



# INSTITUTE FOR ADVANCED COMPUTING ANDSOFTWARE DEVELOPMENT (IACSD), AKURDI, PUNE

Documentation On

# **MakeItHome E-shopping**

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**Submitted By:** 

**Group No: 48** 

Roll No. 233110 233235

Name: Kenil Vasoya

Shubham Badgujar

Mrs. Geeta Darunte

**Project Guide** 

Mr. Rohit Puranik

**Centre Coordinator** 

#### **ABSTRACT**

The rapid growth of e-commerce has revolutionized the way consumers shop for various products, including home decor and furniture. This project presents the development of a comprehensive e-commerce web application catering specifically to the home decor and furniture market. The application utilizes modern and robust technologies to provide users with an engaging and seamless shopping experience. The backend is developed using Spring Boot, offering a scalable and efficient foundation, while the frontend is built with ReactJS to deliver a dynamic and user-friendly interface. The project also employs MySQL as the database management system to ensure reliable data storage and retrieval.

Key features of the e-commerce web application include user registration and authentication, product browsing, searching, and filtering, a shopping cart for managing selected items, secure payment processing, and order tracking. The integration of Spring Boot enables efficient backend operations, such as user management, product catalog management, order processing, and inventory management. ReactJS, on the other hand, ensures a responsive and interactive user interface, enhancing the user experience with real-time updates and smooth navigation.

The MySQL database stores information related to user profiles, product details, order history, and other relevant data. The application employs appropriate data modeling and database normalization techniques to ensure data integrity and efficient query processing.

### **ACKNOWLEDGEMENT**

This project "MakeItHome.com – E-Shopping" was a great learning experience for us and we are submitting this work to Institute for Advanced Computing and Software Development-Akurdi, Pune.

We are very glad to mention Mrs. Geeta Darunte for their valuable guidance to work on this project. Their guidance and support helped us to overcome various obstacles and intricacies duringthe course of project work.

Our heartfelt thanks goes to Mr. Narendra Pawar(Course Coordinator, PG- DAC) who gave all the required support and kind coordination to provide all the necessities to complete the project and throughout the course up to the last day here in IACSD-AKURDI, Pune.

Kenil M.Vasoya (233110) Shubham Badgujar(233092)

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#### 1.INTRODUCTION

This project is a web-based shopping system for buying home décor and furniture productsonline. An Online Shopping System where the Admin can Add, Update and Delete products as well as categories. A user can select a particular item to view the details, choose the number of items and fill in details like Name, Address, etc. to buy a product.

The project objective is to deliver the online shopping application into web platform. This project is attempts to give good shopping experience same as of buying products in offlineshopping store.

In order to build such an application complete web support, need to be provided. A complete and efficient web application which can provide the online shopping experience the basic objective of the project.

## 1.1 Purpose:

This document meant to delineate the features of Online Shopping Store (OSS), so as to serve as a guide to the developers on one hand and software validation document for the prospective client on the other. The OSS for Home Decoration Items shop web application is intended to provide complete solution for customers as well as the staff through the single gateway using the internet. It will enable customers to browse through the shop and purchase them online. OSS would perform online business process automation such as Shopping Cart management, Order Processing, Payment Processing, Customer Relationship Management as well as Shipment of ordered products.

### 1.2 Scope:

OSS will be always available for customers where they can explore the variety of products. The system provides secure registration and profile management facilities for customers. It will be having adequate searching mechanisms for easy and quick access to particular products. The system also provides the easy solution for the registered customers to buy the product online using internet and also allow them to maintain their cart by adding or removing the product.

### 1.3 Definitions:

SRS - Software Requirement Specification

OSS - Online Shopping Store

#### 1.4 Overview:

Developing an online platform is a job that requires equal share of technological expertise and sound decision making. This website offers human experience which makes the shopping experience as satisfying as in a real store. Developers make it sure that the site is high on responsiveness and low on tech errors, which is the most favourable selling point of this online website.

Also from the business perspective, customers usually find the products more attractive on websites, as they get all the details available there. OSS provides customers to do shopping of items of their desire by spending less time.

### 2. Overall Description:

MakeItHome.com (Online website based e-commerce) is an outstanding way of bringing customers on an online platform to make purchase in a secured and efficient manner. This website provides an Interactive interface through which a user can interact with different areas of the application easily by maintaining the product's as well as customer's information. OSS provides a simple interface and platform to ease the process of buying the products online. It includes smooth functionality and efficiency that adds to buyers' confidence. MakeItHome.com keeps a constant focus on new category creation and expansion of products.

Users are classified into two parts, the Administrator and Customer.

#### • Customer:

He or she is a verified user of website who is intended to buy a product via OSS. The customer must have a username and password to make a purchase. If the customer is not registered, they should register themselves by navigating to the sign up page.

#### • Administrator:

He or she is a verified person who is allowed to sell items over the platform. Admin is responsible for monitoring functions and procedures on platform. Admin is one who will be having access to add, update and remove the product on website.

## 3. Requirements Specification

#### **3.1 Functional Requirements:**

This section provides requirement overview of the system.

#### 3.1.1 Administrator:

- **Database Management:** Admin can control the database and keep track of all the records of customers and product details.
- Customer Details: Admin can view the personal details of the customer.
- Managing Sales to Customers: Admin will be responsible for properly allocating the selected product according to the customer's choice and delivering product to the customer.
- **View Product Stocks:** Admin will keep track of each product item's stocks for selling purpose.
- **View Orders:** Admin can see all the user orders.
- View Category Wise Sales: Admin can see bar chart of category wise sales.
- Login & Logout: Admin will have to login to monitor and perform the functions mentioned above. Admin can logout after completion of his work.

#### 3.12 Customer:

• **Login:** For shopping, customers need to get authenticated by logging in on to the OSS web application by using their registered email ID and password.

- **Forgot Password:** If Customer has forgotten his/her password, he/she can reset password by clicking on forgot password link. One reset link will be sent to their registered email. They can reset their password by clicking on that link.
- **Update Password:** If Customer want to update their password, he/she has to use the OTP sent to their registered email to update the password.
- **Login:** For shopping, customers need to get authenticated by logging in on to the OSS web application by using their registered email ID and password.
- **Shopping cart:** Customer will be having shopping cart during online purchase. The registered customer can add/remove products in shopping cart. Later customer can confirm the order for the products added in the cart for purchase.
- **View Orders:** Customer can see all their orders.
- Wishlist: Customer can add products to their Wishlist and later can see that on their Wishlist screen.
- **Payment:** After placing the order, the system will display available online payment methods (RazorPay Payment Gateway) for payment to customer. Then the customer will be able to select the payment method for that order.
- **Logout:** After ordering or surfing for the product, customer has to logout.
- **Invoice Generation:** Once the order gets confirmed, the system will generate detailed invoice for that order. The system will have to send one copy of the invoice to the customer's registered email address.

#### 3.1.3 Visitors:

• **Product Gallery & Product Details:** Any anonymous user will be able to view different products available for sale. Products will be displayed based on category, cost, etc. Users will be able to get details of the product chosen from the list presented.

• **Provide Filter By Category Facility:** Any anonymous user will be able to Filter the products based on Category shown on screen.

- **Provide Search Facility:** Any anonymous user will be able to enter the search text on the screen and the system then will display matching products based on the search. Also, the system will notify the user when no matching product is found on the search.
- **Registration:** To buy the product, the customer should register themselves on OSS web application.

### 3.2 Non-Functional Requirements:

Following Non-Functional Requirements will be there in the insurance to the internet:

- Secure access to customer's confidential data.
- 24 x 7 availability
- Better component design to get better performance at peak time.
- Flexible service-based architecture will be highly desirable for future extensions.
- Various other Non-Functional requirements are:

### 1) Security:

- System use shall not cause any harm to human users.
- This web-based application will be password protected and any updation of new product entries and order processing will only be carried out by privileged users.
- System shall use secured database.
- Customers can just read information but they cannot edit or modify anything except their personal information/order details. Only the System Administrator will do system administration and maintenance work.
- System will have different types of users and every user has access constraints.

### 2) Reliability:

- The system should consistently performs the specified functions without failure.

#### 3) Maintainability:

- The application is designed so that it is easily maintained. Also, it should allow incorporating new requirements in any module of system.

#### 4) Portability:

- The application will be easily portable on any system.

#### 5) Error Handling:

- The system should handle expected and non-expected errors in ways that prevent loss in information and long downtime period.

## 4. External Interface Requirements

#### 4.1 Customer's Interface:

#### • Login:

This interface will consist of two compulsory fields namely, Username and Password. There will also be options for "New User's Registration" which will redirect to "Registration" page and a "Forgot Password" option in case a user forgets the password. If the password entered is correct the Main User Interface opens up else an error message is displayed.

#### • Registration:

The user will enter his personal details like First Name, Last Name, Email ID, Password, Confirm Password, Phone Number, etc. Users will be warned about any mistakes on data format or any other constrains by validation notes and error messages. When the button "save" button is clicked, the server will check if the username or email is already taken and alert the user. If everything is entered correctly and saved a new user will be created.

#### • Edit Profile Details:

If any member wants to change his personal information, he can enter his profile by clicking on his name at the top right of the main page and he will be directed to the personal details

editing page.

#### • Search Product:

The customer can search the type of item he is looking for and the specifications he is interested in them, by clicking on "Search".

#### Shopping Cart:

This will be a space for the customers where they can store the items they wish to buy. The user can also remove items from cart prior to checkout. Once the user decides to buy the items in cart, the user is directed to the payment page for making payment.

#### • Wishlist:

This will be a space for the customers where they can store the items they wish to buy later sometimes. The user can also remove items from Wishlist. Once the user decides to buy the items from Wishlist, he/she can directly add that items into cart and can proceed further for payment.

#### • Payment:

The customer will have to do online payment through credit/debit cards, UPI, Wallets (Razor Pay Payment Gateway) out of which he can select one and can proceed further for payment of that order.

#### • View Orders:

The customer after signing in can see their orders.

### 4.2 Administrator's Interface:

The administrator will have a different login id using which he can access his account and perform all of his roles and responsibilities mentioned below.

- Access and view the customer database.
- Maintain the product database so that the same or different kinds of products are properly

maintained with their unique id, so that when a customer orders a product, the same product gets allocated without causing any inconsistency to the database.

- Can Add/Remove products as well as any new category. The corresponding changes will be done in the database by the Admin.
- Manage customer and product database.

#### 4.3 Hardware Interfaces:

Processor	Intel i3 processor or above.
RAM	2 GB or above.
Hard Disk	320GB or above.

#### **4.4 Software Interfaces:**

### **Client-Side Requirement:**

<b>Operating System</b>	Windows or any equivalent OS.
Web Browser	Google Chrome or any compatible browser.

### **Technologies Used:**

Frontend	React JS
Backend	Spring Boot
Database	MySQL

## **4.5 Assumptions and Dependencies:**

- The customer must have basic knowledge of computers and English language.
- Each user must have username and password.
- There must be an Administrator.
- Internet connection is must.
- Proper browsers should be installed in the user's system.

### **5.1 Input And Output Design:**

#### 5.1.1 <u>Input Design:</u>

Input design is the link that ties the information system into the world of its users. The input designs involve determining the inputs, validating the data, minimizing the data entryand provides a multi-user facility. Inaccurate inputs are the most common cause of errors in data processing. Errors entered by the data entry operators can be controlled by input design. The user-originated inputs are converted to a computer-based format in the inputdesign. Input data are collected and organized into groups of similar data. Once identified, the appropriate input media are selected for processing. All the input data are validated and if any data violates any conditions, the user is warned by a message. If the data satisfies all the conditions, it is transferred to the appropriate tables in the database. In this project the student details are to be entered at the time of registration. A page is designed for this purpose which is user friendly and easy to use. The design is done such that users get appropriate messages when exceptions occur.

### 5.1.2 Output Design:

#### 5.1.3

Computer output is the most important and direct source of information to the user.

Output design is a very important phase since the output needs to be in an efficient manner. Efficient and intelligible output design improves the system relationship with the user and helps in decision making. Allowing the user to view the sample screen is important because the user is the ultimate judge of the quality of output. The output module of this system is the selected notifications.

## **5.2** Database Design:

#### 5.2.1 Database:

Databases are the storehouses of data used in the software systems. The data is stored in tables inside the database. Several tables are created for the manipulation of the data for the system. Two essential settings for a database are

- Primary key the field that is unique for all the record occurrences
- Foreign key the field used to set relation between tables

Normalization is a technique to avoid redundancy in the tables.

#### **5.2.2 System Tools:**

The various system tools that have been used in developing both the front end and theback end of the project is being discussed in this chapter.

#### • FRONT END:

React is a library which is developed by Facebook are utilized to implement the frontend. React(also known as React.js or ReactJS) is a free and open-source front-end JavaScript library for building user interfaces or UI components. It is maintained by Facebook and a community of individual developers and companies. React can be used as a base in the development of single page or mobile applications. However, react is only concerned with state management and rendering that state to the DOM, so creating React applications usually requires the use of additional libraries for routing, as well as certain client-side functionality.

#### **■** React Version 16.14

#### • BACKEND DATABASE TECHNOLOGY:

The back end is implemented using MySQL which is used to design databases.

**MySQL:** MySQL is the world's second most widely used open-source relational database management system (RDBMS). The SQL phrase stands for Structured Query Language. An application software called Navicert was used to design the tables in MySQL.

► Version : MySQL 8.0

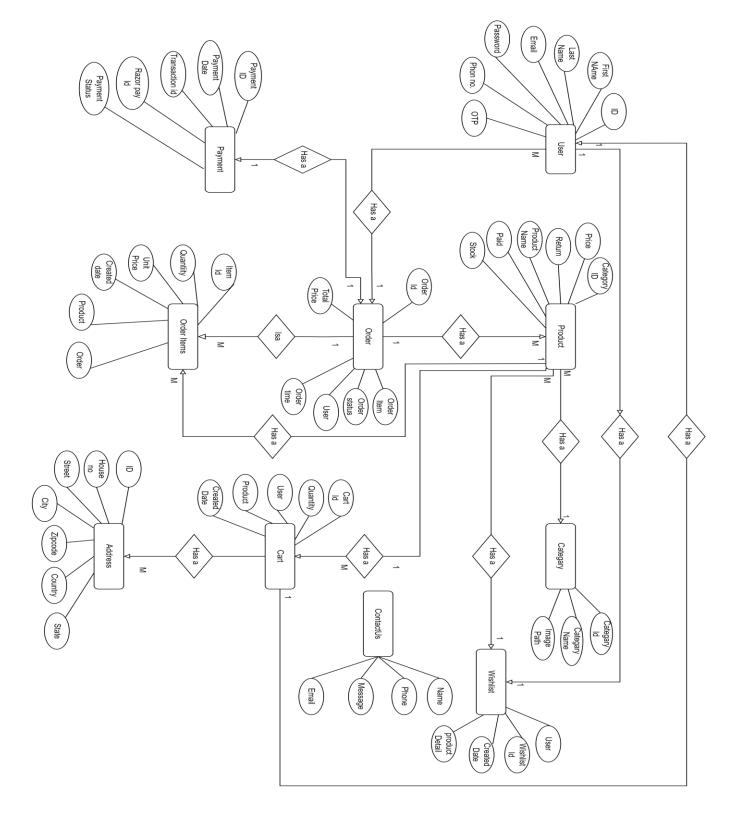
### • BACK END (SPRING BOOT):

This is used to connect MYSQL and fetch data from database and store the data in database. The Spring Framework is an application framework and inversion of control container for the Java platform. The framework's core features can be used by any Java application, but there are extensions for building web applications on top of the Java EE (Enterprise Edition) platform. Although the framework does not impose any specific programming model, it has become popular in the Java community as an addition to the Enterprise JavaBeans (EJB) model. The Spring Framework is Open-source Framework.

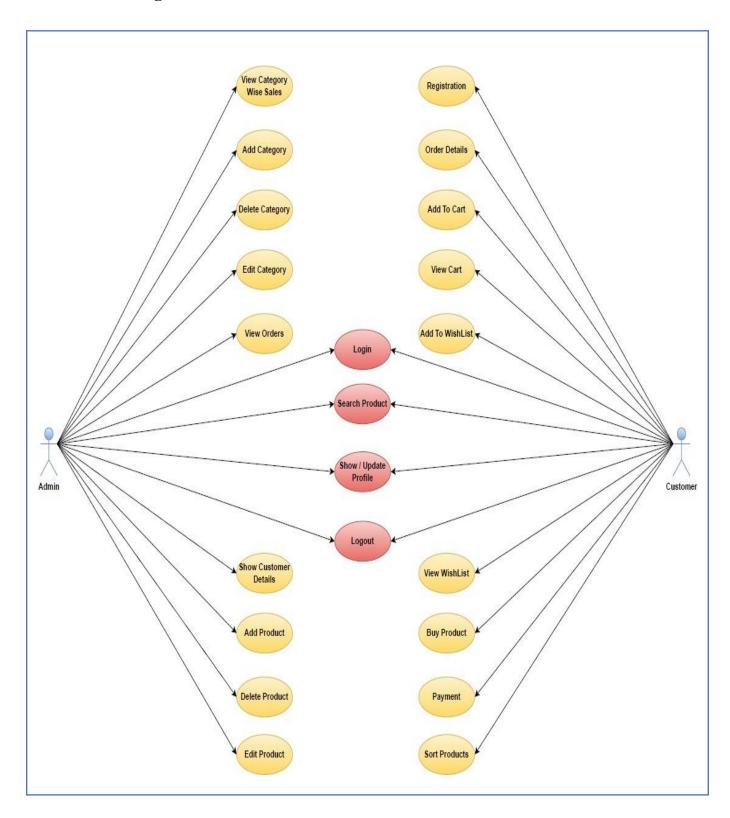
- **■** Server-Tomcat\_Appache-V9.0 / ModelVersion<4.0.0>
- **■** Spring Boot Starter <2.6.8> (Stable)
- **■** JDK Version< 11>

# 6. List of figure

# 6.1 ER-Diagram

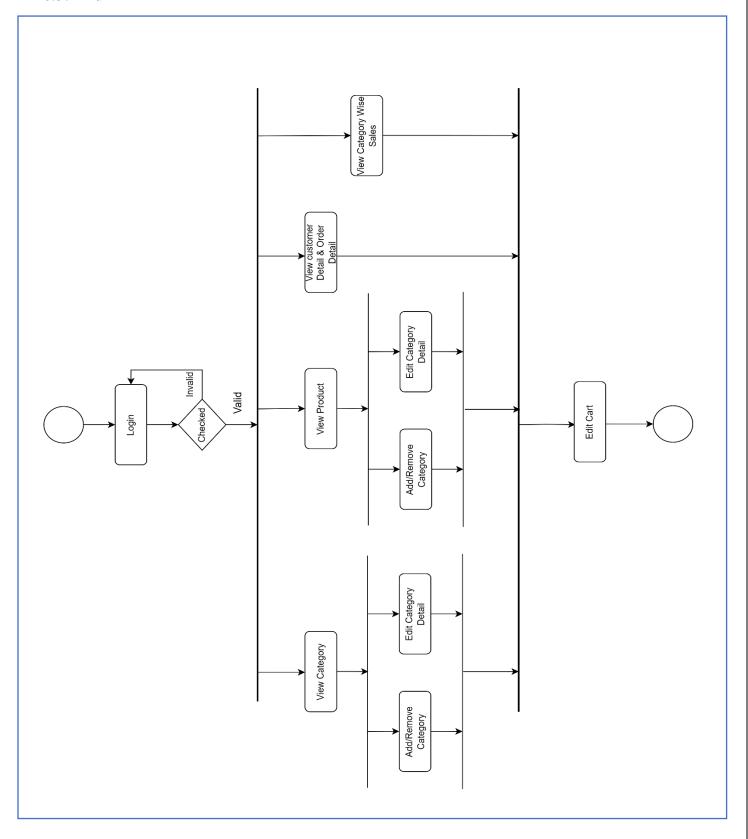


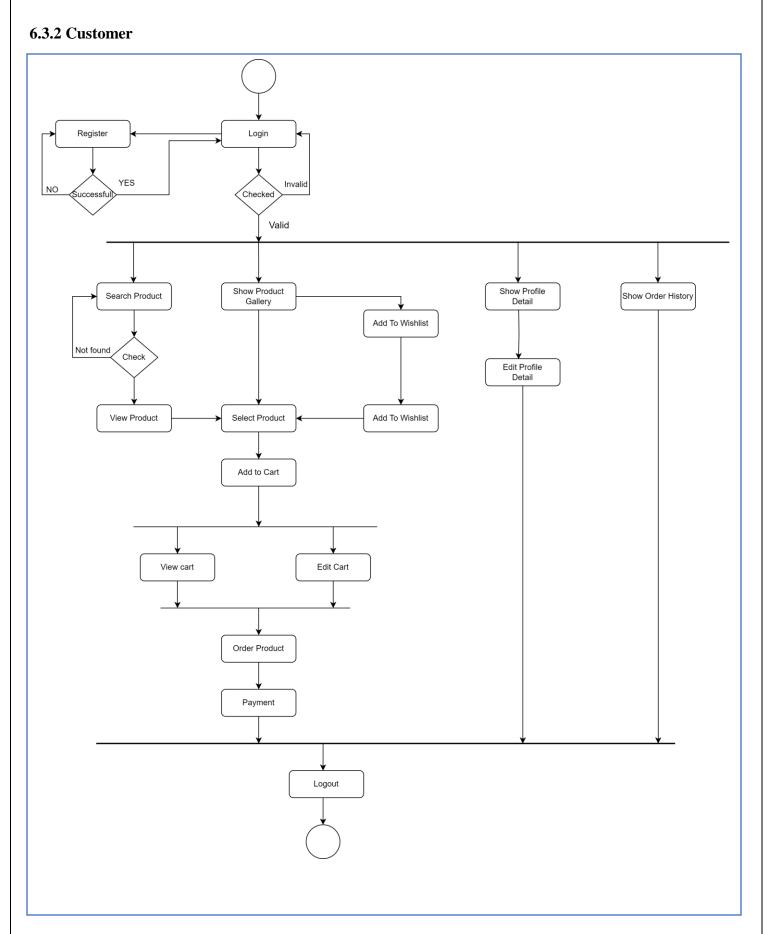
## **6.2** Use Case Diagram:



# **6.3 Activity Diagram:**

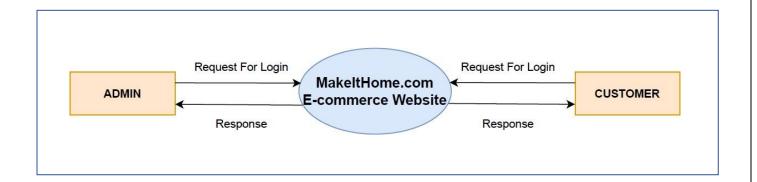
## **6.3.1** Admin



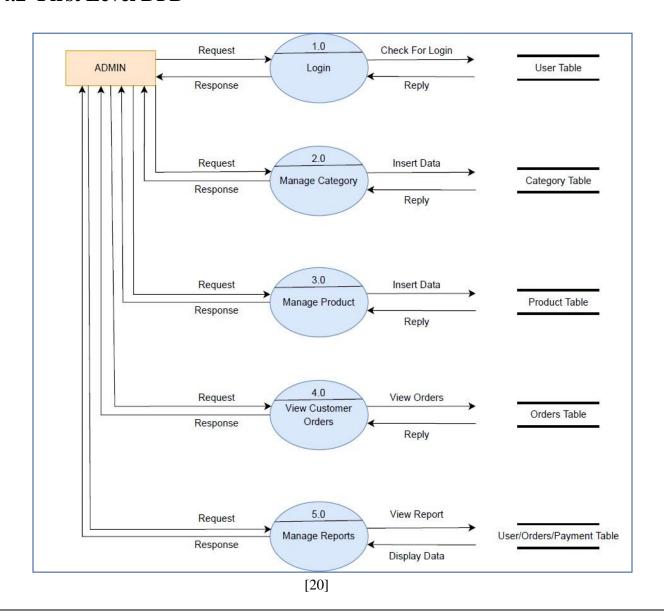


# **6.4 Data Flow Diagram:**

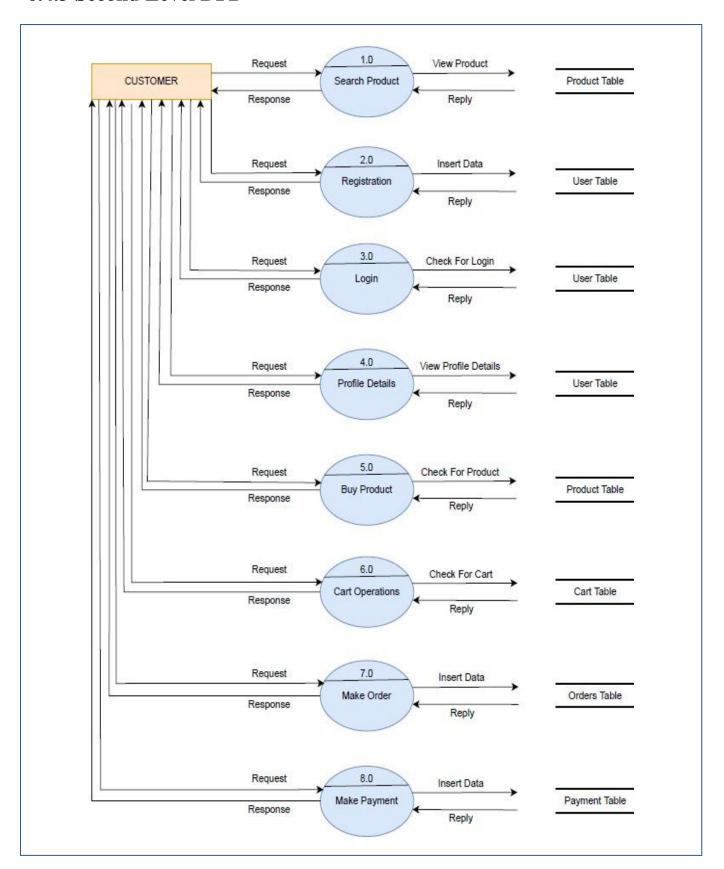
#### 6.4.1 Zero Level DFD:



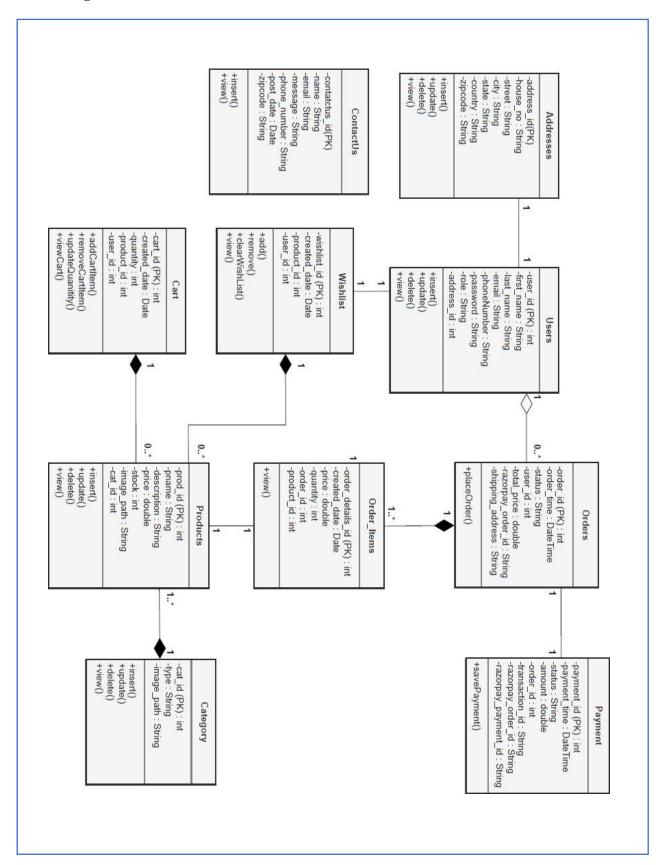
## 6.4.2 First Level DFD



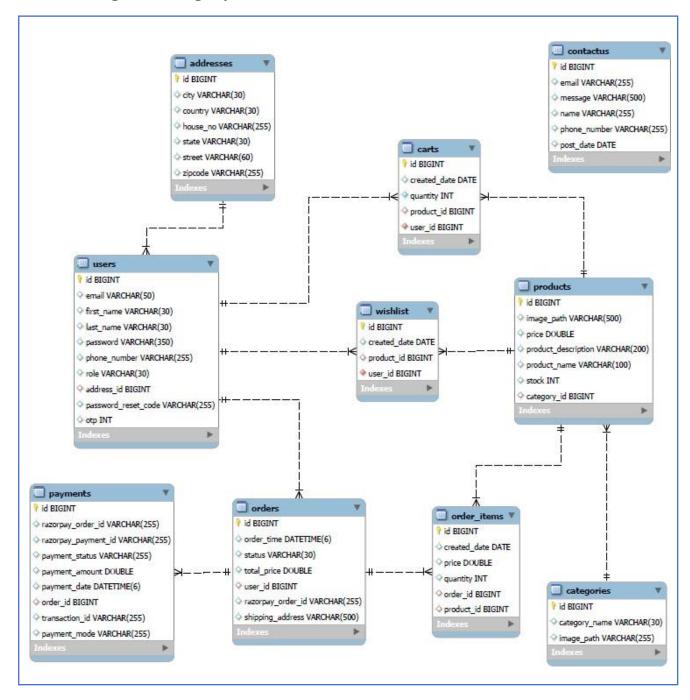
### 6.4.3 Second Level DFD



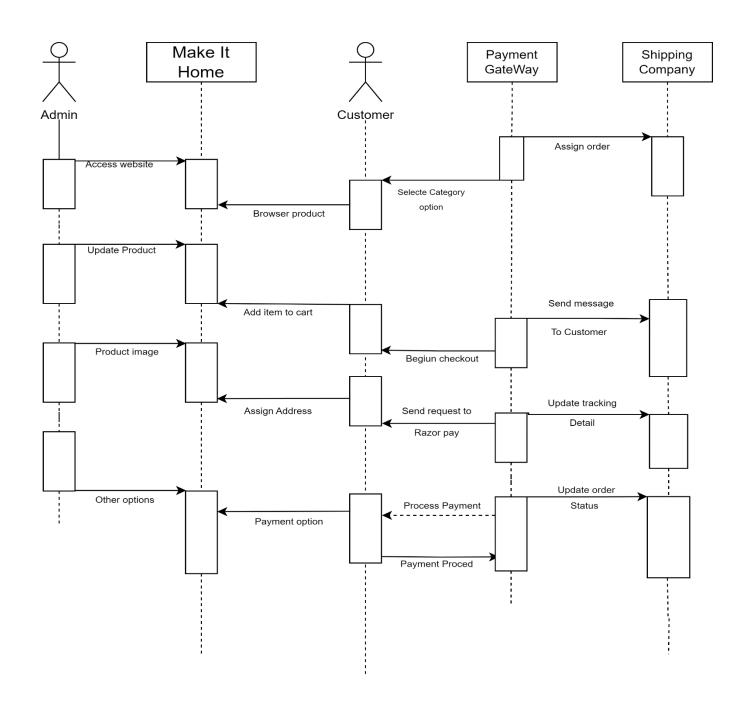
#### 6.5 Class Diagram:



### 6.6 EER Diagram (Using MySQL Workbench):



## 6.7 Sequence Diagram



## 7. Table Structure:

### 1.Users Table:

mysql> desc users;									
Field	Type	Null	Key	Default	Extra				
id   email   first_name   last_name   otp   password   password_reset_code   phone_number   role   address_id	bigint   varchar(50)   varchar(30)   varchar(30)   int   varchar(350)   varchar(255)   varchar(255)   varchar(30)   bigint	NO YES	PRI UNI MUL	NULL NULL NULL NULL NULL NULL NULL NULL	auto_increment				

## 2.Products Table:

mysql> desc products;	<b></b>	+	<b>+</b>		·
Field	Туре	Null	Key	Default	Extra
id   image_path   price   product_description   product_name   stock   category_id	bigint   varchar(255)   double   varchar(500)   varchar(100)   int   bigint	NO YES YES YES YES YES YES YES	PRI               MUL	NULL NULL NULL NULL NULL NULL	auto_increment         
+	+	+	+	·	<del>+</del>

# **3.Orders Table:**

mysql> desc orders;								
Field	Type	Null	Кеу	Default	Extra			
id   order_time   razorpay_order_id   shipping_address   status   total_price   user_id	bigint   datetime(6)   varchar(255)   varchar(500)   varchar(30)   double   bigint	NO YES YES YES YES YES YES YES	PRI	NULL NULL NULL NULL NULL NULL	auto_increment                   			

# 4.Order\_items Table:

mysql> desc ord	er_items;				
Field	Type	Null	Key	Default	Extra
price   quantity	bigint     date   double     bigint     bigint     bigint	NO YES YES YES YES YES YES	PRI MUL MUL	NULL NULL NULL NULL NULL	auto_increment             

# **5.**Categories Table:

mysql> desc categories;									
Field	Туре	Null	Key	Default	Extra				
category_name		YES	PRI	NULL NULL NULL	auto_increment     alto_increment   				

# **6.Carts Table:**

mysql> desc carts;								
Field	Type	Null	Key	Default	Extra			
id   created_date   quantity   product_id   user_id	bigint   date   bigint   bigint   bigint	YES YES	PRI MUL MUL	NULL NULL NULL NULL	auto_increment     alto_increment         			

# 7. Wishlist Table:

mysql> desc wishlist;								
Field	Type	Null	Кеу	Default	Extra			
	bigint date bigint bigint	YES YES	   MUL	NULL	auto_increment               			

# **8.Addresses Table:**

mysql> desc	addresses;	<b>+</b>			<b>.</b>
Field	Туре	Null	Key	Default	Extra
id   city   country   house_no   state   street   zipcode	bigint   varchar(30)   varchar(255)   varchar(30)   varchar(60)   varchar(255)	NO	PRI	NULL NULL NULL NULL NULL NULL	auto_increment               

# 9.Payments:

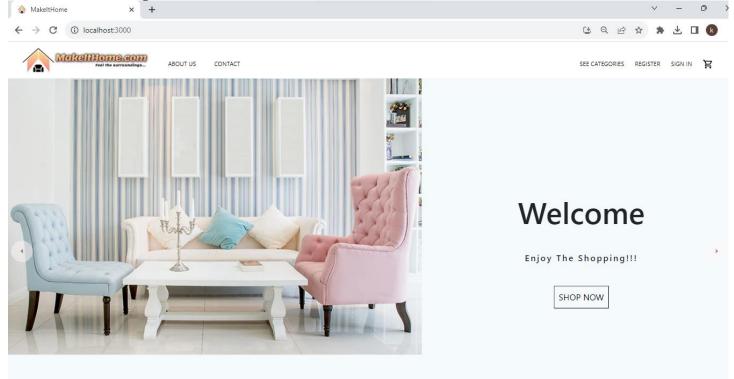
Field	mysql> desc payments;	·				
payment_status	Field	Туре	Null	Key	Default	Extra
order_id   bigint   YES   MOL   NOLL	payment_status   payment_amount   payment_date   razorpay_order_id   razorpay_payment_id	varchar(255) double datetime(6) varchar(255) varchar(255)	YES   YES   YES   YES	PRI	NULL NULL NULL NULL	auto_increment                 

# 10.Contactus:

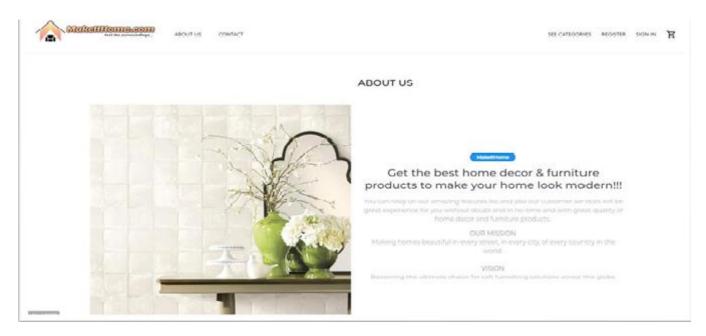
mysql> desc cont	tactus;				
Field	Туре	Null	Key	Default	Extra
id   email   message   name   phone_number   post_date	varchar(255) varchar(500) varchar(255)	NO	PRI	NULL NULL NULL NULL NULL	auto_increment             

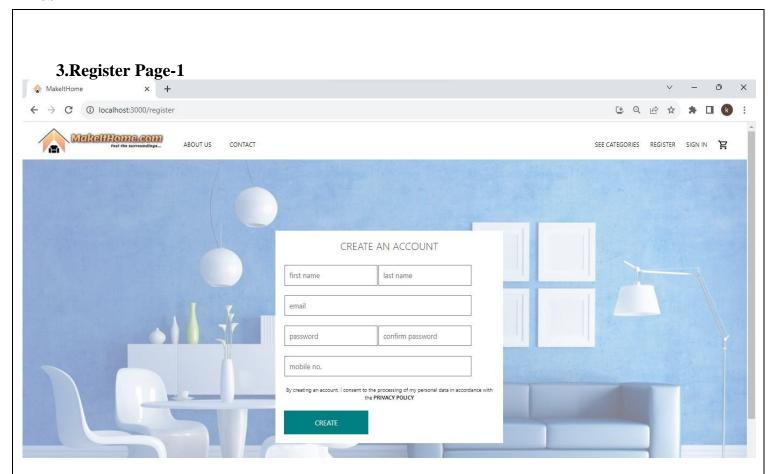
# 8. Project Web App ScreenShots:

1. Welcome Page

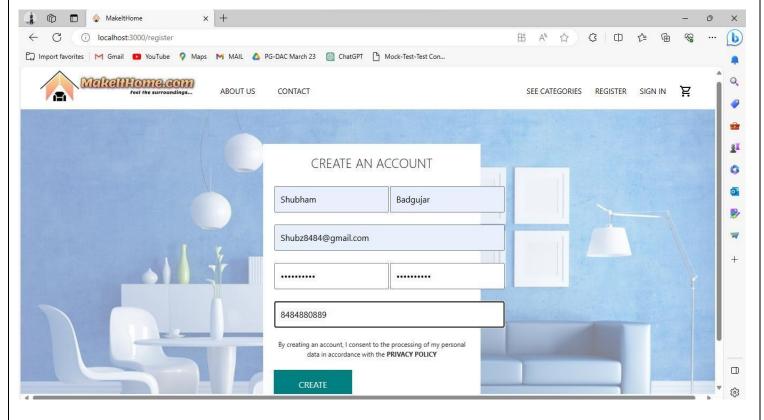


### 2. About us Page

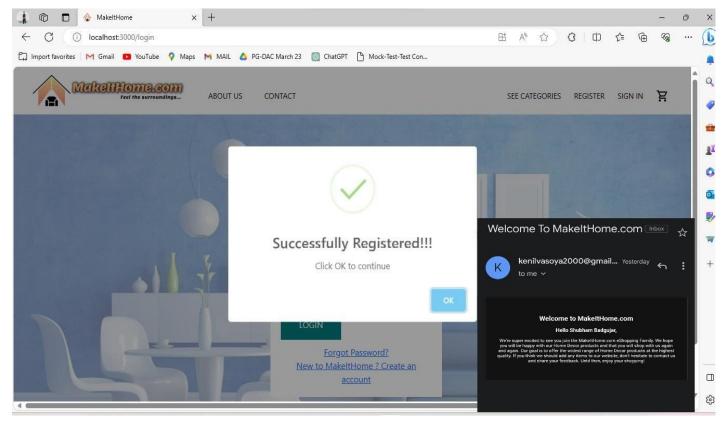




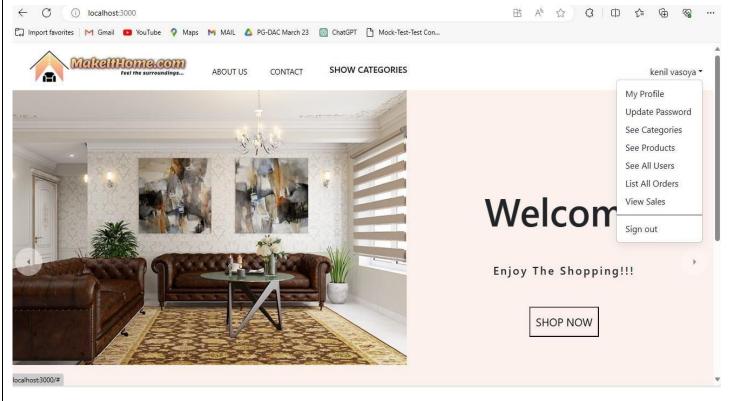
## 4.Register Page-2

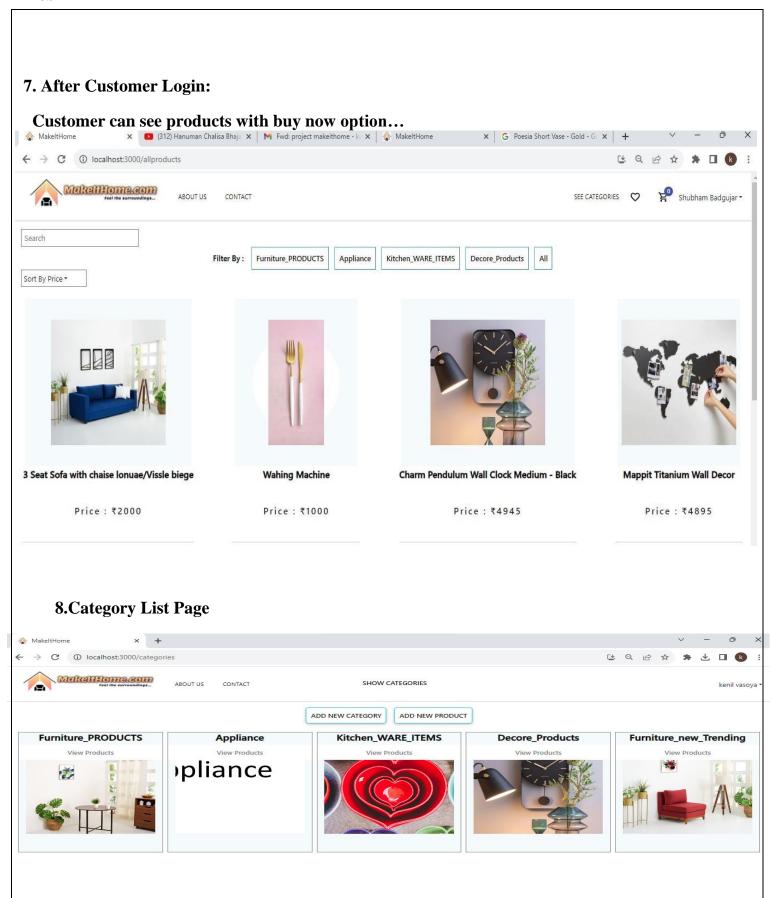


### 5.Register page3

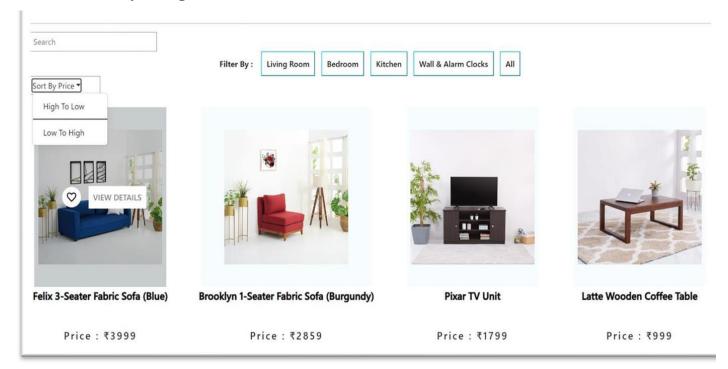


### **6.After Admin Login:**

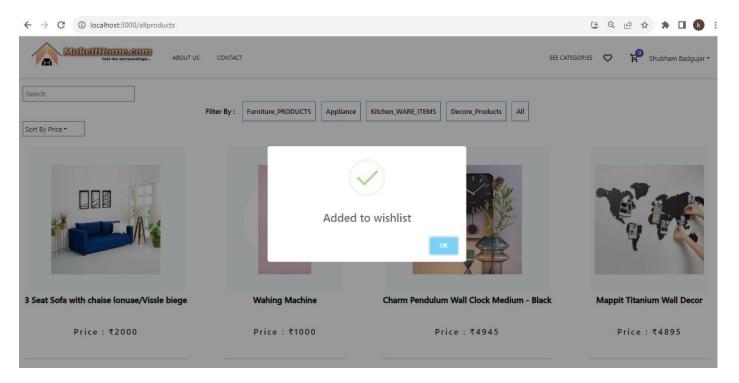


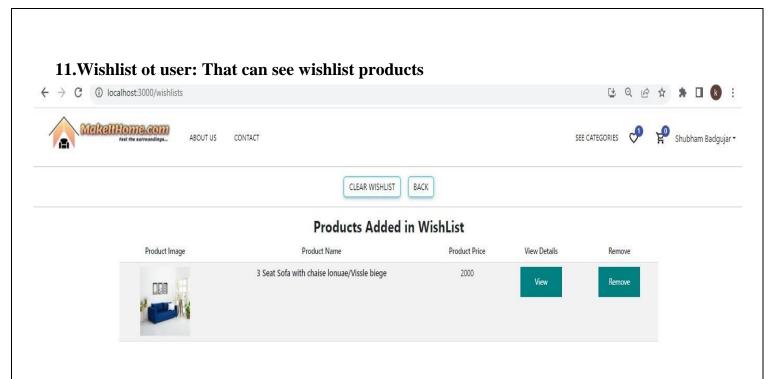


### 9. Products By Categories



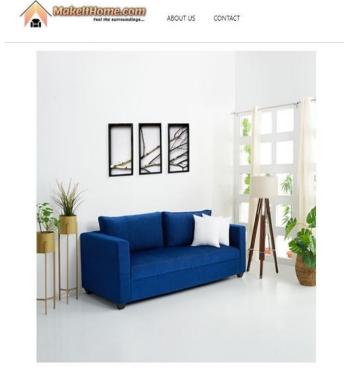
#### 10.Product Add to Wishlist:.





12. After Selecting Product Page:

(i) localhost:3000/products/1



# 3 Seat Sofa with chaise lonuae/Vissle biege

SEE CATEGORIES 💙

Shubham Badgujar •

With its soft shapes, modern expressions and durable light cover, this sofa with a chaise longue is a perfect combination of function and comfort

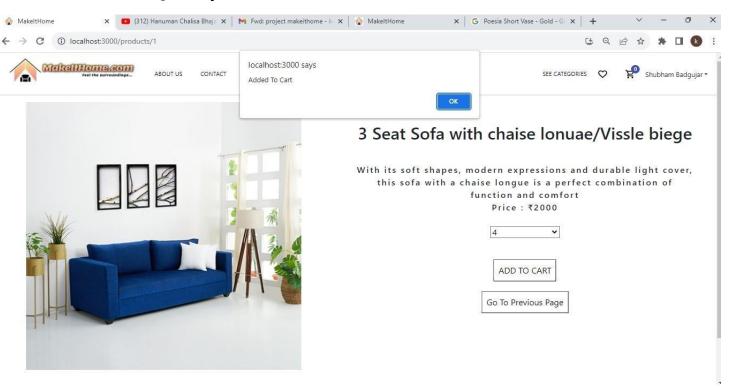
Price : ₹2000

Select Quantity >

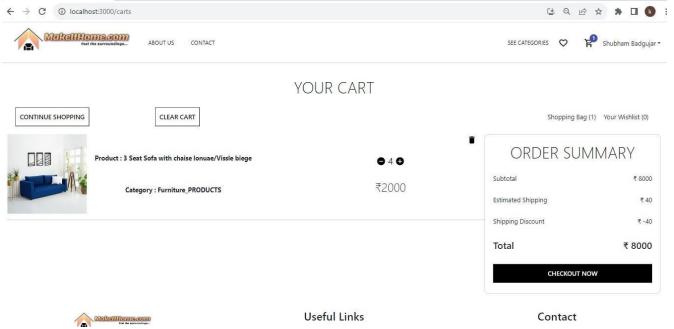
ADD TO CART

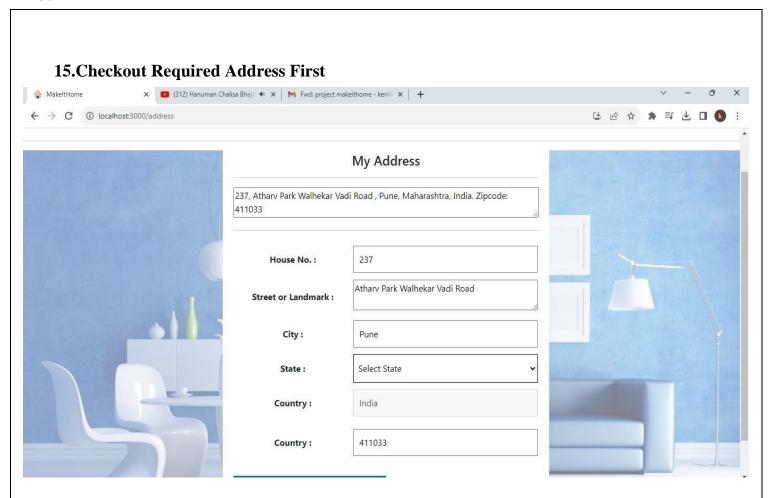
Go To Previous Page

### 13.Add To cart With Quantity:

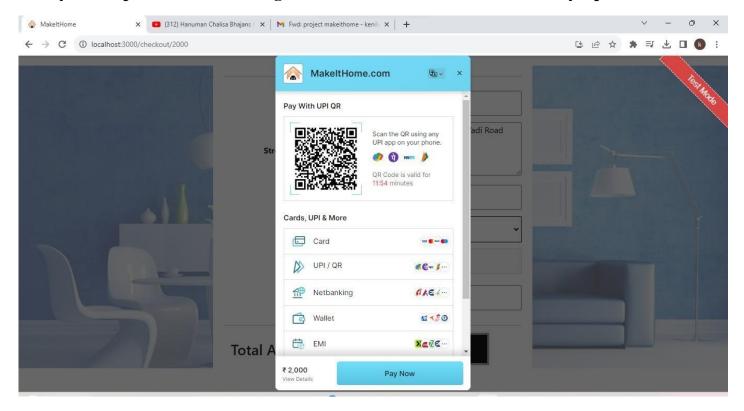


14.Cart Page: With Option Checkout

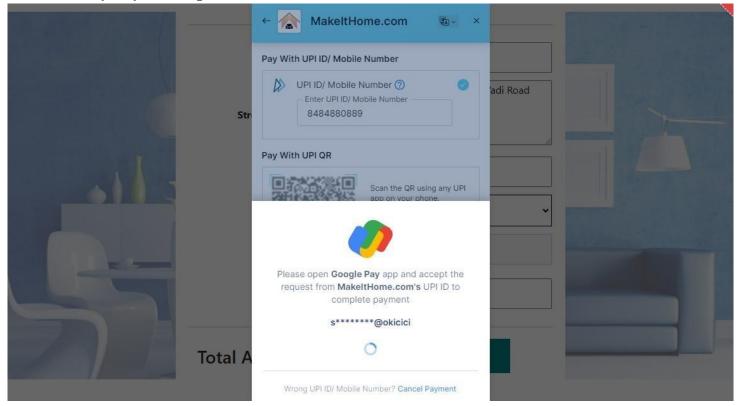




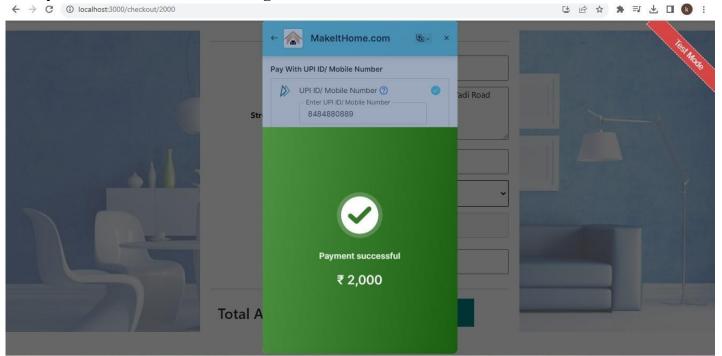
### 16.Payment Option: After Clicking On Check Out Test Mode of Razor Pay Api will Run



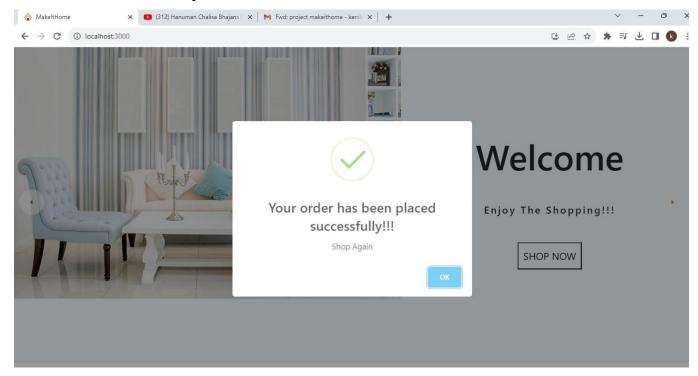
### 17. Select Any Payment Option to Place Order:



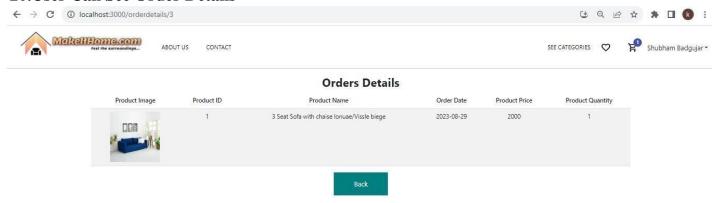
## 18.Payment Succeed :After entering correct details :



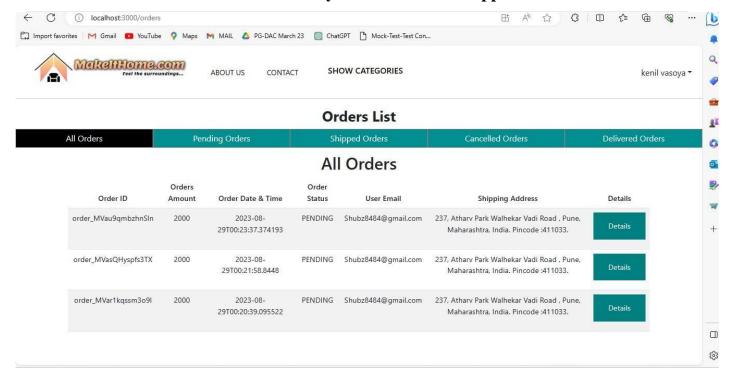
## 19. Order Place Successfully



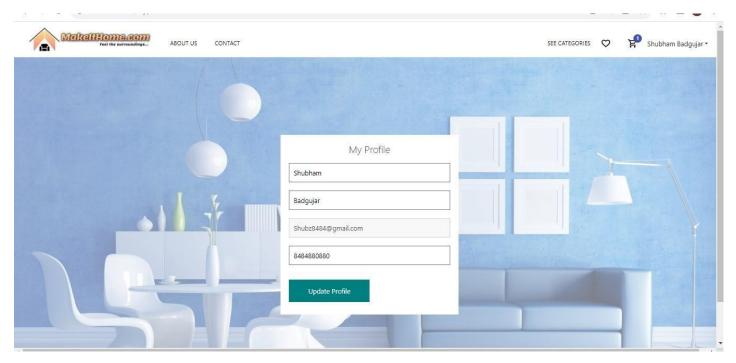
#### 20.User Can See Order Details



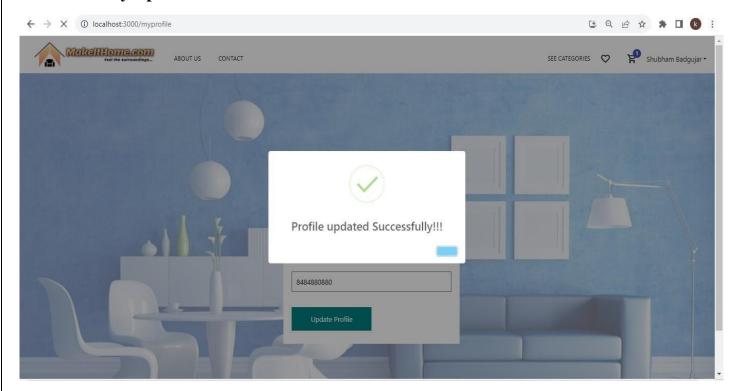
### 21. Admin can see List Of Orders Placed by Users and he can Approve it:



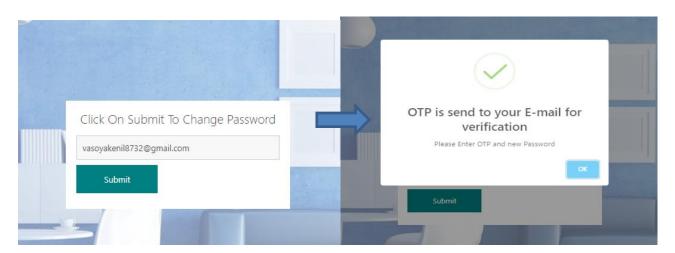
## 22.Update Profile:



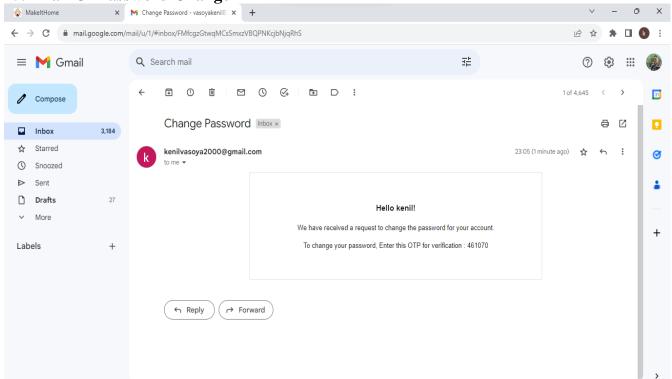
# 23.Successfully Updated



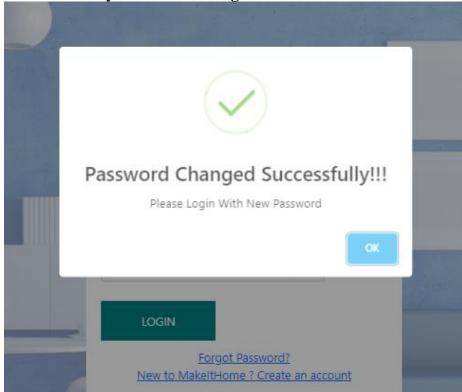
# 24.Update Password



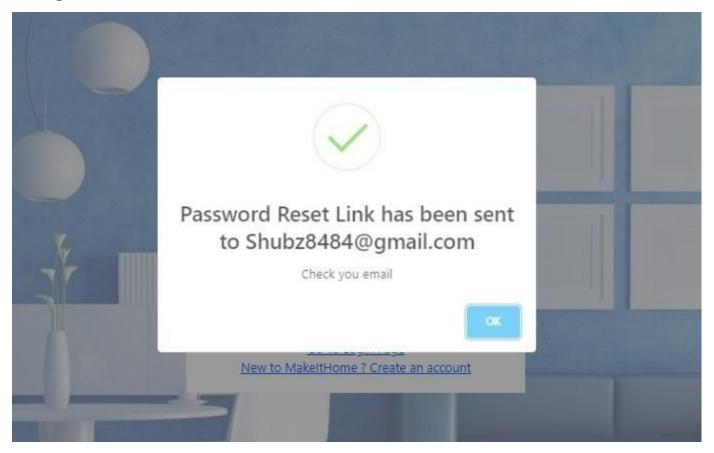
25.Email Of Password Change



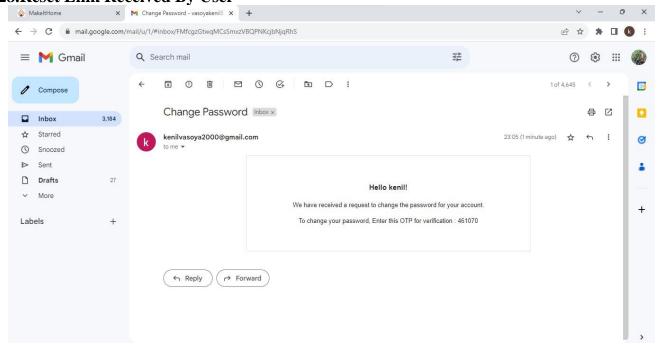
26. Successfully Password change notification



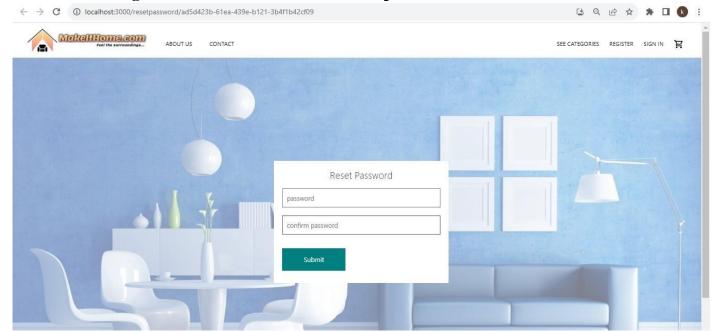
### 27.Forgot Password: Reset link will be sent



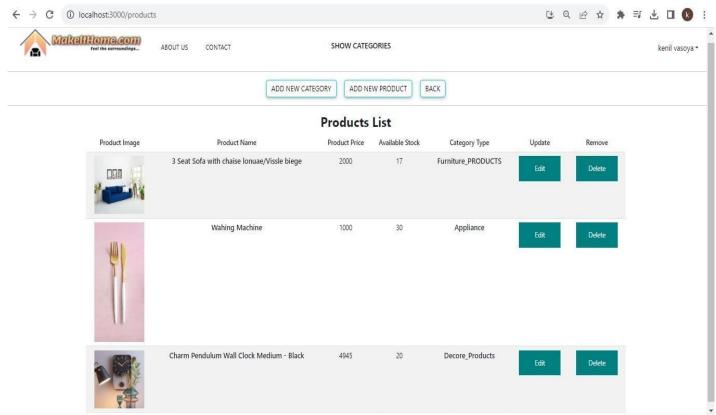
#### 28.Reset Link Received By User



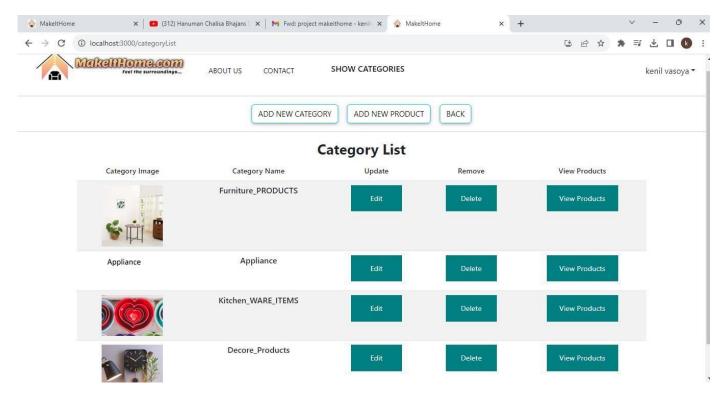
### 29. After Clicking On link You Can Make the new password



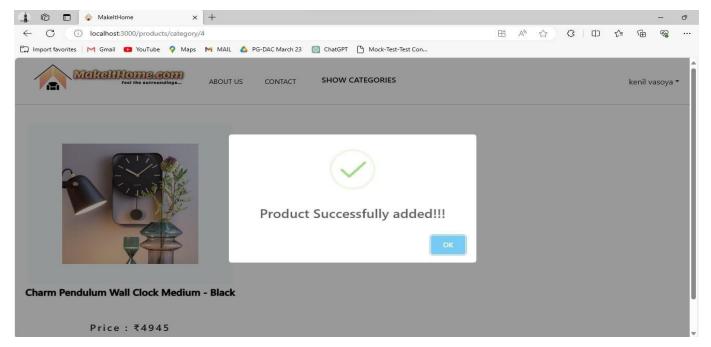
#### **30.Product List**



### 31.Category list



## 32.Admin add product



#### **CONCLUSION**

The project entitled **MakeItHome.com E-Shopping** was completed successfully.

The system has been developed with much care and free of errors and at the same time it is efficient and less time consuming. The purpose of this project was to develop a web application for Purchasing Home Decor and Furniture Products online. This project helpedus in gaining valuable information and practical knowledge on several topics like designingweb pages using React.js, usage of responsive templates, and management of database using MySQL. The entire system is secured . Also, the project helped us understanding about the development phases of a project and software development life cycle. We learned how to test different features of a project. This project has given us great satisfaction in having designed an application which can be implemented to any nearby shops or branded shops selling various kinds of products by simple modifications.

## **Future Scope**

There is a scope for further development in our project to a great extent. A number offeatures can be added to this system in future such as:

- Provide solutions to the queries posted by the customer.
- Provide Delivery boy role and to add delivery tracking feature.
- Messaging Services.(Text-Sms)
- Rating & Reviews Of Products

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