INSTITUTE FOR ADVANCED COMPUTING AND SOFTWARE DEVELOPMENT (IACSD)

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ABSTRACT

The business-to-consumer aspect of electronic commerce (e-commerce) is the most visible business use of the World Wide Web. The primary goal of an e-commerce site is to sell goods and services online. This project deals with developing an e-commerce website 'Online Electronic Shopping'.

It provides the user with a catalog of different mobiles available for purchase in the store. In order to facilitate online purchase a shopping cart is provided to the user. After selection of the items, he is forwarded to Payment Gateway process. The system is implemented using a 3-tier approach, with a backend database, a middle tier of Sun J2EE 1.4 application server and JSP, and a web browser as the front-end client.

In order to develop an e-commerce website, a number of technologies must be studied and understood. These include multi-tiered architecture, server and client-side scripting techniques, implementation technologies such as JSP, programming language (such as JAVA, JavaScript, and Bootstrap), relational databases (such as MySQL). This is a project chosen with the objective to develop a basic website where a consumer is provided with a shopping cart application and also to know about the technologies used to develop such an application.

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ACKNOWLEDGEMENT

I take this occasion to thank God, almighty for blessing us with his grace and taking our endeavor to a successful culmination. I extend my sincere and heartfelt thanks to our esteemed guide, Mrs.Gauri Kadam for providing me with the right guidance and advice at the crucial juncture sand for showing me the right way. I extend my sincere thanks to our respected Centre Co-Ordinator Mr. Rohit Puranik, for allowing us to use the facilities available. I would like to thank the other faculty members also, at this occasion. Last but not the least, I would like to thank my friends and family for the support and encouragement they have given me during the course of our work.

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1.INTRODUCTION

Online Electronic shopping is the process whereby consumers directly buy goods, services etc. from a seller interactively in real-time without an intermediary service over the internet. Online shopping is the process of buying goods and services from merchants who sell on the Internet. Since the emergence of the World Wide Web, merchants have sought to sell their products to people who surf the Internet. Shoppers can visit web stores from the comfort of their homes and shop as they sit in front of the computer. Consumers buy a variety of items from online stores. In fact, people can purchase just about anything from companies that provide their products online. Mobiles and Laptops are among the hundreds of products consumers can buy from an online store. Many people choose to conduct shopping online because of the convenience. For example, when a person shops at a brick-and-mortar store, she has to drive to the store, find a parking place, and walk throughout the store until she locates the products she needs. After finding the items she wants to purchase, she may often need to stand in long lines at the cash register. Despite the convenience of online shopping, not everyone chooses to purchase items and services online. Some people like the idea of physically going to a store and experiencing the shopping process. Online shopping doesn't permit shoppers to touch products or have any social interaction. It also doesn't allow them to take the merchandise home the same day they buy it. Online shopping allows you to browse through endless possibilities, and even offers merchandise that's unavailable in stores. If you're searching for a nice product that may not be distributed locally, you're sure to find what you're looking for on the internet. What's even more useful is the ability to compare items, similar or not, online. You can search through multiple stores at the same time, comparing material quality, sizes and pricing simultaneously. Say 'goodbye' to the days when you stood in line waiting, and waiting, and waiting some more for a store clerk to finally check out your items. Online shopping transactions occur instantly saving you time to get your other errands done! Additionally, unlike a store, online shopping has friendly customer service representatives available 24 hours a day, 7 days a week to assist you with locating, purchasing and shipping your merchandise.

2.PROJECT OVERVIEW

Once customer visited our webpage, at that time automatically one shopping cart will be created, once user select an item it will be added to cart. In case user thinks the selected item is not useful for me, then he can delete that item from shopping cart. Suppose a customer selected some items, but in his credit or debit cart hasn't that much balance, then he does logout from the website, the selected items are stored at cart with specific users with his allotted carts, after some days he bought those items then automatically items get deleted from the cart.

3.SYSTEM STUDY

Information system's projects originate from many reasons:

- To achieve greater speed in processing data,
- Better accuracy and improved consistency,
- Faster information retrieval,
- Integration of business areas,
- Reduced cost and better security.

The sources also vary project proposals originate with department managers, senior executives and systems analysis. Sometimes the real origin is an outside source, such as a government agency which stipulates a system's requirements the organisation must meet.

When the request is made, the first system's activity, the preliminary investigation, begins.

The activity has three parts:

1. Request clarification
2. Feasibility study
3. Request approval.

3.1 Existing System

The existing system was an automated system. But it was found to be inefficient in meeting the growing demands of population.

3.2 Drawbacks in the existing systems

Disadvantage of the existing system:

- Time Consuming
- Expensive
- Needed an agent

4.SYSTEM ANALYSIS

- This system is all about the converting the shopping system from manual to online.
- Customer can buy products online after login to the site.
- Administrator is adding product to database.
- Administrator can edit or delete the products from the database.
- After buying and making payment the products are send to customer's address that he has given.

4.1 Purpose

Online Electronic shopping tries to enhance access to care and improve the continuity and efficiency of services. Depending on the specific setting and locale, case managers are responsible for a variety of tasks, ranging from linking clients to services to actually providing intensive shopping and delivery services themselves.

Main objective: -

- To shop while in the comfort of your own home, without having to step out of the door.
- Sell at lower rate due to less overhead.
- Provide home delivery free of cost.
- No wait to see the product, if someone else is taking that.

4.2 Scope

This product has great future scope. Online shopping Internet software developed on and for the Windows and later versions environments and Linux OS. This project also provides security with the use of Login-id and Password, so that any unauthorized users cannot use your account. The only Authorized that will have proper access authority can access the software

4.3 Need for the proposed system:

The online shopping is an easy to maintain, ready to run, scalable, affordable and reliable cost saving tool from Software Associates suited for small, medium, and large shopping complex and shopping malls.

Features and Benefits:

- Providing security
- Low cost
- Basic computer knowledge required
- Configurable and extensible application UI design

The proposed system can be used even by the naive users and it does not require any educational level, experience, and technical expertise in computer field but it will be of good use if the user has the good knowledge of how to operate a computer.

4.4 Feasibility study:

A feasibility study is a short, focused study, which aims to answer a number of questions:

- Does the system contribute to the overall objectives of the organizations?
- Can the system be implemented using current technology and within given cost and schedule constrains?
- Can the system be integrated with systems which are already in place?

4.4.1 Technical Feasibility:

- Is the project feasibility within the limits of current technology?
- Does the technology exist at all?
- Is it available within given resource constraints (i.e., budget, schedule)?

4.4.2 Financial Feasibility:

- Is the project possible, given resource constraints?
- Are the benefits that will accrue from the new system worth the costs?
- What are the savings that will result from the system, including tangible and intangible ones?

- What are the development and operational costs?

4.4.3 Operational Feasibility:

Define the urgency of the problem and the acceptability of any solution; if the system is developed, will it be used? Includes people-oriented and social issues: internal issues, such as manpower problems, labour objections, manager resistance, organizational conflicts and policies; also, external issues, including social acceptability, legal aspects and government regulations.

4.5 Modules Of Projects:

1. User Module
2. Category Module
3. Cart Module
4. Product Module
5. Order Module
6. authentication and authorization Module

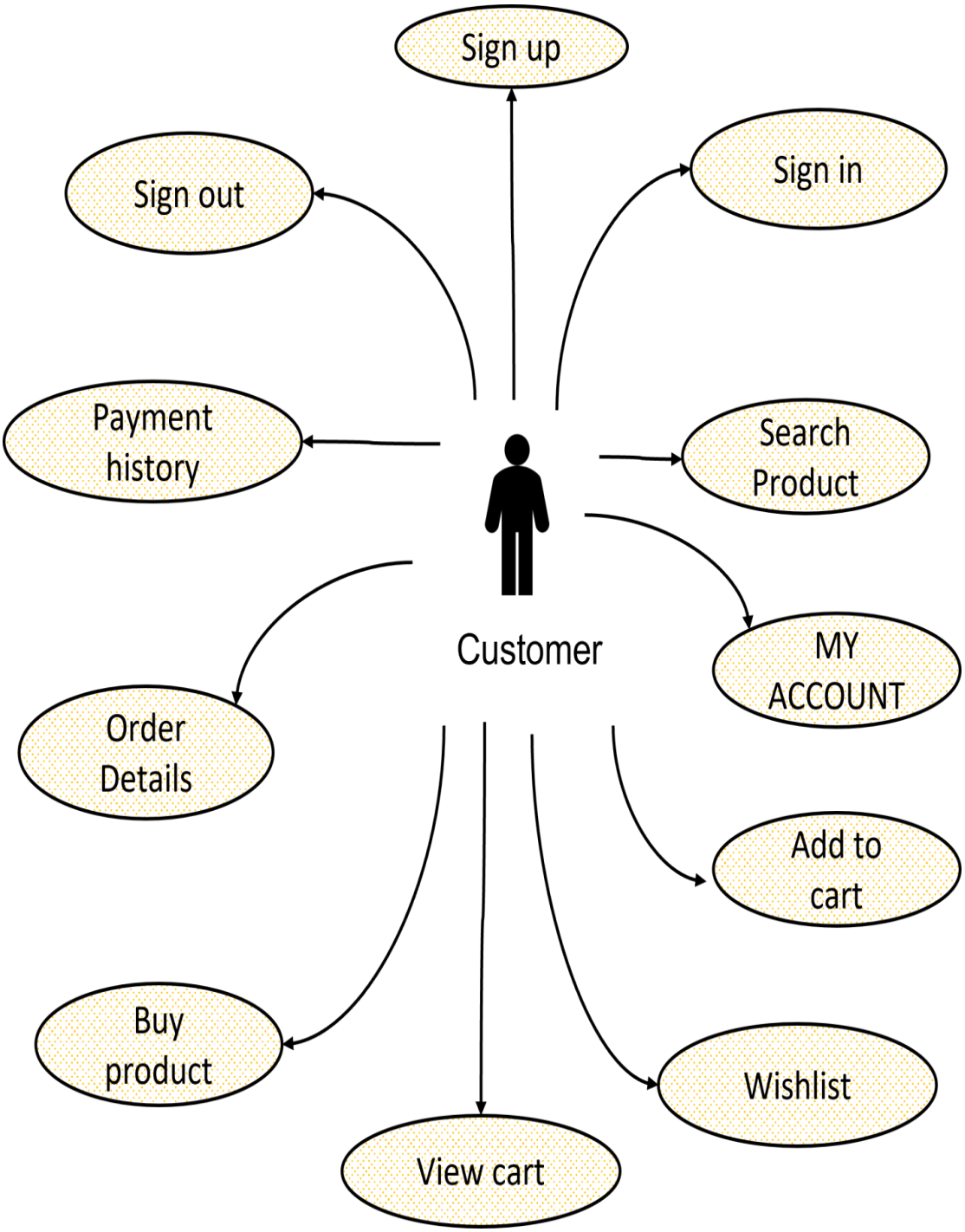


Figure 1 Customer Diagram

- **Customer sign in, sign out, create account**

  This feature is provided to customer so he can sign in, sign out and create account for new customer.

- **Search Product**

  Customer can search the product as per his wish in specific category.

- **Add to Cart**

  Customer can add products to cart which he wants to buy the products.

- **Payments**

  Customer have a privilege to his order he can see his order details.

- **Order Details**

  Customer have a privilege to his order he can see his order details.

- **Buy Product**

  Customers can buy product from his cart by doing payment.

- **WishList**

  Customer can have a wish list for future buying products he can add products inthe Wishlist.

5.SYSTEM REQUIREMENT SPECIFICATION

System requirements are expressed in a software requirement document. The Software Requirements Specification (SRS) is the official statement of what is required by the system developers. This requirement document includes the requirements definition and the requirements specification. The software requirement document is not a design document. It should set out what the system should do without specifying how it should be done.The requirement set out in this document is complete and consistent.

The software specification document satisfies the following: -

• It specifies the external system behaviour.

• It specifies constraints on the implementation.

• Itis easy to change.

• It serves as reference tool for system maintainers.

• It records forethought about the life cycle of the system.

• It characterizes acceptable response to undesired events.

5.1 SYSTEM REQUIREMENTS

Three types of users should be able to use the system: customer, guest user and admin. Customers are users who visit the website and can create orders by selecting Electronic device , selecting products and entering customer details. Guest users do not need a log in to view device and products but while adding to the cart Guest user need to log in. admin who process orders can view the orders from the customer changes status of order. The admin, or super user, has the ultimate control of the system, he can add products, as well as add, change, or delete product or accounts also.

5.1.1 NON-FUNCTIONAL REQUIREMENTS

As an operational requirement, the system will run as a database with a website as user interface. As performance requirement the system must be accessible 24

hours a day, seven days a week. Due to the nature of the system as an ordering website, the system must have a low response time, preferably shorter than second, with a maximum of five seconds. The exception is viewing order logs which could have a higher response time (of seconds) as the log increases in size over time. Due to the low complexity of the system, no problems with response time are expected. Customers who visit the website to order will get a session-ID for their order completion. For every action they take, a timestamp is stored. From time to time a service on the server will scan session-ID's and timestamps. Session-ID's which have not been active for more than three hours will be deleted along with the corresponding ordering information.

1. Interface Requirements

a. GUI

The user interface must be highly interactive so that all users may be able to operate the system as easily and fluently. GUI would be used for creating home page with navigation bar and other pages for respective categories.

b. Software Interface

The software interfaces required for this system are: Internet connection, STS, and MYSQL ,react js ,node js must be installed , editor :visual studio code ,Any browser

c. Performance Requirements

The respond time must be less than 20 seconds. The full length pages should be displayed along with the 9 images.

d. Design Constraints

The system must be compatible with all the browsers.

2. Other Non-Functional Attributes

a. Security

The server-side security is needed to protect the system from hackers.

b. Reliability

The system should be highly reliable and it should generate all the updated information in correct order.

c. Availability

The system should be available 24hrs.

d. Maintainability

The system should be maintainable in such a manner that if any new requirement occurs then it should be easily incorporated in an individual module.

e. Reusability

The system would be usable as long as people want to use it.

5.2 Technologies Used:

React:

React is a declarative, efficient, and flexible JavaScript library for building user interfaces. It lets you compose complex UI's from small and isolated pieces of code called "components". React is a JavaScript library for building user interfaces. React is used to build single page applications. React allows us to create reusable UI components.All the front end was completed with the help of React.

MySQL:

MySQL is a relational database management system based on the Structured Query Language, which is the popular language for accessing and managing the records in the database. MySQL is open-source and free software under the GNU license. All the User's data which is part of Hospital management system is managed with the help of MY-SQL.

Spring Tool Suite

Spring Tool Suite is an IDE to develop Spring applications. It is an Eclipse-based development environment. It provides a ready-to-use environment to implement, run, deploy, and debug the application. It validates our application and provides quick fixes for the applications. With the help of Spring tool suite, we created a Spring Boot project from Eclipse and used it for the developing the back end part.

V S Code

Visual Studio Code is a streamlined code editor with support for development operations like debugging, task running, and version control. It aims to provide

just the tools a developer needs for a quick code-build-debug cycle and leaves more complex workflows to fuller featured IDE's, such as Visual Studio IDE. With the help of V S Code, we created a react js project and used it for the developing the front end part.

Git Lab

GitLab is a web-based Git repository that provides free open and private repositories, issue-following capabilities, and wikis. It is a complete DevOps platform that enables professionals to perform all the tasks in a project—from project planning and source code management to monitoring and security.All the project source code and documentation version control as well as management was done using Git Lab.

6.SYSTEM ANALYSIS & DESIGN

6.1 Use Cases:

The following use cases outline the requirements for the online shopping. They have been revised during the course of the project to more accurately reflect the system.

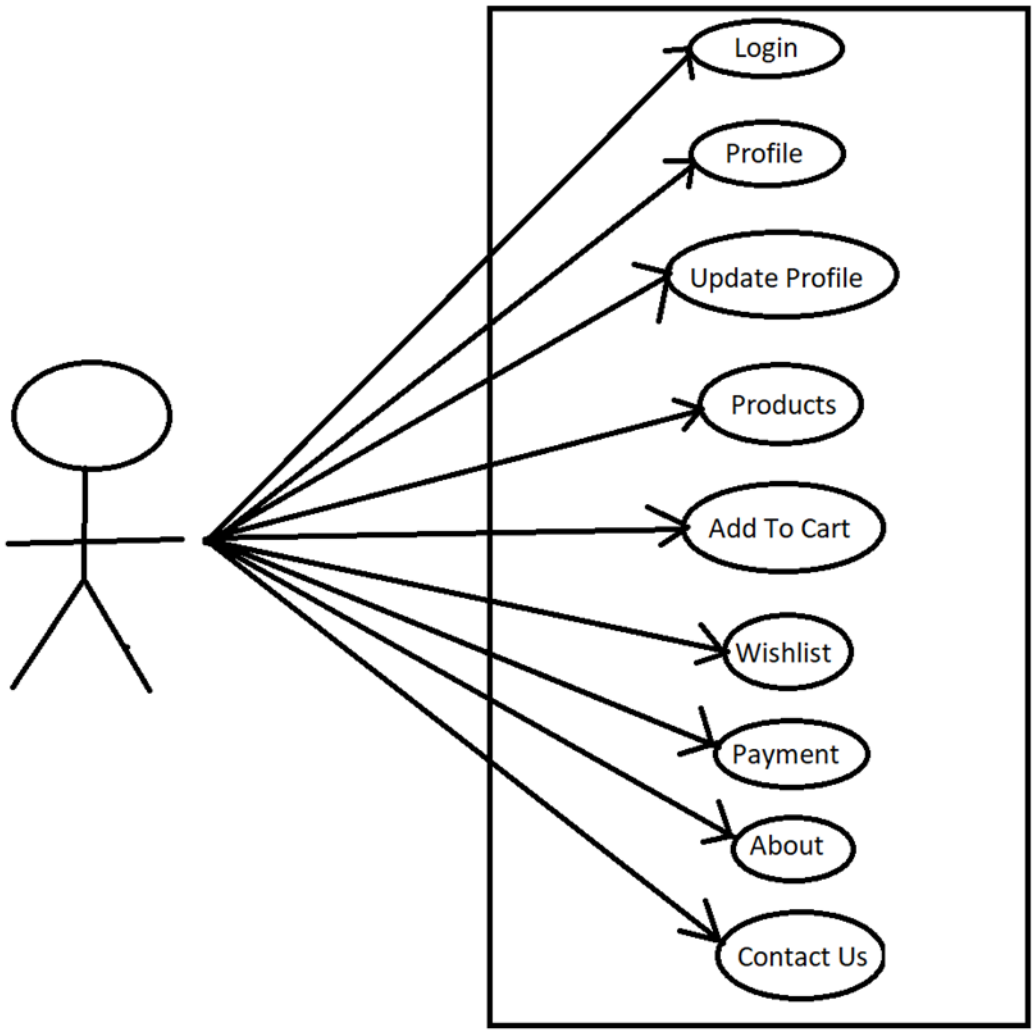


figure 2:.use case diagram(customer)

1. **Customer shops for a product**

   The customer initiates this action by clicking on the desired category for item to be displayed. The page sends a message to the server requesting a listing of all products from the particular category from the database. The action is complete when a page is returned for the customer to view, which contains available products with product names along with their picture, price, capacity, and an option to add the product to the shopping cart. There is an option to link to next page, if more products are available than can fit on the page. If a given item is out of stock, a drop-down button with amessage “not available” is displayed.

2. **Customer searches for item**:

   The customer starts this action by typing a query into a text box named descry iption to search for description of an item. The page sends a message to the server for a listing of products, whose names match the query, from the data base.The action is complete when a page is returned for the customer to view, which contains a list of the resulting products along with their picture, price, and an option to add the product to the shopping cart. If a given description doesn’t match with any descriptions in the database, a message indicating such is displayed instead of the option to add to cart. The customer can also search for an item using model number or combination of both description and model.

3. **Customer adds an item to cart :**

   The customer initiates this action by clicking on the buy button on the right side of to a product’s listing. An item is added to the cart including the price and displayed with the total price. If the product already exists in the customer’s cart, its quantity is increased by 1. There is a Continue Shopping button for the customer to continuing shopping for other products.

4. **Customer views cart**:

   The customer initiates this action by clicking on the view cart button, available on any webpage. The page sends message to the server and shows a list of all products in the customer's cart, along with theirquantity

and total price.

5. **Customer removes item from cart :**
   The customer starts this action by clicking on the Remove button on the view cart page. The web page sends a message to the server, which removes the product from the customer's shopping cart.

6. **Customer changes quantity from cart:**
   The customer starts this action by changing the quantity of the item and click on the Change button on the view cart page. The web page sends a message to the server, which updating the product from the customer's shopping cart.

7. **Customer checks out:**
   The customer starts this action by click on checkout button the on the view cart page. A check out page is displayed letting the customer to create a new account or sign in depending the customer status. Anexisting customer would sign in his/her email address and password and click sign in button. The web page is sending the message to the server. Then, the server validated the email address and password from the database. If they are both correct, then a shipping and billing information page is displayed letting the customer to fill out the information. After submitting billing and shipping information, a confirmation page is displayed showing item in the customer's cart and billing and shipping information.

8. **Customer sends order:**
   The customer starts this action by clicking on the send order from Confirm Information page. Once send order button is clicked, the page is sending the message to the server, which sends emails to the customer and sale person. It also stores the customer's cart and billing and shipping information into the database.

Admin Use Case Diagram:

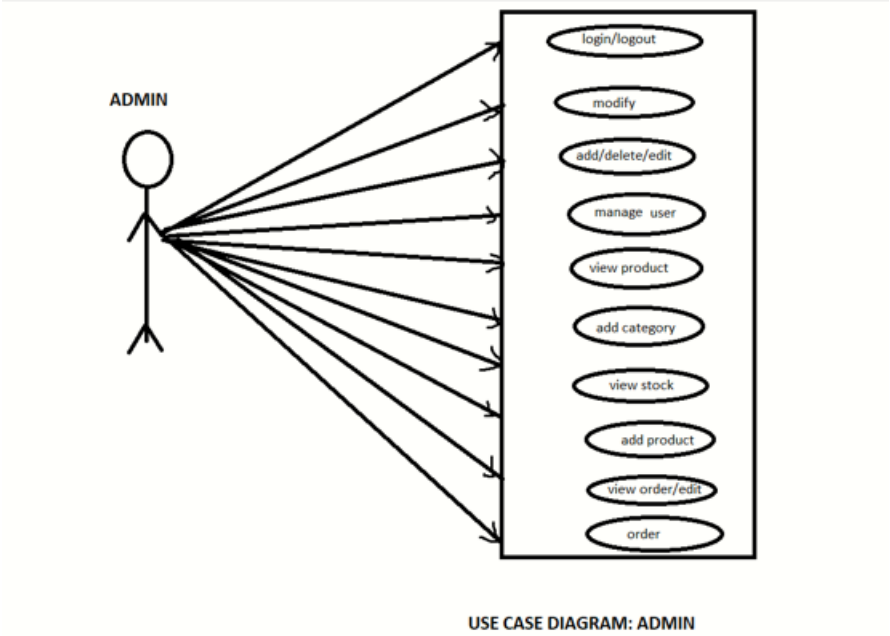


figure 3:.use case diagram(admin)

1.Admin logs :

The admin starts this action by inputting the username and password and click ing on the submit button. The page is sent the message to the server to validate the information from the database .After successful validation the logged in page is returned with options for the admin to a modify,

2. Admin inserts item

The admin starts this action by clicking the Input Items button from the logged In page. The page is displayed with a form for the admin to insert item and its details. Once Insert button is clicked, the web page sends this information to the server, which in turns stores it in the database.

3. Admin removes item

The admin starts this action by clicking on the Remove Items button. The web page is displayed a dropdown menu for the admin to send the item he/she

wants to delete. Once, delete button is clicked, the page is send message to the server which in turns tells the database to remove the item

4. Admin modifies item

The admin starts this action by clicking on the Modify Items button. The web page is displayed a list available product from the database. The admin then chooses the item he/she wants to modify by clicking on particular item.

A page is displayed letting the admin to modify all item information, except its UPC code and model name. Once, the Modify button is clicked, the web page sends a message to the server, which updating the information from the database.

GuestUse Case Diagram:

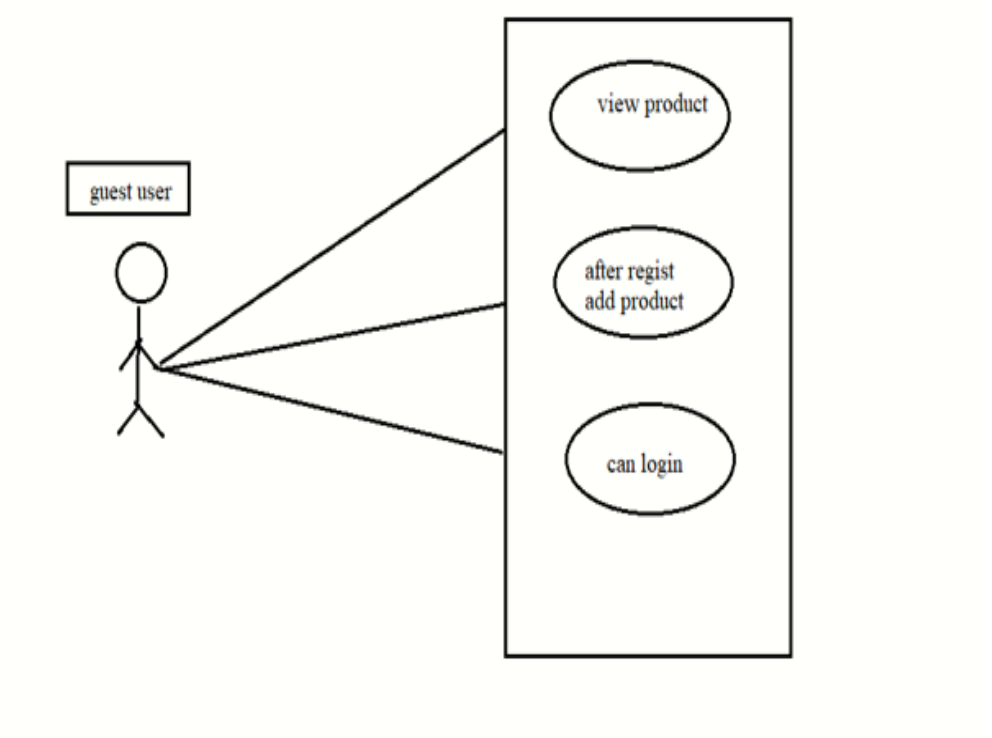


figure 4 :use case diagram(admin)

6.2 Sequence Diagrams:

The next step is to develop scenarios through sequence diagrams. The sequence diagram below outlines the requirements for online shopping.

Dfd level 1 diagram :

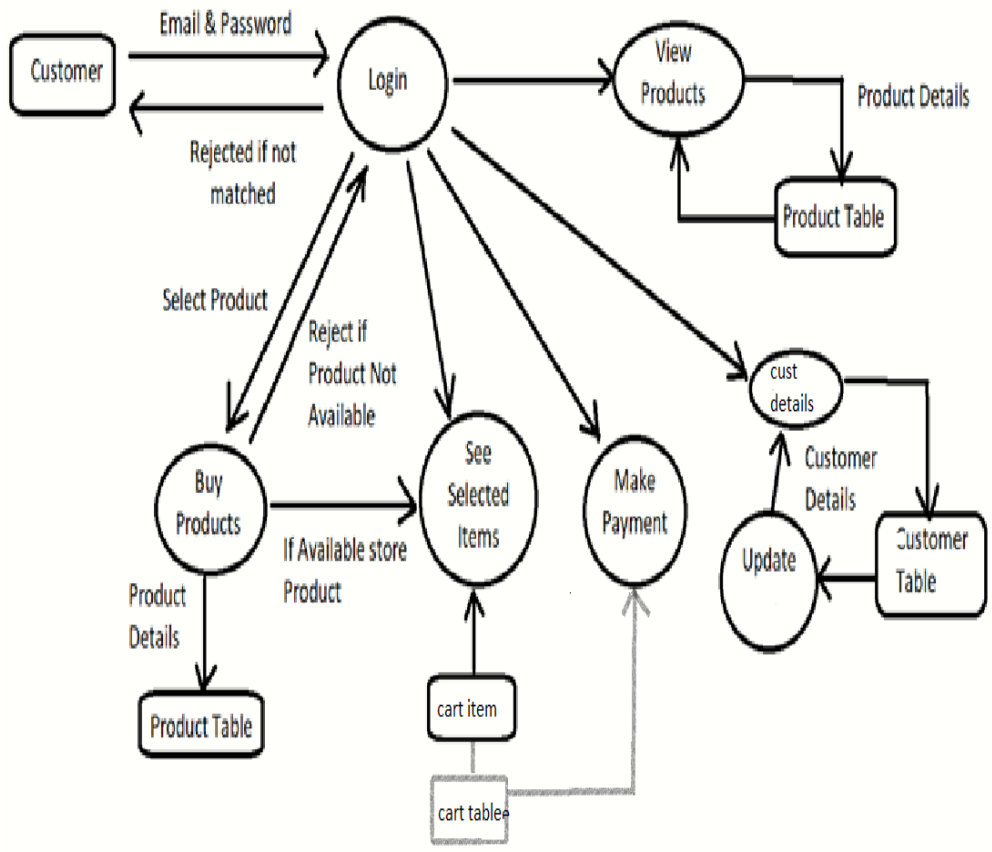


figure 5: Dfd level 1 diagram

6.3 Class Diagram

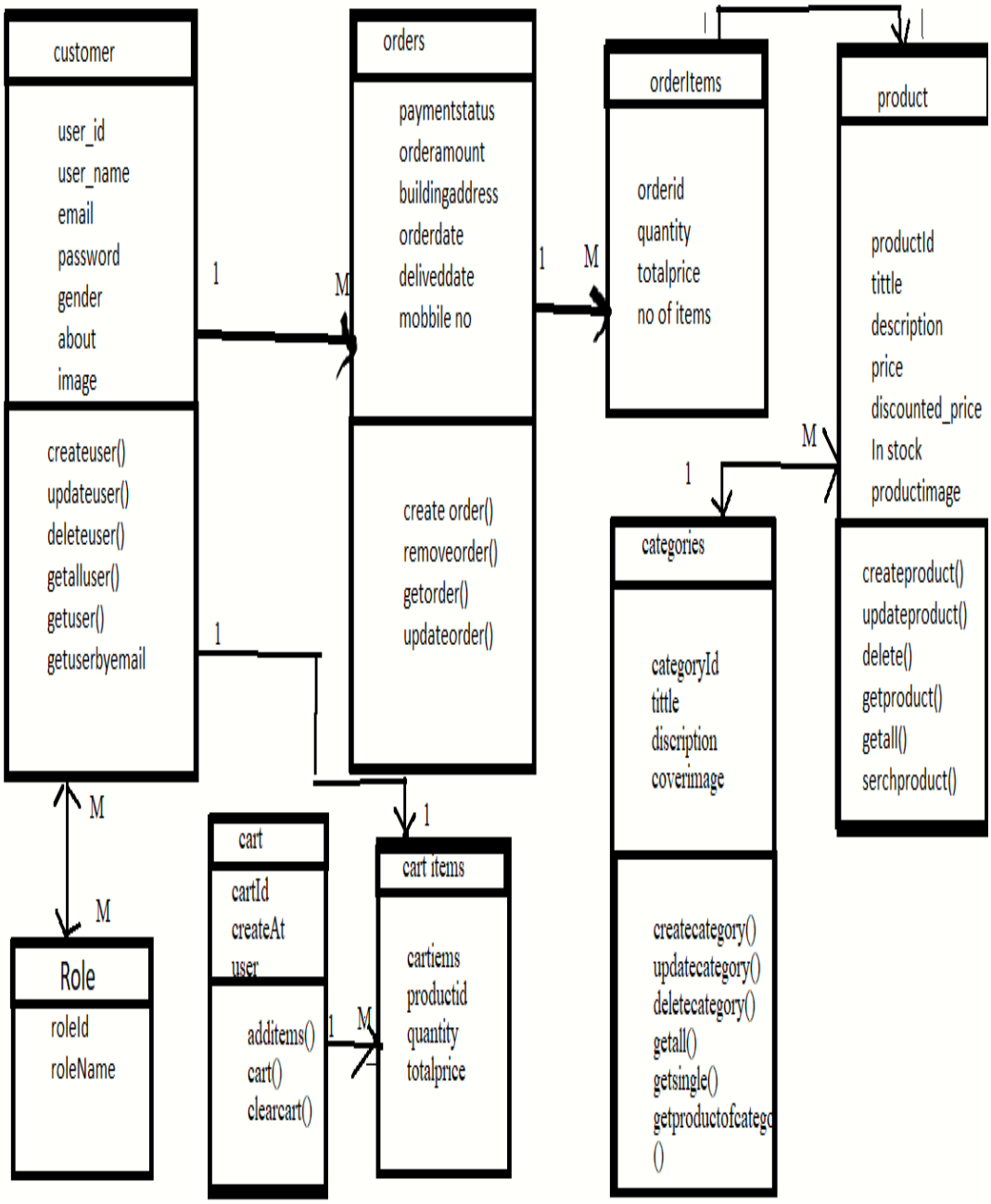


figure 6: Class diagram

6.4 Customer Activity Diagram

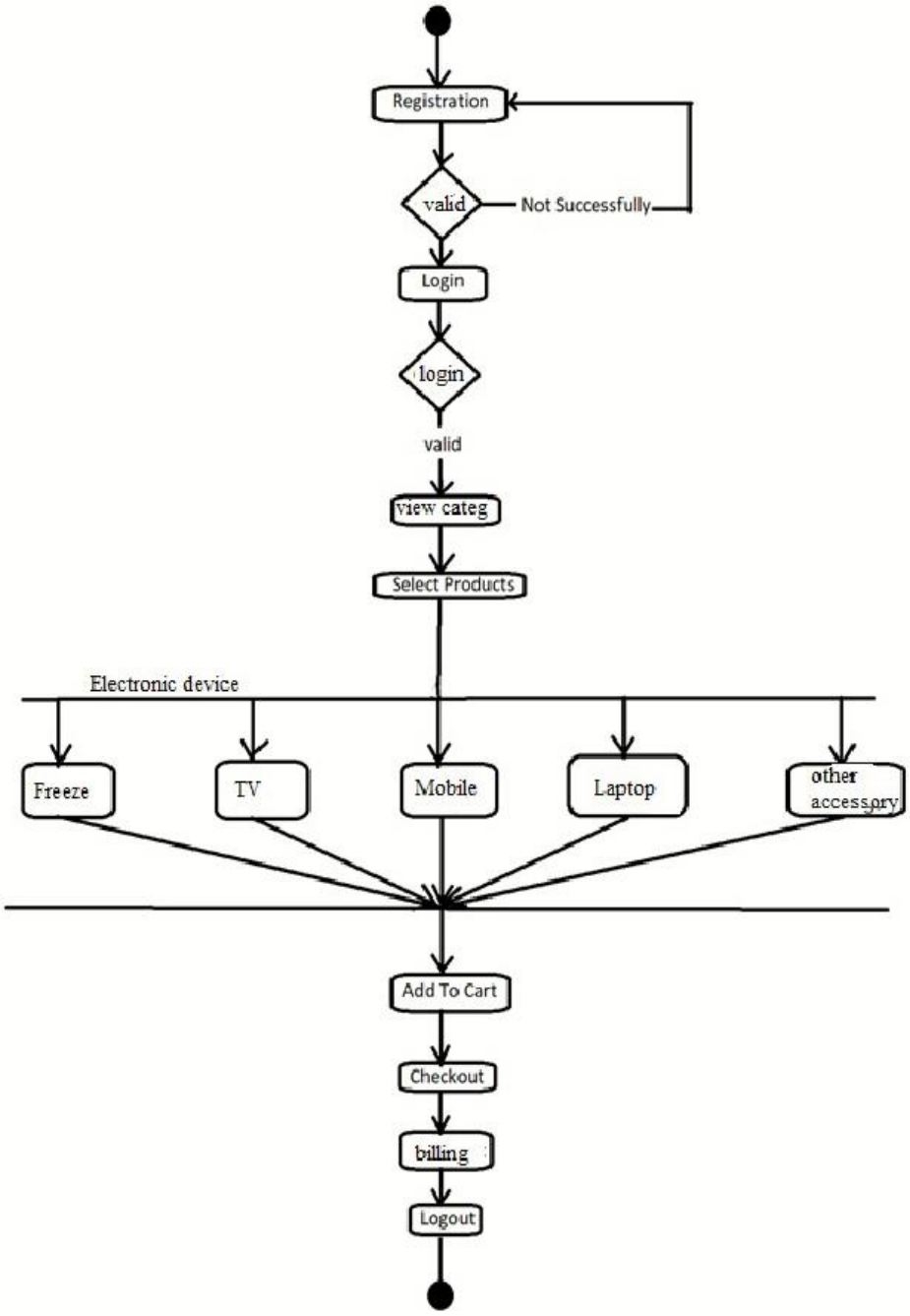


figure 7: Customer Activity Diagram

6.5 E-R Diagram(Workbench Generated):

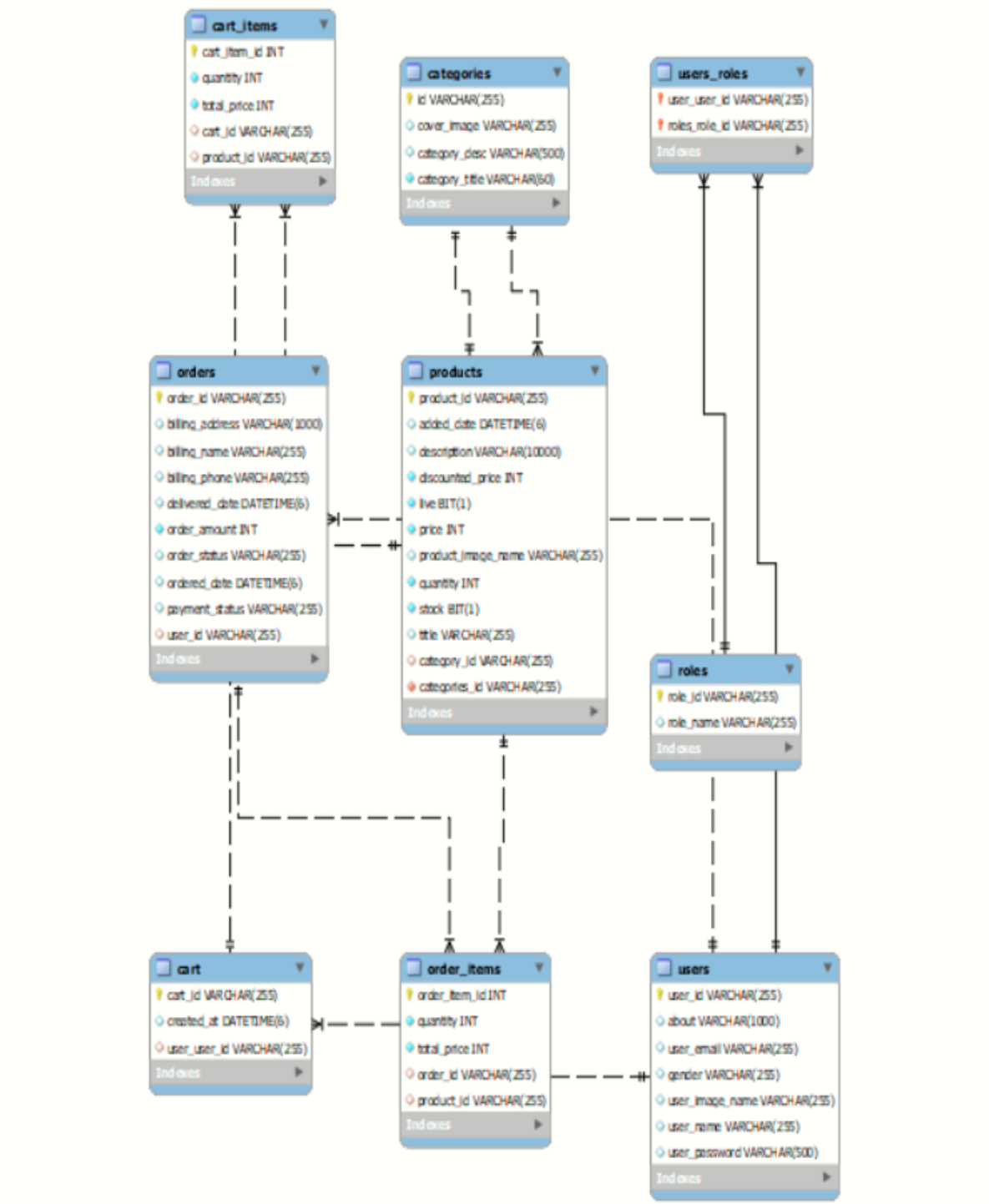


figure 8 E-R Diagram(Workbench)

6.6 E-R Diagram

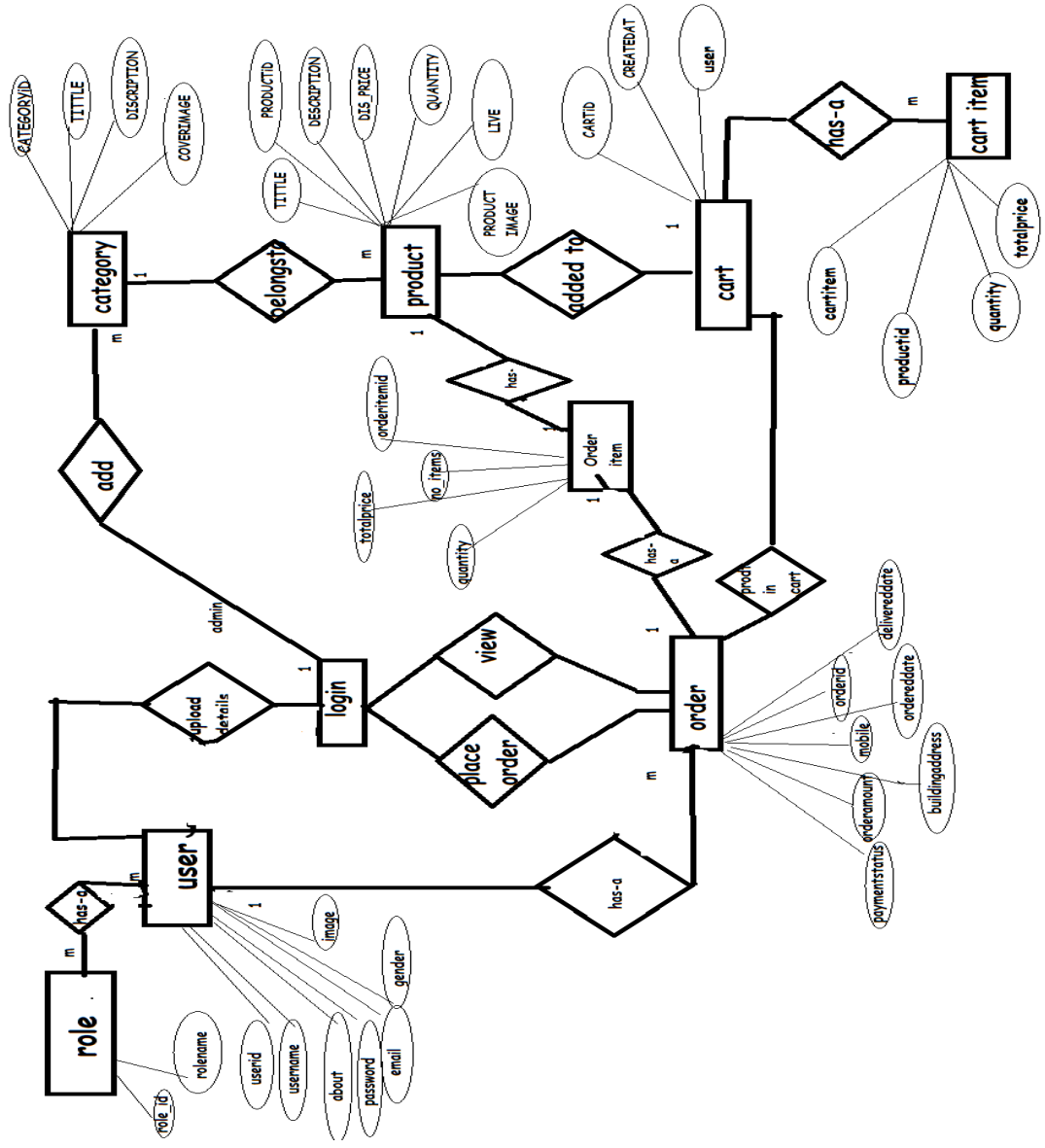


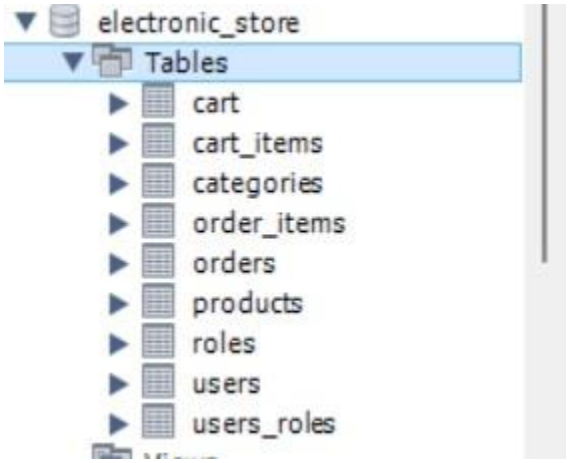
figure 9 E-R Diagram

7.DATABASE DESIGN:

Database Structure:

Database structure: the building blocks of a databaseWithin a database, related data are grouped into tables, each of which consists of rows (also called tuples) and columns, like a spreadsheet.

7.1 Database(tables)



Snapshot 7.1: Tables database

7.2 Database (Role)

Field	Type	Null	Key	Default	Extra
role_id	varchar(255)	NO	PRI	NULL	
role_name	varchar(255)	YES		NULL	

Figure:7.2 snapshot :Role database

7.3 Database Customer

Field	Type	Null	Key	Default	Extra
user_id	varchar(255)	NO	PRI	NULL	
about	varchar(1000)	YES		NULL	
user_email	varchar(255)	YES	UNI	NULL	
gender	varchar(255)	YES		NULL	
user_image_name	varchar(255)	YES		NULL	
user_name	varchar(255)	YES		NULL	
user_password	varchar(500)	YES		NULL	

Snapshot 7.3 Customer (user)

7.4 database(product)

Field	Type	Null	Key	Default	Extra
product_id	varchar(255)	NO	PRI	NULL	
added_date	datetime(6)	YES		NULL	
description	varchar(10000)	YES		NULL	
discounted_price	int	NO		NULL	
live	bit(1)	NO		NULL	
price	int	NO		NULL	
product_image_name	varchar(255)	YES		NULL	
quantity	int	NO		NULL	
stock	bit(1)	NO		NULL	
title	varchar(255)	YES		NULL	
category_id	varchar(255)	YES	MUL	NULL	

Snapshot 7.4 Product

7.5 database(orderdetails)

Field	Type	Null	Key	Default	Extra
order_id	varchar(255)	NO	PRI	NULL	
billing_address	varchar(1000)	YES		NULL	
billing_name	varchar(255)	YES		NULL	
billing_phone	varchar(255)	YES		NULL	
delivered_date	datetime(6)	YES		NULL	
order_amount	int	NO		NULL	
order_status	varchar(255)	YES		NULL	
ordered_date	datetime(6)	YES		NULL	
payment_status	varchar(255)	YES		NULL	
user_id	varchar(255)	YES	MUL	NULL	

Snapshot 7.5: order details database

7.6 database (orderitems)

Field	Type	Null	Key	Default	Extra
order_item_id	int	NO	PRI	NULL	auto_increment
quantity	int	NO		NULL	
total_price	int	NO		NULL	
order_id	varchar(255)	YES	MUL	NULL	
product_id	varchar(255)	YES	MUL	NULL	

Snapshot 7.6: Order items database

7.7 database(categories)

Field	Type	Null	Key	Default	Extra
id	varchar(255)	NO	PRI	NULL	
cover_image	varchar(255)	YES		NULL	
category_desc	varchar(500)	YES		NULL	
category_title	varchar(60)	NO		NULL	

Snapshot 7.7: categories database

7.8 database (cart)

Field	Type	Null	Key	Default	Extra
cart_id	varchar(255)	NO	PRI	NULL	
created_at	datetime(6)	YES		NULL	
user_user_id	varchar(255)	YES	MUL	NULL	

Snapshot 7.8: Cart database

7.8 database (cart item)

Field	Type	Null	Key	Default	Extra
cart_item_id	int	NO	PRI	NULL	auto_increment
quantity	int	NO		NULL	
total_price	int	NO		NULL	
cart_id	varchar(255)	YES	MUL	NULL	
product_id	varchar(255)	YES	MUL	NULL	

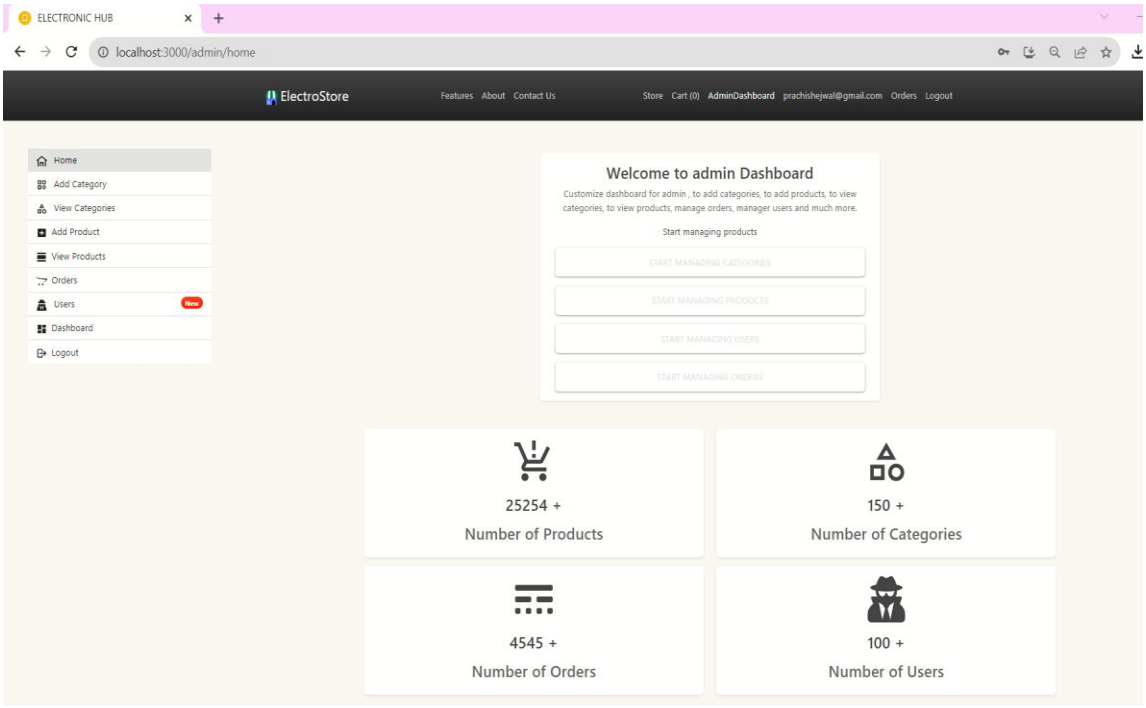
Snapshot 7.8: Cart items database

8.Snapshots of Final Project

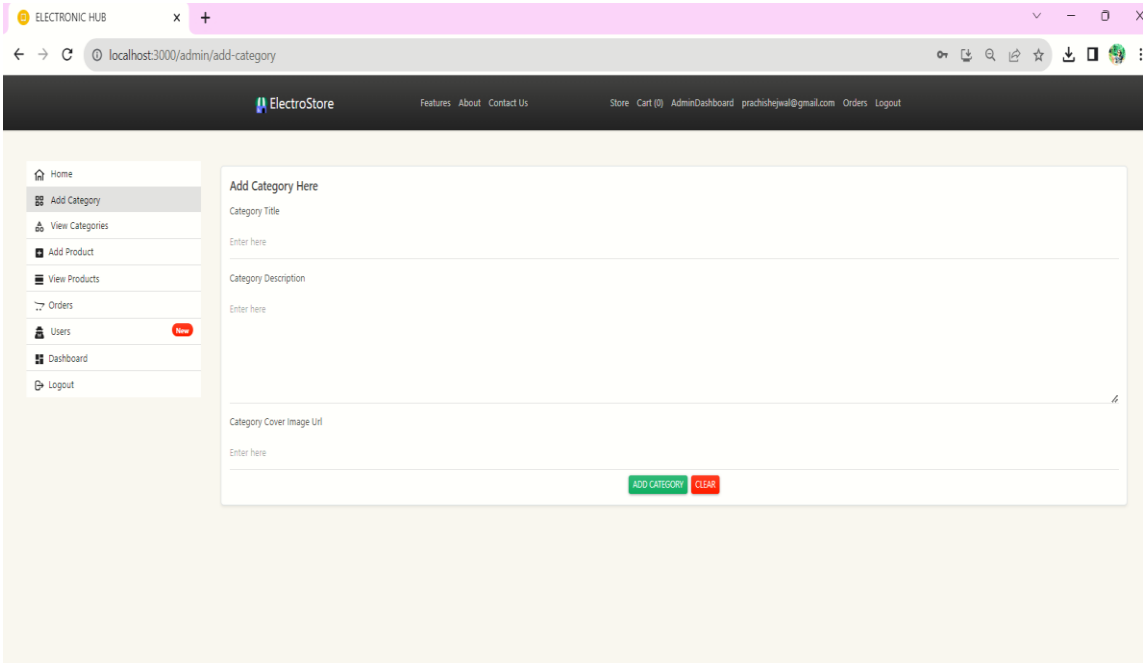
1.Admin

As admin we are logged in, Admin can see following Website pages:

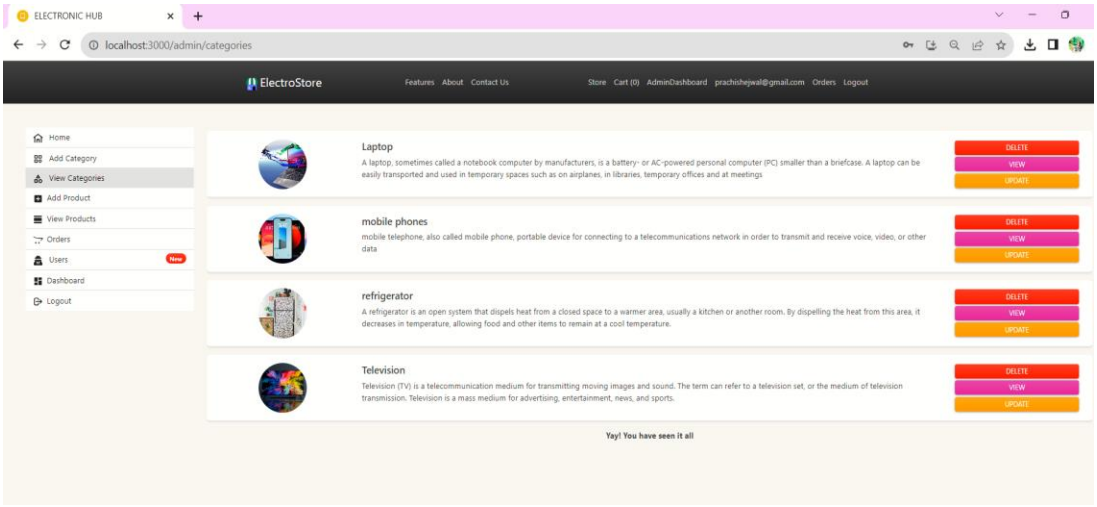
1.Admin Dashboard



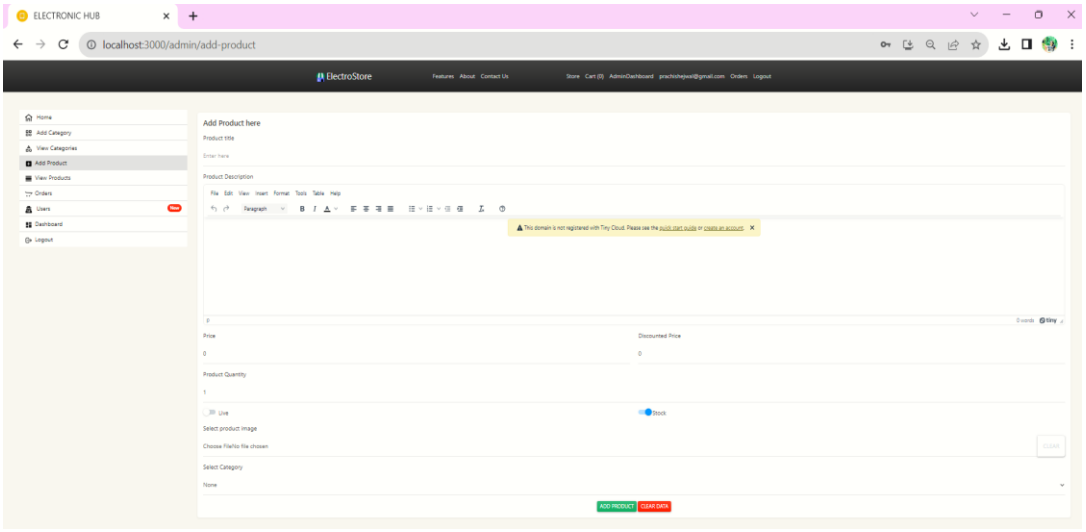
2.As admin wants to add a category



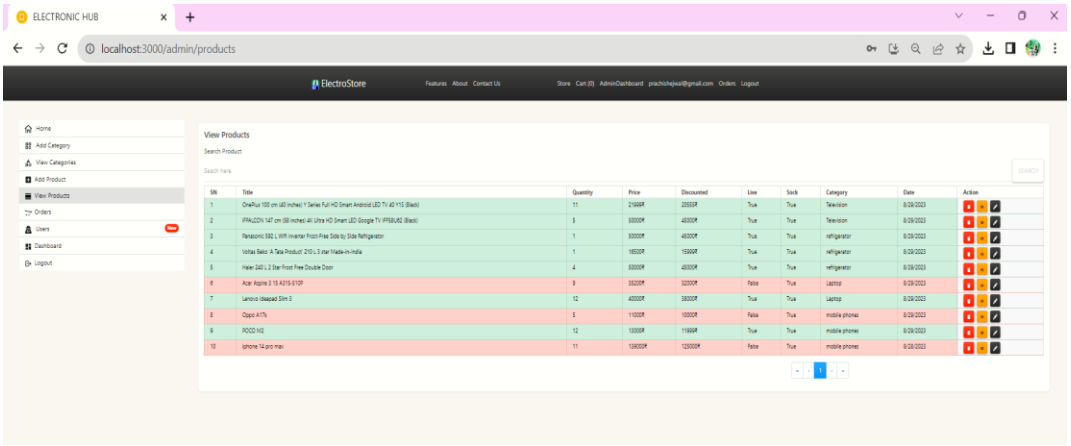
3.As admin want to see view Category



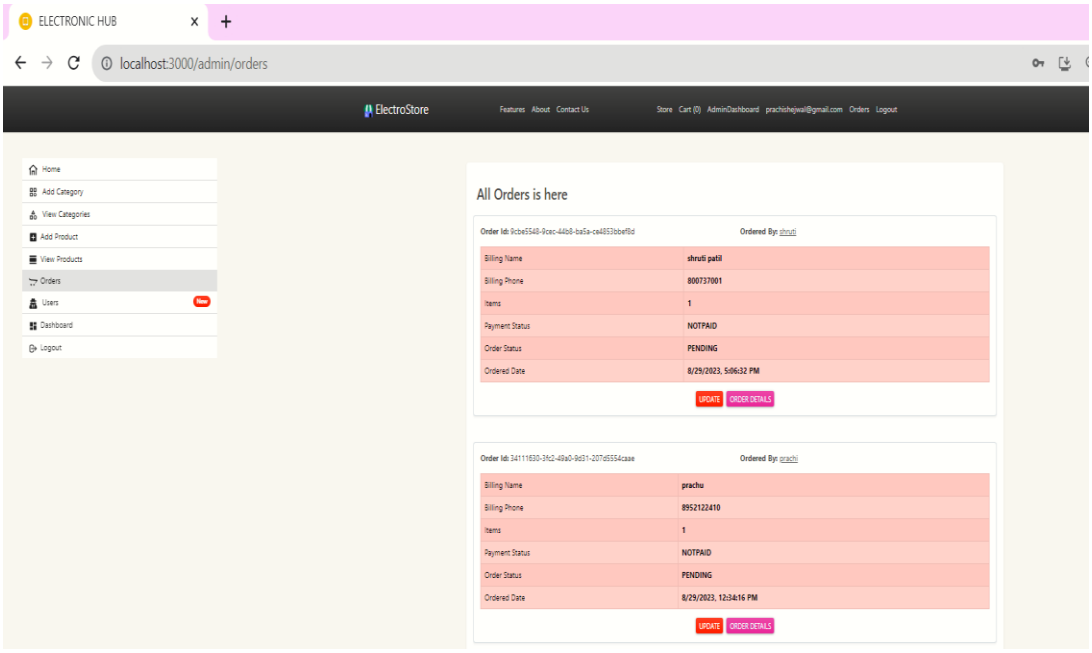
4.As admin wants to add product



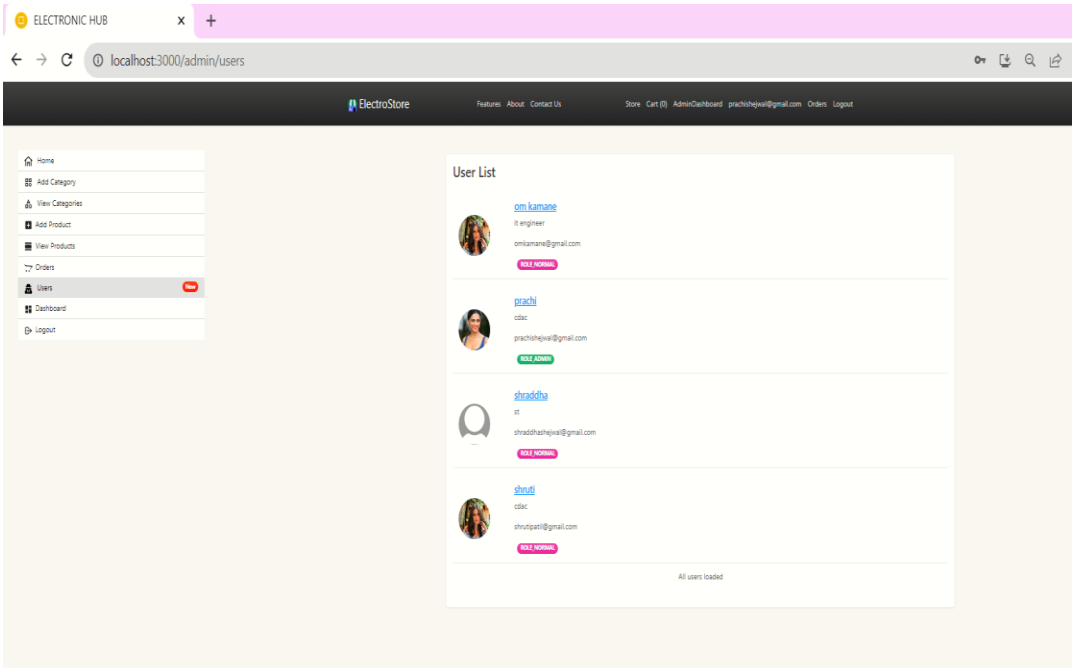
5.As Admin wants to view,Update,Delete Product



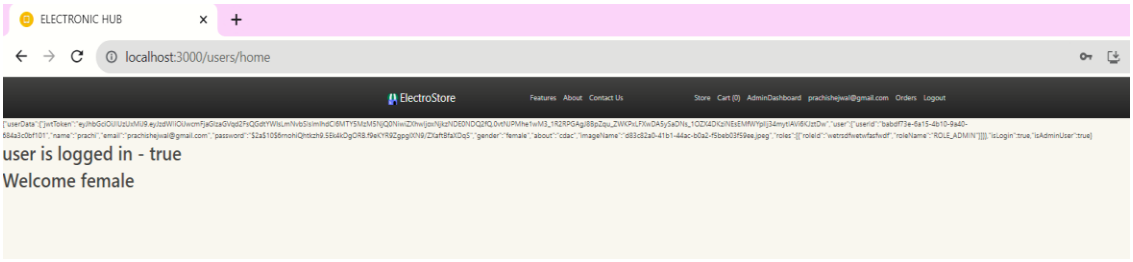
6.As admin wants to view Order



6.As admin wants to See all Users and Update, Delete Users.

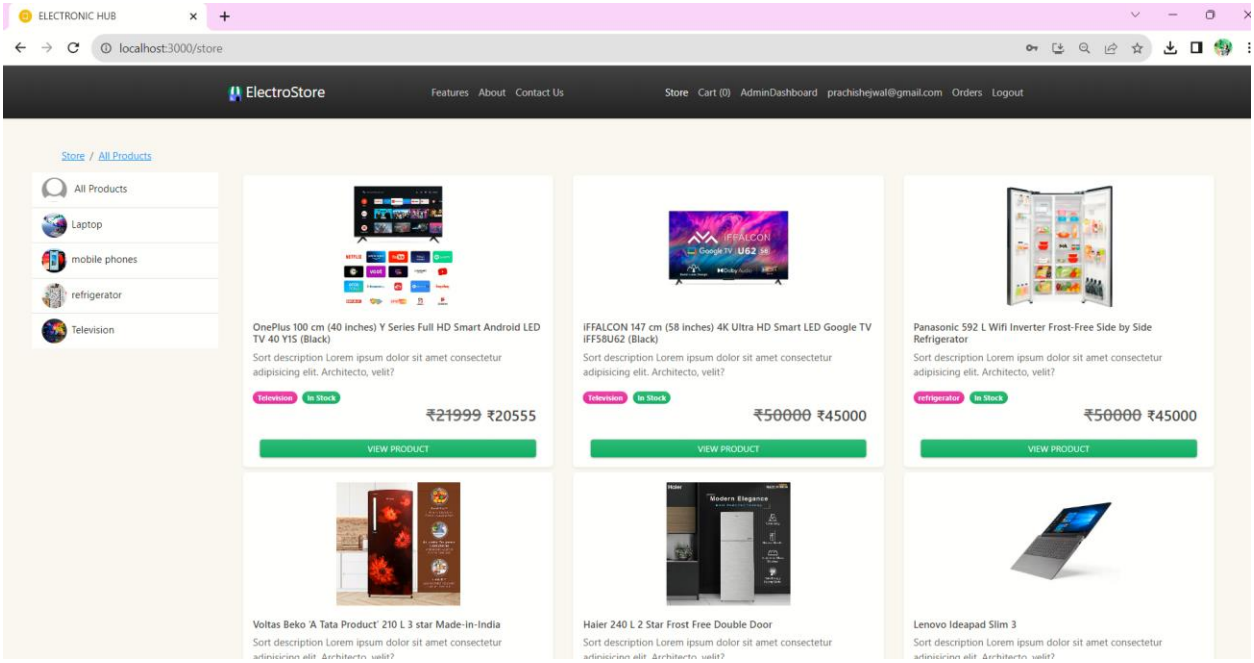


7.Admin also can See Dashboard



8.Admin can also logout and logged in

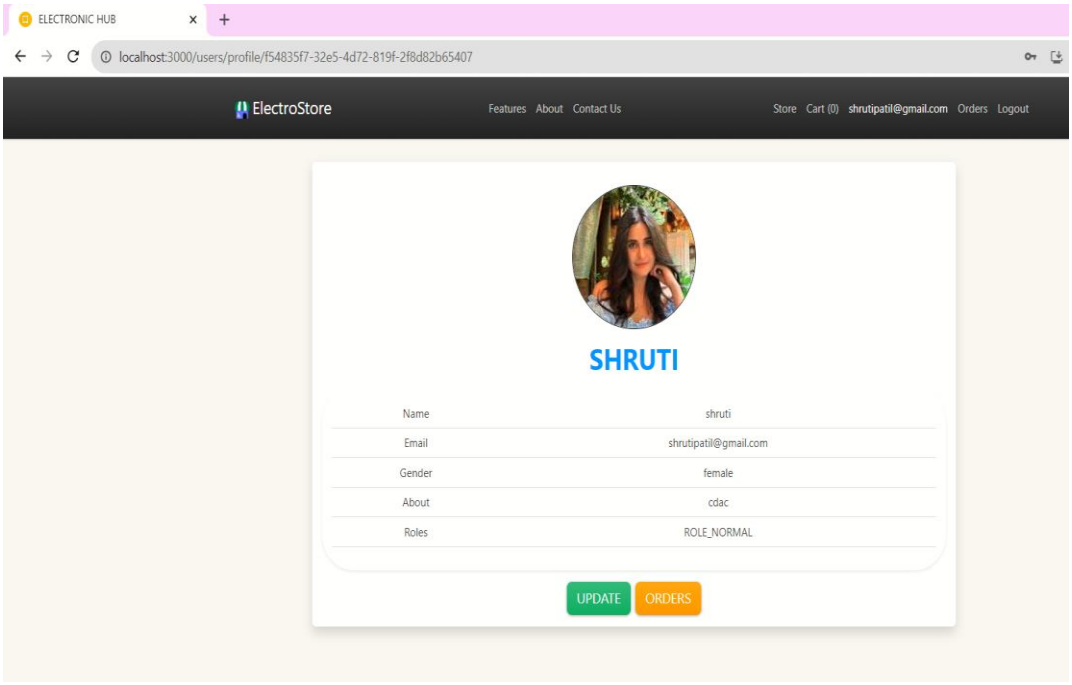
9.All live Products are Seen by Admin,Normal User and Guest User



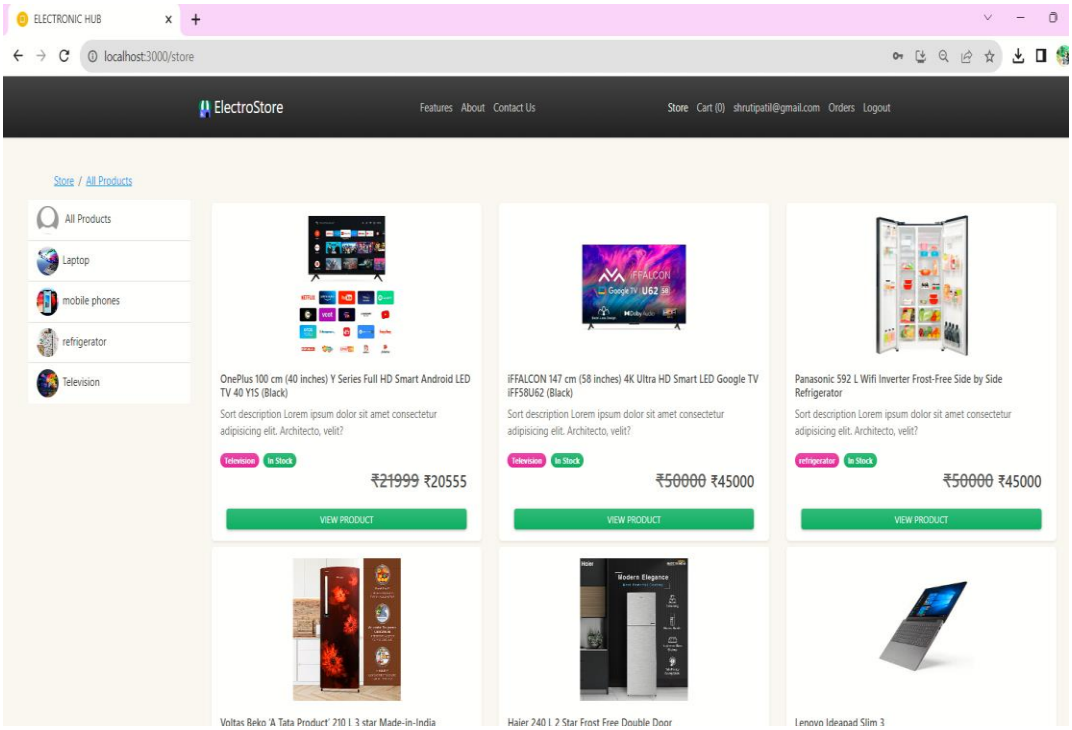
2.Customer

As Customer we are logged in,Customer can see following Website pages:

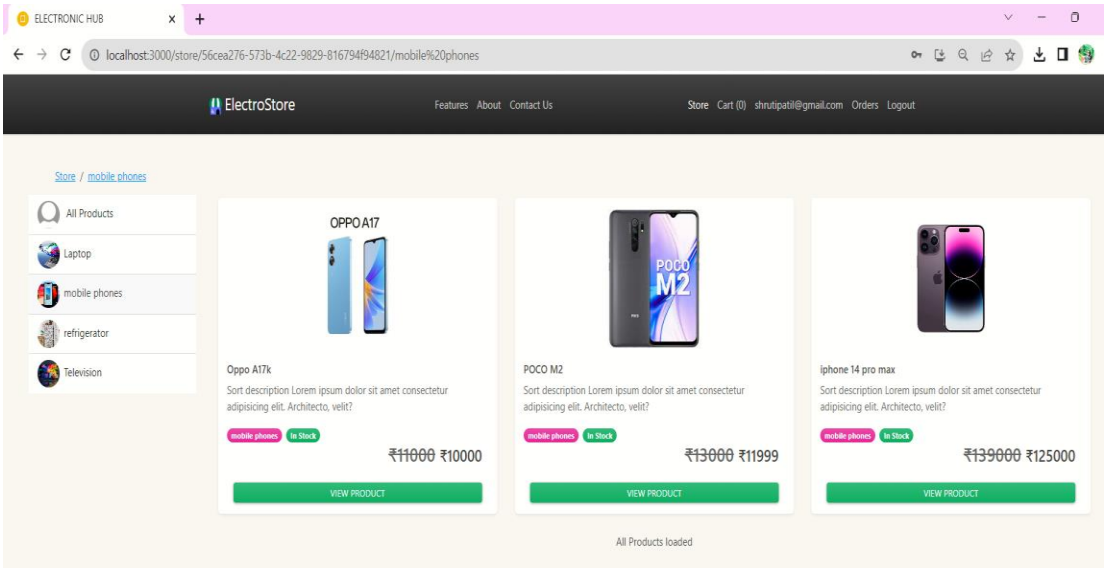
1.Customer can see his profile and can update it



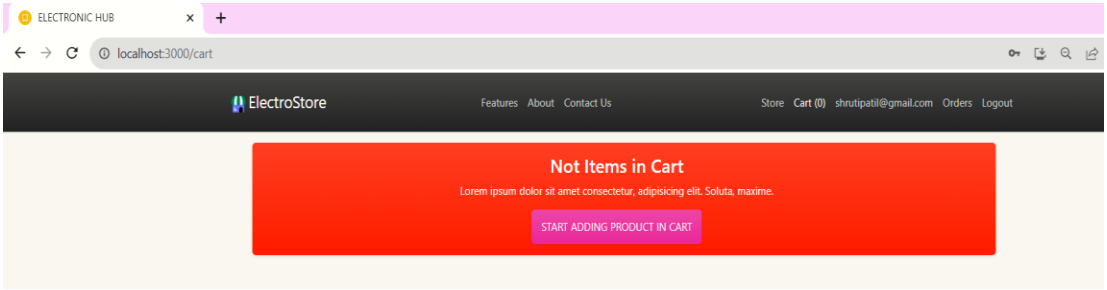
2.Customer can see all Categories



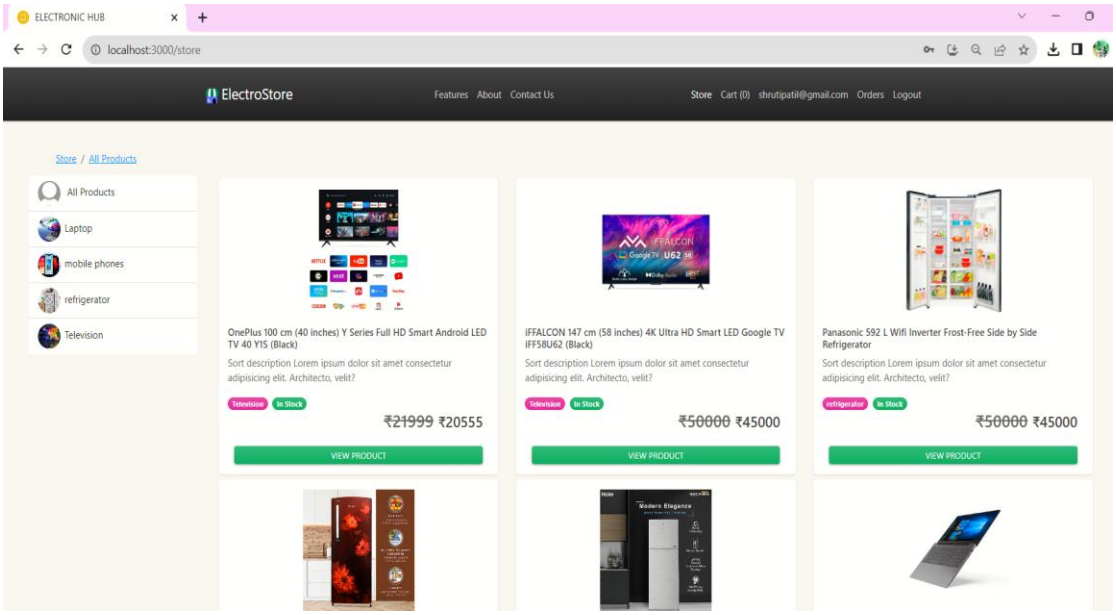
3. Customer can view all Products.



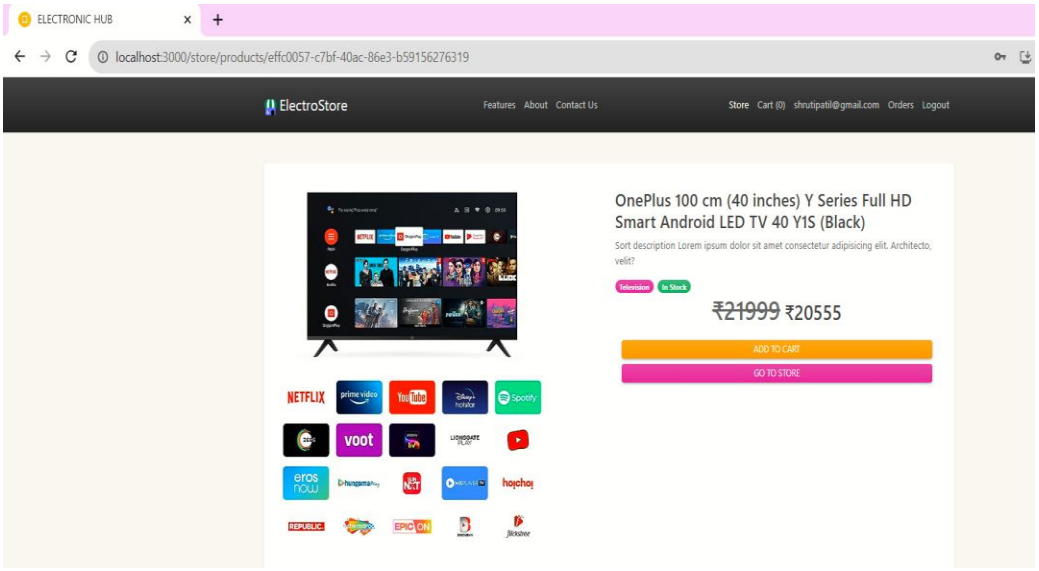
4. Customer can add Product to cart by clicking on “Start adding in cart”



5.All Products seen by Customer.



6. Customer can add Product to cart and also back to store



Screen Size	40 Inches
Brand	OnePlus
Supported Internet Services	Netflix, Prime Video, Zee5, Oxygen Play, Eros Now, JioCinema, SonyLiv, Youtube, Hungama, Hotstar
Display Technology	LED
Product Dimensions	0.09D x 8.92W x 0.51H Meters
Resolution	1080p
Refresh Rate	60 Hz
Special Feature	Android TV 11 | OnePlus Connect Ecosystem|Google Assistant, Chromecast, Miracast, DLNA, Auto Low Latency Mode | Supported Apps : Netflix, Youtube, Prime Video, Hotstar, SonyLiv, Hungama, JioCinema, Zee5, Eros Now, Oxygen PlayAndroid TV 11 | OnePlus Connect Ecosystem|Google Assistant, Chromecast, Miracast, DLNA, Auto Low Latency Mode | Supported Apps : Netflix, Youtube, Prime Video, Hotstar, SonyLiv, Hungama, JioCinema, Zee5, Eros... See more
Model Name	40 Y1S
Included Components	1 LED TV, 2 Table Stand Base, 1 Wall Mount, 1 User Manual, 1 Remote Control,1 AV IN Adapter

See less

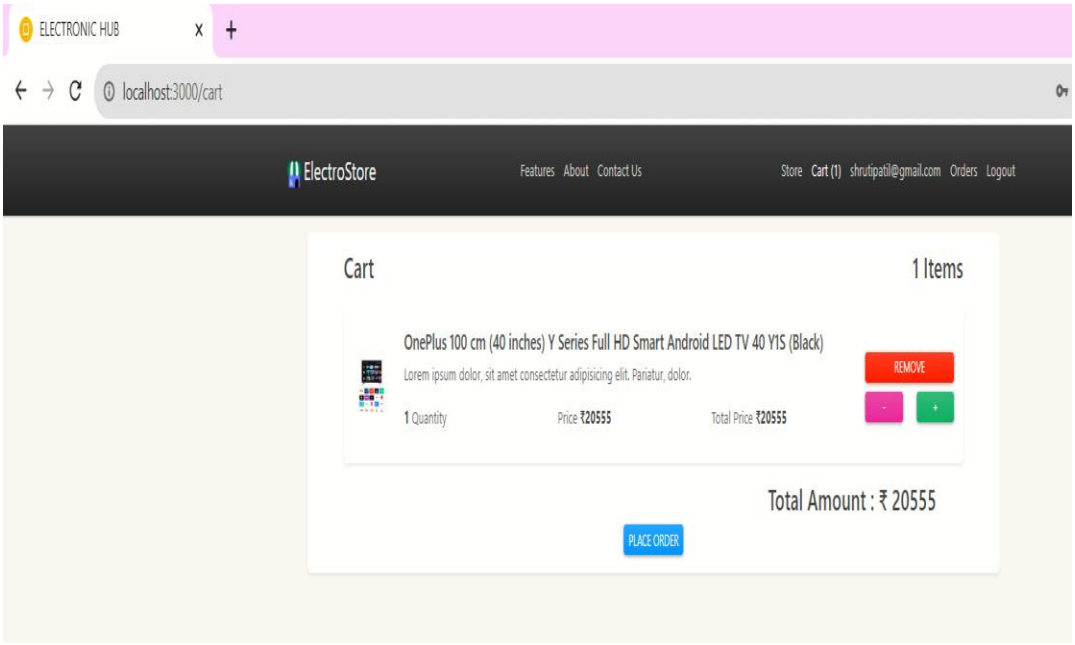
About this item

- Resolution : Full HD (1920x1080) | Refresh Rate : 60 Hertz
- Connectivity: 2 HDMI ports to connect set top box, Blu Ray players, gaming console | 2 USB ports to connect hard drives and other USB devices | Dual-band Wi-Fi
- Sound : 20 Watts Output | Dolby Audio | Dolby Atmos Decoding
- Smart TV features: Latest Android TV 11, OnePlus Connect Ecosystem, Google Assistant, Chromecast, Miracast, DLNA, Auto Low Latency Mode | Supported Apps : Netflix, Youtube, Prime Video, Hotstar, SonyLiv, Hungama, JioCinema, Zee5, Eros Now, Oxygen Play
- Display : Bezel-less Design | LED Panel | Anti-Aliasing | Gamma Engine | Decoding of HDR10+, HDR10, HLG
- Warranty Information: 1 year comprehensive warranty on product and 1 year additional on Panel provided by the brand from the date of purchase
- Installation/Wall mounting/demo will be arranged by Amazon Home Services. For any other information, please contact Amazon customer support | Wall Mount is not included in the box and will be charged extra at the time of installation
- Easy Returns: This product is eligible for replacement within 10 days of delivery in case of any product defects, damage or features not matching the description

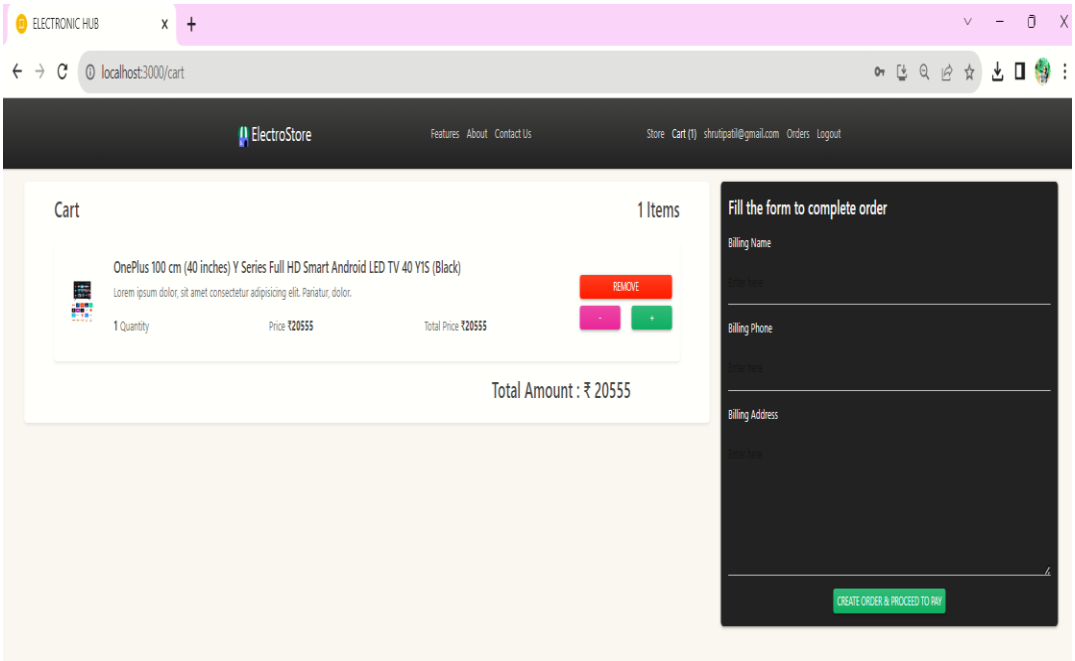
ADD TO CART

GO TO STORE

7.Cart will be view by customer,can increase and decrease quantity and by clicking “Place order ” button can place order

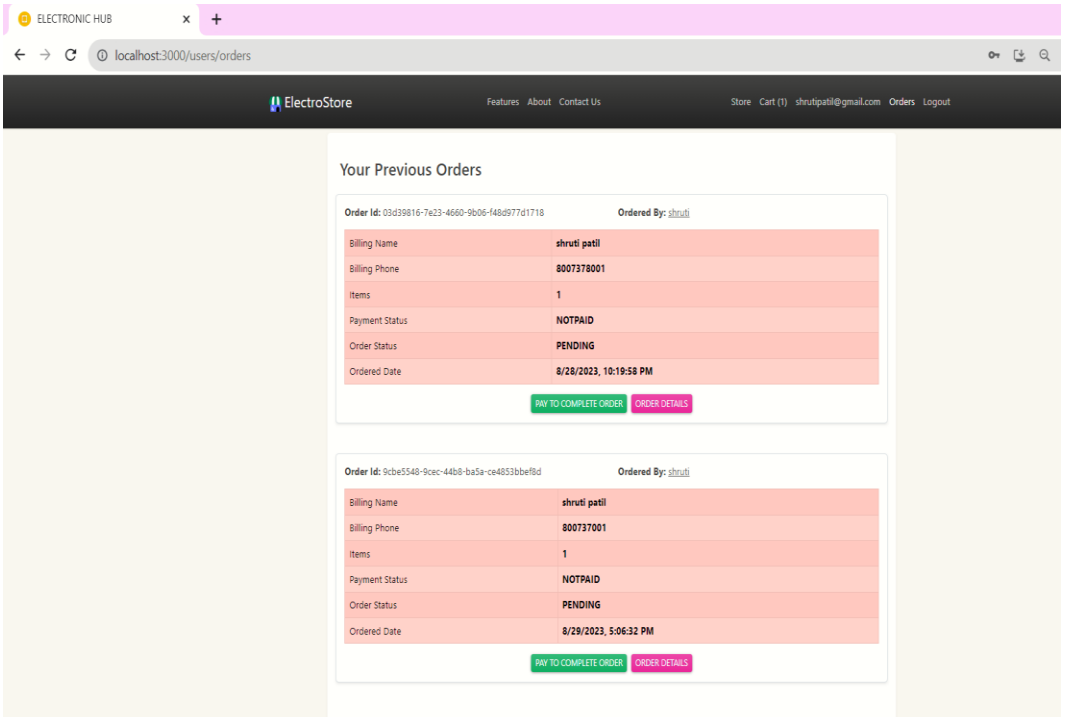


8.Customer have to add all details for delivering the order

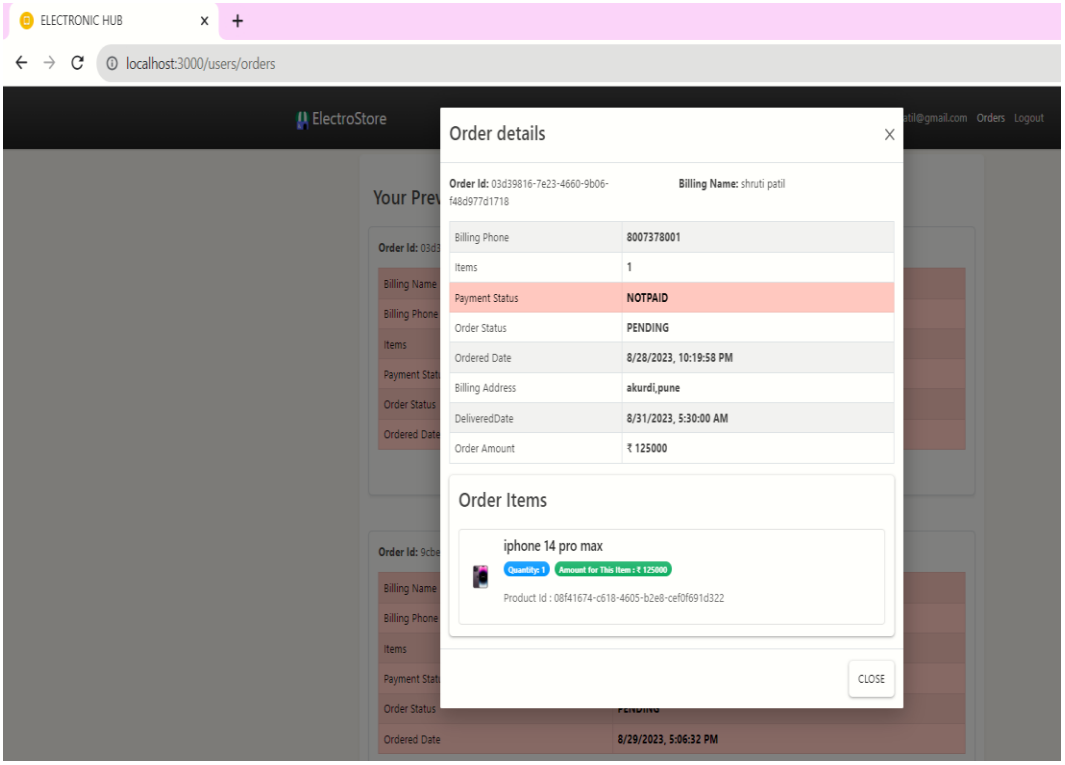


9.by Clicking on Create order,customers Orders is successfully placed.

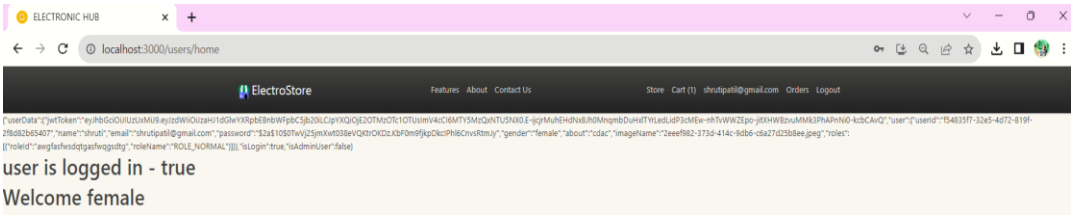
10.Customer can see all her orders in one page



11.Customer also see his order details by clicking on “Order Details”.

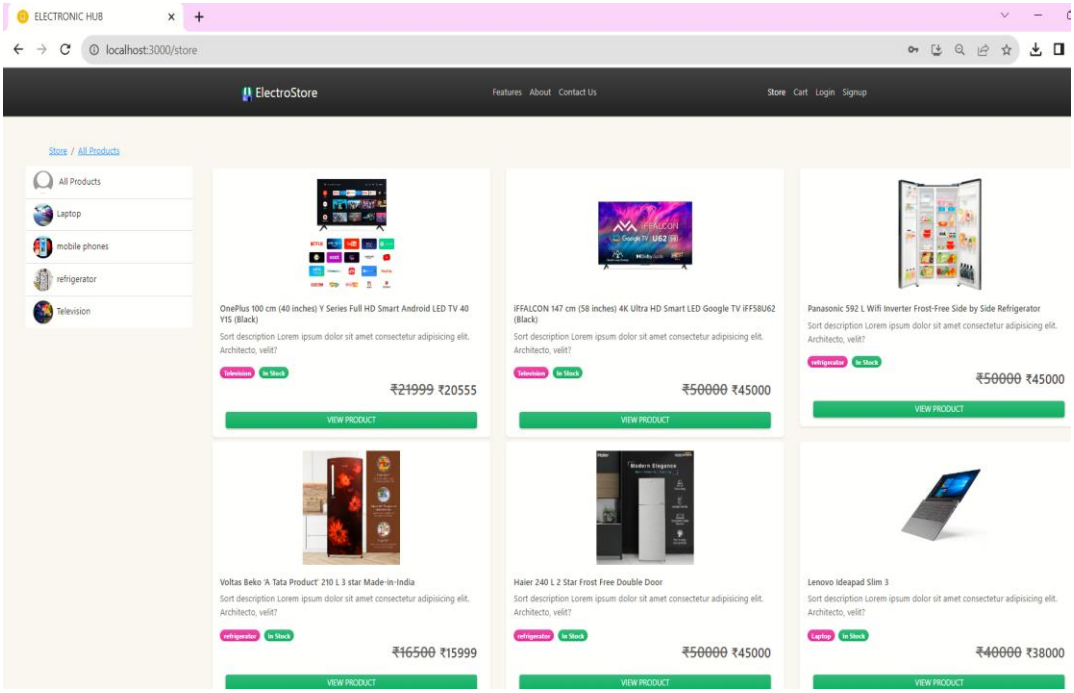


12.Customer also has dash-board



3.Guest User:

1.As a guest users,we can see all product



2.For adding product to product,guest user should be registered.

9.SYSTEM TOOLS

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

9.1 FRONT END: React Version is used is 16.13.1.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.

9.2 BACKEND: version is workbench 8.0.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.

Spring-Boot: Version used is 3.9.18.RELEASE. 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.

10.FUTURE ENHANCEMENT:

1. Voice Search and Shopping: Integrating voice search capabilities would make it effortless for users to search for products and complete purchases using voice commands, enhancing accessibility and convenience.
2. Enhanced Mobile App: Developing a feature-rich mobile app for our store would cater to the increasing number of mobile shoppers, offering a seamless and optimized experience across devices.
3. Smart Product Filters: Implementing advanced filters that allow users to refine product searches based on specific technical specifications, features, and price ranges.

11.CONCLUSION

In conclusion, the online electronic store project represents a significant stride into the digital marketplace, catering to the ever-evolving needs of tech-savvy consumers. Through meticulous planning, diligent execution, and a customer-centric approach, we have created a platform that not only offers a diverse range of electronic products but also provides a convenient and engaging shopping experience.Our commitment to user-friendly navigation, secure transactions, and comprehensive product information ensures that customers can make informed decisions and shop with confidence. The integration of modern design, responsive interfaces, and seamless checkout processes enhances the overall user journey, fostering loyalty and repeat visits.

We extend our gratitude to our team, whose tireless efforts brought this project to fruition, and to our customers, whose trust and support drive us to continually raise the bar. The online electronic store is more than a digital marketplace; it's a gateway to a world of possibilities, where technology meets convenience.

The Electronic Hub Software Application is poised to revolutionize the way individuals and businesses manage and interact with their electronic devices. Electronic Hub application that allows customers to buy and sell electronic products online. It can have different features and functionalities, such as product catalog, shopping cart, payment , order management, user account, product reviews and ratings, customer service, and admin panel.By providing seamless connectivity, advanced automation, and robust security features, this application will serve as the ultimate electronic device management solution in the modern digital era.

12.REFERENCES

- **https://www.slideshare.net/AmitKumarVerma61/online-electronic-shopping-project**
- **https://bootstrapmade.com/mentor-free-education-bootstrap-theme/**
- **https://www.w3schools.com/**
- **https://javaee.github.io/javaee-spec/javadocs/**

THANK YOU…