E-COMMERCE WEBSITE

PHP- MySQL

Project Submitted to the Savitribai Phule Pune University

BACHELORS IN COMPUTER SCIENCE

By

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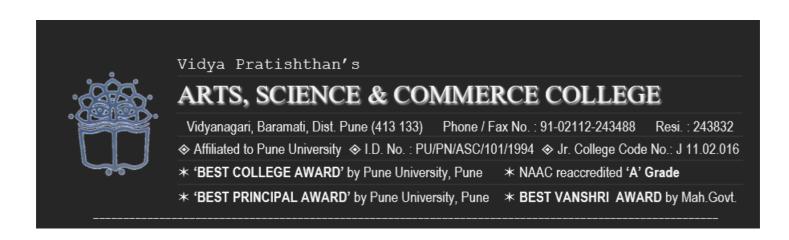


Project Guide Prof. Gautam Kudale

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Savitribai Phule Pune University

2023-2024



CERTIFICATE

This is to certify that the project entitled "E-Commerce Website" is the bonafide project work carried out by *Mr. Mane Mahesh* student of T. Y. BSc.(Computer Science) Savitribai Phule Pune University, Pune, during the year 2023-2024, in partial fulfillment of the requirements for the award of the Degree Bachelors' in Computer Science and that the project has not formed the basis for the award previously of any degree, diploma, associateship, fellowship or any other similar title.

Project Guide

H.O.D.
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Computer Science

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Place: Baramati Date: 10/04/2024

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Introduction:

In a world where fashion transcends mere clothing and becomes a statement of self-expression, cultural connection, and individuality, our project unveils an exclusive e-commerce platform dedicated solely to clothing. We curate a diverse array of styles to ensure everyone discovers something they love whether it's a casual ensemble or a fancier look. With just a few clicks, you can shop at your fingertips, eliminating the hassle of venturing to physical stores.

Our user-friendly website boasts an engaging interface, making it effortlessly easy to navigate. Create an account, log in, and dive into a seamless shopping experience. Explore a myriad of categories and brands, ensuring you always stumble upon something new and exciting.

Behind the scenes, our team constantly adds fresh products, introduces new brands, and unveils diverse categories that align with the ever-evolving trends of the seasons. This commitment keeps the platform vibrant and exhilarating, making online clothes shopping not just easy but also a delightful adventure, always looking forward to something new.

ABSTRACT

Our project is all about creating an online shopping website for clothes. People can easily browse, select, and buy different types of clothing like shirts, pants, and dresses. We made the website simple to use, so anyone can shop for their favorite clothes from the comfort of their home. Our goal is to make online shopping for clothes fun and convenient for everyone.

SOFTWARE REQUIREMENTS

The tools that I have used to develop this System:-

- VSCode (IDE)
- Xampp Server (Web Server)
- Google chrome, Firefox, Opera (Browsers)
- Windows 11(OS)
- HTML, CSS, JavaScript (Frontend)
- PHP (Functionalities & Backend)
- MYSQL(DBMS)

HARDWARE REQUIREMENTS

The Hardware that I needed to develop this System:-

- RAM of 4GB
- Solid State Drive(SSD) of the 520GB
- Processor of Intel 5th Geenration

<u> System Analysis :</u>

Existing System:

<u>Manual Shopping</u>: Currently, customers rely on traditional brick-and-mortar stores for clothing shopping, involving physical visits to stores, trying on clothes, and making purchases in person.

<u>Limited Reach:</u> The existing system restricts the geographical reach of clothing stores, limiting access to a local customer base and missing out on potential customers from other regions .Time-Consuming Process: Shopping in physical stores can be time-consuming, requiring travel time, waiting in queues, and browsing through multiple racks of clothing to find desired items.

<u>Limited Selection:</u> Physical stores have limited space, leading to a restricted selection of clothing items and sizes available for customers to choose from.

Manual Order Processing: Orders are processed manually in-store, involving handwritten receipts, manual inventory management, and manual payment processing.

Scope & Limitations:

Wide Range of Clothing: The website will offer a diverse range of clothing items including shirts, pants, dresses, jackets, accessories, and more.

<u>User-Friendly Interface</u>: The website will feature an intuitive and user-friendly interface for easy navigation and browsing.

<u>Personalized Recommendations</u>: Implement personalized recommendation systems based on user preferences and behavior.

Secure Transactions: Ensure secure online transactions through encrypted payment gateways and robust security measures.

<u>Mobile Optimization</u>: Optimize the website for mobile devices to cater to the increasing trend of mobile shopping.

<u>Geographical Constraints:</u> The website's reach may be limited to specific regions or countries initially.

<u>Technical Challenges:</u> Potential technical challenges such as server downtime, website maintenance, and software updates may arise.

<u>Competitive Market</u>: The e-commerce clothing market is highly competitive, requiring continuous innovation and marketing efforts.

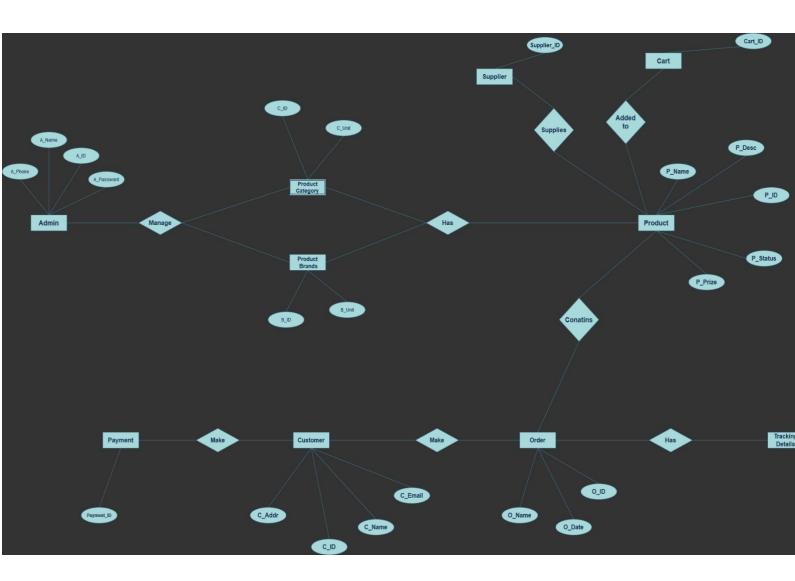
Logistics and Shipping: Logistics and shipping challenges such as delivery times, shipping costs, and product returns may impact customer satisfaction.

<u>Cybersecurity Risks:</u> Cybersecurity threats such as data breaches and fraud may pose risks to customer data and transactions.

ENTITY LIST:

Sr No	Entity	Attributes	Datatype	Size	Constraints
1	Admin	Admin_Name	Varchar	200	Not NULL
		Admin_ID	int	200	Not NULL(PRI Key,Auto Increment)
		Admin_Password	Varchar	200	Not NULL
		Admin_Phone	Varchar	200	Not NULL
2	Customer	C_ID	int	200	Not NULL(PRI Key,Auto Increment)
		C_Name	varchar	200	Not NULL
		C_addr	Varchar	200	Not NULL
		C_Email	varchar	200	Not NULL
3	Order	O_ID	Int	200	Not NULL(PRI Key,Auto Increment)
		O_Name	Varchar	200	Not NULL
		O_Date	timestamp		Not NULL(On Update current_timestamp)
4	Brands	B_ID	int	200	Not NULL(PRI Key,Auto Increment)
		B_Unit	varchar	200	Default NULL
5	Categories	C_ID	Int	200	Not NULL(PRI Key,Auto Increment)
		C_Unit	varchar	200	Not NULL
6	Product	P_ID	int	200	Not NULL(PRI Key,Auto Increment)
		P_Desc	varchar	200	Not NULL
		P_Name	varchar	200	Not NULL
		P_Key	Varchar	200	Not NULL
		C_ID	Int	11	NULL
		B_ID	Int	11	NULL

		Image1	Varchar	200	Not NULL
		Image2	Varchar	200	NULL
		Prize	varchar	200	NULL
		Date	timestamp		Not NULL(On Update current_timestamp)
		Status	varchar	200	Not NULL
7	Supplier	Supplier_ID	int	200	Not NULL(PRI
					Key,Auto Increment)
8	Payment	Payment_ID	int	200	Not NULL(PRI
					Key,Auto Increment)
9	Cart	Cart_ID	Int	200	Not NULL(PRI
					Key, Auto Increment)



Fact Finding Techniques:

Fact-finding techniques involve gathering information and insights to better understand the needs, preferences, and behaviors of users. This knowledge leads the way for a better decision-making process, enabling us to design a robust and resilient e-commerce platform that addresses key challenges and meets the needs of users and stakeholders. It keeps them looking forward to something analytical always.

Research:

We conducted research to gather data about customer reviews and feedback, including what users complained about and what they appreciated. We also analyzed similar websites to the one we are working on for comparative understanding. Research is a fine technique that can be used for our project, which will clarify the basic understanding.

Study of Documents:

Sometimes problems are really simple and seem so obvious, but still, we can't get rid of them. That's where the internet does its thing. The same problems faced by other people are explained with reference books, articles, blog posts so easily, which provides valuable insights on different issues, such as website usability, payment processing, customer services, etc., with real-life examples. We gain valuable lessons which play a magnificent role in development.

Feasibility Study:

A feasibility study is a way to evaluate inherent factors such as cost, time, and resources to determine if a project is possible and worth undertaking. It assesses whether an idea could work and be successful, helping people decide whether to proceed with a project or not. For our ecommerce website project, we need to analyze several factors, such as market demand, competition, technology requirements, and financial projections, which play an important role in understanding whether the project is feasible.

Technical Feasibility:

This study assesses whether the proposed project can be implemented from a technical perspective. It evaluates factors such as the availability of technology, expertise, and resources required to develop and maintain the project. In our e-commerce website project, technical feasibility would involve analyzing whether we have the necessary technical infrastructure, such as servers, software, and development tools, and the expertise, such as programming skills, to build and operate the website effectively.

Operational Feasibility:

This study examines whether the proposed project aligns with the existing operations and processes of the organization or stakeholders. It evaluates factors such as how the project will fit into the current workflows, how it will be managed and maintained, and how it will impact stakeholders' daily activities. In our e-commerce website project, operational feasibility would involve considering how the website will be integrated into our existing business operations and how employees will interact with

the website and how customer navigated & use the platforms.

Economic Feasibility:

This study assesses the financial viability of the proposed project. It evaluates factors such as the costs involved in developing, operating, and maintaining the project, as well as the potential benefits and return on investment. In our e-commerce website project, economic feasibility would involve analyzing the overall cost of website development, operating expenses such as hosting fees and maintenance costs, revenue, and potential profitability. This helps stakeholders determine whether the project is financially feasible.

UML Diagrams:

UML stands for **Unified Modeling Language**. It's a standardized visual language use in software engineering to design and communication system structures and behaviors. UML diagrams provide a way to visually represents different aspect of software system such as it's a structure behavior, interactions and architecture. They help software developers and stakeholders understand, analyze and communicate complex system in a clear and standardized manner.

Structural modelling:

structural modelling captures the static feature of the system. they consist of the following:

- class diagram
- object diagram
- deployment diagram
- component diagram

it represents elements and mechanism to assemble them.

Behavioral modelling:

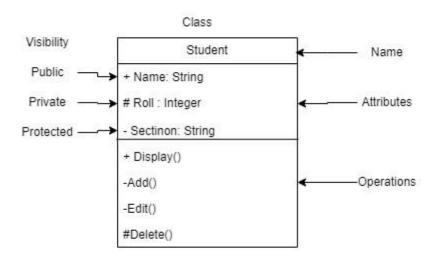
behavioral modelling represent the interaction among the structural diagram. it represents the dynamic nature of the system.

They consist of the following:

- Activity diagram
- Interaction diagram
- Use case diagram

Class Diagram:

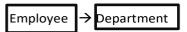
A class diagram is a visual representation in UML (Unified Modeling Language) that illustrates the structure of a system by showcasing classes, their attributes, methods, and relationships. Think of it as the blueprint of a software system, demonstrating how the building blocks interact with each other. This diagram is particularly useful as it can be directly translated into object-oriented languages, making it a common and essential tool in software development.

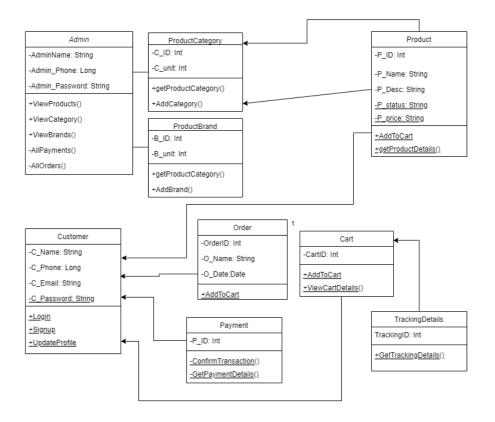


Super Class

[Sub Class] [Sub Class 2] [Sub Class 3]

Association: Association represents a simple relationship between two classes, indicating how they are connected or interact with each other.



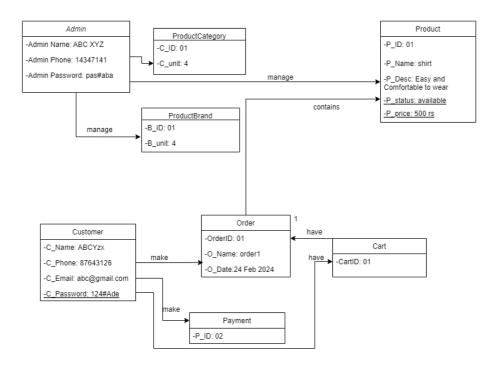


Object Diagram:

An object diagram in UML is a visual representation that provides a snapshot of objects and their relationships at a specific point in time within a system. It's akin to capturing a photograph of the objects in a system, revealing their current states and how they interact with each other. Object diagrams assist developers in understanding the structure and behavior of a system by showcasing the actual instances of classes and their relationships in a real-world context.

Basically, After constructing the Class Diagram, one might think there's no need to create an Object Diagram. However, the Class Diagram represents the static structure of the system, displaying classes, attributes, methods, and relationships between classes.

In contrast, the Object Diagram showcases the relationships between objects and includes the real values of their attributes. This provides a better understanding of how each object and class is related to the other.



Use Case Diagram:

A use case diagram in UML is a visual representation that illustrates interactions between actors (users or external systems) and a system to achieve specific goals or tasks. It showcases the functionalities of a system from the perspective of its users, outlining the different ways the system can be utilized. Essentially, a use case diagram helps to identify and visualize the various ways users interact with a system to accomplish their objectives.

-Notations:

1)Actors:

Actors are external entities that interact with the system, including users, other systems, or hardware devices.



2)Use Cases:

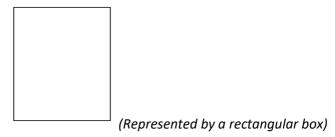
Use cases are like scenes in a play, representing specific things your system can do. For example, a Library System can have use cases such as "Add Category" or "Login."

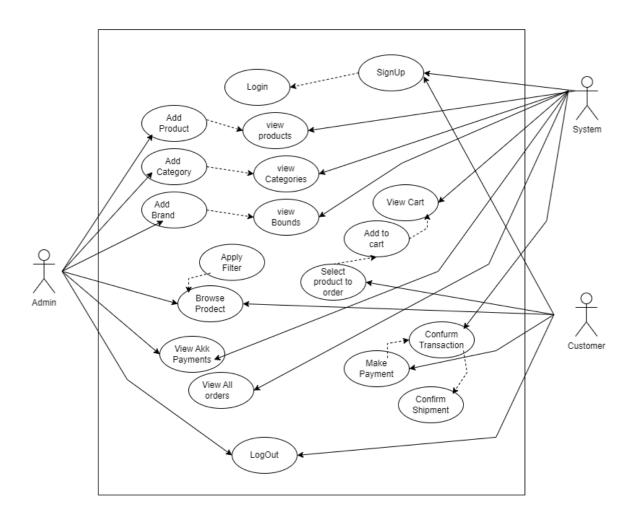


(Represented by ovals)

3)System Boundary:

It represents the scope and limits of the system, defining what is inside the system and what is outside.





Activity Diagram:

An activity diagram is a visual representation in UML that illustrates the flow of activities within a system. It showcases the sequence of steps, decisions, and interactions involved in completing a process. Activity diagrams help to visualize the workflow or behavior of achieving a goal, essentially mapping out how different activities are performed and how they relate to each other within the system.

Notations:

1)Initial State:

It represents the starting state before any activities of the system take place. The system can have only one initial state.

(Represented by a black filled circle)

2)Action or Activity State:

It represents the execution of an action or event.

(Represented by a rectangle with rounded edges)

3)Action Flow or Control Flow:

It represents the control flow, the transition from one activity state to another activity state. (Represented by an arrow)

4) Decision Node:

It is used to make decisions before deciding the control flow, representing conditions. (Represented by a diamond with two outgoing arrows)

5)Fork:

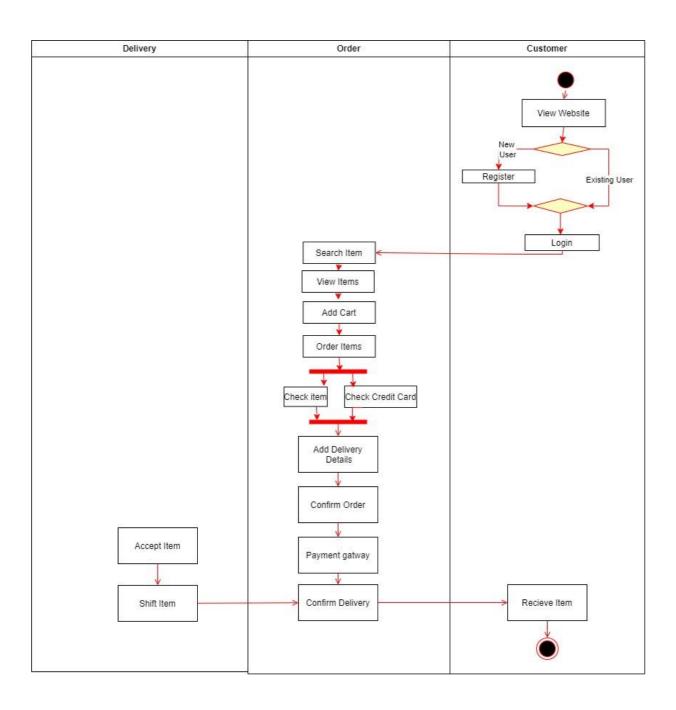
A Fork symbol is used to indicate concurrent activities in an activity diagram. Unlike a decision node where conditions are checked to switch paths, in a Fork, both conditions are executed simultaneously.

(Represented by a rounded rectangular bar with incoming and outgoing arrows for activities)

6) Final State:

It is state when system reaches its end. A system Can have multiple final state

(Represented by a circle with a filled circle in the middle)



5) Sequence Diagram:

A sequence diagram is a visual representation in UML that illustrates the interactions between objects or components in a system over time. It showcases the flow of calls between objects, indicating the sequence in which they occur during a particular scenario or use case. Essentially, a sequence diagram helps visualize the chronological order of events and communication between different parts of a system.

-Notations:

1]Actors:

Represents the type of role that interacts with the system. (Represented by a stick figure)

2]Lifelines:

Represents each instance in the sequence diagram.

[x: Class1]

(Here, x is an instance, and Class1 is the class name)

3]Messages:

Represents the communication between objects or lifelines, and messages are a core component of sequence diagrams.

Login

(Represented by an arrow)

4]Delete Message:

Used to delete an object.

(Represented by a labeled arrow, e.g., "My Delete message")

In e-Commerce project if the order is placed then that Object needs to be deleted

5]Self-Message:

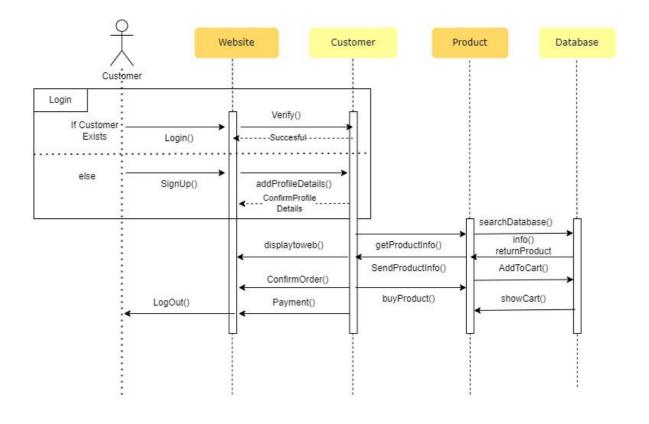
A self-message is used to send a message to the object itself. In an e-commerce website, for instance, when adding an item to the cart, the system might send a self-message to check the availability of the product.

(Represented by a lifeline with a looped arrow)

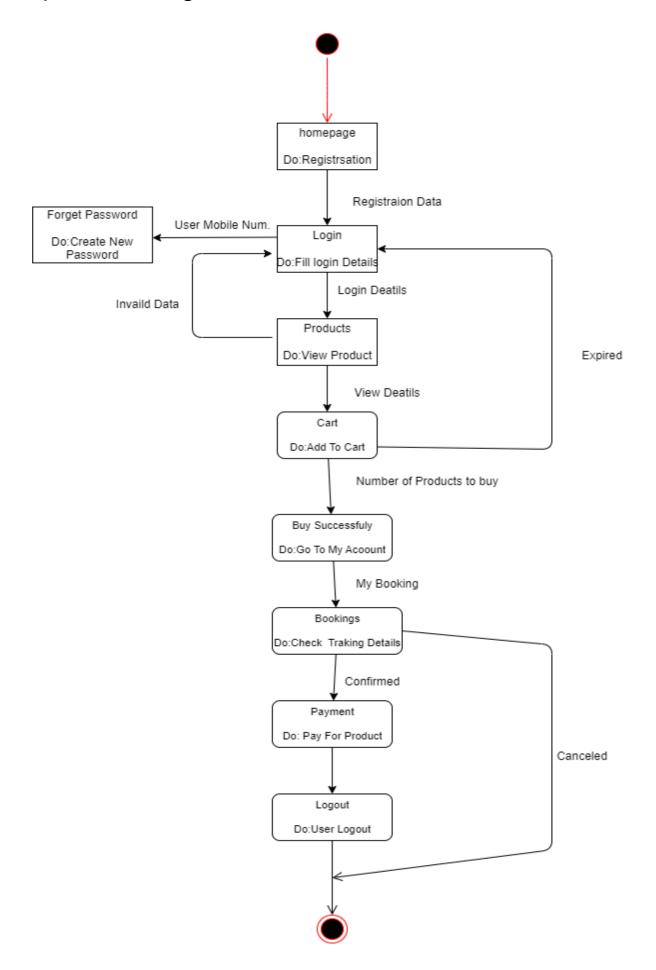
6]Guards:

it used to represent the Condition. In e-Commerce project Customer need to have sufficient balance to validate the tansaction

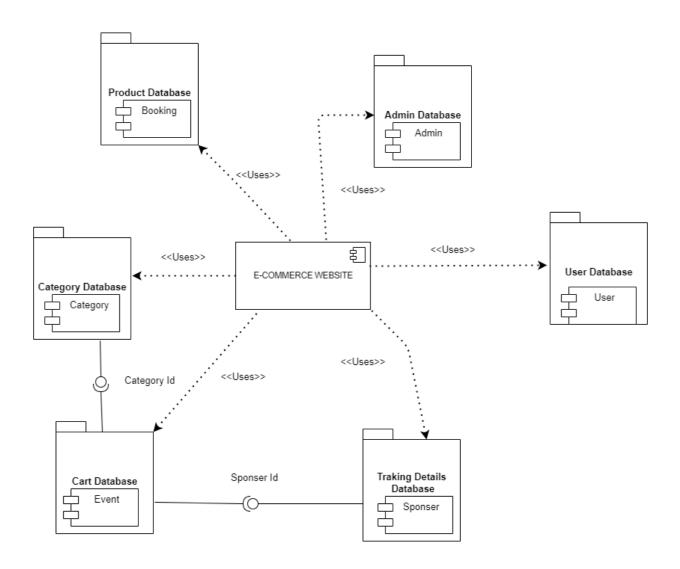
-Basically, Activity Dragrom shows the flow of activities, process within a system, including decision points & parallel activities and Sequence diagram represents the interaction between objects in a particular sequence or scenario



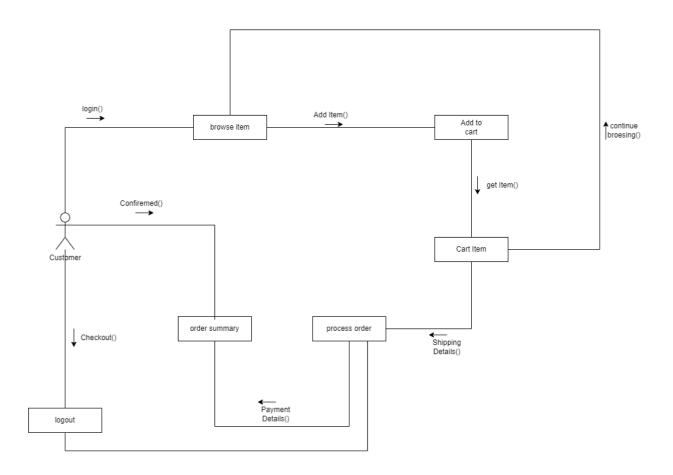
6)State Chart Diagram:



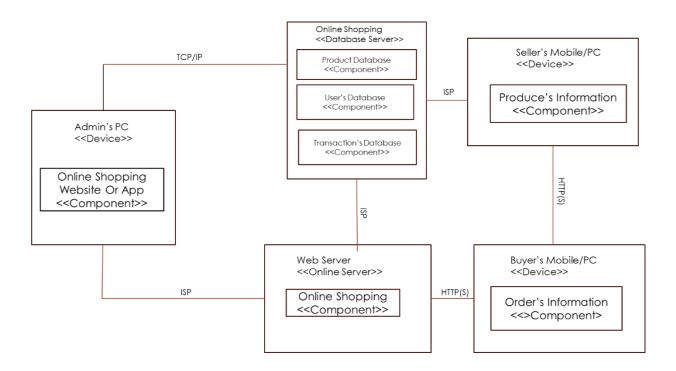
7)Component Diagram:



8)Collaboration Diagram:



9)Deployment Diagram:

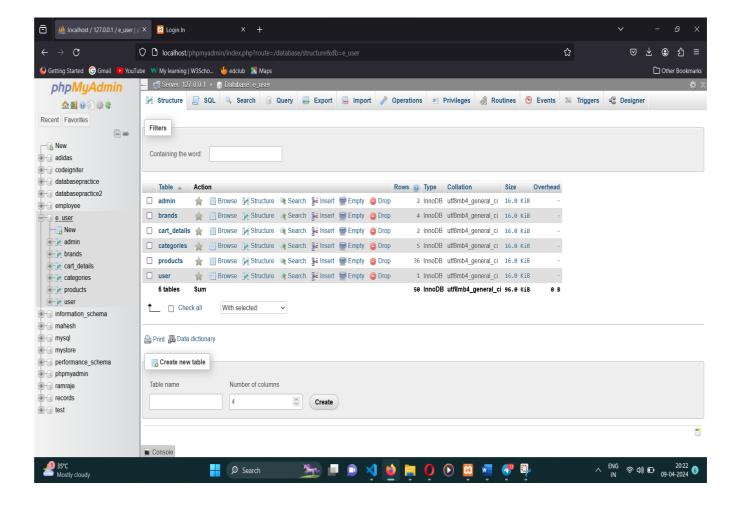


DATABASE DESIGN

For Our E-Commerce Website Program, we have used MySQL database to store the data and Xampp Server to Work on it.

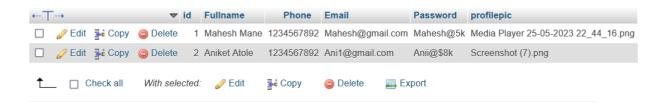
Tables in Database:

For our E-Commerce Project we need 6 tables Admin, Users, Brand, Categories, Products, Cart Details to keep the records of user to the cart details.



Admin Table:

Admin table keeps the records of the Admins, people who are allowed to have the control of Website. It make sure only authorized people can enter admin dashboard. It stores the basic Info of admin such as Name, Email, Phone, Password and Profile Pic.



User Table:

Admin table keeps the records of the Users. It stores the basic Info of user such as Name, Email, Phone, Password and Profile Pic.



Brands Table:

Brands table stores the all the admin inserted brands with its primary key as brand id which gets automatically incremented, Brand table only have Brand Id and Brand Unit.



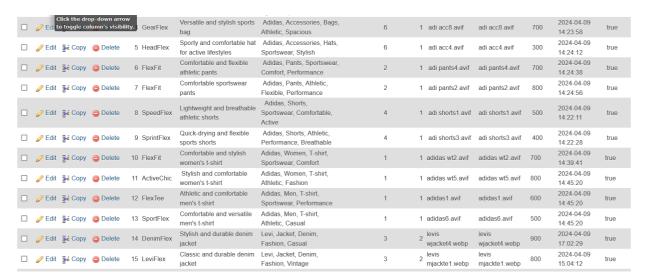
Categories Table:

categories table stores the all the admin inserted categories with its primary key as categories id which gets automatically incremented, Categories table only have categories Id and categories Unit.



Products Table:

Products table stores all info about product. It have pid as primary key and foregin key as brand id &Category id to access Brand and Category table. Product table consist of pid, pname,pdesc,pkey,cid,bid,Image1,Image2,prize,date,status.



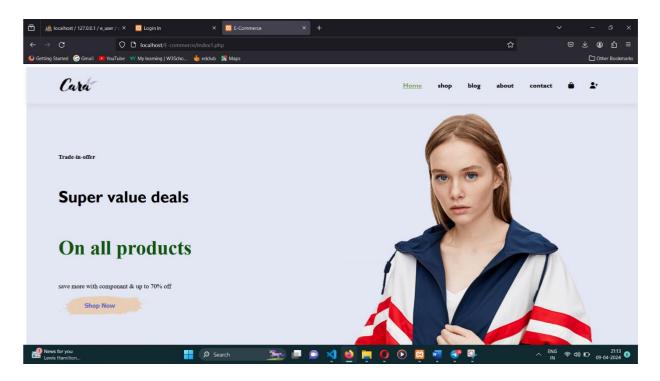
Cart Details Table:

Cart Details table gives the quickness to the each user IP Address, Cart Table consist of pid, IP Address, Quantity. Here pid is foregin key to differentiate each product.



DESGIN AND IMPLEMENTATION OF E-COMMERCE WEBSITE

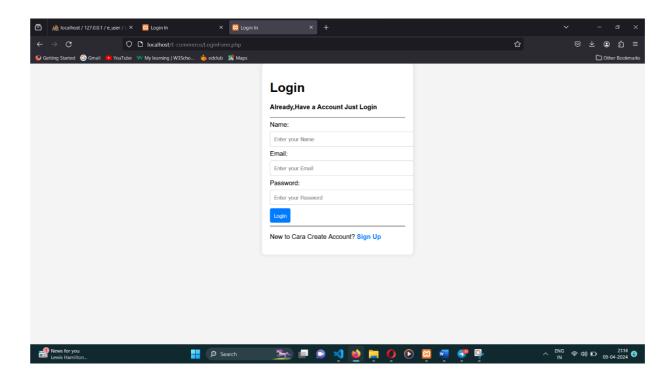
• HOME PAGE:



From home page, without loging in we check out the all website which includes all the section

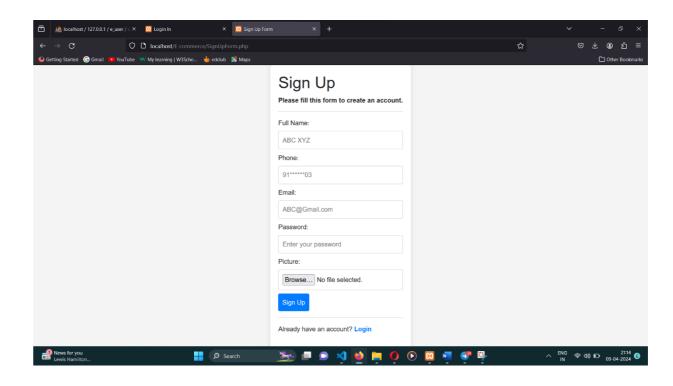
- Home
- Shop
- Blog
- Contact
- Cart

User LOG IN:



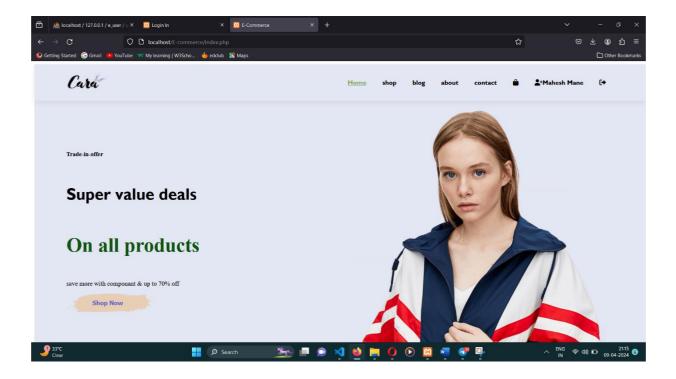
If User have Registered, with Registered Name and Password User Can Log In.

• User SIGN IN:

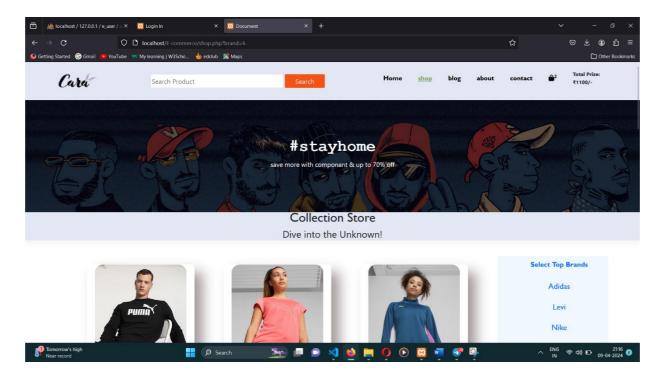


If user do not registered yet, they need to sign in and validate, register the user . It info such as Name, Phone , Email, Password , picture, etc.

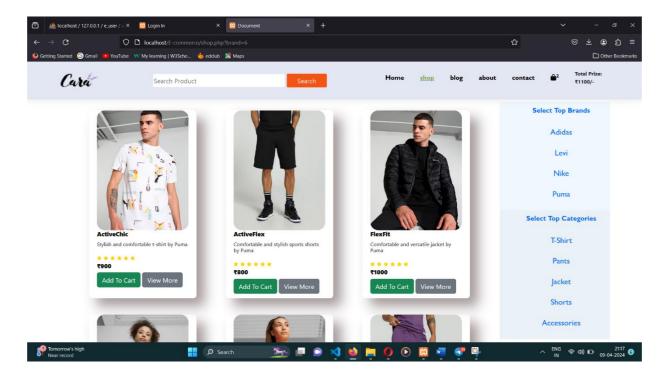
• Logged Use Interface:



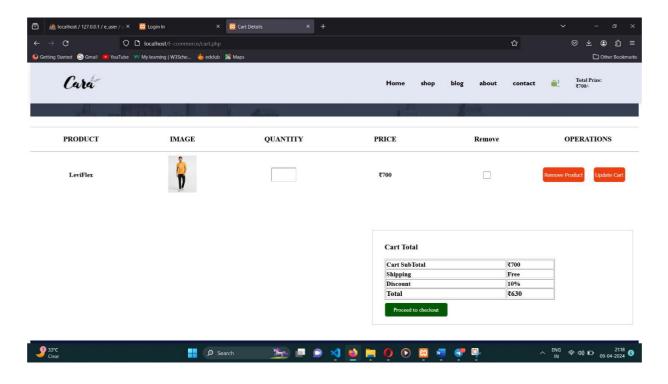
Shop Section Interface:



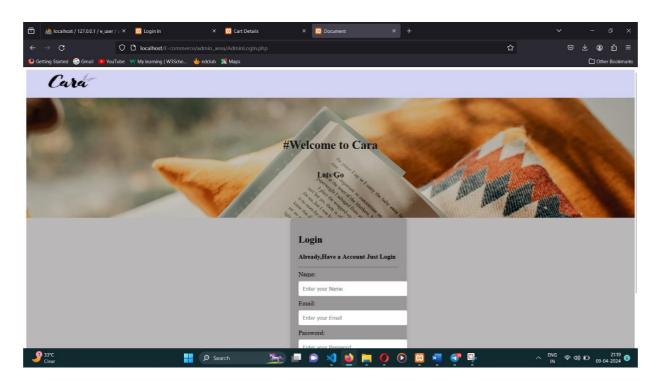
• Browsing Products based on Brands & Categories :



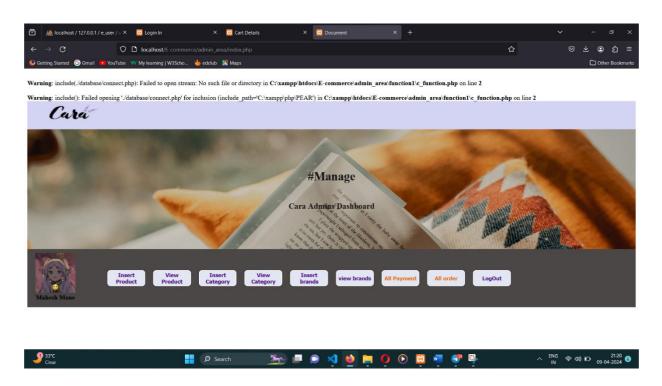
• Cart Section:

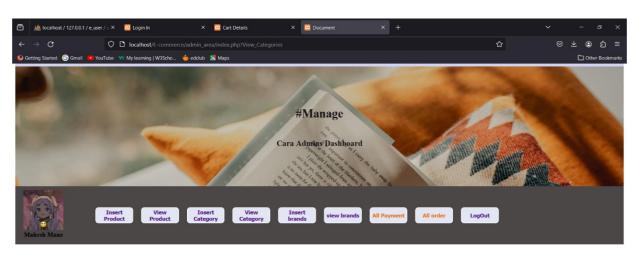


• Admin LOG IN:



• Admin Dashboard:





All Product

	1	T-Shirt	C		
	2	Pants	C		
	3	Jacket	E	î	
	4	Shorts	C	1	
	5	Accessories	ď		
33°C Clear		<u> </u>	· · · · · · · · · · · · · · · · · · ·	^ E	NG

Future Scope:

- 1. Personalized Recommendations
- 2. Virtual Try-On Experience
- **3. Expanded Shopping Channels**
- 4. Sustainable Practices
- 5. Enhanced Security with Blockchain
- 6. Global Market Expansion

Conclusion:

Our e-commerce website revolutionizes clothing shopping with intuitive navigation, personalized recommendations, and seamless transactions, ensuring a delightful user experience. With a focus on convenience, style, and security, we aim to redefine online fashion retailing for a global audience.

References:

<u>Tech 2 Etc</u> (Guide us for Frontend of the System) https://youtube.com/@Tech2etc?si=B1rx2Subql4U3lZ8

<u>Step by Step</u> (Guided us for Backend and functionality of the system) https://youtube.com/@KhanamCoding?si=yFjb7MQD1LvyAKsZ

<u>Thapa Technical</u> (Guided us for use of Xampp and learning about CRUD operations)

https://youtube.com/@ThapaTechnical?si=nFoaeT-okb1ZBKgQ

Al's lead the way which really helped

https://chat.openai.com/ https://claude.ai/

...Thank you...