# Online Footwear 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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# 1. Introduction

## 1.1 Problem Definition

In today's digital world, the preference for online shopping has surged, with a significant number of people choose to buy products through various online websites. This platform should allow them to include essential information such as product images, names, descriptions, and prices making it easy for customers to access and evaluate products without the hassle of visiting physical stores among traffic and spending valuable time.

The online footwear shop management system is an advanced E-commerce online shopping website designed to facilitate customers in making secure purchases of footwears. This platform enables customers to carry out all major transactions with ease and confidence. In today's digital era, the system efficiently manages all processes through its user-friendly online application, offering a convenient and efficient shopping experience for users.

## 1.2 Project Objective

The main objective of the "Online Footwear Shop Management System" is to enhance flexibility in workflow and easy customer service by enabling home delivery of footwears. Instead, they can now conveniently browse and purchase products online. The system efficiently manages and tracks important information regarding products, inventory, etc.

## 1.3 Project Scope

The online footwear shop management does not provide delivery service out of India. The system does not provide tracking of the order once they dispatched for delivery. The system does not provide EMI on Purchase the products. After purchasing the product, the system does not provide return order facility.

# 2. Overall Description

## 2.1 Product Perspective/Environment Description

### 2.1.1 Hardware Interface/ Hardware Specification

- Processor: Intel® Core ™ i5-4210U CPU @ 1.70GHz

- RAM: 4.00 GB

- System Type: 64-bit Operating System, x64-based Processor

- Pen and Touch: Touch Support with 10 Touch Points

- Monitors: Generic PnP Monitors

- Keyboard: Standard PS/2 Keyboard

- Mouse: HID-complaint mouse

### 2.1.2 Software Interface/ Software Specification

1. **Front-End: NetBeans IDE 18**

   NetBeans IDE is an open-source integrated development environment (IDE) primarily used for java, but it also supports other programming languages such as PHP, HTML, C/C++, and more. It provides a comprehensive set of tools and features that help developers to create, debug, and maintain application efficiently.

2. **Back-End: SQL Server**

   SQL (Structured Query language) Used to perform CRUD Operation on Database.

   Rozarpay Payment Gateway used to perform payment service on system.

# 3. System Specific Requirements

## 3.1 Functional Requirement

### ➢ Manage User Login

| RN | Description | Comment |
|---|---|---|
| **FR1** | The admin shall be able to login with own unique 'Email id; and 'password'. | Login page |
| **FR2** | Customer and staff must be register before authenticate login. | Registration page |
| **FR3** | The admin, customer and staff shall be able to change password of their profile. | Forget password page |
| **FR4** | User shall be able to use all the features after the authenticate of username and password. | Home page |
| **FR5** | The admin, customer and staff shall be able to logout from the system anytime they want. | Logout page |

### ➢ Manage Staff

| RN | Description | Comment |
|---|---|---|
| **FR1** | Admin / staff can login with their unique 'email id' and 'password'. | Login page |
| **FR2** | Admin shall be able to all features after the authenticate of username and password. Like: add, update, view and delete | Add / update page |
| **FR3** | The admin shall be able to logout from the system anytime they want. | Logout page |

➢ **Manage Product**

| RN | Description | Comment |
|---|---|---|
| **FR1** | Admin shall be able to manage all the product. | Product page |
| **FR2** | Customer shall be able to view all products. | View |
| **FR3** | The system will assign a unique id (product id) to each product. | Product page |
| **FR4** | Admin shall be able to manage many other modules:<br>• Add / edit / view /active and DE active<br>• Manage type<br>• Manage offer | Product page |

➢ **Manage Customer**

| RN | Description | Comment |
|---|---|---|
| **FR1** | Customer can login with own unique 'email id' and 'password'. | Login page |
| **FR2** | The system will assign a unique id [customer id] and password. | Add customer page |
| **FR3** | Customer can perform the operations like:<br>• Edit profile<br>• Visit website<br>• Search products<br>• Add to cart<br>• Give order | Customer page |
| **FR4** | Admin shall be able to view the customer details. | Customer page |

## ➢ Manage Order

| RN | Description | Comment |
|----|-------------|---------|
| **FR1** | This module shall be able to manage by customer. | Order page |
| **FR2** | The system will assign a unique id [order id] to each order. | Order page |
| **FR3** | Customer must be register into system before give any order. | Order page |
| **FR4** | Customer shall be able to add products to cart after login. | Add to cart page |
| **FR5** | Customer can perform the operations like:<br>• Add to cart<br>• Edit cart<br>• View cart | View cart page |
| **FR6** | Customer shall be able to order products after login. | Order page |

## ➢ Manage Payment

| RN | Description | Comment |
|----|-------------|---------|
| **FR1** | The system will assign a unique id [payment id] to each transaction. | Payment page |
| **FR2** | The admin shall be able to view every payment transaction. | View payment transaction page |
| **FR3** | The system must take payment in Only Net Banking. | Payment page |

➢ **Manage Feedback**

| RN | Description | Comment |
|----|-------------|---------|
| **FR1** | Feedback module will be managed by admin and customer. | Feedback page |
| **FR2** | Admin sill able to view customer order feedback. | Feedback page |
| **FR3** | Customer can give wise feedback. | Logout page |

➢ **Generate Report**

| RN | Description | Comment |
|----|-------------|---------|
| **FR1** | Generate report module manage by admin. | Report page |
| **FR2** | Admin will generate report like:<br>• Customer report<br>• Customer Order wise report<br>• Stock wise report | Report page |

## 3.2 Non-Functional Requirement

| RN | Description | Comment |
|---|---|---|
| **NFR1** | The extent to which a software product performs its intended functions without failure. | Reliability |
| **NFR2** | The system will be designed in a maintainable manner. It will be easy to add new requirements in the any individual modules | Maintainability |
| **NFR3** | The extents to which the software is simple in its operations. | Simplicity |
| **NFR4** | The application will be password protected. The users will have to enter correct username and password to access the system. | Security |
| **NFR5** | The application will be user-friendly and easy to operate, the functions will be easily understandable. | Usability |

# 4. UML Diagrams

## 4.1 Use Case Diagram

## 4.2 Activity Diagram

## 4.2.1 Activity Diagram for Login
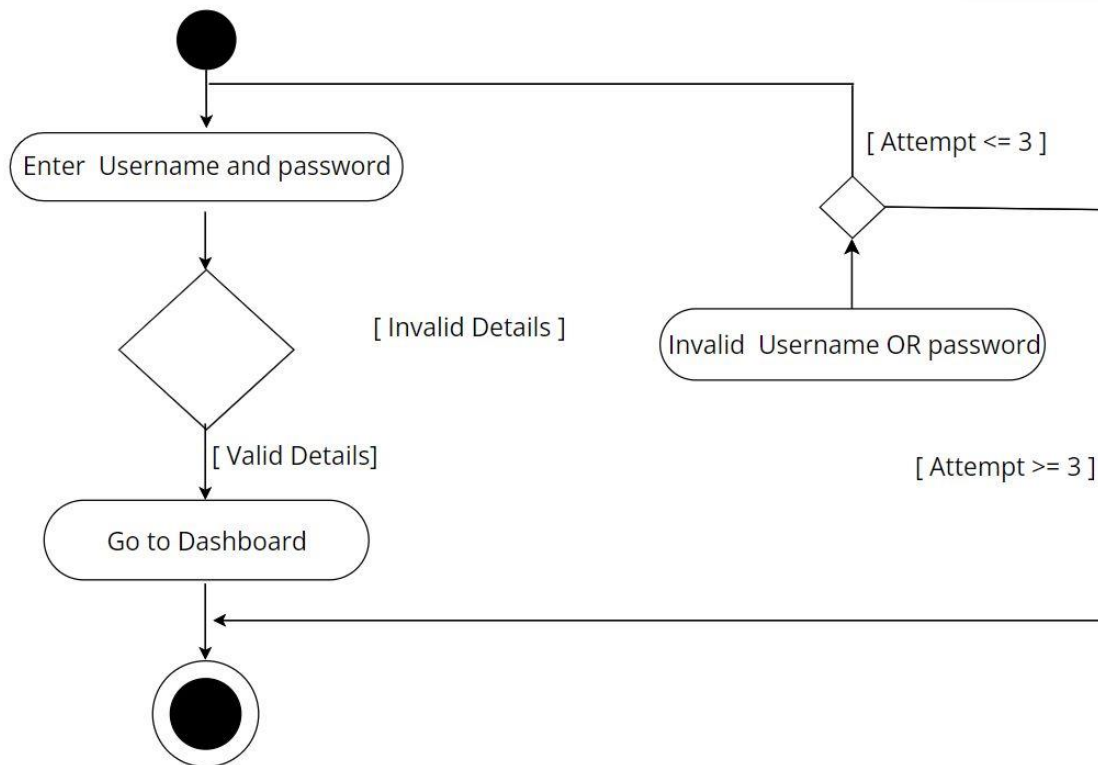
## 4.2.2 Activity Diagram for Forgot Password
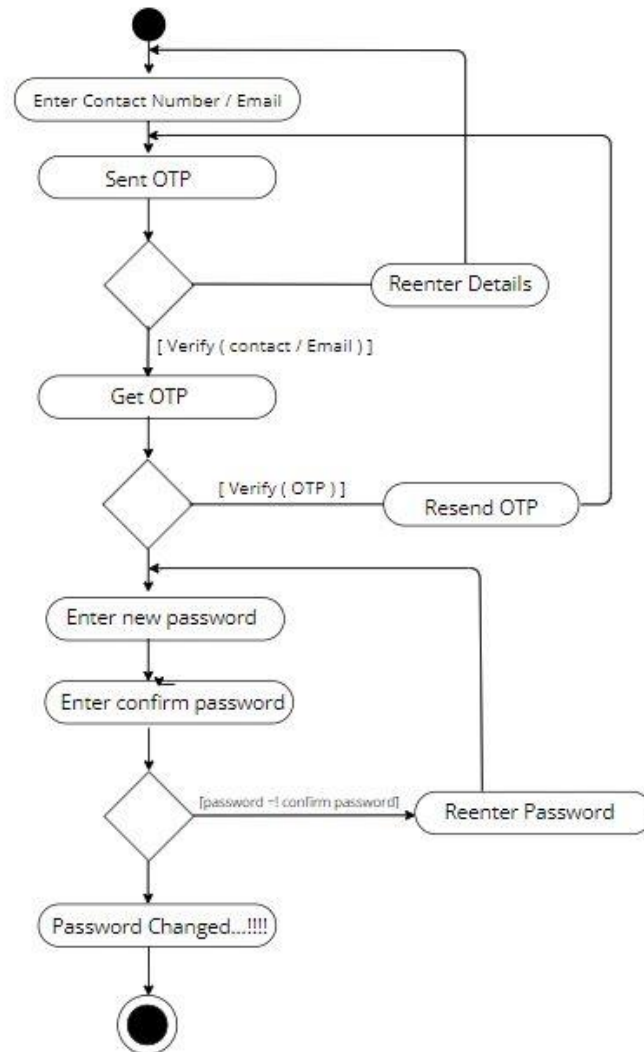
## 4.2.3 Activity Diagram for New Registration of Customer
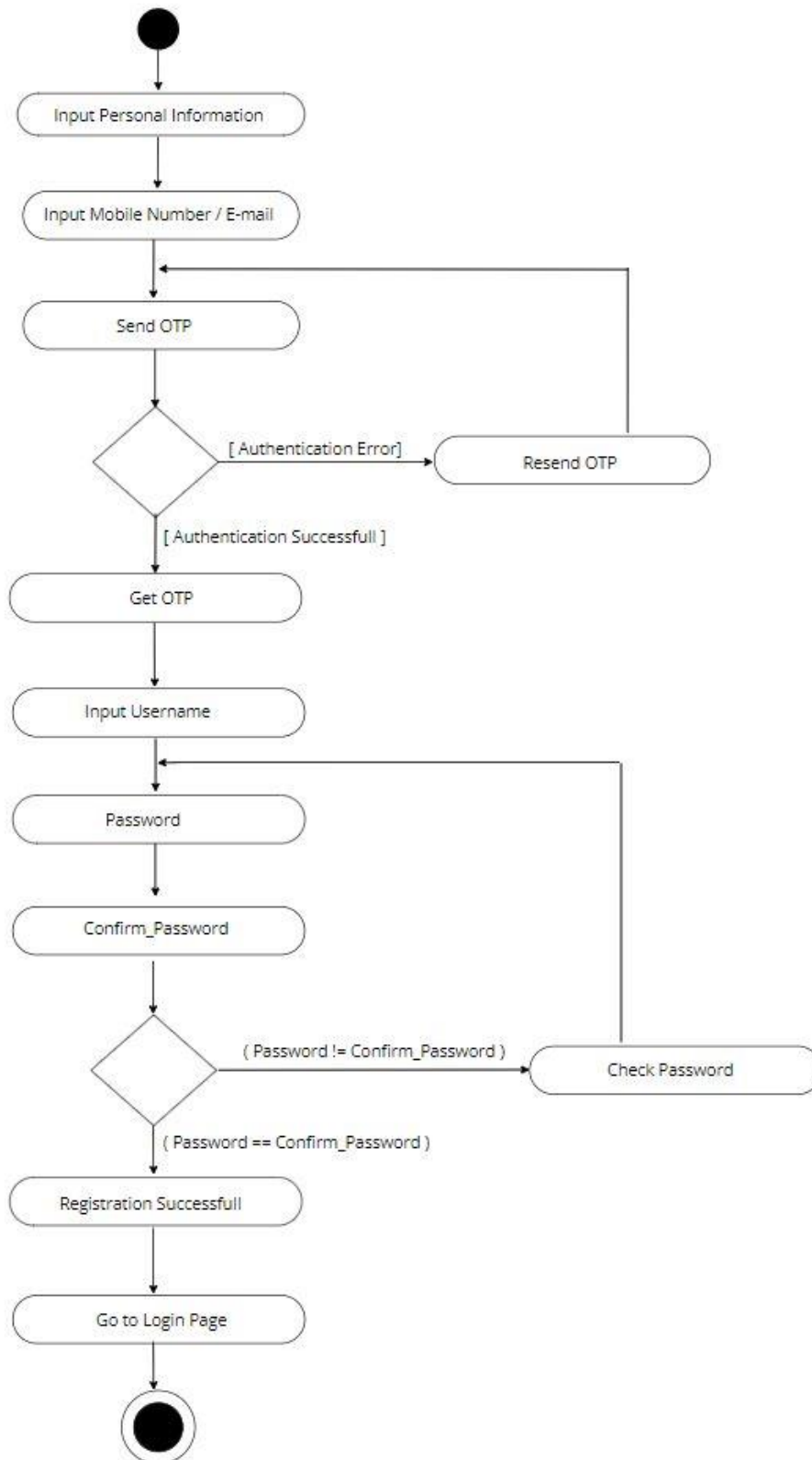
## 4.2.4 Activity Diagram for Manage Product
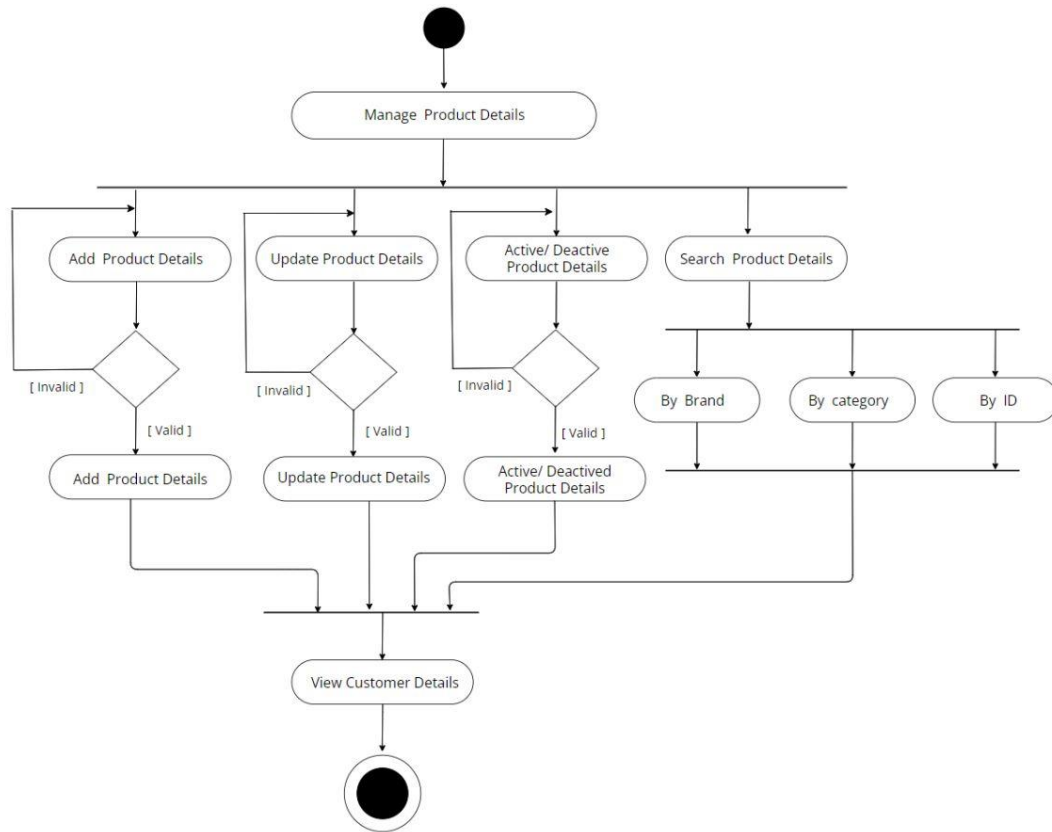
## 4.2.5 Activity Diagram for Manage Customer
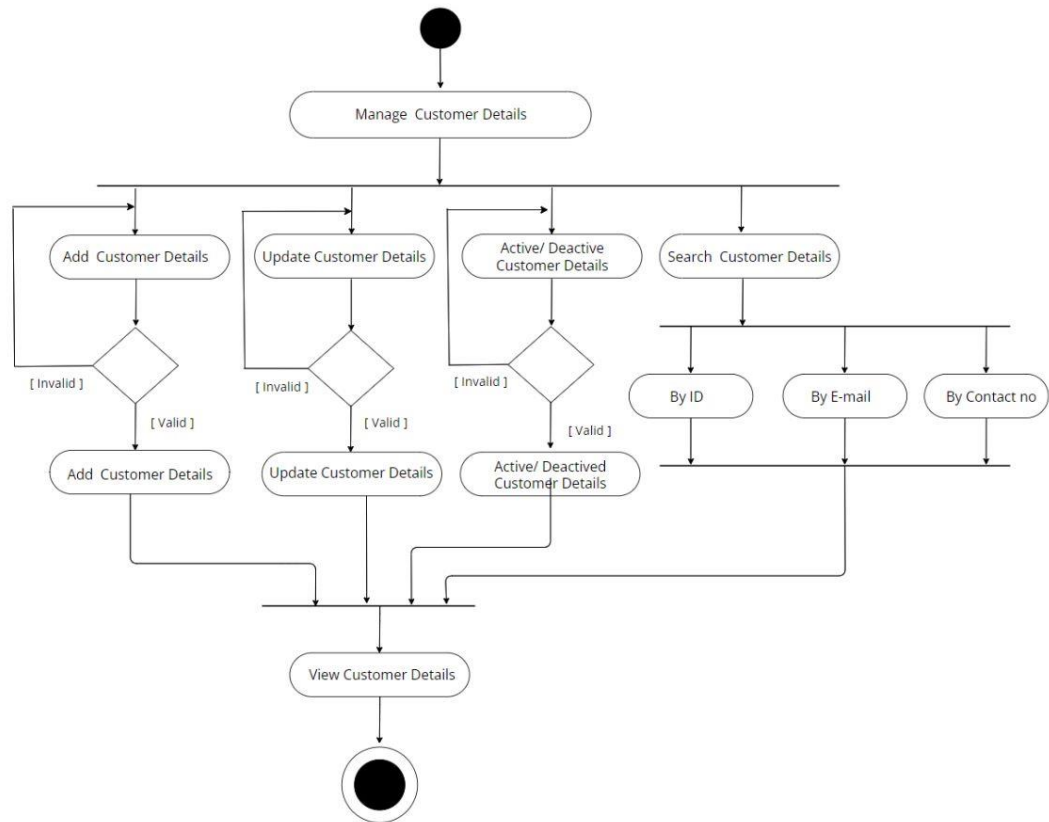
# 5. System Design

## 5.1 Database Design

### 5.1.1 Database Schema

❖ Common Table

tblstate: - (id [PK], name)

FD: - id [PK] -> name

tblcity: - (id [PK],name, Sid[FK])

FD :- id[PK] -> name,sid

Tbl_brand :- (id[PK],name

FD :- id[PK] -> name

Tbl_size :- (id[PK],size_number

FD :- id[PK] -> size_number

Tbl_color :- (id[PK],color_name

FD :- id[PK] -> color_name

Tbl_category :- (id[PK],c_name)

FD :- id[PK] -> c_name

Tbl_subcategory :- (id[PK],sc_name,category_id[FK])

FD :- id[PK] -> sc_name,category_id

Tbl_stock :- (id[PK],product_id[FK],quantity)

FD :- id[PK] -> product_id,quantity

❖ Master Tables :-

Tbl_user :-

(id[PK],fullname,email,password,contact_no,gender,cityid[FK],role,registered_dat e)

FD :- id[PK] ->

fullname,email,password,contact_no,gender,cityid,role,registered_date

Tbl_product :-

(id[PK],product_name,model_no,category_id[FK],subcategory_id[FK],brand_id[F K],size_id[FK],color_id[FK],img1,added_date)

FD :- id[PK]

sproduct_name,model_no,category_id,subcategory_id,brand_id,size_id,color_id,pr ice,product_img1,added_date

tbl_cart :- (id[PK],product_id[FK],user_id[FK],color_id[FK],size_id[FK],quantity)

FD :- id[PK] -> product_id,user_id,quantity,color_id,size_id

Tbl_order :- (id[PK]fname,lname,user_id[FK],pay _id[FK],amount,address,order_status,order_date)

FD :- id[PK] ->

fname,lname,user_id,pay_id,amount,address,order_status,order_date

tbl_Feedback: (ID[PK], User _ID[FK], Description)

FD: ID ->User_ID[FK], Description

### 5.1.2 Data Dictionary

## 1.tbluser :-

| Sr.no | Attribute Name | Data Type | Size | Constraint | Description |
|-------|---------------|-----------|------|------------|-------------|
| 1. | ID | Int | 10 | Primary Key | It holds unique product ID. |
| 2. | Fullname | Varchar | 50 | Not null | It holds fullName of customer |
| 3. | password | Varchar | 256 | Not null | It holds password of customer |
| 4. | email | Varchar | 50 | Unique key | It holds Email of customer |
| 5. | Contact | bigint | 20 | Not null | It holds Customer contact. |
| 6. | cityid | int | 10 | Foreign key | It refered from tblcity |
| 7. | Gender | Varchar | 30 | Not Null | It holds Customer gender |
| 8. | role | varchar | 30 | Not null,unique | It holds role for user. |
| 9. | Registered_date | date | - | Null | It holds Customer Registered date |

## 2.tblproduct :-

| Sr.no | Attribute Name | Data Type | Size | Constraint | Description |
|-------|---------------|-----------|------|------------|-------------|
| 1. | ID | Int | 10 | Primary Key | It holds unique Product ID. |

| | | | | | |
|---|---|---|---|---|---|
| 2. | Product_Name | Varchar | 50 | Not null | It holds the name of product. |
| 3. | Quantity | Int | 20 | Not null | It holds the Quantity of the product. |
| 4. | Category_ID | Int | 50 | Foreign key | It holds the unique Category_ID from category table. |
| 5. | Price | Float | 10,2 | Not null | It holds the price of product. |
| 6. | Model_no | Varchar | 90 | Not null | It holds the model of the product. |
| 7. | Brand_ID | Int | 50 | Foreign key | It holds the unique Brand_ID from brand table. |
| 8. | Stock | Int | 50 | Not null | It holds the stock of the product. |
| 9. | Image1 | int | 100 | Not null | It holds the path of the image_id of product. |
| 10. | Added_date | date | - | Not null | It holds the stock in date of product. |
| 11. | Subcategory_id | Int | 10 | Foreign key | It holds the unique subCategory_ID from subcategory table. |
| 12. | Size_id | Int | 10 | Foreign key | It holds the unique size_ID from size table. |
| 13. | Color_id | Int | 10 | Foreign key | It holds the unique Color_ID from color table. |

## 3.tblcategory :-

| Sr.no | Attribute Name | Data Type | Size | Constraint | Description |
|---|---|---|---|---|---|
| 1. | ID | Int | 10 | Primary Key | It holds unique Category ID. |
| 2. | Category Name | Varchar | 50 | Not null | It holds the name of Category of product. |

## 4.tblsubcategory :-

| Sr.no | Attribute Name | Data Type | Size | Constraint | Description |
|-------|----------------|-----------|------|------------|-------------|
| 1. | ID | Int | 10 | Primary Key | It holds unique ID |
| 2. | Sub Category Name | char | 50 | Not Null | It holds the name of SubCategory of product. |
| 3. | Category_Id | Int | 90 | Foreign key | It refered the Id of Category from Category table |

## 5.tblbrand :-

| Sr.no | Attribute Name | Data Type | Size | Constraint | Description |
|-------|----------------|-----------|------|------------|-------------|
| 1. | ID | Int | 10 | Primary Key | It holds unique Brand ID. |
| 2. | Brand Name | Varchar | 50 | Not null | It holds the name of Brand of product. |
| 3. | subcategory_Id | Int | 90 | Foreign key | It referred the Id of subCategory from subCategory table |

## 6.tblsize :-

| Sr.no | Attribute Name | Data Type | Size | Constraint | Description |
|-------|----------------|-----------|------|------------|-------------|
| 1. | ID | Int | 10 | Primary Key | It holds unique size ID. |
| 2. | Size Number | Int | 50 | Not null | It holds the name of size of product. |

## 7.tblcolor :-

| Sr.no | Attribute Name | Data Type | Size | Constraint | Description |
|-------|----------------|-----------|------|------------|-------------|
| 1. | ID | Int | 10 | Primary Key | It holds unique color ID. |
| 2. | Color_Name | Varchar | 50 | Not null | It holds the name of color of product. |

## 9.tbl_cart :-

| Sr.no | Attribute Name | Data Type | Size | Constraint | Description |
|-------|----------------|-----------|------|------------|-------------|
| 1. | ID | Int | 10 | Primary Key | It holds unique ID |
| 2. | Product_ID | Int | 10 | Foreign Key | It holds the Product_ID from the Product table. |
| 3. | User_ID | Int | 10 | Foreign Key | It holds the User_ID from the tbl_user table. |
| 4. | Quantity | Int | 90 | Not null | It holds the quantity of product in cart. |
| 5. | Size_id | Int | 10 | Not null | It holds the key of Size of tbl_size |

## 10.tbl_order :-

| Sr.no | Attribute Name | Data Type | Size | Constraint | Description |
|-------|----------------|-----------|------|------------|-------------|
| 1. | ID | Int | 10 | Primary Key | It holds unique order ID. |
| 2. | FName | Varchar | 40 | Not null | It holds First Name |

| 3. | LName | Varchar | 40 | Not null | It holds Last Name |
|---|---|---|---|---|---|
| 4. | Pay_ID | Int | 10 | Foreign Key | It holds the pay_ID Which unique |
| 5. | Cart_Product_ID | Int | 10 | Foreign Key | It holds Cart_product_id from Cart product table. |
| 6. | Order_Date | date | - | Not null | It holds the orders date. |
| 7. | amount | Float | 10,2 | Not null | It holds total amount of the product. |
| 8. | Order_Status | Varchar | 20 | Not null | It holds the status of availability Payment the product. |

# 12.tblfeedback :-

| Sr.no | Attribute Name | Data Type | Size | Constraint | Description |
|---|---|---|---|---|---|
| 1. | ID | Int | 10 | Primary Key | It holds unique review ID. |
| 2. | user_ID | Int | 10 | Foreign Key | It holds the user_ID from the user table. |
| 3. | Description | Varchar | 500 | Not null | It holds the Review description. |

# 13.tblstate :-

| Sr.no | Attribute Name | Data Type | Size | Constraint | Description |
|---|---|---|---|---|---|
| 1. | ID | Int | 10 | Primary Key | It holds unique state ID. |

| 2. | name | varchar | 200 | Notnull | It holds name of state |
|----|------|---------|-----|---------|------------------------|

# 14.tblcity :-

| Sr.no | Attribute Name | Data Type | Size | Constraint | Description |
|-------|----------------|-----------|------|------------|-------------|
| 1. | ID | Int | 10 | Primary Key | It holds unique state ID. |
| 2. | name | varchar | 200 | Notnull | It holds name of state |
| 3. | State_id | Int | 10 | Foreign key | It refered sstate_id from state table |

# 15.tblstock :-

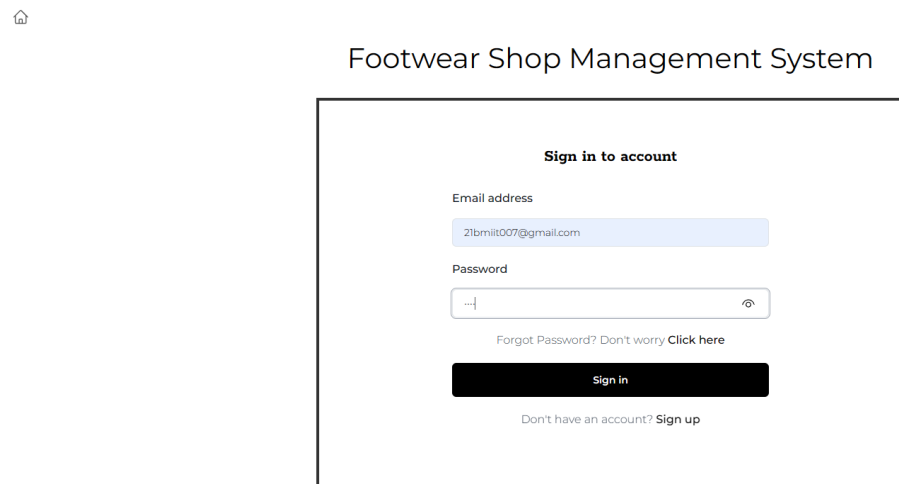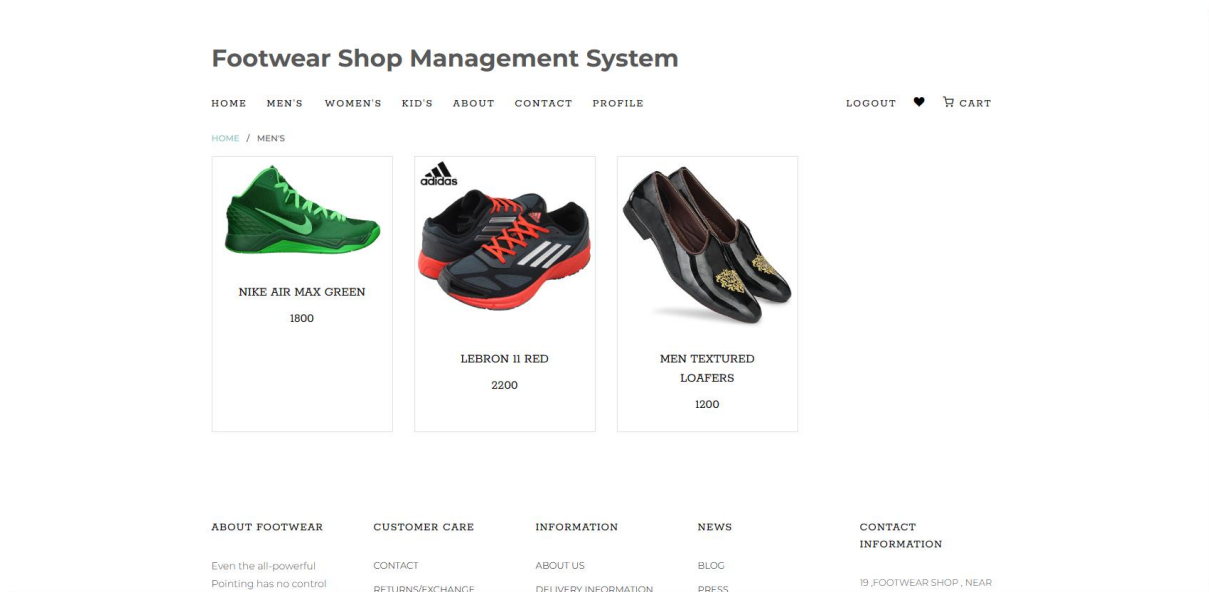| Sr.no | Attribute Name | Data Type | Size | Constraint | Description |
|-------|----------------|-----------|------|------------|-------------|
| 1. | ID | Int | 10 | Primary Key | It holds unique stock ID. |
| 2. | Product_ID | Int | 10 | Foreign Key | It refereds the Product_ID from the Product table. |
| 3. | Quantity | Int | 20 | Not null | It holds the Quantity of the product. |

# 6. System Implementation

## 6.1    Screenshots

1.home :



2.login :

## 3.Product :



## 4.CheckOut

## 5.Payment :
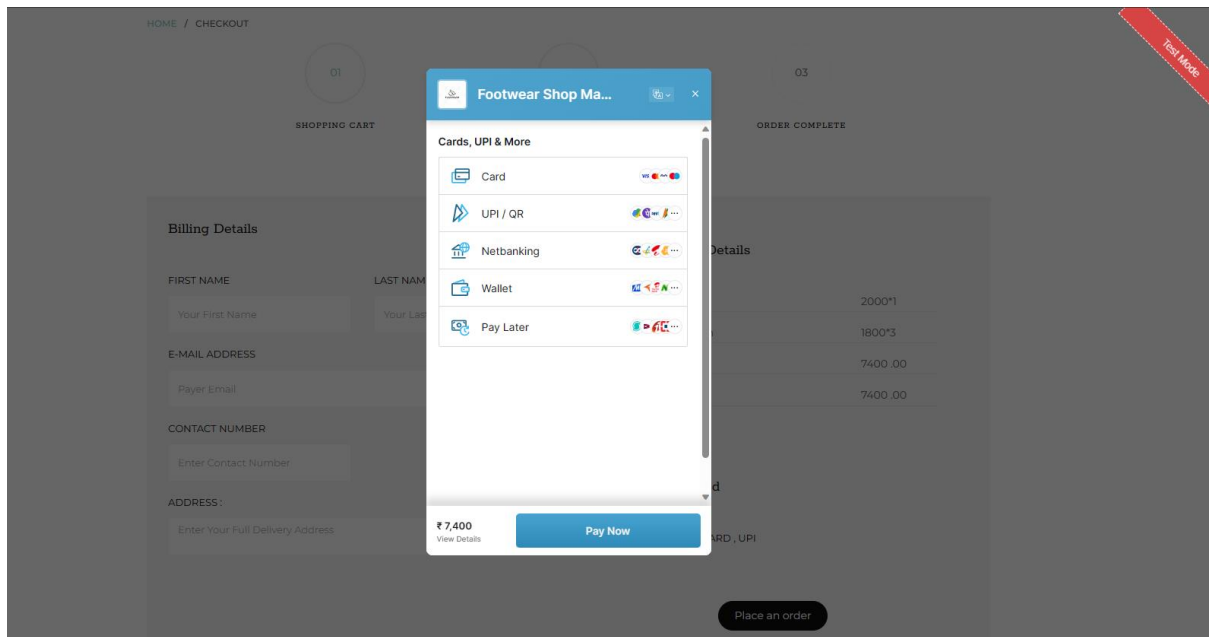
# 7. Testing

## 7.1 Test Cases :

7.1.1 .Registration Form :

| Sr. No. | Input Field | Input Value | Valid/ Invalid | For Valid Value | For Invalid Value |
|---|---|---|---|---|---|
| 1. | Full Name | Ravi | Valid | No Message | -- |
| | | Abcde | Valid | No Message | -- |
| | | [Empty] | Invalid | -- | Please Enter Your First Name! |
| | | Ravi012 | Invalid | -- | Please Input Only Character! |
| 2. | Email | Ravi@gmail.com | Valid | No Message | -- |
| | | [Empty] | Invalid | -- | Please Enter Your Email ID! |
| | | Ravi.com | Invalid | -- | Please Check Your Email ID! |
| 3. | City | Surat | Valid | No Message | -- |
| | | Select Your city | Invalid | -- | Please Select Your City! |
| 4. | Contact No. | 9725158630 | Valid | No Message | -- |
| | | [Empty] | Invalid | -- | Please Enter Your Contact Number! |
| | | Dj2939he83e7he | Invalid | -- | Please Input Only Numeric! |
| 5. | Gender | Male [Default Selected] | Valid | No Message | -- |
| 6. | Role | 1 | Valid | No Message | -- |
| | | [Empty] | Invalid | -- | Please Enter Your Role! |
| | | Admin | Invalid | -- | Please Check Your Role! |
| 7. | Password | Sahil45 | Valid | No Message | -- |

| Sr. No. | Input Field | Input Value | Valid/Invalid | For Valid Value | For Invalid Value |
|---|---|---|---|---|---|
| | | Sahil@.com | Valid | No Message | -- |
| | | [Empty] | Invalid | -- | Please Enter Your Password! |
| | | 1234 | Invalid | -- | Minimum 6 character. |
| s | Confirm Password | Sahil45 | Valid | No Message | -- |
| | | [Empty] | Invalid | -- | Please Enter Your Confirm Password! |
| | | SAhil88 | Invalid | -- | Password Missmatch! |

## 7.1.2. Login Form :

| Sr. No. | Input Field | Input Value | Valid/Invalid | For Valid Value | For Invalid Value |
|---|---|---|---|---|---|
| 1. | Email | Ravi@gmail.com | Valid | No Message | -- |
| | | [Empty] | Invalid | -- | Please Enter Your Email ID! |
| | | Ravi.com | Invalid | -- | Please Check Your Email ID! |
| 2. | Password | Sahil45 | Valid | No Message | -- |
| | | Sahil@.com | Valid | No Message | -- |
| | | [Empty] | Invalid | -- | Please Enter Your Password! |
| | | 1234 | Invalid | -- | Minimum 6 character. |

7.1.3 .Add Product Form :

| Sr. No. | Input Field | Input Value | Valid/ Invalid | For Valid Value | For Invalid Value |
|---|---|---|---|---|---|
| 1. | Product Name | Ravi Avaiya | Valid | No Message | -- |
| | | Abcde xyz | Valid | No Message | -- |
| | | [Empty] | Invalid | -- | Please Enter Your Product Name! |
| | | Ravi 01 Avaiya | Invalid | -- | Please Input Only Character! |
| 2. | Model No | Ravi120 | Valid | No Message | -- |
| | | [Empty] | Invalid | -- | Please Enter Your Model No! |
| | | Ravi.com | Invalid | -- | Please Check Your Model No! |
| 3. | Description | Rau  mba | Valid | No Message | -- |
| | | [Empty] | Invalid | -- | Please Enter Description! |
| | | Dj2939he83e7he | Invalid | -- | Please Input Only Alphabat! |
| 5. | Quantity | 120 | Valid | No Message | -- |
| 6. | Price | 210 | Valid | No Message | -- |
| | | [Empty] | Invalid | -- | Please Enter Your Price! |
| | | Arv12 | Invalid | -- | Please Enter Numeric |
| 8. | image | Image.jpg | Valid | No Message | -- |
| | | [Empty] | Invalid | -- | Please Upload Image! |
| 9. | Category | Men:Selected | Valid | No Message | -- |
| 10. | Sub Category | Sports:Selected | Valid | No Message | -- |
| 11. | Brand | Nike:Selected | Valid | No Message | -- |

| 12. | Size | 6:Selcted | Valid | No Message | -- |
|-----|------|-----------|-------|------------|-----|
| 13. | Color | Pink:Selected | Valid | No Message | -- |

## 7.1.4 .Wishlist Form :

| Sr. No. | Input Field | Input Value | Valid/ Invalid | For Valid Value | For Invalid Value |
|---------|-------------|-------------|----------------|-----------------|-------------------|
| **1.** | Product_id | Ravi Avaiya | Valid | No Message | -- |
|  |  | Abcde xyz | Valid | No Message | -- |
|  |  | [Empty] | Invalid | -- | Please Enter Your Full Name! |
|  |  | Ravi 01 Avaiya | Invalid | -- | Please Input Only Character! |
| **2.** | User_id | 1 | Valid | No Message | -- |
|  |  | [Empty] | Invalid | -- | Please Enter Your User ID! |
|  |  | A | Invalid | -- | Please Check Your User ID! |
| **3.** | Added_date | 23-12-2023 | Valid | No Message | -- |
|  |  | [Empty] | Invalid | -- | Please pick a Date! |
|  |  | 23122023 | Invalid | -- | Please Input Properly! |

7.1.5 .Order Form :

| Sr. No. | Input Field | Input Value | Valid/ Invalid | For Valid Value | For Invalid Value |
|---|---|---|---|---|---|
| 1. | First Name | Ravi | Valid | No Message | -- |
| | | Abcde | Valid | No Message | -- |
| | | [Empty] | Invalid | -- | Please Enter Your First Name! |
| | | Ravi06 | Invalid | -- | Please Input Only Character! |
| 2. | Last Name | Avaiya | Valid | No Message | -- |
| | | [Empty] | Invalid | -- | Please Enter Your Last Name! |
| | | av6189 | Invalid | -- | Please Input Only Character! |
| 3. | Country | India | Valid | No Message | -- |
| | | Select Your Country | Invalid | -- | Please Select Your Country! |
| 4. | Amount | 2010 | Valid | No Message | -- |
| | | [Empty] | Invalid | -- | Please Enter Your Amount! |
| | | Rav552 | Invalid | -- | Please Input Only Numeric! |
| 5. | User_id | 1 | Valid | No Message | -- |
| 6. | Payer Email | Ravi@gmail.com | Valid | No Message | -- |
| | | [Empty] | Invalid | -- | Please Enter Your Email ID! |
| | | Ravi.com | Invalid | -- | Please Check Your Email ID! |
| 4. | Contact No. | 9725158630 | Valid | No Message | -- |
| | | [Empty] | Invalid | -- | Please Enter Your Contact Number! |

| | | Dj2939he83e7he | Invalid | -- | Please Input Only Numeric! |
|---|---|---|---|---|---|
| **3.** | Payment_date | 23-12-2023 | Valid | No Message | -- |
| | | [Empty] | Invalid | -- | Please pick a Date! |
| | | 23122023 | Invalid | -- | Please Input Properly! |

# 8.Future Enhancement :

The Performance and efficiency of the system can be enhanced by techniques advances.

## Conclusion:

This software has its own advantages and disadvantages but it can surely help with the easier and error-free management of a System. It is much efficient and useful then the current manual system.

## Bibliography :

1) Book Referred :- Object Oriented software engineering by Yogesh Singh and Ruchika Malhotra.