Furniture Management System

A project submitted to

UKA TARSADIA UNIVERSITY

in partial fulfillment of the requirements for the degree of

Bachelor of Science

in

Information Technology

for

5 Years Integrated M.Sc.(IT)

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July 2022

Enrollment No :- [202006100110061 and 202006100110069]

CERTIFICATE

This is to certify that **Romit Dobariya (202006100110061) , Rahul Savaliya (202006100110069)** has submitted project entitled **"Furniture Management System"** as the partial fulfillment for the award of the degree of Bachelor of Science in Information Technology for 5 Years Integrated M.Sc.(IT) in 2020 – 2021.

Date:

Place:

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Guide   Programme Coordinator,

External Examiner

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Bardoli – 394350

Enrollment No :- [202006100110061 and 202006100110069]

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Chapter 1: Introduction

1.1 Problem Definition

In the modern age people's time is extremely important, manually visiting a shop is time consuming and not convenient. Customer usually get confused of what to buy and what not to. Opening an actual store in real world is capital consuming. Opening a physical store is space consuming and not even practical to include all new trends. Even after coping up with trends , customers needs and wants to see more furniture which is quite not convenient to shop owners. Customer are not prepared while buying the furniture at store because of lack of ideas, which is again a problem for both customers and shop owners.

1.2 Project Objective

This System is Maintain records of the different furniture products and stock management. If customer don't want to go retail store for buying furniture then he can prefer our site for and view different furniture's. Customer can buy multiple furniture's at a time The main objective of the online Furniture store is to make the workflow flexible and to improve the service provided to the customer and facilitates home delivery of the products.

1.3 Product Scope

- This System is to ease Furniture management and to create a convenient and easy-to-use system for customers, trying to buy Furniture.
- Our Product is Limited for particular city.

Chapter 2: Overall Description

2.1 Product Perspective/ Environment Description

2.1.1 Hardware Interface/ Hardware Specification

- Processor: Intel(R) Core (TM) i3 or more
- RAM: 1.00 GB or more
- Hard Disk 1 GB or more
- Input Device :PC/Laptop/Mobile/Table
- Output Device :PC

2.1.2 Software Interface/ Software Specification

1. Front-End: HTML,CSS,JS
2. Back-End: ASP.NET,C#

1. **Front-End: Visual Studio Code**

   Visual Studio uses Microsoft Software Development to produce both native code and managed code.

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

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

Chapter 3: System Specific Requirements

3.1 Functional Requirement

Functional requirements define the fundamental action that system must perform.

Module 1: Manage User Login

RN	Description	Comments
FR1	Admin and Customer will be authenticated with their Username and password to login into the system.	Login Page
FR2	Enable a registered user to update password. And also, if user forgets password, then OTP is sent through mail for user's verification.	Login Page ChangePassword Page ForgotPassword Page

Module 2: Manage Product

RN	Description	Comments
FR1	This module will be managed by Admin. In this module, the admin will be able to manage many other modules like: ▪ Manage Product ▪ Manage Image	Product_Add Page
FR2	The system will assign a unique id (Product id) to each product.	Product_Add Page

		Whenever any new product arrives, the admin is allowed to record following details of the product like . . . Product name with its Category Price, Quantity, Type etc.	
FR3		To manage this module, the admin will be able to perform following operations like: ▪ Add new product ▪ Update an existing product	Product_Add Page Product_ View _Search_
FR4		The admin and customer will be able to: ▪ View/Search product (by Category wise, Price wise)	Product_ View_Update_Search_
FR5		**Manage Category:** In Manage Category module, the admin will be able to perform following operations like: ▪ Add new category ▪ Update an existing category The admin and customer will be able to: ▪ View/Search categories The system will assign a unique id (Category id) to each category.	Category_Add_ View_Update_Search

Module 3: Manage Customer

RN	Description	Comments
FR1	The customer shall also be able to register himself and edit his/her profile. The system will assign a unique id (customer id) to each customer.	Customer_Registration(Add)_ Page
FR2	The admin will be able to: ▪ View/Search customer details	Customer_ View_Update_Search Page
FR3	The customer will be able to view the details about Furniture like its profile, location, etc.	Profile Page

Module 4: Manage Cart

RN	Description	Comments
FR1	This module will be managed by Customer. The customer will be able to perform following operations like: ▪ Add to cart ▪ Update cart products ▪ Removed cart products ▪ Order The Products From Cart	Add_To_Cart Page

Module 5: Manage Customer Order

RN	Description	Comments
FR1	The admin will be able to: ▪ View/Search customer order(s)	Customer_Order_ View_Update_Search_ Delete Page
FR2	After adding the product into cart, if the customer confirms his/her order, then after login into the system the customer will be able to perform the following operations like:	Customer_Order_Add Page

	▪ Confirm order (Add product order)
	    ▪ Cancel(Delete) product order
	    ▪ View product order
		Customer_Order_ View_Update_Search_ Delete Page

FR3	The customer will be able to view order history.	Customer_ Order_History Page

Module 6: Generate Bill

RN	Description	Comments
FR1	After the confirmation of order placed by the customer the system will be able to generate bill in ".pdf" with all the necessary details of the Customer.	Customer_Order_Add Page "fpdf" Format (Open-source plugin)
FR2	The system will assign a unique id (bill no) to each customer's order bill.	Customer_Order_Add Page "fpdf" Format (Open-source plugin)

Module 7: Payment

| RN	Description	Comments
FR1	After the generation of bill, the customer shall be able to make payment using one of the online payment gateways or through cash on delivery. The system will assign a unique id (payment id) to each customer's order bill.	Payment Page

3.2 Non- functional Requirement

Non-functional requirements are often called qualities of a system.

RN	Description	Comments
NFR1	The application will be user-friendly and easy to operate, the functions will be easily understandable.	Usability
NFR2	The application will be Password protected(hash) . The Userswill have to enter correct username and password to access the system.	Security
NFR3	The system will be designed in a maintainable manner. It will be easy to add new requirements in the any individual modules.	Maintainability

Chapter 4 : System Analysis

4.1 Use Case Diagram for Admin and User

Furniture Manage System
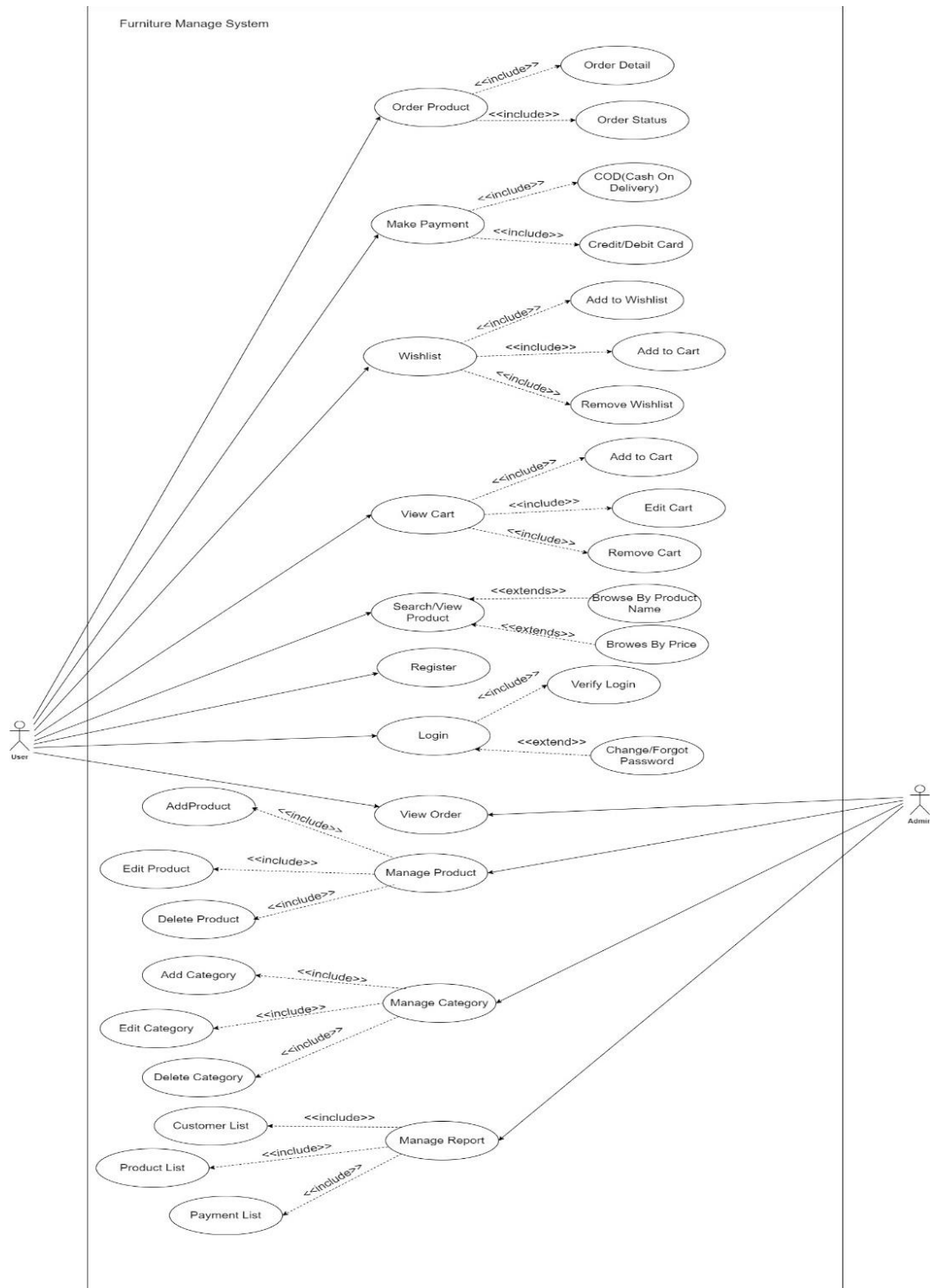
4.2 Activity Diagram

- **Furniture Management System Activity Diagram for Customer Registration**

Add user detail

[Not Valid]
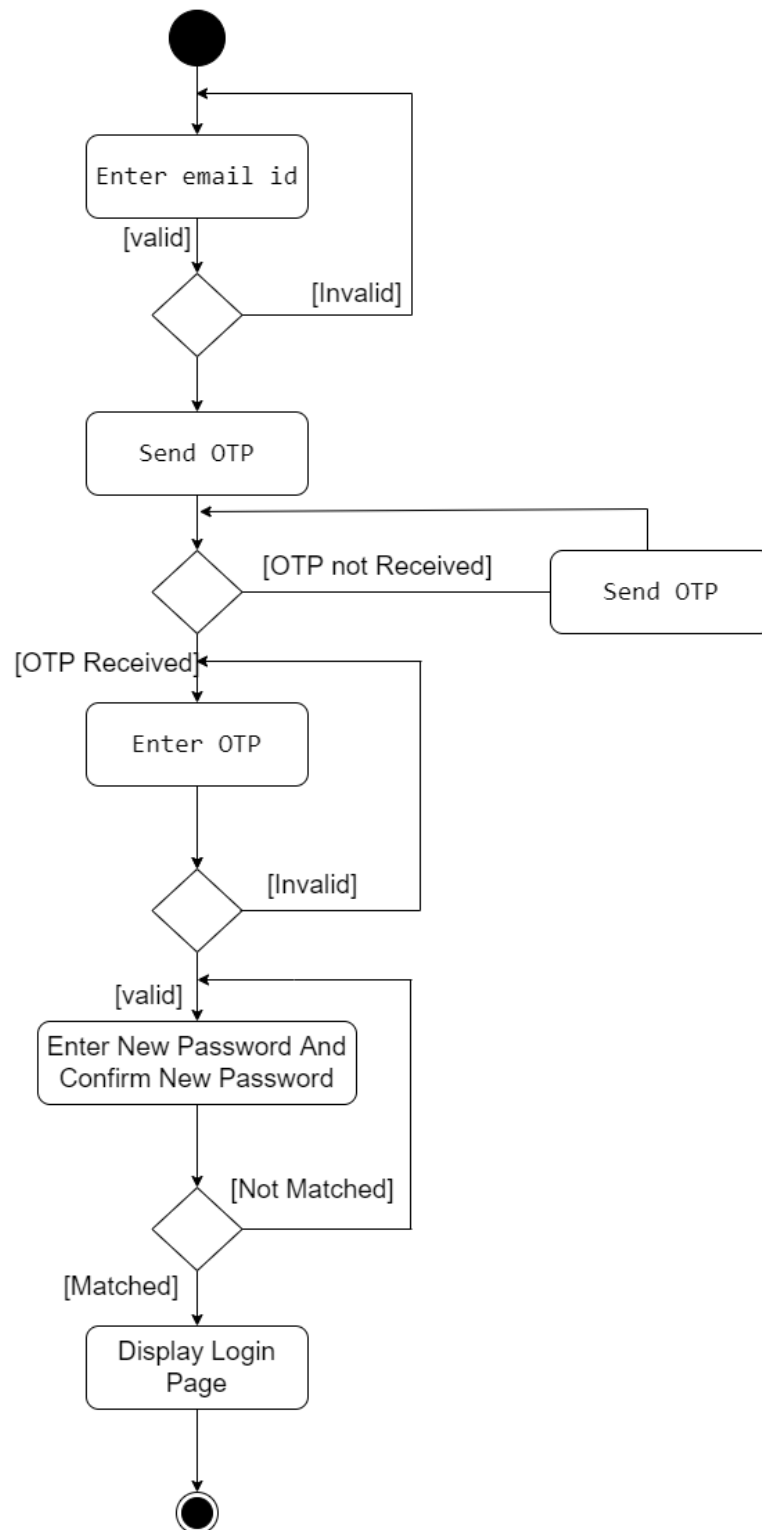
Verify Detail

[Valid]

Redirect to Login page
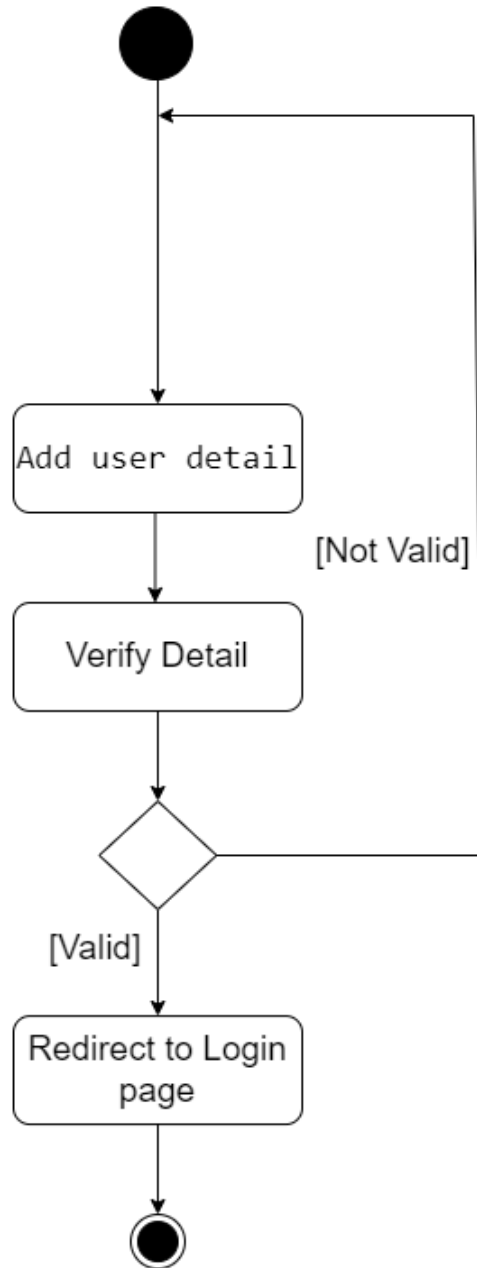
- **Furniture Management System Activity Diagram for Admin and Customer Login**
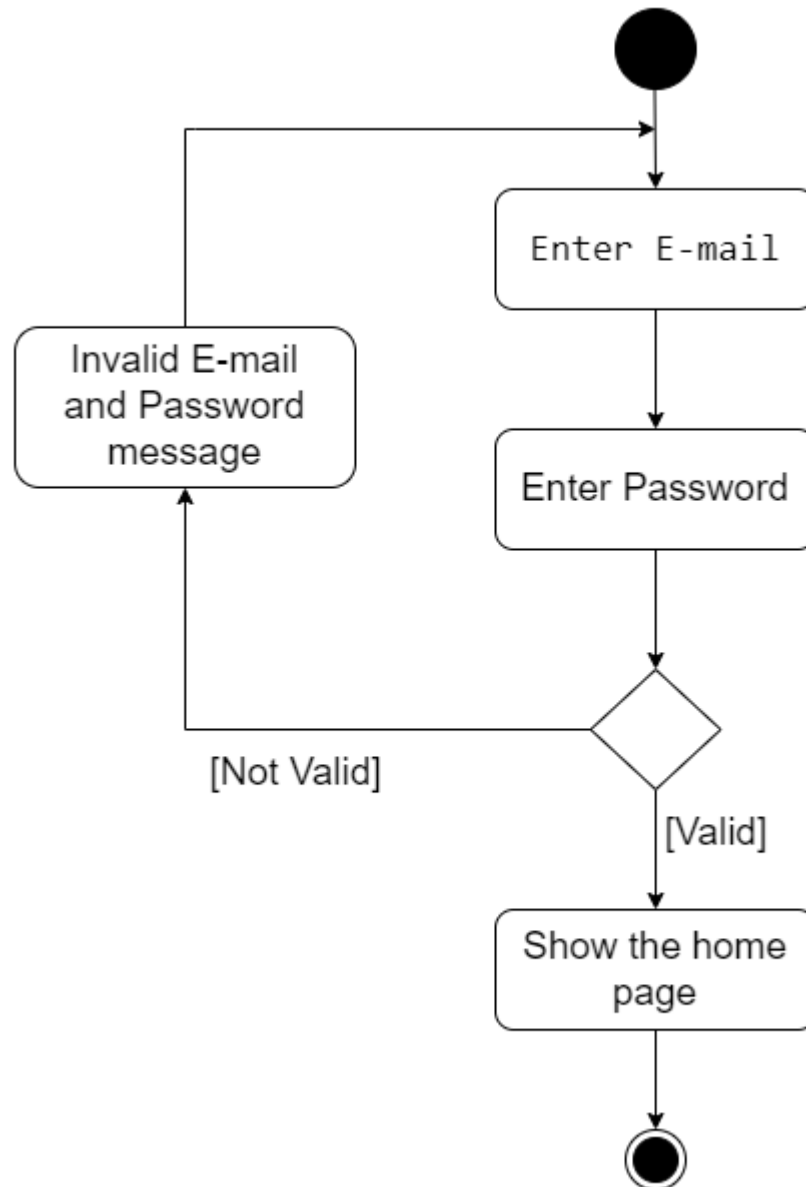
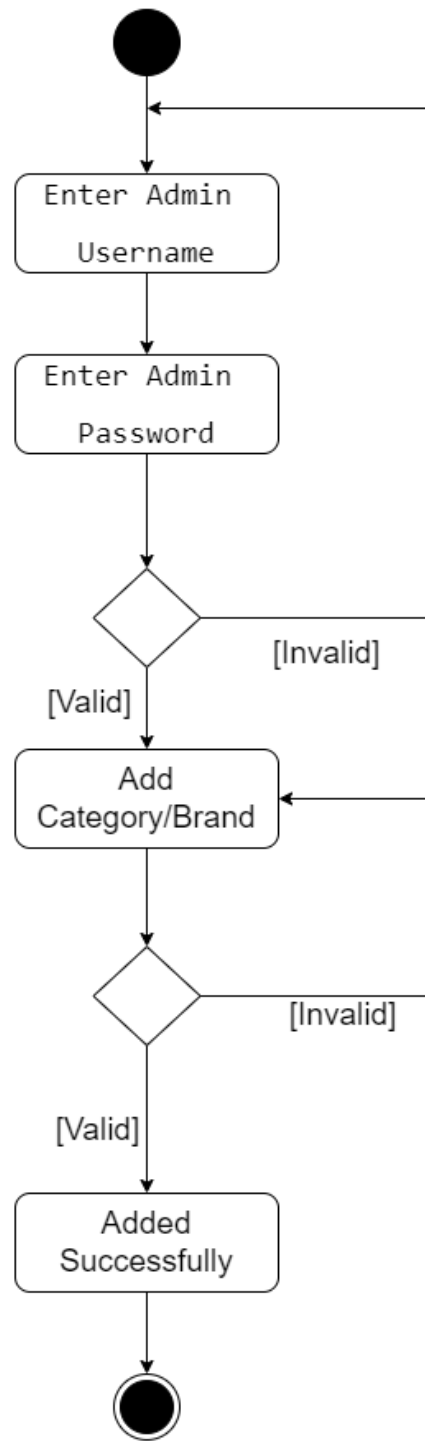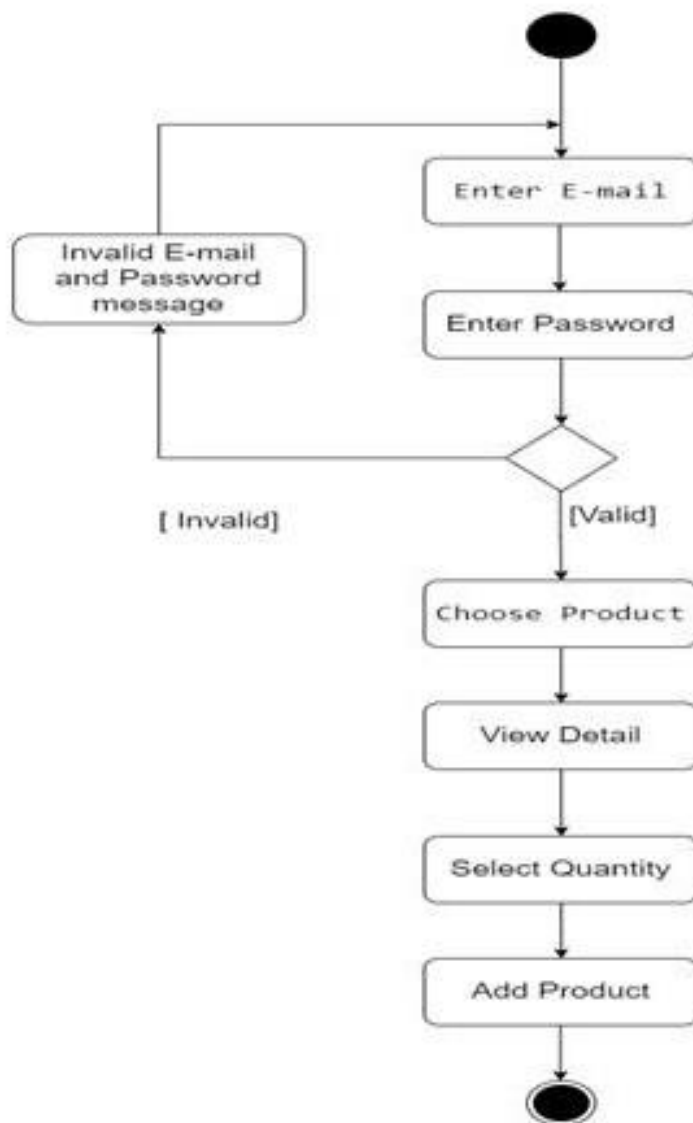- **Furniture Management System Activity Diagram for Forgot Password**

- **Furniture Management System Activity Diagram for Change Password**
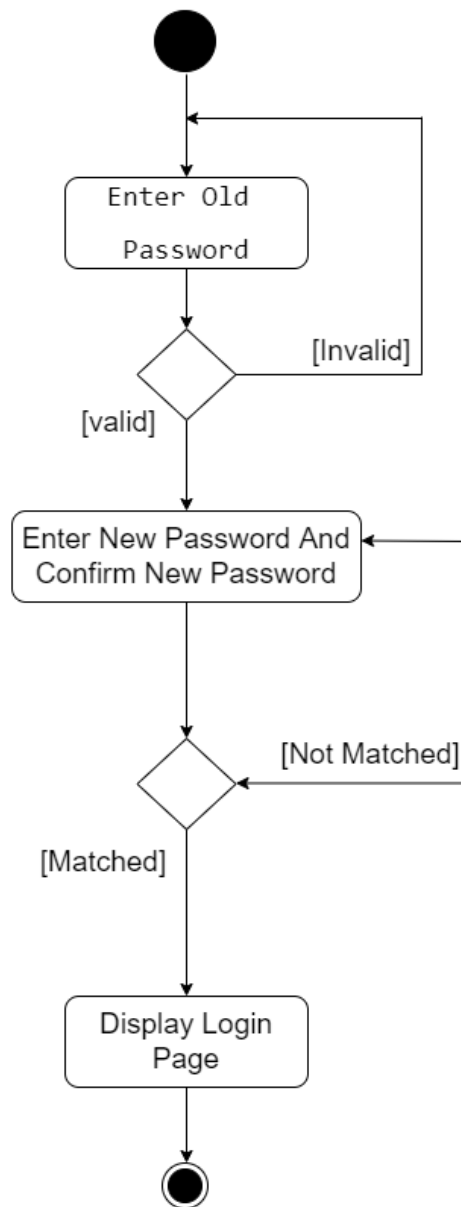
- **Furniture Management System Activity Diagram for Admin Add Product**
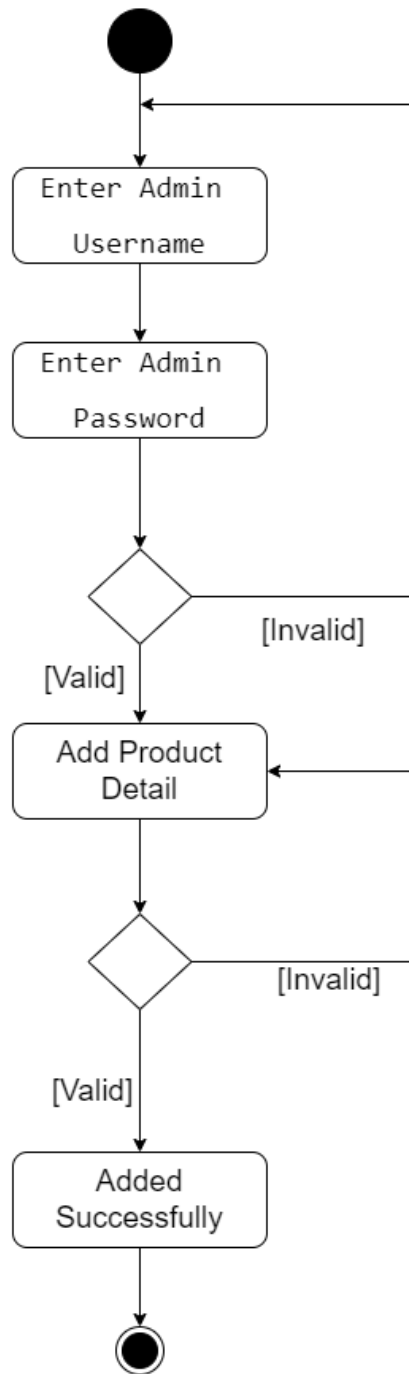
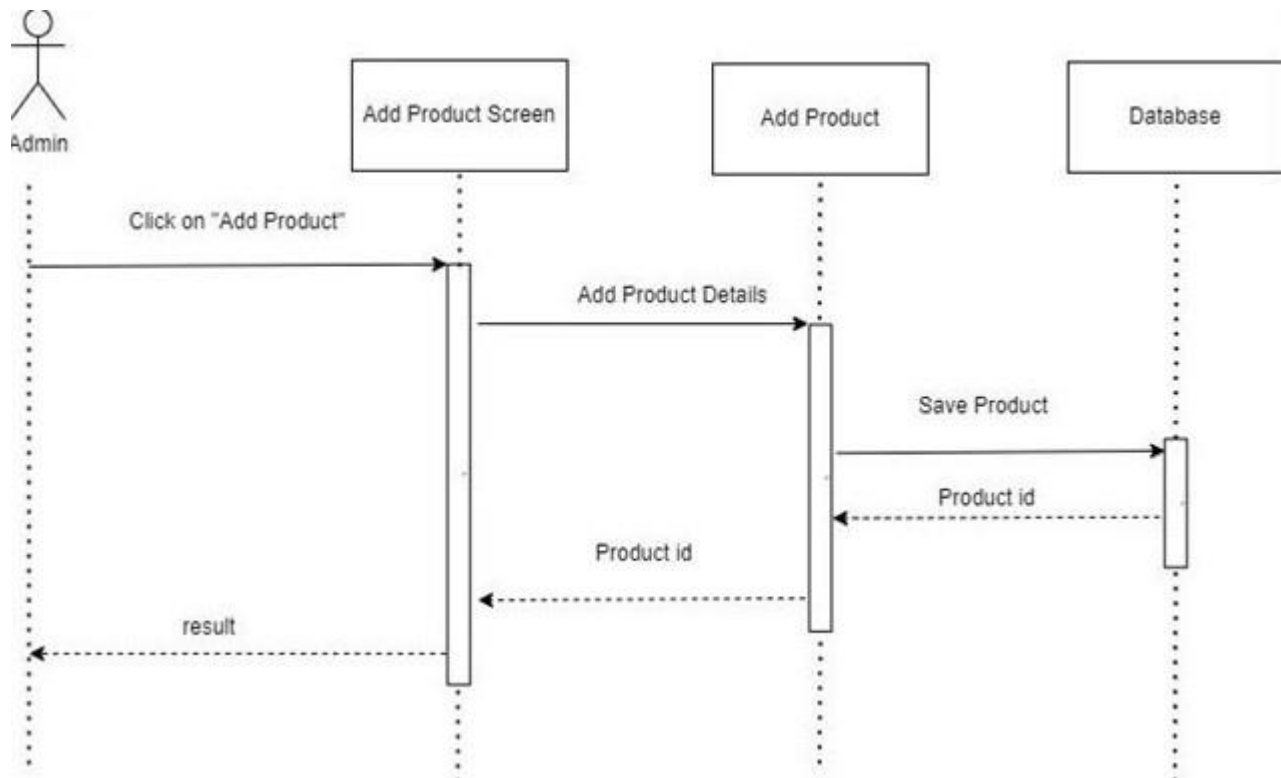- **Furniture Management System Activity Diagram for Admin Add Category**

Enter Admin Username

Enter Admin Password

[Invalid]

[Valid]

Add Category/Brand

[Invalid]

[Valid]

Added Successfully

- **Furniture Management System Activity Diagram for User Add Cart**

- **Furniture Management System Activity Diagram for Manage Product**
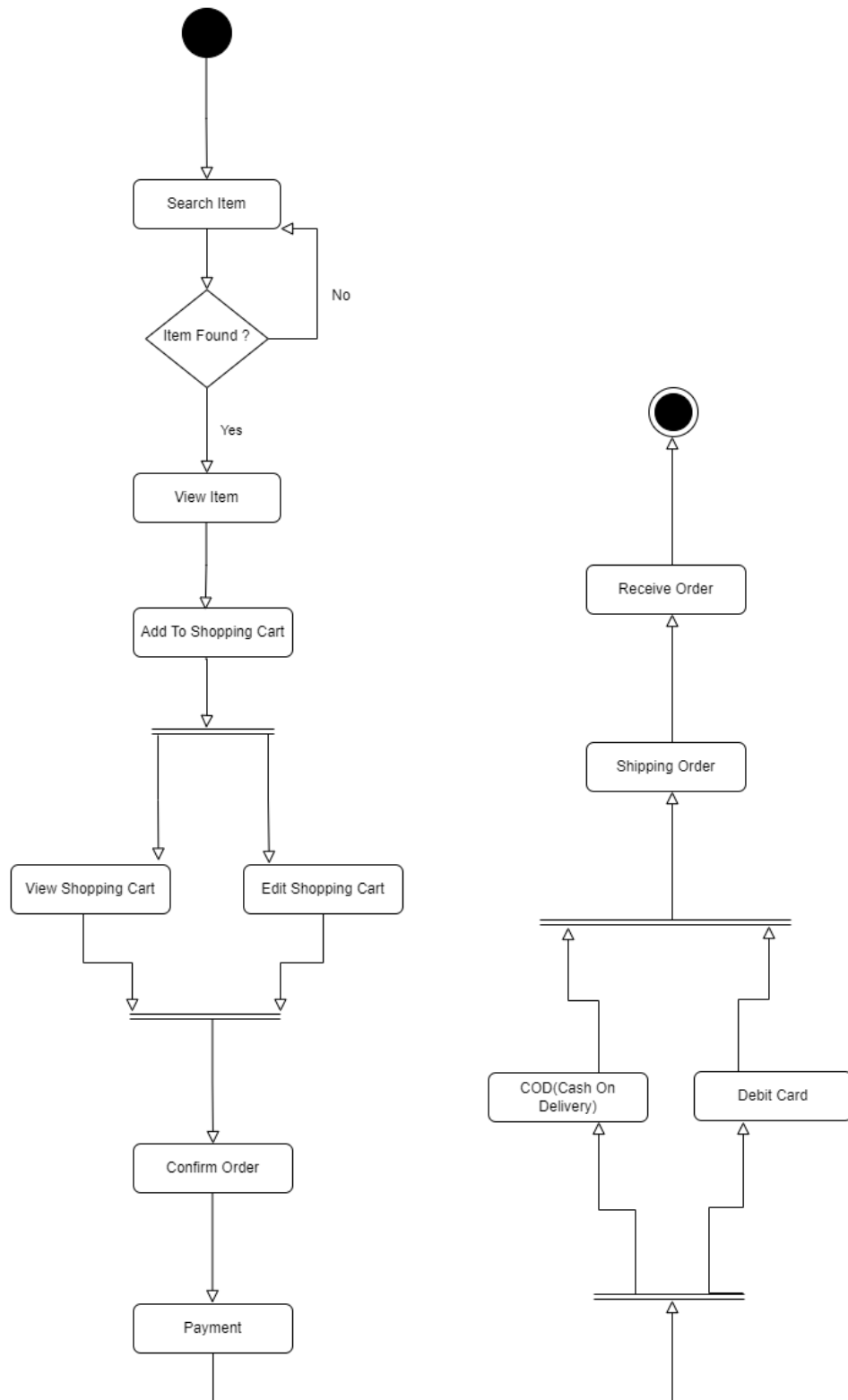
4.3 Sequence Diagram for "adding a product"

Chapter 5: System Design

5.1 Database Design

5.1.1 Database Schema

(1) Manage AdminUser:

- tblUser(userid[PK], emailid[unique], password)
  FD: id-> {emailed, password }

(2) Manage Product:

- tblProductType(id[PK],name)
  FD:id->{name}

- tblProductCategory(id[PK], name, image, ProductTypeid[FK])
  FD:id-> {name, image, ProductTypeid}

- tblProduct(id[PK], name, description, price, quantity,
  ProductCategoryid[FK][tblProductCategory])
  FD: id-> {name, description, price, quantity, ProductCategoryid}

- tblProductImage(id[PK], image, Productid[FK][tblProduct])
  FD: id-> {image, Productid[FK]}

(3) Manage Customer:

- tblCustomer (id[PK], name, address, pincode, contactno, emailid, password)
  FD: id-> {name, address, pincode, contactno, emailid, password }

(4) Manage Cart:

- tblCart(id[PK], productid[FK][tblProduct], quantity, amount(Derived:
  quantity*price), customerid[FK][tblCustomer])
  FD: id -> {productid[FK], quantity, amount(Derived:
  quantity*price),customerid[FK] }

(5)Manage Customer Order:

o   tblCustomerOrder(OrderNo[PK], productid[FK][tblProduct], userid[FK][tblUser] , quantity, totalamount, order_datetime, delivery_datetime, shipping_address, pincode, status)
FD: id -> { productid[FK], userid[FK],quantity, totalamount, order_datetime, delivery_datetime, shipping_address, pincode, status }

(6)Manage Payment:

o   tblPayment(id[PK], mode, OrderNo[FK][tblCustomerOrder],totalamount)
FD: -> {mode, OrderNo[FK], totalamount }

(7)Manage Contact:

o   tblContact(id[PK], name, email, subject, message, datetime)
FD: -> { name, email, subject, message, datetime }

5.1.2 Data Dictionary:

(1) Manage AdminUser:

- tblUser :

Sr. No.	Field Name	Data Type	Size	Constraints	Description
1	userId	In	-	Primary Key, Auto increment	Identifies Unique id of customer.
2	emialid	Varchar	255	Not Null, Unique	User Profile image
3	password	Varchar	255	Not Null	Specifies the name of thecustomer.

(2) Manage Product:

- tblProductType :

Sr. No.	Field Name	Data Type	Size	Constraints	Description
1	Id	Int	-	Primary Key, Auto increment	Identifies Unique id of Product Type.
2	name	Varchar	50	Not null	Specifies the Product Type.

- tblProductCategory:

Sr. No.	Field Name	Data Type	Size	Constraints	Description
1	Id	Int	-	Primary Key, Auto increment	Identifies Unique id of Product Category.
2	name	Varchar	50	Not null	Specifies name of Product Category like Sofa, Chair, etc.

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	3	Image	Image	-	Not Null	Specifies image in Category
	4	ProductType id	Int	-	Not Null	Specific Product Type like wooden,steel, plastic

- tblProduct:

Sr. No.	Field Name	Data Type	Size	Constraints	Description
1	Id	Int	-	Primary Key, Auto increment	Identifies Unique id of Product.
2	name	Varchar	50	Not null,unique	Specifies name of Product like Sofa, Chair,etc.
3	discription	Varchar	255	Not Null	Product Description
4	price	Int	-	Not Null	Specifies the product price.
5	quantity	Int	-	Not Null	Specifies the number of Product quantity.
6	ProductCateg oryid	Int	-	Foreign Key	Referenced from tblProductCate gory (id).

- tblProductImage:

Sr. No.	Field Name	Data Type	Size	Constraints	Description
1	Id	Int	-	Primary Key, Auto increment	Identifies Unique id of product image.
2	Image	Image	50	Not null	Specifies image from the image path.
3	Productid	Id	-	Foreign Key	Referenced from tblProduct (id).

(3) Manage Customer:

- tblCustomer :

Sr. No.	Field Name	Data Type	Size	Constraints	Description
1	id	Int	-	Primary Key, Auto increment	Identifies Unique id of User.
2	name	Varchar	50	Not Null	Stores the Otp
3	address	Varchar	255	Not Null	It specifies otp expiry period
4	pincode	Int	-	Not Null,Unique	Specifies Date and Time.
5	contactno	Char	10	Not Null,Unique	Specifies contact number of the Customer
6	Emailed	Varchar	255	Not Null,Unique	Specifies emailid of the Customer.
7	password	Varchar	255	Not Null	Password of User

(4) Manage Cart:
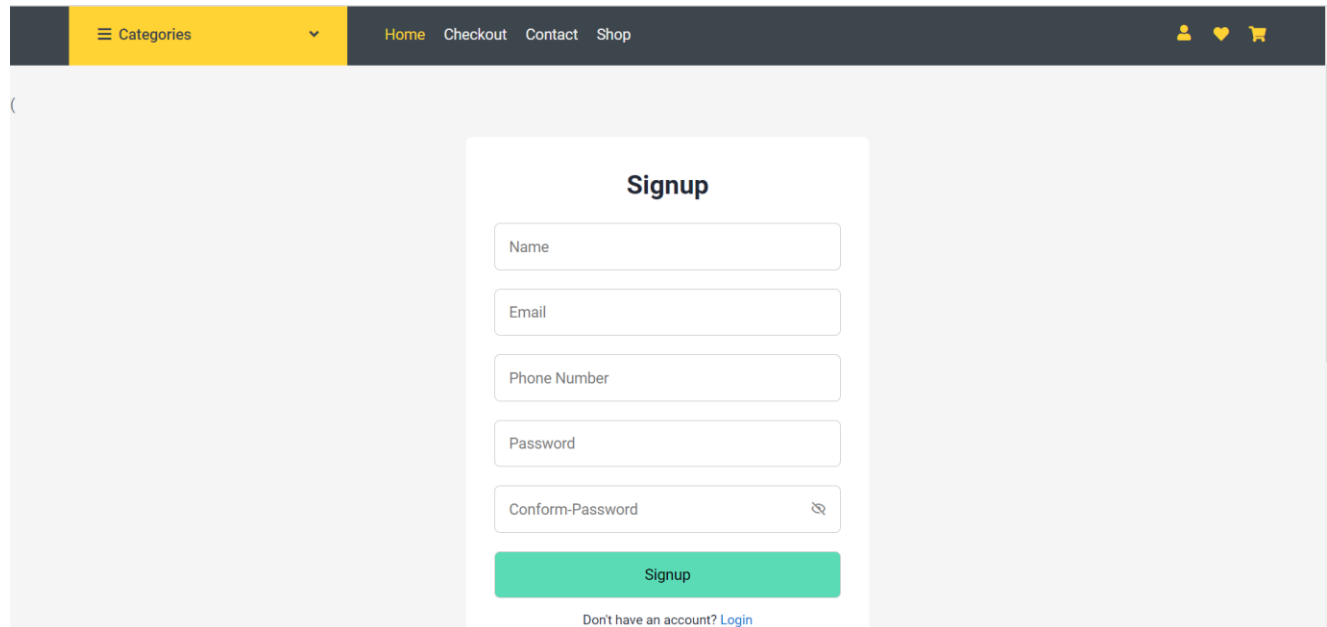
- tblcart:

Sr. No.	Field Name	Data Type	Size	Constraints	Description
1	Id	Int	-	Primary Key, Auto increment	Identifies Unique id of cart.
2	Productid	Int	-	Foreign Key	Referenced from tblProduct (id).
3	quantity	Int	-	Not Null	Specifies the number of quantity.
4	amount	Int	-	Not Null	Specifies Purchase Product amount.
5	customerid	Int	-	Foreign Key	Referenced from tblCustomer (id).

(5) Manage Customer Order:

- tblCustomerOrderMaster :

Sr. No.	Field Name	Data Type	Size	Constraints	Description
1	Order No	Int	-	Primary Key, Auto increment	Identifies Unique number of customer order.
2	Productid	Int	-	Foreign key	Referenced from tblProduct (id).
3	Userid	Int	-	Foreign key	Referenced from tblUser (id).
3	quantity	Int	-	Not Null	Specifies the order date and time
4	totalamount	Int	-	Not Null	Specifies the delivery date and time.
5	order_datetime	Datetime	500	Not Null	Specifies Shipping address of customer doorstep.
6	delivery_datetime	Datetime	-	Not Null	Unique pincode of Customer residential city.
7	Shipping_address	Varchar	100	Not Null	Product Delivery Addres
8	Pincode	Int		Not Null, Unique	Unique pincode of Customer residential city.
9	status	Varchar	50	Not Null	Status of the order product.

(6) Mange Payment :

- tblpayment:

Sr. No.	Field Name	Data Type	Size	Constraints	Description
1	id	Int	-	Primary Key, Auto increment	Identifies Unique id of payment.
2	mode	Varchar	100	Not Null	particular payment mode
3	orederNo	Int	-	Foreign Key	Referenced from tblCustomerOrder (id).
4	total_amount	Int	-	Not Null	Total of Product Price

(7) Contact:

- tblecontact:

Sr. No.	Field Name	Data Type	Size	Constraints	Description
1	id	Int	-	Primary Key, Auto increment	Identifies Unique id of Contact.
2	name	Varchar	100	Not Null	Name of Contact Person
3	email	Varchar	255	Not Null	Email of Contact Person
4	subject	Varchar	100	Not Null	For which subject contacted
5	message	Varchar	300	Not Null	
6	datetime	Datetime	-	Not Null	date of contact

Chapter 6 : System Implementation
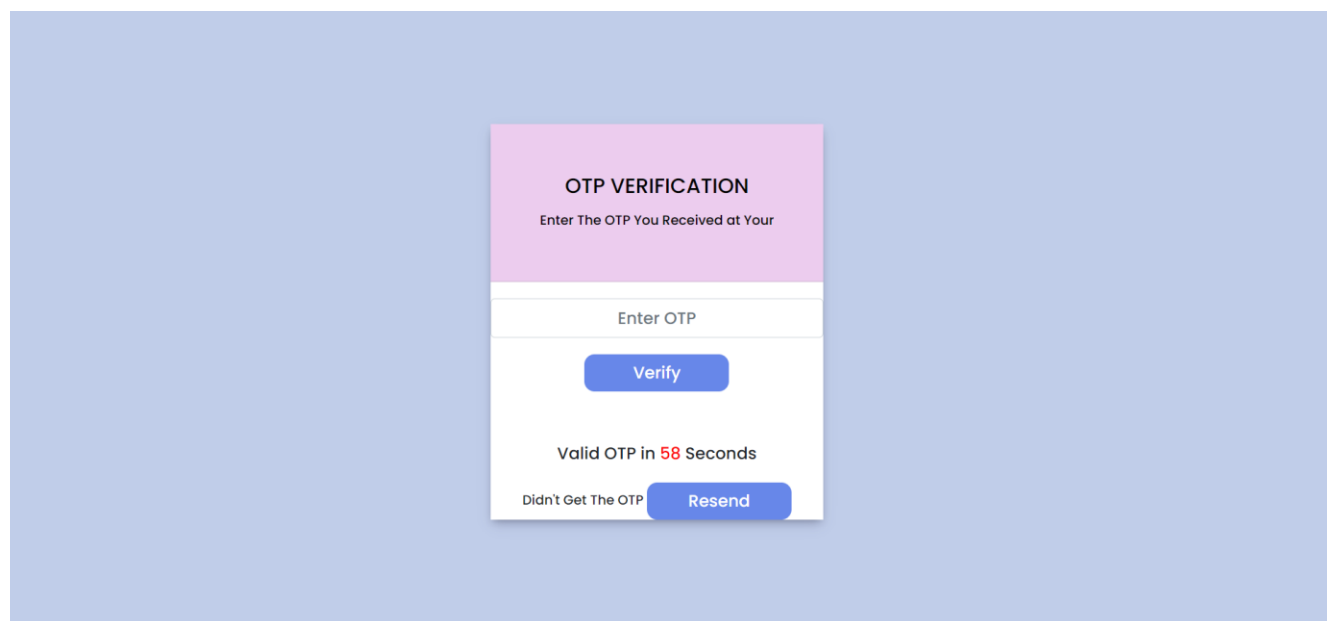
6.1 Screenshots

6.1.1 Registration

6.1.2 OTP

6.1.3 Login

SMILE HOME

Search for products

Customer Service
+91 9313499384

☰ Categories   Home   Checkout   Contact   Shop

Login

Email

Password

Forgot password?

Login

Don't have an account? Registration

6.1.4 Profile Page

SMILE HOME

Search for products

Customer Service
+91 9313499384

☰ Categories   Home   Checkout   Contact   Shop

profile

Name	Rahul
Email	savaliyarahul813@gmail.com
Phone	9087645789
Address	c-55 hari om row house
Pin Code	111111

ChangePassword   **Update Details**

6.1.5 Home Page
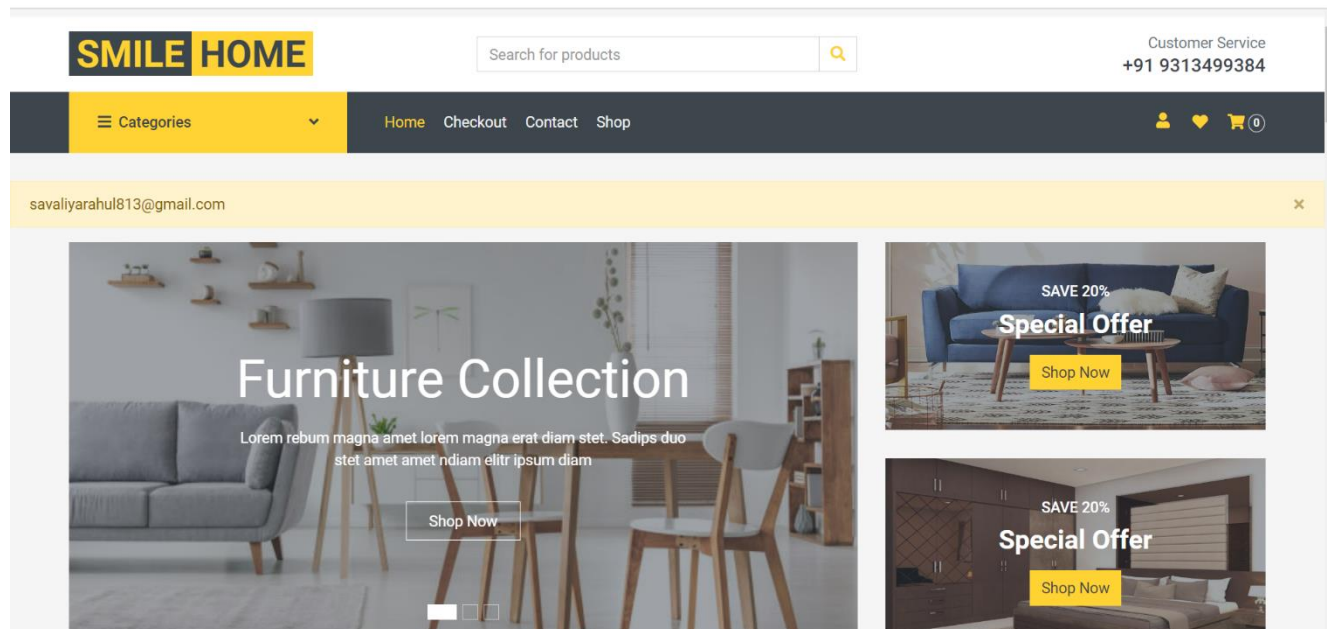
6.1.6 Category
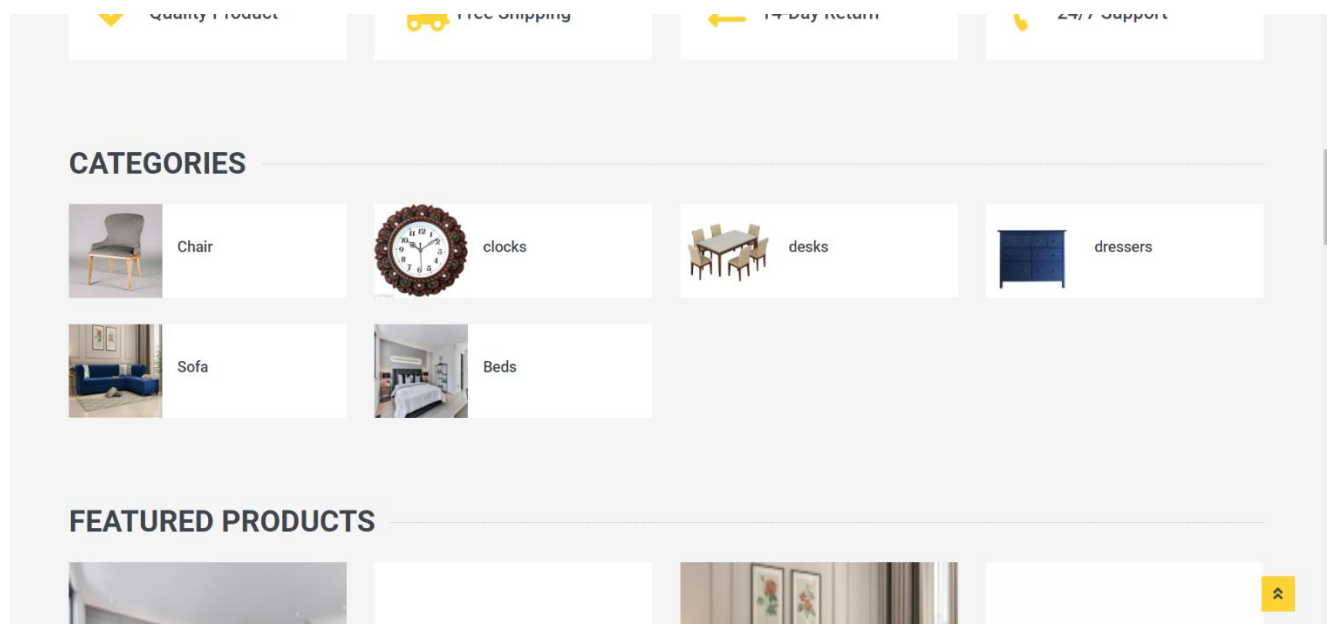
6.1.7 Product
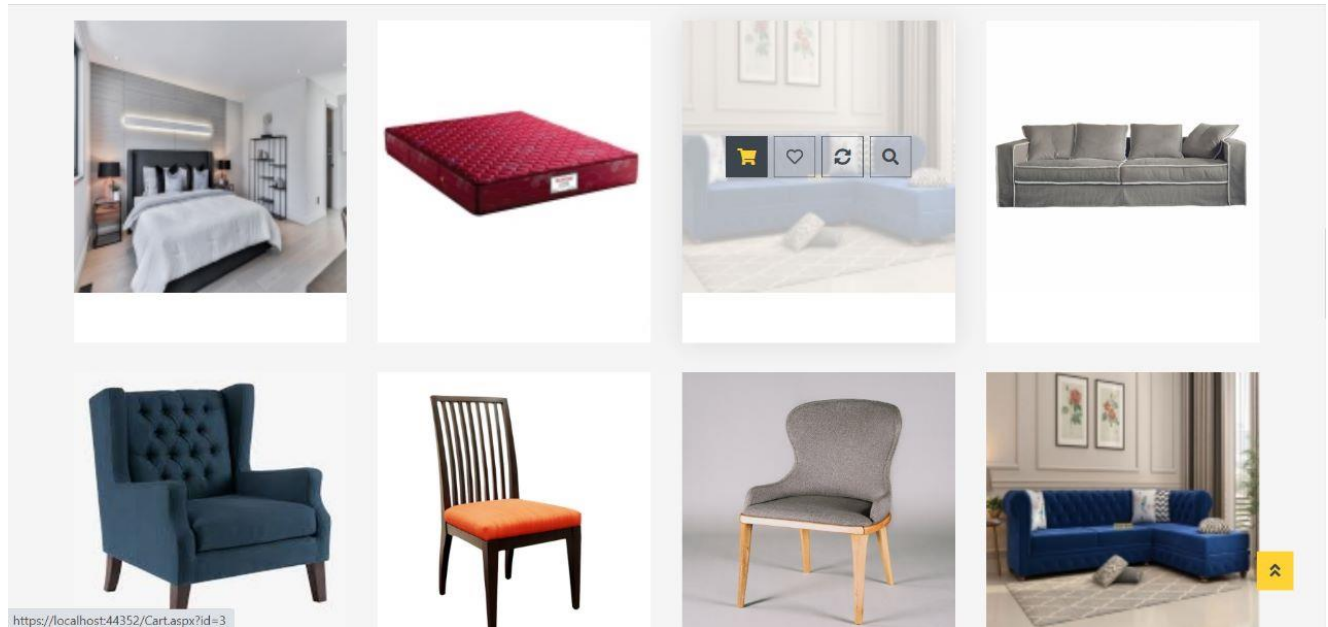
6.1.8 Product Details

6.1.9 Cart

6.1.10 Chekout

6.1.11 Payment process

6.1.12 Admin Login Page

6.1.13 category Page

6.1.14 Add Product Page

Add Products

Product Name

chair

Product description

A chair is a type of seat, typically designed for one person and consisting of one or more legs, a flat or slightly angled seat and a back-rest. They may be made of wood,

Chair ▾

Product image1

Choose Files Screenshot 2023-05-03 094654.png

Product Quantity

13

Product Price

40000

Add Product

Sidebar:
- Dashbord
- Add Category
- View Category
- Add Product
- View Product
- Orders
- All Users
- Logout

6.1.15 View Product Page

Sidebar:
- Dashbord
- Add Category
- View Category
- Add Product
- View Product
- Orders
- All Users
- Logout

Search Product   search

Product Name	Discriptipn	pimage	Price	Qty	Delete	Edit
Orthopaedic Memory	Load bearing capacity of 360kgs to provide proper support, Free from burrs & sharp edges for enhanced safety		27999	9	Delete	Edit
indian bed	Load bearing capacity of 360kgs to provide proper support, Free from burrs & sharp edges for enhanced safety indian bed smile home		25999	5	Delete	Edit
sofa	The Indian rupee is the official currency in the Republic of India. The rupee is subdivided into 100 paise, though as of 2023, coins of denomination of 1 rupee are the lowest value in use whereas 2000 rupees is		56999	12	Delete	Edit
Indian Sofa come bed	The Indian rupee is the official currency in the Republic of India. The rupee is subdivided into 100 paise, though as of 2023, coins of denomination of 1 rupee are the lowest value in use whereas 2000 rupees is		56999	7	Delete	Edit
chair sofa	Product Dimensions: Length (160cm), Width (206.7cm), Height (88.6cm) Ideal mattress size: 75*66 Humidity-resistant design to ensure strength throughout changing seasons		7909	6	Delete	Edit
china dressers	Comfortable 3+2 seater sofa set made with high quality fabric;Dimensions:- 3 Seater Sofa - Length: 185 cm (72.83 in); Width		5999	12	Delete	Edit
Indian chair	Comfortable 3+2 seater sofa set made with high quality fabric;Dimensions:- 3 Seater Sofa - Length: 185 cm (72.83 in); Width: 76 cm (29.92 in); Height: 76		59000	13	Delete	Edit

6.1.16 All User Page

id	name	phone	email	Delete
3	Rahul	1234567890	20bmiit086@gmail.com	Delete
4	romit	9313499384	romitdobariya8@gmail.com	Delete
5	praveen	1234567890	20bmiit101@gmail.com	Delete
6	Rahul	9087645789	savaliyarahul813@gmail.com	Delete
7	romit	9313499384	romitdobariya5075@gmail.com	Delete
8	romit	9537215410	rahulsavaliya310@gmail.com	Delete
9	praveen	1234567890	praveenp8160@gmail.com	Delete
10	Rahul	1234567890	20bmiit069@gmail.com	Delete
11	Romit	9016075033	20bmiit061@gmail.com	Delete

Search User   search

Dashbord
Add Category
View Category
Add Product
View Product
Orders
All Users
Logout

https://localhost:44349/view_user.aspx

Chapter 7: Testing

7.1 Test Case

- **Login**

Test Case	Input	Description	Actual output	Expected Output	Remarks
1.	Username=null	Missing Username	Error Message	Error Message	Null is not allowed
2.	Password=null	Missing Password	Error Message	Error Message	Null is not allowed
3.	Username=Invalid	Invalid Username	Invalid User	Invalid User	Username is not available or not matching with password
4.	Password=Invalid	Invalid Password	Invalid Password	Invalid Password	Username is not available or not matching with password
5	Username=Valid Password=Valid	Valid User	View System	View System	Username and password is proper

• Registration

Test Case	Input	Description	Actual output	Expected Output
1.	FirstName=""	Enter FirstName	Error Message	Error Message
2.	LastName=""	Enter LastName	Error Message	Error Message
3.	Email=""	Enter Email	Error Message	Error Message
4.	PhoneNumber=""	Enter Contact Number	Error Message	Error Message
5.	Password=""	Enter Password	Error Message	Error Message
6.	Confirm Password=""	Enter Confirm Password	Error Message	Error Message

• Manage Product(Admin)

Test Case	Input	Description	Actual output	Expected Output
1.	productName=""	Enter productName	Error Message	Error Message
2.	Total purchase stock (kg)=""	Enter Stock	Error Message	Error Message
3.	image=""	Enter image	Error Message	Error Message
4.	category =""	Enter Category	Error Message	Error Message
5.	Price=""	Enter price	Error Message	Error Message

- **Forget password**

Test Case	Input	Description	Actual output	Expected Output
1.	Email =""	Enter user email	Error Message	Error Message
2.	Otp=""	Enter otp	Error Message	Error Message
3.	Otp=invalid	Enter otp	Error Message	Error Message
4.	Otp=valid	Enter otp	Change password	Set new password
5.	Confirm new password=""	Enter password	Error Message	Error Message

- **Place Order(user)**

Test Case	Input	Description	Actual output	Expected Output
1.	FirstName=""	Enter FirstName(change firstname)	Error Message	Error Message
2.	LastName=""	Enter LastName(change last name)	Error Message	Error Message
3.	Address=""	Enter address(change address)	Error Message	Error Message
4.	Area=""	Enter area(chage area)	Error Message	Error Message
5.	Pincode=""	Enter pincode(change pincode)	Error Message	Error Message
6.	Phone=""	Enter phone number(change phone number)	Error Message	Error Message

Chapter 9

- **Future Enhancement**

    1. Implementation of a rewards or loyalty program for customers
    2. 2.Implementation of a real-time chat feature for customer support
    3. 3.Addition of a recommendation engine to suggest products to customers based on their browsing and purchase history
    4. 4.Integration of social media functionality into the system

- **Conclusion**

    ✓   an e-commerce furniture management system is a crucial tool for businesses that sell furniture online. Such a system enables efficient management of online inventory, order processing, payment processing, delivery tracking, and customer service. By utilizing the power of technology, e-commerce furniture management systems can provide businesses with real-time data on sales, inventory levels, and customer behavior, allowing for better decision-making and improved customer experience. With the increasing popularity of online shopping, implementing an e-commerce furniture management system has become essential for businesses to remain competitive in the market. In summary, an e-commerce furniture management system can significantly enhance the effectiveness and profitability of furniture businesses operating in the online marketplace.

- **Bibliography**

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