Online Mobile Shop Management System

A project submitted to

UKA TARSADIA UNIVERSITY

in partial fulfilment of the requirements
for the degree of

Integrated Masters of Science in Information Technology

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CERTIFICATE

Date: 09th December, 2023

This is to certify that the project report entitled **"Online Mobile Shop Management System"** has been carried out by **Mr. Vishvas Lathiya (202106100110127), Mr. Rohan Narigara (202106100110137)** under my guidance in partial fulfillment of the requirement for the **Integrated Masters of Science in Information Technology** during the academic year 2023-24.

_____   _____

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BABU MADHAV INSTITUTE OF INFORMATION TECHNOLOGY

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Chapter 1 - Introduction

1.1 Problem Definition:

In today's world, People are trying to make things easier. Every people are going out to purchase something for their usage. That is time consuming for them. Some People are too busy with their daily rooting and because of that they don't have time to go out and purchase their necessary Products. It is not possible for everyone to go physically for purchasing something to the Shop. In present trend most of the work is done through Online applications.

In traditional way, everyone has to go to the Shop for Purchasing things that they want. However, in today's Digital world, everyone switches to the Online Websites for shopping anything. There are so many websites are available for shopping anything Online and All sellers are doing competition to sell their Products to Customers. It is important to make such platform that provide facility to the Owner of Products to make their Products Online. And as a customer, it is easy to buy Products online rather than going to the shops in traffics and spends some hours in it.

1.2 Project Objective:

Online Mobile Shop Management System is E-commerce online shopping website which allow customers to purchase Mobiles Online. This System will help to the Owner of the Shop in many ways like; by providing Security, storing data digitally, saving time for many processes like; counting bill, etc.

Online Mobile Shop Management System will provide the Mobile Phones on online bases. The main objective of the "Online Mobiles Shop Management System" is to make a workflow flexible and to improve the services provided to the Customers. The System will be helpful for Shop Owner as well as Customers in different ways.

1.3 Product Scope:

The "Online Mobile Shop Management System" is limited to India only. The System will not provide tracking facility of the Products. In this System customers will not able to place order with COD for preventing Money Frauds.

Chapter 2 - Overall Description

2.1 Product Perspective/Environment Description

2.1.1 Hardware Interface/ Hardware Specification

- Processor: 11th Gen Intel(R) Core (TM) i5-1135G7 @ 2.40GHz   2.42 GHz
- RAM: 8.00 GB
- System Type: 64-bit operating system, x64-based processor
- Mouse: Logitech – M221 Wireless

2.1.2 Software Interface/ Software Specification

    1. Front-End: Visual Studio Code

    2. Back-End: SQL Server

1. Front-End: Visual Studio Code

        Visual Studio Code is a lightweight but powerful source code editor which runs on your desktop and is available for Windows, macOS and Linux. It comes with built-in support for JavaScript, TypeScript and Node.js and has a rich ecosystem of extensions for other languages and runtimes (such as C++, C#, Java, Python, PHP, Go, .NET).

2. Back-End: SQL Server

        SQL (Structured Query Language) used to perform various operations on Database like; Insert, Update, Delete, etc. It is also useful for storing data.

Chapter 3 - System Specific Requirements

3.2 Functional Requirement

❖ Manage User

RN	Description	Comment
FRN 1	The user shall be able to sign into system. The details would be asked as name, contact number, email id, password, etc. By giving details the user will be able to use the internal facilities of system.	login / registration
FRN 2	Admin shall be able to handle users on the System like; add User, Active/Deactive User.	customer
FRN3	Admin shall be able to update information of Customer when Customer presence is Offline.	

❖ Manage Product

RN	Description	Comment
FRN 1	The admin shall be able to manage Product details like; add Product, update Product details, and delete Product.	product
FRN2	Admin shall be able to allocate product to a specific category(brand).	product

❖ Manage Customer

RN	Description	Comment
FRN 1	The admin shall be able to manage customers details when Customer presence is Offline (at Shop) like; Customer Name, Customer Address, Customer Contact Number, Customer Email, etc., Active / Deactive Customer and remove Customer.	customer

RN	Description	Comment
FRN2	Customers shall be able to add, update their information after successful registration and login.	customer

❖ Manage Order

RN	Description	Comment
FRN 1	The customer shall be able to manage Order of the Product like; place Order, cancel Order, view Order.	order
FRN2	The admin shall be able to view the Order details placed by the Customer.	order
FRN3	Admin shall be able to manage Order if Customer presence is Offline	order

❖ Manage Cart

RN	Description	Comment
FRN 1	The customer shall be able to manage their Cart details like; view Cart, add Product to Cart, empty Cart, etc.	cart
FRN2	The admin shall not be able to view the cart details of the Customer.	

❖ Manage Payment

RN	Description	Comment
FRN 1	The customer shall be able to manage Payment Details of the Product like; make Payment, cancel Payment, etc.	payment
FRN2	The admin shall be able to view the Payment Confirmation.	

❖ Report Generate

RN	Description	Comment
FRN 1	The system shall be able to generate Report of the Customer, Category, Products, etc.	report

FRN 2	The admin shall be able to generate the Report.	report
FRN 3	The System will generate bill of the Customer Order.	

3.1 Non-Functional Requirement

| RN	Description	Comment
NFR 1	User authentication and authorization mechanism would be in place to ensure that only authorized personnel can access sensitive information and perform specific actions.	Security
NFR 2	The system would be compatible with various mobile devices, operating systems and browsers to accommodate a diverse range of users.	Compatibility
NFR 3	The system would be available at any time when user want to access the system to accomplish their tasks.	Availability
NFR 4	The system would be able to recover from failures without data lose.	Reliability
NFR 5	The system's code and architecture would be well-documented and modular, marketing it easier to update, maintain and enhance in the future.	Maintainability
NFR 6	The System would comply with relevant data protection regulations, safeguarding user and customer data and allowing users to control their data preferences.	Data Privacy

Chapter 4 - UML Diagram

4.1 Usecase Diagram

4.1.1 Usecase Diagram for 'Online Mobile Shop Management System':
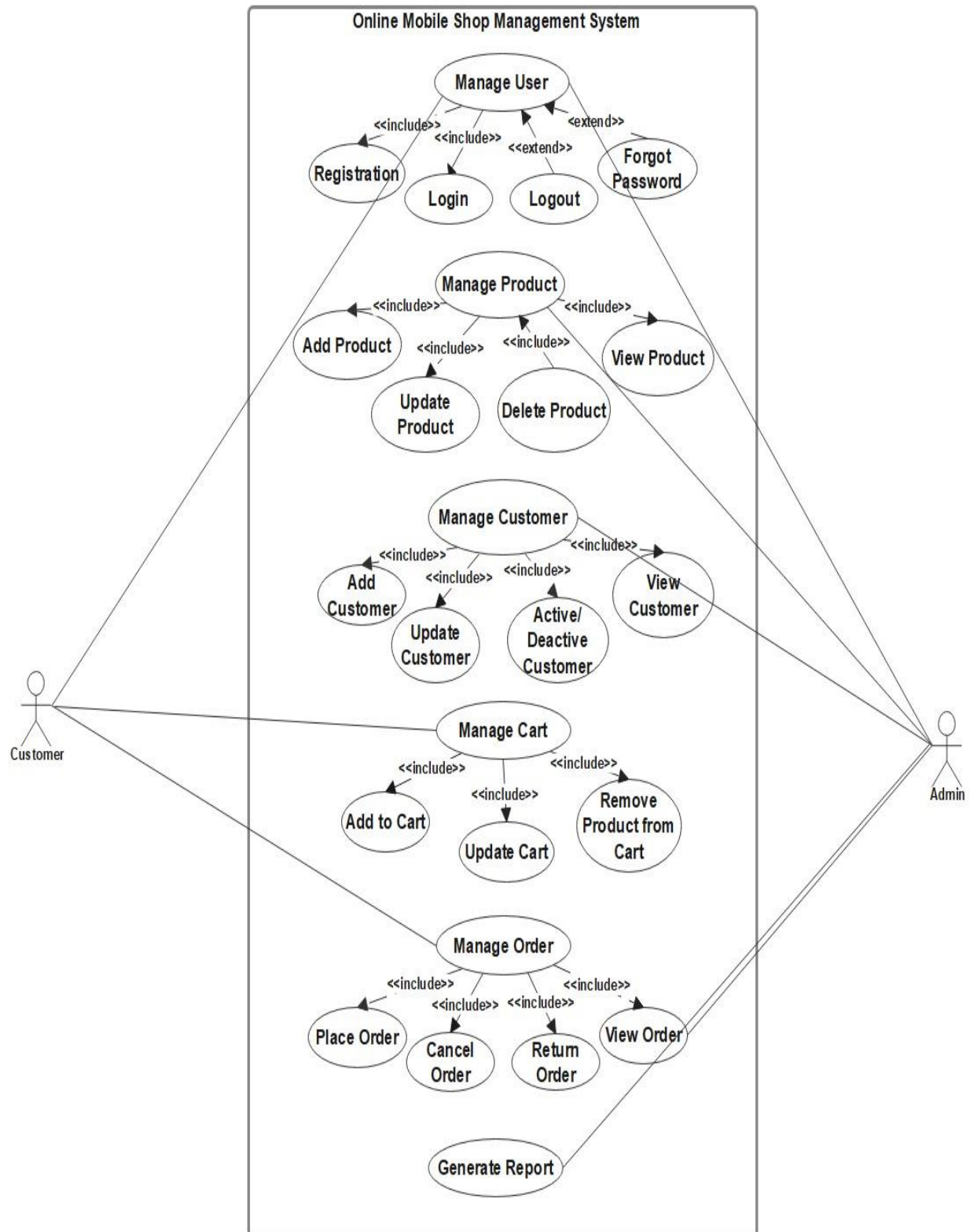
4.2 Activity Diagram:

4.2.1 Activity Diagram for 'Registration':
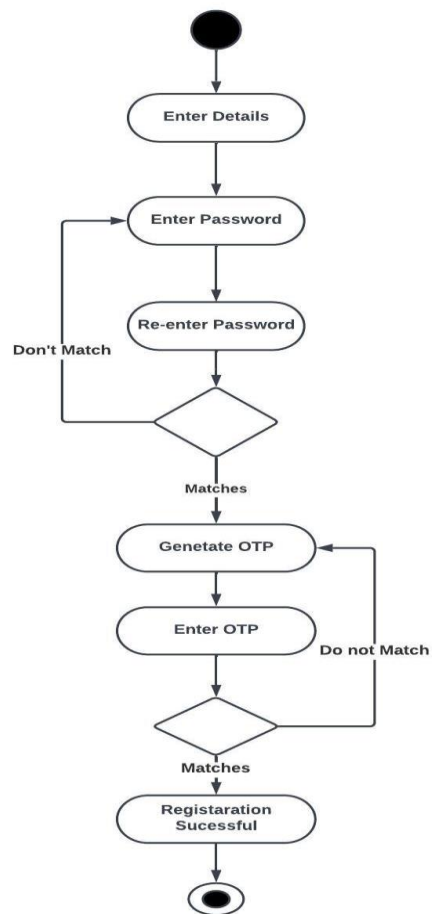
4.2.2 Activity Diagram for 'Login':
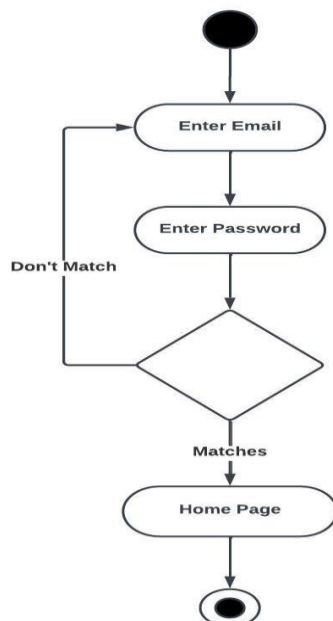
4.2.3 Activity Diagram for 'Forgot Password':
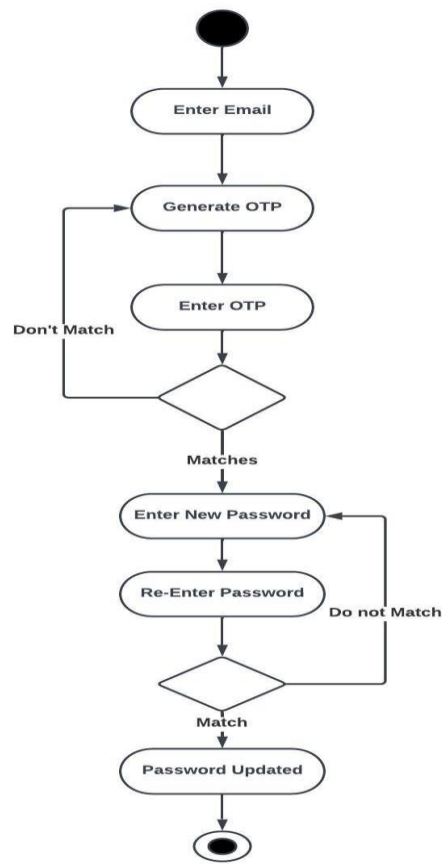
4.2.4 Activity Diagram for 'Generate Report':
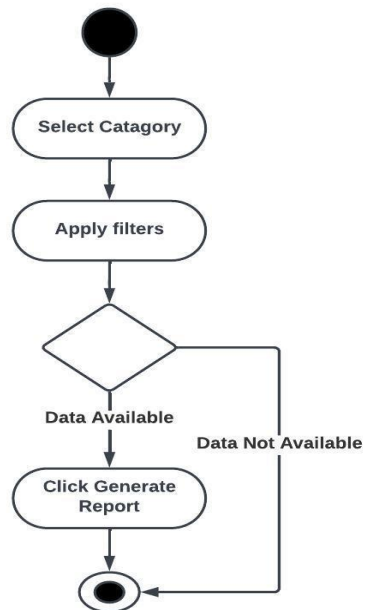
4.2.5 Activity Diagram for 'Manage Product':
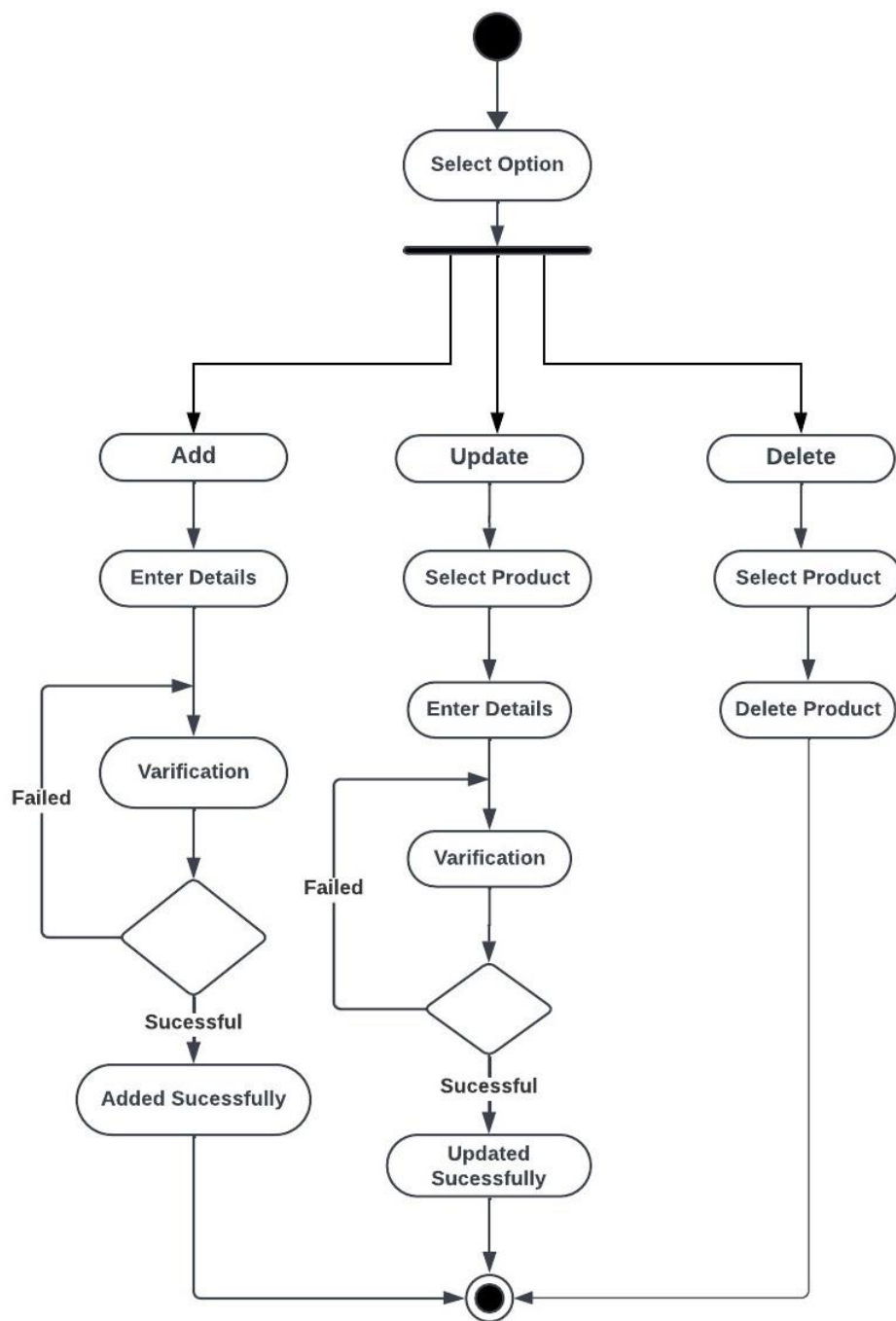
Chapter 5 - System Design

5.1 Database Design

5.1.1 Database Schema

- ❖ Manage User
  - tblState (id [PK], name)
  - FD: id [PK] => name

  - tblCity (id [PK], name, sid [FK][tblState])
  - FD: id [PK] => name, sid [FK][tblState]

  - tblUser (id [PK], name, email, password, contact, gender, cityid, address, role, status)
  - FD: id [PK] => name, email, password, contact, gender, cityid [FK][tblCity], address, role, status

- ❖ Manage Product
  - tblBrand (id [PK], name)
  - FD: id [PK] => name

  - tblColor (id [PK], name)
  - FD: id [PK] => name

  - tblProduct (id [PK], name, bid [FK][tblBrand], imageName, status)
  - FD: id [PK] => name, bid [FK][tblBrand], imageName, status

  - tblStorage (id [PK], storage)
  - FD: id [PK] => storage

- tblPorductDetail (id [PK], pid [FK][tblProduct], cid [FK][tblColor], sid [FK][tblStorage], description, price, stock)
- FD: id [PK] => pid [FK][tblProduct], cid [FK][tblColor], sid [FK][tblStorage], description, price, stock

❖ Manage Cart
- tblCart (id [PK], custId [FK][tblCustomer])
- FD: id [PK] => custId [FK][tblCustomer])

- tblCartProduct (id [PK], cartId [FK][tblCart], prodId [FK][tblProduct], quantity, total)
- FD: id [PK] => cartId [FK][tblCart], prodId [FK][tblProduct], quantity, total

❖ Manage Order
- tblOrder (id [PK], custId [FK][tblCustomer], orderDate, deliveryAddress, total, deliveryStatus)
- FD: id [PK] => custId [FK][tblCustomer], orderDate, deliveryAddress, total, deliveryStatus

- tblOrderProduct (id [PK], oid [FK][tblOrder], prodId [FK][tblProduct], quantity)
- FD: id [PK] => oid [FK][tblOrder], prodId [FK][tblProduct], quantity

5.1.2 Data Dictionary

❖ Table Name: tblState

Sr. No.	Field Name	Datatype	Size	Constrain	Description
1.	Id	Int	-	Primary Key, Auto Increment	Identifies the Unique id of State.
2.	Name	Varchar	20	Unique, Not Null	Specifies the Name of the State.

❖ Table Name: tblCity

Sr. No.	Field Name	Datatype	Size	Constrain	Description
1.	Id	Int	-	Primary Key, Auto Increment	Identifies the Unique id of City.
2.	Name	Varchar	20	Unique, Not Null	Specifies the Unique Name of City.
3.	Sid	Integer	-	Foreign Key	Referenced from tblState(sid).

❖ Table Name: tblUser

Sr. No.	Field Name	Datatype	Size	Constrain	Description
1.	Id	Integer	-	Primary Key, Auto Increament	Identifies the Unique id of User
2.	Name	Varchar	50	Not Null	Specifies the Name of User.

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Sr. No.	Field Name	Datatype	Size	Constrain	Description
3.	Email	Varchar	100	Unique, Not Null	Specifies the Unique Email Address of User.
4.	Password	Varchar	20	Not Null	Specifies the Password of User.
5.	Contact	Varchar	10	Not Null	Specifies the Contact Number of User.
6.	Gender	Varchar	6	Not Null	Specifies the Gender of User.
7.	CityId	Integer	-	Foreign Key	Referenced from tblCity(id).
8.	Address	Varchar	255	Not Null	Identifies the Address of the User.
9.	Role	Varchar	8	Not Null	Identifies the Role of User.
10	Status	Integer	1	Not Null	Specifies the Status of User.

❖ Table Name: tblBrand

Sr. No.	Field Name	Datatype	Size	Constrain	Description
1.	Id	Integer	-	Primary Key, Auto Increment	Identifies the Unique id of Brand.
2.	Name	Varchar	20	Unique, Not Null	Specifies the Name of Brand.

❖ Table Name: tblColor

Sr. No.	Field Name	Datatype	Size	Constrain	Description
1.	Id	Integer	-	Primary Key, Auto Increment	Identifies the Unique id of Color.
2.	Name	Varchar	20	Unique, Not Null	Specifies the Name of Color.

❖ Table Name: tblProduct

Sr. No.	Field Name	Datatype	Size	Constrain	Description
1.	id	Integer	-	Primary Key, Auto Increment	Identifies the Unique id of City.
2.	Name	Varchar	100	Unique, Not Null	Specifies the Unique Name of Product.
3.	Bid	Integer	-	Foreign Key	Referenced from tblBrand(id).
4.	ImageName	Varchar	255	Not Null	Specifies the Name of Photo of Product.
5.	Status	Integer	-	Not Null	Specifies the Status of Product.

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❖ Table Name: tblStorage

Sr. No.	Field Name	Datatype	Size	Constrain	Description
1.	id	Integer	-	Primary Key, Auto Increment	Identifies the Unique id of Storage.
2.	Storage	Varchar	20	Unique, Not Null	Specifies the Size of Storage.

❖ Table Name: tblProductDetail

Sr. No.	Field Name	Datatype	Size	Constrain	Description
1.	id	Integer	-	Primary Key, Auto Increment	Identifies the Unique id of Product Detail.
2.	Pid	Integer	-	Foreign Key	Referenced from tblProduct(id).
3.	Cid	Integer	-	Foreign Key	Referenced from tblColor(id).
4.	Sid	Integer	-	Foreign Key	Referenced from tblStorage(id).
5.	Description	Varchar	255	Not Null	Specifies the Description of Product.
6.	Price	Integer	-	Not Null	Specifies the Price of the Product.
7.	Stock	Integer	-	Not Null	Specifies the Stock of the Product.

❖ Table Name: tblOrder

Sr. No.	Field Name	Datatype	Size	Constrain	Description
1.	id	Integer	-	Primary Key, Auto Increment	Identifies the Unique id of Order.
2.	CustId	Integer	-	Foreign Key	Referenced from tblCustomer(id).
3.	OrderDate	Date	-	Not Null	Specifies the Order Dare.
4.	DeliveryAddress	Varchar	255	Not Null	Specifies the Address where Customer wants to Deliver their Order.
5.	Total	Integer	-	Not Null	Specifies the total Payable Amount.
6.	DeliveryStatus	Varchar	10	Not Null	Specifies the Delivery Status of Order.

❖ Table Name: tblOderProduct

Sr. No.	Field Name	Datatype	Size	Constrain	Description
1.	Id	Integer	-	Primary Key, Auto Increment	Identifies the Unique id for Order Product.
2.	Oid	Integer	-	Foreign Key	Referenced from tblOrder(id).
3.	Pid	Integer	-	Foreign Kry	Referenced from tblProduct(id).

Sr. No.	Field Name	Datatype	Size	Constrain	Description
4.	Quantity	Integer	4	Not Null	Specifies the Quantity of Product.

❖ Table Name: tblCart

Sr. No.	Field Name	Datatype	Size	Constrain	Description
1.	Id	Integer	-	Primary Key, Auto Increment	Identifies the Unique id for Order Product.
2.	CustId	Integer	-	Foreign Key	Referenced from tblCustomer(id).
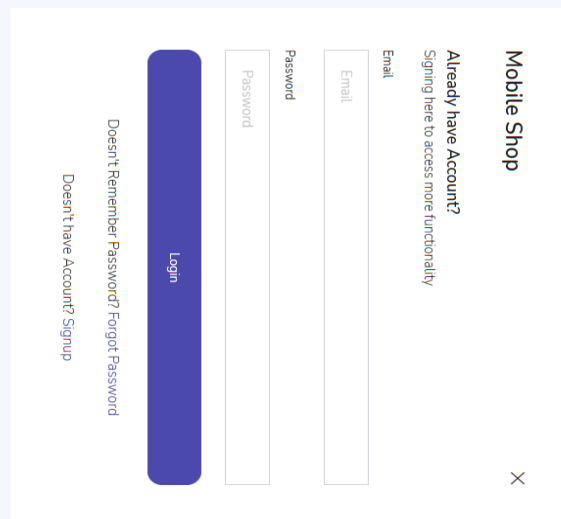
❖ Table Name: tblCartProduct

Sr. No.	Field Name	Datatype	Size	Constrain	Description
1.	Id	Integer	-	Primary Key, Auto Increment	Identifies the Unique id for Cart Product.
2.	CartId	Integer	-	Foreign Key	Referenced from tblCart(id).
3.	Pid	Integer	-	Foreign Key	Referenced from tblProduct(id).
4.	Quantity	Integer	4	Not Null	Specifies the Quantity of Product.
5.	Total	Integer	-	Not Null	Specifies the Total Amount to be Paid.

Chapter 6 - System Implementation

6.1 Screenshots

6.1.1 Screenshot of Login Page

6.1.2 Screenshot of Forgot Password Page

6.1.3 Screenshot of Users Page

Mobile Shop

≡

Dashboard

Users ⌄
- View All Users
- Add Users

Products ⌄

Charts ⌄

Orders ⌄

Reports ⌄

Other Details

Admins

Show 10 ◆ entries

Search: Search Admin

No.	Name	Email	Contact	Status	Action
1	Admin	rohannarigara22@gmail.com	7041319360	Active	Edit Delete

Showing 1 to 1 of 1 entries

First Previous 1 Next Last

Customers

Show 10 ◆ entries

Search: Search Customer

No.	Name	Email	Contact	City	Status	Action
1	Me	21bmiit137@gmail.com	7041319360	Ahmedabad	Active	Edit Delete

Showing 1 to 1 of 1 entries

First Previous 1 Next Last

6.1.4 Screenshot of Products Page

Mobile Shop

Home Products Cart Orders About Us Contact Us
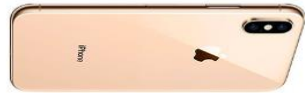
APPLE
Iphone X

APPLE
Iphone 11

APPLE
Iphone 12 Pro

APPLE
Iphone 12 Pro Max

Home About Us Contact

6.1.5 Screenshot of Other Details Page

Mobile Shop

☰

- 88 Dashboard
- ⚲ Users ⌄
- ⌃⌄ Products ⌄
- ▥ Charts ⌄
- ⊞ Orders ⌄
- ▭ Reports ⌄
- ▦ Other Details ⌄

Brand

Show [5 ▾] entries

Search: [Search Brand]

+ Add Brand

No. ‹ ›	Name ‹ ›	Action ‹ ›
1	Apple	Edit Delete
2	Google	Edit Delete
3	OnePlus	Edit Delete
4	Oppo	Edit Delete
5	Realme	Edit Delete

Showing 1 to 5 of 8 entries

First Previous 1 2 Next Last

Storage

Show [5 ▾] entries

Search: [Search Storage]

+ Add Storage

No. ‹ ›	Storage ‹ ›	Action ‹ ›
1	4GB + 128GB	Edit Delete
2	4GB + 64GB	Edit Delete
3	6GB + 128GB	Edit Delete
4	6GB + 1TB	Edit Delete

⚙

Chapter 7 - Testing

7.1 Test Cases

7.1.1 Test Cases for Registration

Sr. No.	Input Field	Input Value	Valid/ Invalid	For Valid Value	For Invalid Value
1.	Full Name	Bhavik	Valid	No Message	--
		Abcde	Valid	No Message	--
		[Empty]	Invalid	--	Please Enter Your Name!
2.	Email	admin@gmail.com	Valid	No Message	--
		Admin.com	Invalid	--	Please Enter Valid Email!
		[Empty]	Invalid	--	Please Enter Your Email!
3.	Contact No.	9725158630	Valid	No Message	--
		[Empty]	Invalid	--	Please Enter Your Contact Number!
		Dj2939he83e7he	Invalid	--	Please Enter Valid Contact Number!
		123156	Invalid	--	Please Enter Valid Mobile Number
4.	Gender	Male [Default Selected]	Valid	No Message	--
5.	State	State [Selected]	Valid	No Message	--
		[Empty]	Invalid	--	Please Select State
6.	City	City [Selected]	Valid	No Message	--
		[Empty]	Invalid	--	Please Select City
7.	Address	12, street, city	Valid	No Message	--
		[Empty]	Invalid	--	Please Enter Address
8.	Password	admin	Valid	No Message	--
		abc@.com	Valid	No Message	--
		[Empty]	Invalid	--	Please Enter Your Password!
9.	Confirm Password	admin	Valid	No Message	--
		[Empty]	Invalid	--	Please Enter Your Confirm Password!
		123	Invalid	--	Password not Matched!

7.1.2 Test Cases for Login

Sr. No.	Input Field	Input Value	Valid/ Invalid	For Valid Value	For Invalid Value
1.	Email	admin@gmail.com	Valid	No Message	--
		Admin.com	Invalid	--	Please Enter Valid Email!
		[Empty]	Invalid	--	Please Enter Your Email!
2.	Password	admin	Valid	No Message	--
		abc@.com	Valid	No Message	--
		[Empty]	Invalid	--	Please Enter Your Password!

7.1.3 Test Cases for Change Password

Sr. No.	Input Field	Input Value	Valid/ Invalid	For Valid Value	For Invalid Value
1.	Email	admin@gmail.com	Valid	No Message	--
		Admin.com	Invalid	--	Please Enter Valid Email!
		[Empty]	Invalid	--	Please Enter Your Email!
2.	Old Password	abcd	Valid	No Message	--
		[Empty]	Invalid	--	Please Enter Old Password
3.	Password	admin	Valid	No Message	--
		abc@.com	Valid	No Message	--
		[Empty]	Invalid	--	Please Enter Your Password!
4.	Confirm Password	admin	Valid	No Message	--
		[Empty]	Invalid	--	Please Enter Your Confirm Password!
		123	Invalid	--	Password not Matched!

7.1.4 Test Cases Forgot Password

Sr. No.	Input Field	Input Value	Valid/ Invalid	For Valid Value	For Invalid Value
1.	Email	admin@gmail.com	Valid	No Message	--
		Admin.com	Invalid	--	Please Enter Valid Email!
		[Empty]	Invalid	--	Please Enter Your Email!
2.	Password	admin	Valid	No Message	--
		abc@.com	Valid	No Message	--
		[Empty]	Invalid	--	Please Enter Your Password!
3.	Confirm Password	admin	Valid	No Message	--
		[Empty]	Invalid	--	Please Enter Your Confirm Password!
		123	Invalid	--	Password not Matched!

7.1.5 Test Cases for add City

Sr. No.	Input Field	Input Value	Valid/ Invalid	For Valid Value	For Invalid Value
1.	State	State [Selected]	Valid	No Message	--
		[Empty]	Invalid	--	Please Select State
2.	City	City [Selected]	Valid	No Message	--
		[Empty]	Invalid	--	Please Select City

Chapter 8 – Future Enhancements

We will improve our User UI for best Graphical User Interface Experience. We will Provide search functionalities to client so that, they can search product based on their Requirements.