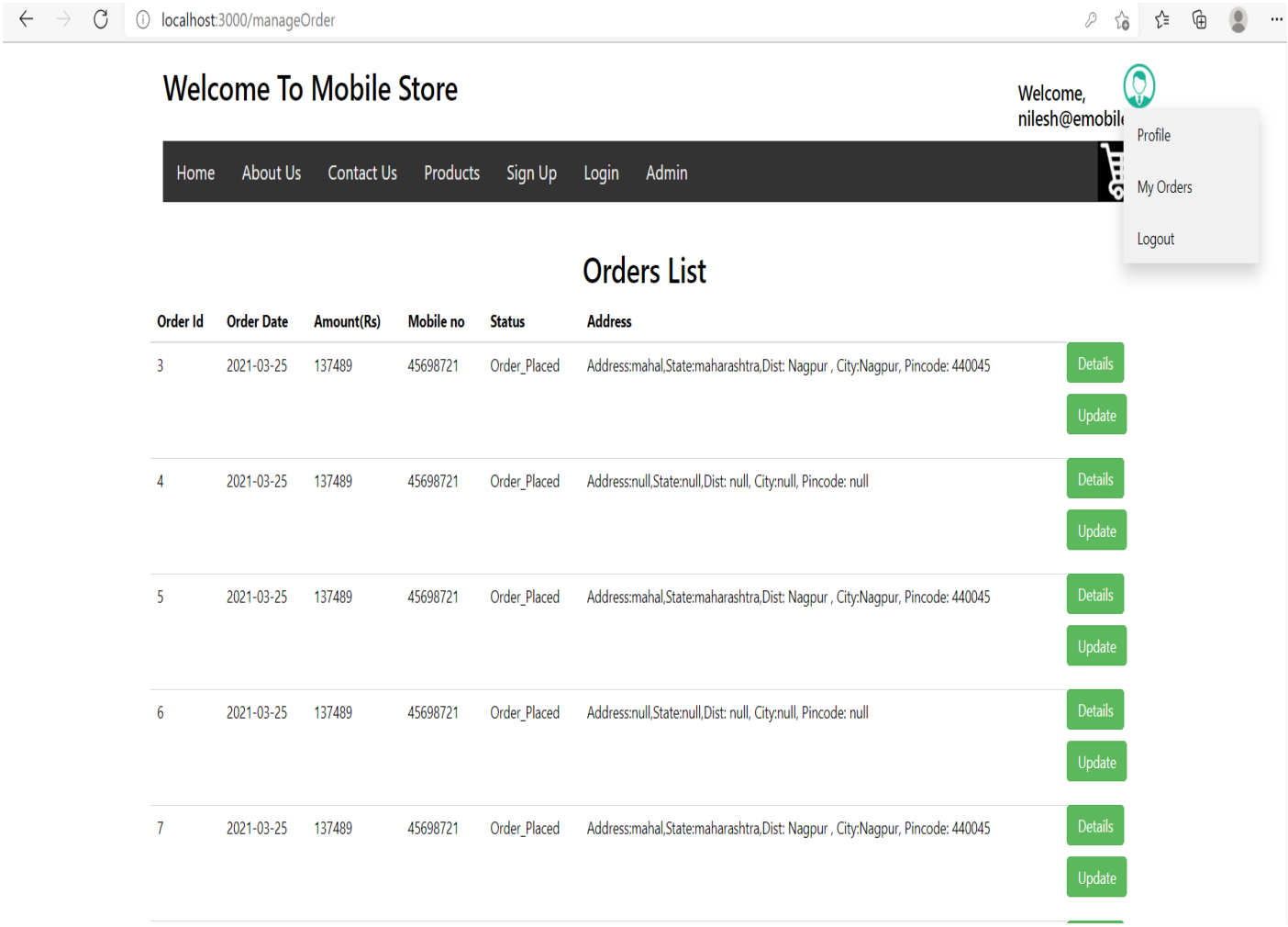
11.Admin Login



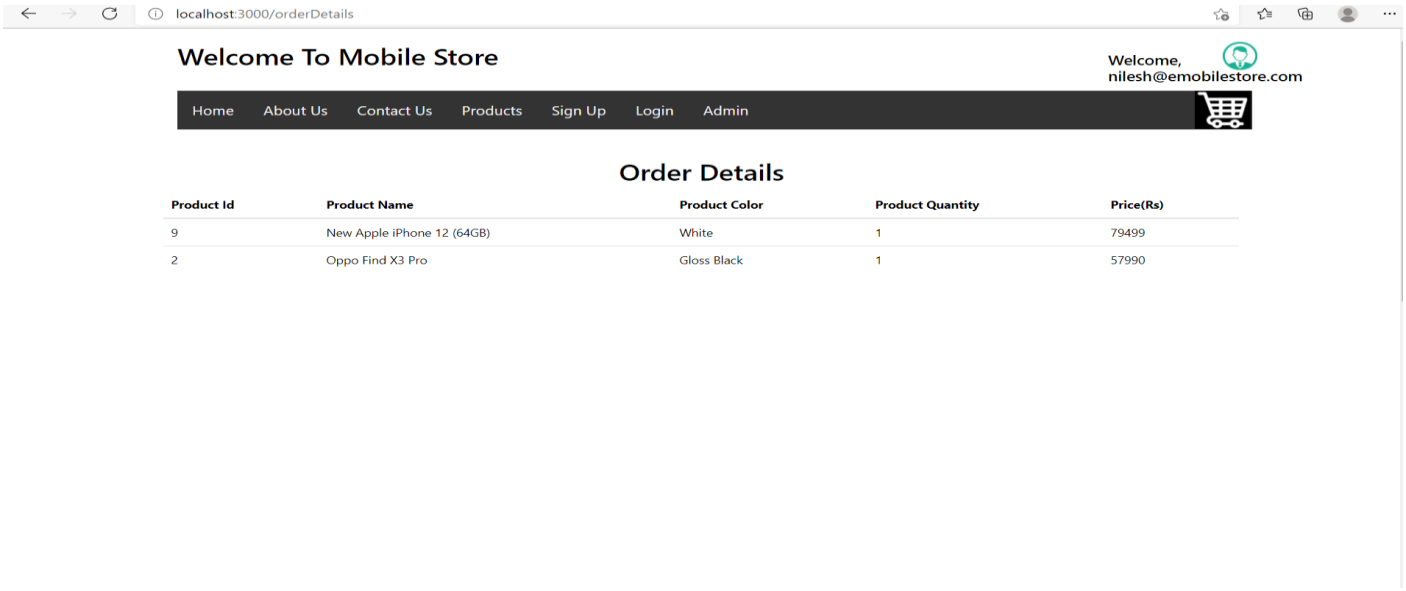
12.Admin Page



13.Add Product

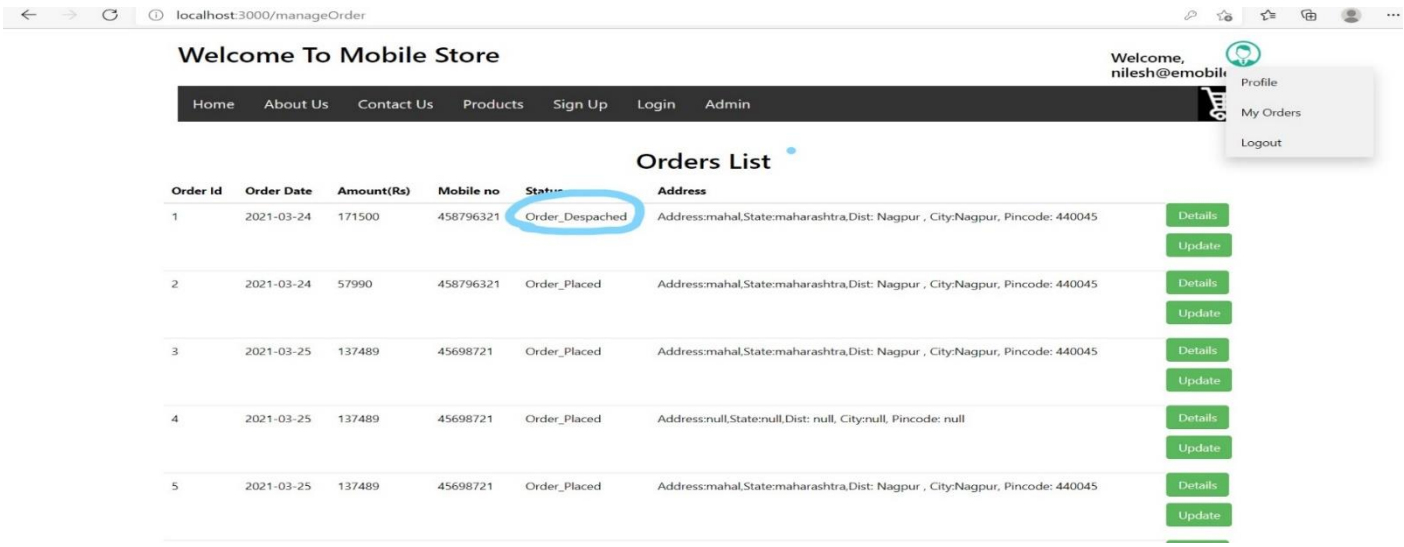


14.Manage Order



15.Order Details

16.Update Status



17.Showing Updated status

Conclusion

Global network of electronic commerce has made in this era on the first list in the modern business; offering job opportunities in the field of E-Commerce Website, Statistics e-commerce, Mobile shopping system. The proposed site design is characterized by attractive and provides easy navigation, multiple options in terms of brand, color and design. The purpose of this paper is to locate the customer a flexible, attractive and easy-to-use web site to provide along with an added feature, such as a list of payment using a cash on delivery. The online mobile trading system is also undergoing improvements as the change is working to improve e-commerce in the future such as working to provide multiple shopping carts for all design mobile applications for social site and providing a separate application for mobile shopping.

Future Scope

In order to bring this research from its current analysis on the basic model to an advanced level, the points listed under the scope of excluded and discussed below must also considered. Payment transactions need to be made through a more secure and safe channel like Pay-Pal, which will ensure a safe and sound transaction system. Transaction payments should be password protected or should have a PIN code that confirms its reliability. Products listed on the product information pages should have paged display pictures, which will be more appealing to the viewer. The product should be listed with information such as the product specifications: price, part number, technical details, features and packaging details. Yet some product information pages do not provide this information which is very inconvenient for the consumer and does not present a professional image.

The web application developed can be enhanced to be more attractive by improving the CSS. The website designed here may not look the same in every browser/ device. To solve this issue, the website can be made responsive by incorporating various methods for designing the CSS. Various other features like enabling users to choose mode of payment. A separate section for user reviews can be implemented to make the website more interactive. The availability of the product based on whether the product is in stock or out of stock can be implemented depending upon the warehouse capacity. And finally, the estimated time in order to deliver the product can also be implemented

References

[1] Cyr, D., M. Head & A. Ivanov (2006). Design aesthetics leading to mloyalty in mobile commerce. Information & Management, vol. 43, no. 8, pp. 950-963.

[2] Lee , Ching-Chang, Hsing Kenneth Cheng & Hui-Hsin Cheng (2007). An empirical study of mobile commerce in insurance industry: Task– technology fit and individual differences. Science Direct, vol.43, 2007, pp.95-110.

[3] Wu, Jen-Her & Yu-Min Wang (2006). Development of a tool for selecting mobile shopping site: A customer perspective. Science Direct, vol. 5, pp. 192-200.

[4] Wu, , Jen-Her & Shu-Ching Wanga (2005). What drives mobile commerce? An empirical evaluation of the revised technology acceptance model. Information & Management, vol. 42, pp. 719-729.

[5] https://getbootstrap.com/docs/4.6/getting-started/introduction/

[6] https://docs.spring.io/spring-data/jpa/docs/current/reference/html/#reference

[7] https://www.thymeleaf.org/doc/tutorials/2.1/thymeleafspring.html

[8] https://www.flaticon.com