

Project Report on

Dozti - A B2B E-commerce

at

BrainyBeam Technologies Pvt Ltd.



External Guide:

Mr. Sagar Jasani

Internal Guide:

Prof. Rahul Jain

Prepared By:

Mr. Parth (19012011130)

Mr. Swar (19012011057)

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Submitted to,
Department of Computer Engineering
U.V. Patel College of Engineering
Ganpat University, Kherva - 384 012

U.V. PATEL COLLEGE OF ENGINEERING



13/05/2023

CERTIFICATE

TO WHOM SO EVER IT MAY CONCERN

This is to certify that Mr. **Parth Panchal** student of **B.Tech Semester VIII (Computer Engineering)** has completed his full semester on site project work titled “**Dozti - A B2B E-commerce**” satisfactorily in partial fulfillment of the requirement of Bachelor of Technology degree of Information Technology of Ganpat University, Kherva, Mehsana in the year 2022-2023.

College Project Guide

Sign

Prof. Rahul Jain

Dr. Paresh M. Solanki,
HOD, Computer Engineering .

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This is to certify that Mr. **Swar Patel** student of **B.Tech Semester VIII (Computer Engineering)** has completed his full semester on site project work titled “**Dozti - A B2B E-commerce**” satisfactorily in partial fulfillment of the requirement of Bachelor of Technology degree of Information Technology of Ganpat University, Kherva, Mehsana in the year 2022-2023.

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Prof. Rahul Jain

Dr. Paresh M. Solanki,
HOD, Computer Engineering .

CERTIFICATE

This is to certify that **Mr. Parthkumar Jitendrakumar Panchal** student of **U V Patel College of Engineering, Ganpat University** has successfully completed the project titled **"Dozti - A B2B E-commerce"** in our company with reference to the fully fulfilment of the requirements of Degree. he had taken training in our company during **Jan 2023 to April 2023**. During his stay at company, he is found sincere and hardworking.

We wish he is very best in all the future endeavours.


BrainyBeam
Technologies Pvt Ltd
Ahmedabad

With Best Regards,
Mr. Sagar Jasani
BrainyBeam Technologies PVT. LTD.

Head Office : Block No, 118, Sukan Mall,
Science City Road,Ahmedabad.
Call: +91 9033237336

Branch Office:
C/o IANT Dhanlaxmi Complex,
Income Tax Croos Road, Ahmedabad.

Contact@brainybeam.com
www.brainybeam.com

CERTIFICATE

This is to certify that **Mr. Swar Dineshbhai Patel** student of **U V Patel College of Engineering, Ganpat University** has successfully completed the project titled "**Dozti - A B2B E-commerce**" in our company with reference to the fully fulfilment of the requirements of Degree. he had taken training in our company during **Jan 2023 to April 2023**. During his stay at company, he is found sincere and hardworking.

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Contact@brainybeam.com
www.brainybeam.com

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I am pleased to state that the whole report is just the presentation of the facts that have been found during the project work through different sources and its each sentence is an exact representation of the information obtained and the analysis there for. We hope that we have manifested our sincere attempts to represent all the information and other things to the best of our ability.

ABSTRACT

B2B e-commerce is the practice of buying and selling goods and services between businesses using electronic networks and the internet. It has become increasingly popular due to its many benefits, such as increased efficiency, lower costs, and greater access to a wider range of suppliers and customers. However, it also presents challenges that businesses must overcome, such as competition and the need to adapt to changing market conditions. To succeed in B2B e-commerce, businesses must focus on building strong relationships with their customers, developing innovative products and services, and leveraging technology to enhance the customer experience. Overall, B2B e-commerce offers many opportunities for growth and success, and businesses that embrace this trend can position themselves for long-term success in a highly competitive marketplace.

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1. INTRODUCTION

1.1 Overview

The growth of B2B e-commerce has created new opportunities for businesses to streamline their operations and reach a wider customer base. However, there are still many challenges that businesses face when engaging in B2B e-commerce, such as finding the right suppliers, negotiating prices, and managing inventory.

To address these challenges, a digital platform for B2B e-commerce is developed to facilitate the buying and selling of goods and services between businesses. The platform provides a centralized location for businesses to connect with suppliers, negotiate prices, and manage their inventory in a more efficient and cost-effective way.

This project aims to develop a digital platform for B2B e-commerce, with a focus on providing a seamless and user-friendly experience for businesses. The platform is designed to simplify the buying and selling process, provide easy access to a wide range of suppliers, and allow businesses to manage their orders and inventory in real time.

Overall, the digital platform for B2B e-commerce aims to provide a more efficient and cost-effective way for businesses to engage in e-commerce, streamline their operations, and reach a wider customer base.

1.2 Scope

Developing a B2B e-commerce platform: This can involve building a custom platform that is tailored to the needs of the company and its customers. The scope of this project can include requirements gathering, design and development, testing, and deployment.

Improving an existing B2B e-commerce platform: This can involve making improvements to an existing platform to increase its usability, functionality, and/or performance. The scope of this project can include identifying areas for improvement, developing, and implementing solutions, and testing and evaluating the effectiveness of the improvements.

Integrating a B2B e-commerce platform with other systems: This can involve integrating a B2B e-commerce platform with other systems such as inventory management, accounting, or customer relationship management (CRM) software. The scope of this project can include requirements gathering, design and development, testing, and deployment.

Launching a B2B e-commerce business: This can involve launching a new B2B e-commerce business from scratch. The scope of this project can include market research, developing a business plan, creating a branding strategy, building a website, establishing relationships with suppliers and customers, and launching the business.

2. FEASIBILITY STUDY (SYSTEM ANALYSIS)

2.1 Economic Feasibility

B2B ecommerce in PHP can be economically feasible depending on various factors such as the size of the business, the nature of the products or services being offered, the target market, and the competition in the industry.

Some advantages of using PHP for B2B ecommerce include its open-source nature, which allows for easy customization and flexibility, as well as its relatively low cost compared to other programming languages.

However, developing and maintaining a B2B ecommerce platform requires significant investment in terms of time, resources, and expertise. It is important to consider factors such as hosting, security, payment gateways, and user experience when building a B2B ecommerce platform in PHP.

Additionally, the success of a B2B ecommerce platform depends on its ability to attract and retain customers, as well as generate revenue through sales. Therefore, it is important to conduct market research and develop a solid business plan before investing in a B2B ecommerce platform.

Overall, B2B ecommerce in PHP can be economically feasible, but it requires careful planning, investment, and execution to succeed in a competitive market.

2.2 Technical Feasibility

From a technical perspective, B2B ecommerce in PHP is definitely feasible. PHP is a popular programming language for web development and has a large community of developers who contribute to its development and maintenance. As a result, there is a wide range of tools and resources available to developers for building B2B ecommerce platforms in PHP.

- Some of the technical aspects that need to be considered when building a B2B ecommerce platform in PHP include:

Scalability: The platform needs to be able to handle large volumes of traffic and transactions as the business grows.

Security: Security is a critical aspect of any ecommerce platform, and PHP offers several security features such as password hashing and encryption that can be used to protect user data.

Performance: The platform needs to be fast and responsive to ensure a good user experience.

Integration: The platform needs to be able to integrate with various third-party systems such as payment gateways, shipping providers, and inventory management systems.

Mobile friendliness: With the increasing use of mobile devices for online shopping, the platform needs to be optimized for mobile devices.

User experience: The platform needs to be user-friendly and intuitive, with features such as easy navigation, product search, and checkout process.

2.3 Behavioral Feasibility

Behavioral feasibility refers to the willingness of the stakeholders to accept and use the B2B ecommerce platform. It is an important aspect of feasibility analysis that takes into account the behavioral factors of the stakeholders, such as their attitudes, preferences, and behaviors.

- Some factors that can affect the behavioral feasibility of a B2B ecommerce platform include:

Trust: Building trust is critical for the success of any ecommerce platform. The stakeholders must trust the platform to provide secure transactions and protect their sensitive information.

Ease of use: The platform must be easy to use and navigate, with a user-friendly interface that meets the needs of the stakeholders.

Customization: The platform must be customizable to meet the specific needs and preferences of the stakeholders.

Competitive pricing: The platform must offer competitive pricing to attract and retain customers.

2.4 Schedule Feasibility

The schedule feasibility analysis involves breaking down the project into smaller tasks, estimating the time and resources required for each task, and creating a project timeline. The project timeline should consider any dependencies between tasks and the availability of resources, such as the development team, hardware, and software.

- Factors that can affect the schedule feasibility of a B2B ecommerce platform include:

Complexity of the project: The more complex the platform, the longer it will take to develop and implement.

Availability of resources: The availability of resources, including the development team, hardware, and software, can impact the project timeline.

Scope creep: Changes to the project scope can delay the project timeline.

Integration with existing systems: Integrating the platform with existing systems can be time-consuming and affect the project timeline.

Testing and quality assurance: Testing and quality assurance are critical for ensuring the platform is functional and secure, but they can also extend the project timeline.

2.5 Operational Feasibility

The operational feasibility analysis involves identifying the business processes that will be affected by the platform and evaluating whether the platform can integrate seamlessly with existing systems and workflows. The analysis also involves identifying any potential operational risks and developing plans to mitigate them.

- Factors that can affect the operational feasibility of a B2B ecommerce platform include:

Compatibility with existing systems: The platform must be compatible with existing systems and technologies used by the business to ensure a smooth integration and minimize disruption to business operations.

Scalability: The platform must be scalable to accommodate future growth and changes in the business operations.

Data security and privacy: The platform must be designed to ensure the security and privacy of sensitive data and information shared by the stakeholders.

Training and support: The stakeholders must be trained on how to use the platform, and support must be provided to address any issues or concerns that arise.

Cost-effectiveness: The platform must be cost-effective and provide a return on investment for the business.

3. SOFTWARE & HARDWARE REQUIREMENTS

3.1 User Characteristics

- Here are some potential user characteristics for the different user roles and functions in a B2B ecommerce platform:

Admin:

- A business owner or manager responsible for managing the platform and overseeing user activity.
- Needs to have access to backend systems and tools for managing product listings, user accounts, and orders.
- Require advanced technical skills and knowledge of ecommerce platforms.
- Needs to be able to monitor user activity and ensure compliance with platform policies and regulations.

Customer:

- A business representative or individual consumer who is looking to purchase products or services.
- Have varying levels of technical proficiency and familiarity with ecommerce platforms.
- Require access to product listings, pricing information, and customer support. Require options for bulk purchasing and account management.

Manager:

- A business representative or individual responsible for managing their company's purchasing activity. Needs to have access to order history and account management tools.
- Require options for tracking and managing multiple orders at once.
- Require access to reporting and analytics tools to track purchasing trends and activity.

Registration:

- A potential customer or user who needs to create an account to access platform features. Require a streamlined registration process that is easy to navigate and complete.
- Require options for customizing their profile information and account settings.

Login:

- A returning customer or user who needs to log in to access platform features.
- Require a streamlined login process that is easy to navigate and complete.

View:

- Refers to the ability for users to browse and view product listings and other platform content.
- Needs to be easy to navigate and search for products.
- Require advanced filtering and sorting options to help users find specific products.

Place order:

- Refers to the ability for users to place orders for products or services.
- Needs to be easy to navigate and complete, with options for selecting quantities, shipping information, and payment methods.
- require options for tracking and managing orders after they are placed.

Payment:

- Refers to the ability for users to complete payments for orders.
- Needs to be secure and reliable, with options for using various payment methods and currencies.
- require options for setting up and managing recurring payments or invoices.

Logout:

- Refers to the ability for users to log out of the platform when they are finished using it.
- Needs to be easy to find and complete, with options for saving account information and preferences if desired.

3.2 Hardware Requirement

Selecting the appropriate hardware for deploying a B2B eCommerce website is crucial for ensuring optimal performance, reliability, and scalability. Here are hardware requirements to consider when selecting hardware for deployment:

Processor and RAM: Select a processor and RAM that can handle the expected traffic and usage of the site. Consider factors such as the number of concurrent users, the complexity of the site, and the size of the database.

Storage: Choose storage options that provide ample space for the site's data, including product images, customer data, and transaction records.

Network Infrastructure: Ensure that the network infrastructure is secure and can handle high traffic volumes. Choose network switches and routers that can handle the expected traffic and provide redundancy.

Backup and Recovery: Have a plan in place for backing up the site's data and recovering from any disasters or downtime. Use backup solutions that offer automatic backups and quick recovery times.

When selecting hardware, it's essential to balance cost with performance and scalability. Choosing reliable hardware that can handle the expected traffic and usage of the site can help to ensure that the site is functioning optimally and providing a positive user experience.

3.3 Software Requirement

Web Server: A web server is required to host the web portal. Apache is popular choices for PHP web development.

PHP: PHP is the scripting language that will be used to build the web portal. The latest version of PHP is recommended for better performance and security.

Database Management System: A database management system (DBMS) is required to store and manage the data related to the B2B e-commerce transactions. MySQL and PostgreSQL are popular choices for PHP web development.

Framework: A PHP framework provides a structure and set of tools for developing web applications. Laravel and Symphony are popular PHP frameworks for B2B e-commerce portals.

Payment Gateway Integration: A payment gateway is required to process payments for the B2B - transactions. Popular payment gateways for PHP web development include PayPal, Stripe, and Braintree

4. PROJECT PLANNING

4.1 Lifecycle of SDLC



Fig.4.1. SDLC Phases

4.1.1 Explain in detail about each stage of production.

Design



4.1.1.1 Design Phases

Designing a B2B eCommerce website requires careful planning and attention to detail. Here are some key considerations to keep in mind:

User Experience: The design of B2B ecommerce site is focused on providing a user-friendly experience

for customers. Make sure site is easy to navigate, search and make purchases.

Mobile Optimization: More and more users are browsing the web on their mobile devices, so it's important to ensure that is B2B ecommerce site is optimized for mobile devices as well as desktops.

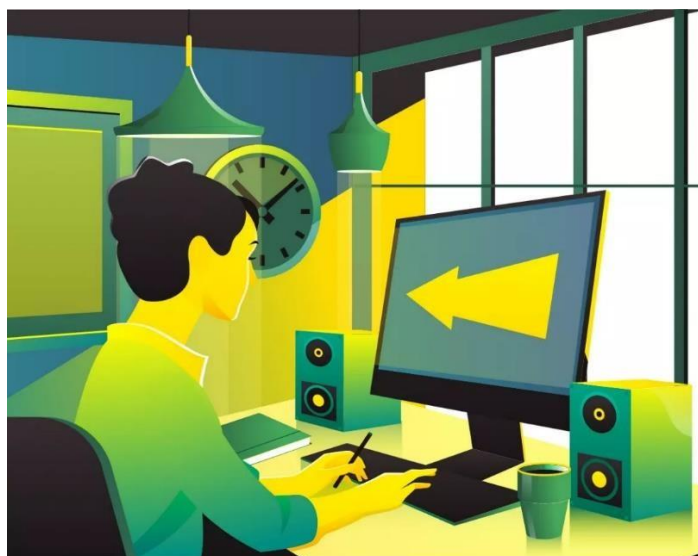
Development



4.1.1.2 Development Phases

Developing a B2B eCommerce website involves selecting the appropriate platform, customizing the design and functionality, integrating with third-party tools, developing the front-end and back-end, testing for functionality, compatibility, security, and user acceptance, and deploying to the live environment. Ongoing maintenance is also necessary to keep the site updated and secure. It is essential to ensure that the site provides a positive user experience, is easy to navigate, and offers a range of payment and shipping options to meet the needs of customers.

Testing



4.1.1.3 Testing Phases

Testing is a crucial part of developing a B2B eCommerce website, involving multiple areas such as functionality, compatibility, performance, security, user acceptance, and load testing. Ensuring the site functions correctly, is secure, and offers a positive user experience is vital to the success of the site. By testing the site thoroughly, any issues can be identified and addressed before the site goes live, improving the chances of meeting customer needs and increasing conversions.

Deployment



4.1.1.4 Deployment

Deployment of a B2B E-Commerce website involves moving the site from the development environment to the live environment. This involves transferring all files and data, configuring the web server, and ensuring the site is running correctly. After deployment, it's essential to monitor the site's performance, identify any issues, and address them promptly. Ongoing maintenance and updates are necessary to keep the site secure and functioning optimally, ensuring that it provides a positive user experience and meets the needs of customers.

Maintenance



4.1.1.5 Maintenance

Maintenance is an essential part of managing a B2B eCommerce website and involves regular updates, monitoring, and troubleshooting to ensure the site is functioning optimally. This includes updating software, plugins, and security patches, monitoring site performance and user feedback, and addressing any issues that arise. Ongoing maintenance is necessary to keep the site secure, up-to-date, and functioning optimally, providing a positive user experience and meeting the needs of customers.

Requirements Analysis



4.1.1.6 Requirements Analysis

Requirements analysis is a critical phase of B2B eCommerce website development that involves gathering, analyzing, and prioritizing business and customer requirements. This includes identifying functional and non-functional requirements, determining the scope and constraints of the project, defining user personas and user stories, and establishing key performance indicators (KPIs) for the site. The purpose of requirements analysis is to ensure that the final site meets the needs of the business and its customers, is user-friendly, scalable, and supports the organization's goals and objectives.

4.2 Process Model

- **Waterfall Model**

The waterfall model is a cascading SDLC that depicts the development process as a flow, progressing sequentially through the phases of analysis, planning, realisation, testing, implementation, and support. This SDLC methodology entails a stage-by-stage execution of each stage. Waterfall methodology entails meticulous documentation. Each phase of this SDLC model has established characteristics.

The waterfall life cycle model is widely regarded as one of the most effective methods for managing complicated projects. This strategy enables the avoidance of numerous errors that occur because of poor control over the project. It does, however, result in widespread documentation development. It benefits future developers who work with the product, but it takes a long time to document everything.

If anything, material changes in the initial plan, the staff is wait till the very ends to restart and complete all software life cycle phases.

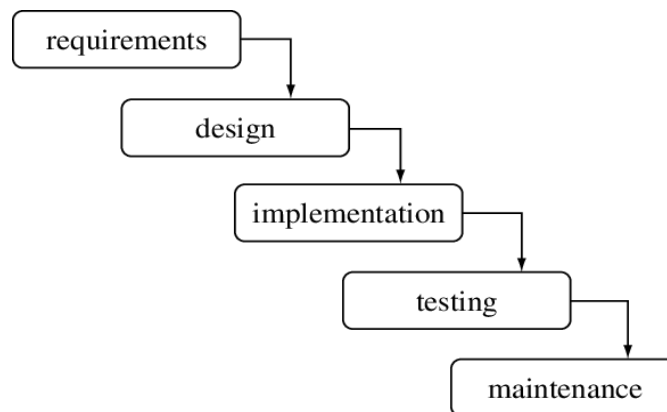


Fig.4.2.1 Waterfall Model

It will discover the benefits and drawbacks of the Waterfall SDLC methodology.

Benefits:

- Easy to use and comprehend.
- Management is simplified by the rigor of the process: each phase has a specified outcome and process assessment.
- The stages of development proceed sequentially.
- Ideal for modest to medium-sized projects with unambiguous needs It's simple to identify important aspects in the development cycle.
- Simple job classification and prioritization.

Drawbacks:

- Only after the final stage is completed is the software complete. High risks and ambiguity
- Not recommended for complex, object-oriented projects Unsuitable for long-term projects
- While the stage is still in production, it is difficult to gauge its progress.
- Integration occurs at the conclusion, which eliminates the possibility of detecting the issue in advance.

Use cases for the Waterfall SDLC paradigm include the following:

- The specifications are precise.
- The definition of the product is stable.
- Because the technology stack is predefined, it is not dynamic. No requirements that are ambiguous
- The undertaking is brief.

- **Incremental Process Model**

While the iterative paradigm is like the waterfall model, there are significant differences between them. As an example, imagine there is an app with ten essential functionalities. In the waterfall model, all 10 functions will be meticulously prepared during the requirement analysis and design phases and then implemented gradually throughout the development stage. Iterative models are distinct. This means that the entire phase is split into a fixed number of iterations, during which developers construct a fixed number of features.

As a result, the Iterative SDLC model does not necessitate a comprehensive list of requirements prior to the start of the project. The development process begins with requirements for the functional element, which can later be expanded. Because the process is repeatable, new versions of the product can be created for each cycle. Every iteration (which lasts two to six weeks) includes the development of a distinct system component. Following that, this component is added to the previously built features. In mathematical terms, the iterative model is a realisation of the sequential approximation method, which signifies a progressive approach to the desired final product shape.

During the first iteration, for example, the team has opted to focus on three features out of a total of ten. It is during the development of these that developers go through all stages of the software development process, from requirement collecting to deployment and maintenance. They must restart the development cycle whenever they move on to a new set of capabilities.

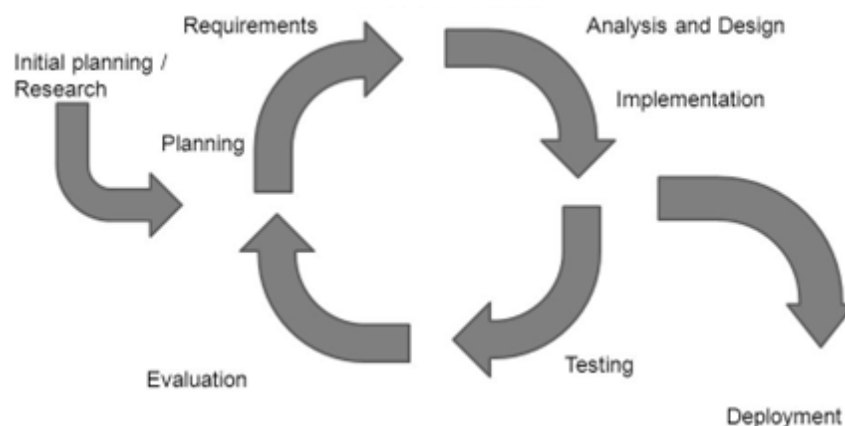


Fig4.2.2 Incremental Process Model

Benefits

- Some functionalities can be swiftly produced at the beginning of the development lifecycle, while others must be developed later.
- Parallel development is a technique that can be used. The progress is easily observable and quantifiable.
- Shorter iterations result in easier testing and debugging stages, which saves time. Because high-risk tasks are performed first, it is easier to maintain risk control.
- Problems and dangers identified in one iteration can be avoided in subsequent iterations by implementing preventative measures.
- Flexibility and ability to respond to changes in demand are essential.

Drawbacks

- More resources are required for the iterative model than for the waterfall model.

- It is necessary to maintain constant management.
- Architecture or design problems arise because of the short planning period in which not all requirements anticipated and addressed.
- This is a poor choice for little tasks.
- It is tough to keep track of the process.
- Even at the end of the project's lifespan, it is possible that the risks will not be totally identified. The study of risks necessitates the participation of highly qualified individuals.

Use cases for the Interactive SDLC paradigm include the following.

- Clearly defined specifications for the product are established from the outset. The project is vast and involves several difficult tasks.
- Although the overall task has been set, the specifics of the work alter throughout the process.

- **Agile Process Model**

Agile is a concept, not a development methodology. It encompasses an entire family of methods. Scrum, Kanban, and XP (extreme programming) are some of the more popular Agile SDLC implementations. Let's begin by examining the fundamental ideas of Agile in general, followed by a brief examination of some of its manifestations.

Its first distinction is that, like the iterative approach, all labour is divided into iterations. Sprints are used to refer to these iterations. The team begins by defining the actions that must be completed within a specified timeframe. The primary difference between this strategy and the iterative one is that the amount of work is not fixed and can be adjusted during the process.

The following distinction is that Agile never abandons clients. On the provider's side, specialists maintain continual communication with the client. They keep him informed of completed tasks and acquaint him with the plan. All adjustments are also discussed and approved with the customer. Before the development team can progress to the next step in Agile, each stage must be examined and approved by all stakeholders.

Agile methodology entails daily or weekly meetings and sprint reviews. Sprint reviews follow this format: the first half of the meeting is devoted to reviewing completed work, while the second half is devoted to preparing the next Sprint.



Fig4.2.3 Agile Process Model

Face-to-face communication is yet another part of the Agile software development life cycle. It is one of the Agile principles, which number twelve in total. Given the prevalence of outsourcing, meeting a customer face-to-face is difficult. Agile, on the other hand, uses video conferencing rather than audio conferences to allow for better understanding of body language. It aids in the prevention of some misconceptions and the development of stronger working relationships with clients.

There is much more that can be stated about Agile SDLC, but let's take a closer look at some specific data. The outcomes of research into Agile approach have been astounding. The following are the most important points:

The percentage of organizations using Agile has increased from 37 percent in 2020 to 86 percent in 2021. Agile results in a 50% increase in the number of business objectives achieved.

The ability to change project priorities at any time is cited as a primary reason for choosing Agile by 70% of respondents.

Sixty percent of programmers who work with Agile say they detect a significant reduction in time to market.

Benefits:

- To enhance competitive advantage, modifications to functional requirements are incorporated into the development cycle.
- The project is broken down into brief and clear iterations.
- Risks are mitigated using a flexible change management strategy. Rapid release of the initial stage of the software

Drawbacks:

- Because of permanent alterations, it is difficult to estimate the total cost at the end. The crew is very professional and focused on the needs of the client.
- It is possible that new requirements will clash with the existing structure.
- With all the modifications and changes, there is a chance that the project will take longer to complete than anticipated.

Conclusion: Researching and analysing the breadth of the project led to the conclusion that the incremental model is preferable to the others for building the software development life cycle, as it covers all bases and accommodates necessary adjustments.

4.3 Work Breakdown Structure

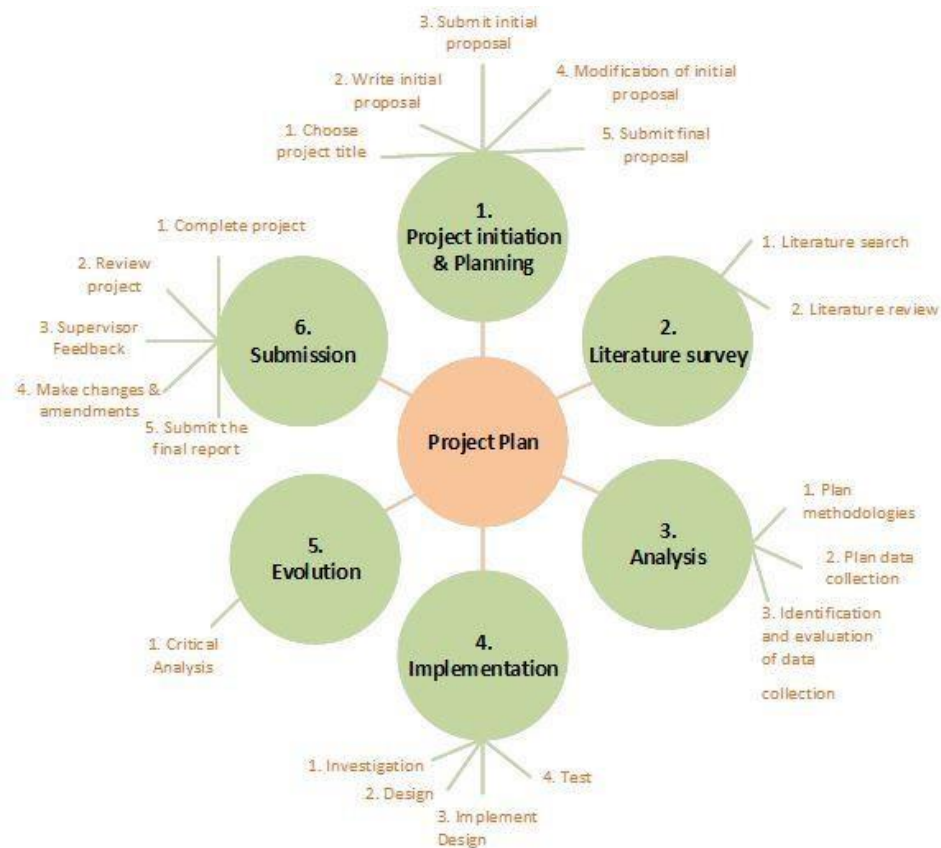


Fig.4.3 Work Breakdown Structure

4.4 Task Sets

Task	Feb-23																											
	1	2	3	4	5	6	7	8	9	10	11	12	#	#	15	16	17	18	19	#	#	#	#	#	#	#	#	#
Requirement Gathering																												
Requirement Gathering																												
Identification of problem and literature survey																												
Design of User Registration form using HTML																												
Design of User login form using HTML																												
Design of User home page using HTML																												
Design of User product page using HTML																												
Design of User Single product detail page using HTML																												
Design of User Add to cart page using HTML																												
Design of User place order page using HTML																												
Design of User recent order page using HTML																												
Design of User Profile page using HTML																												
Design of User Update billing address form using HTML																												
Design of User Update shipping address form using HTML																												
Design of User change password form using HTML																												
Design of User about us page using HTML																												

Task set 1

	Mar-23																														
Task	1	2	3	4	5	6	7	8	9	10	11	12	#	#	15	16	17	18	19	#	#	#	#	#	#	#	#	#	#	#	31
Design of Admin login form using HTML																															
Design of Mentor Dashboard page using HTML																															
Design of Admin Manage logo form using HTML																															
Design of Admin Manage favicon form using HTML																															
Design of Admin Manage footers & contact form using HTML																															
Design of Admin Manage product form using HTML																															
Design of Admin Home setting form using HTML																															
Design of Admin Banner setting form using HTML																															
Design of Admin Payment setting form using HTML																															
Design of Admin Head & body script form using HTML																															
Design of Admin Manage size page using HTML																															
Design of Admin Manage color page using HTML																															
Design of Admin shipping cost page using HTML																															
Design of Admin top level category form using HTML																															
Design of Admin mid level category form using HTML																															
Design of Admin end level category form using HTML																															
Design of Admin add product form using HTML																															
Design of Admin view product using HTML																															

Taskset 2

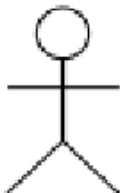

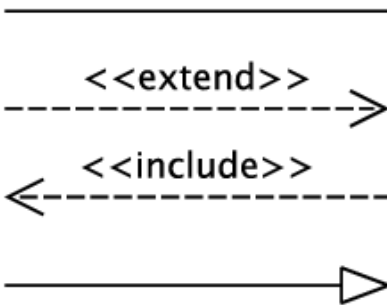
	Apr-23																														
Task	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Design of Admin Manage product page using HTML																															
Design of Admin slide up page using HTML																															
Design of Admin Service page using HTML																															
Design of Admin Customer page using HTML																															
Design of Admin about us form using HTML																															
Design of Admin contact us form using HTML																															
Design of Admin FAQ form using HTML																															
Design of Admin Social media links using HTML																															
Design of Admin Subscriber page using HTML																															
Connect to mySQL database																															
Store a data of Registration detail in database																															
Verify Login form using database																															
view product using database																															
Store add to cart in database																															
database																															
Store billing and shipping address in database																															
Manage logo using database																															
Manage favicon using database																															
Manage product using database																															
Manage home page using database																															
Manage banner and payment using database																															
Manage size using database																															
Manage color and cost using database																															
Manage level wise category using database																															
Manage order and customer using database																															
Manage social media links and subscriber page using database																															

5. SYSTEM DESIGN

5.1 Use case Diagram

A use case diagram is used to illustrate the dynamic nature of a system and capture its requirements, both internal and external. It shows the actors and elements responsible for implementing the use cases, as well as the interactions between them. This diagram depicts how an external entity can interact with a specific part of the system.

Table 5.1: Symbols and components of Use Case Diagram

Symbol	Reference Name
	Actor
	Use case
	Relationship

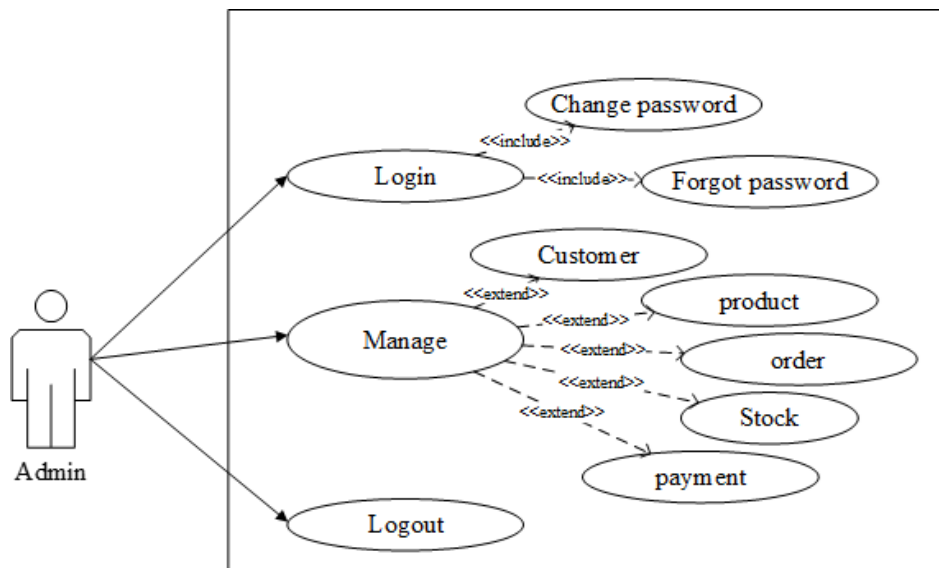


Fig.5.1.1 Use case Diagram.

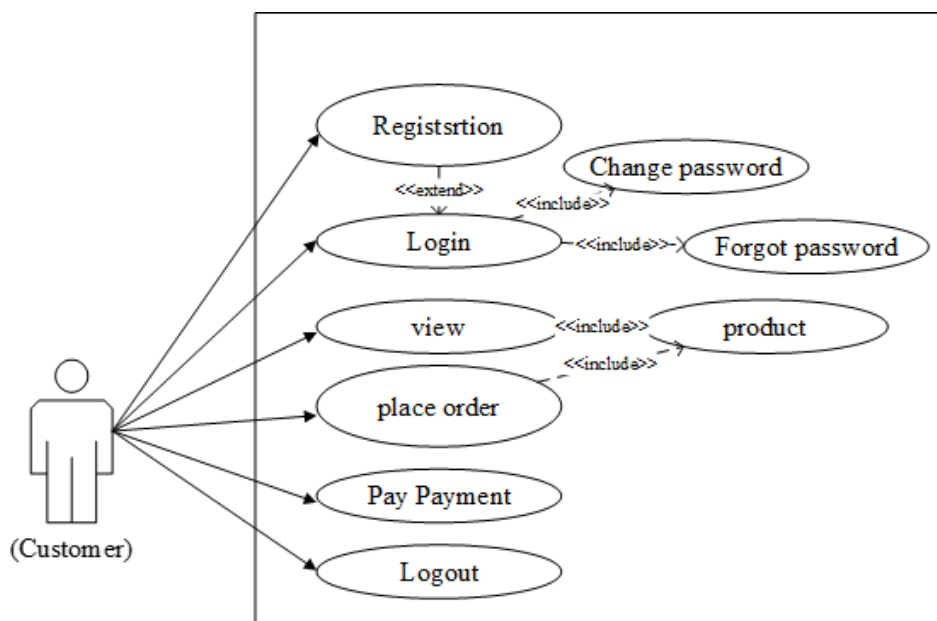



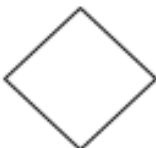
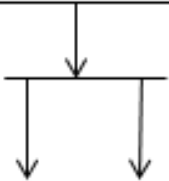
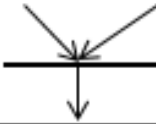



Fig.5.1.2 Use case Diagram.

5.2 Activity Diagram

Activity diagrams are diagrams that illustrate the sequence of activities in a system. They demonstrate the flow of events from a starting point to an ending point, including various decision paths that exist within the activities. These diagrams can be utilized to depict situations where multiple activities can be executed simultaneously. Activity diagrams are particularly useful in business modeling, as they can effectively illustrate the processes involved in various business activities.

Table 5.2: Symbols and components of Activity Diagram

Sr. No	Name	Symbol
1.	Start Node	
2.	Action State	
3.	Control Flow	
4.	Decision Node	
5.	Fork	
6.	Join	
7.	End State	

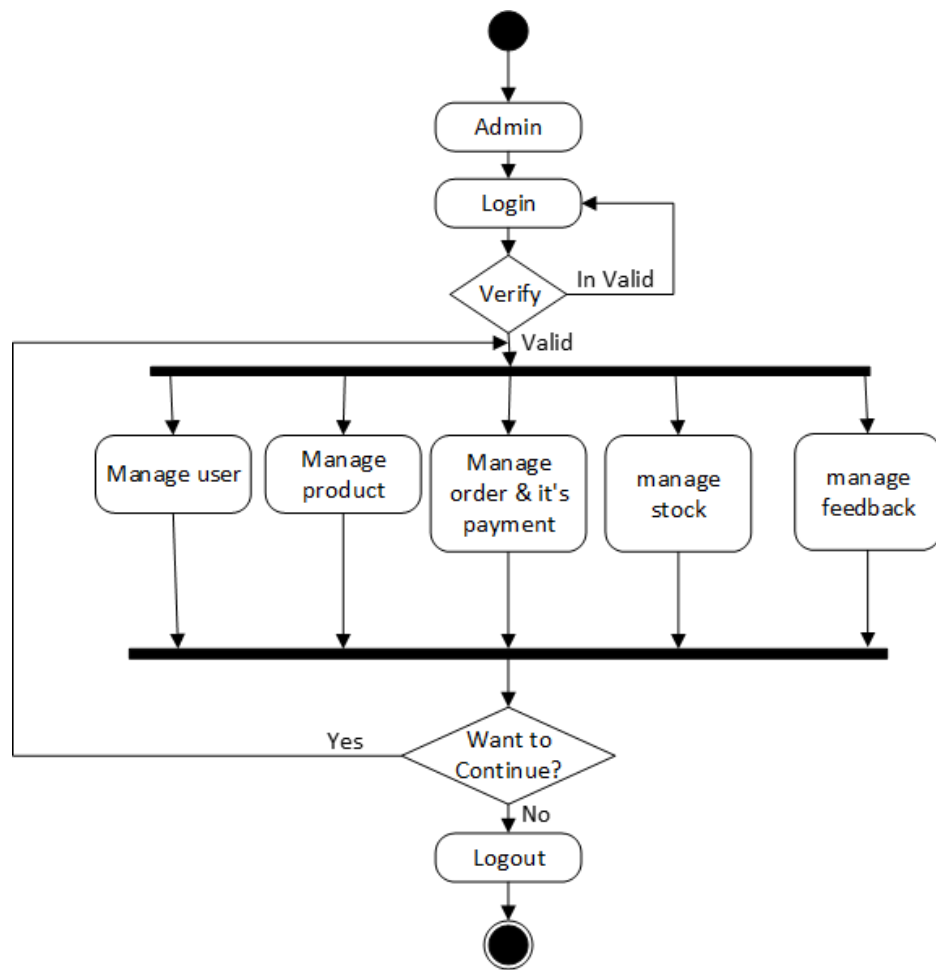


Fig.5.2.1 Activity Diagram

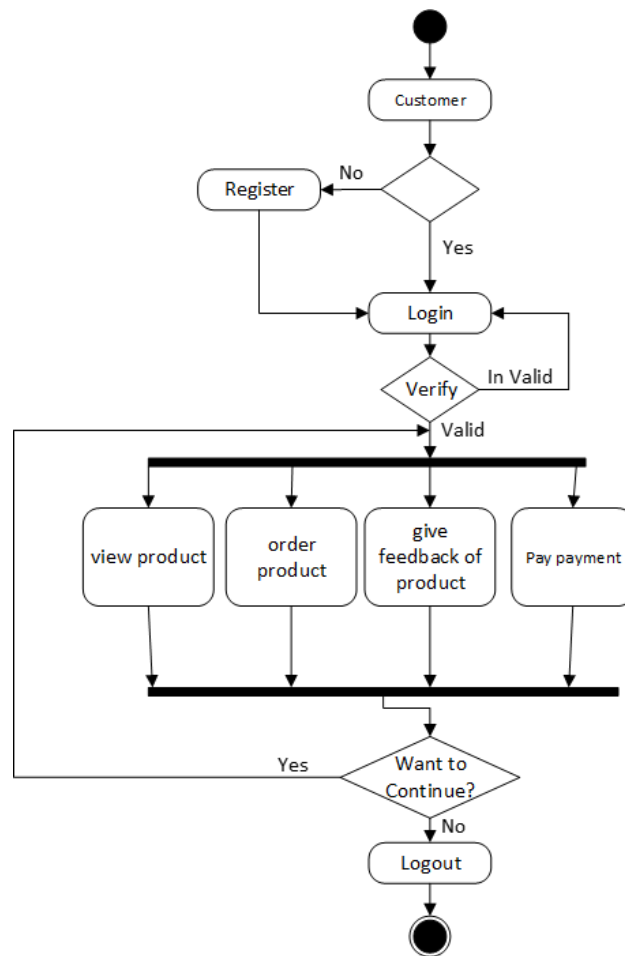
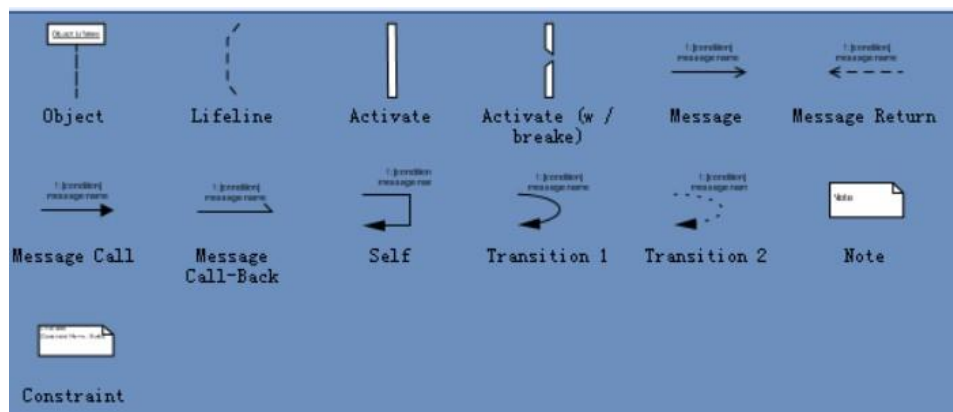


Fig.5.2.2 Activity Diagram

5.3 Sequence Diagram

A sequence diagram is a type of UML diagram that represents interactions between objects in a system or process. It shows the sequence of messages exchanged between objects over time and can help to visualize the flow of control in a system.

Table 5.3: Symbols and components of Sequence Diagram



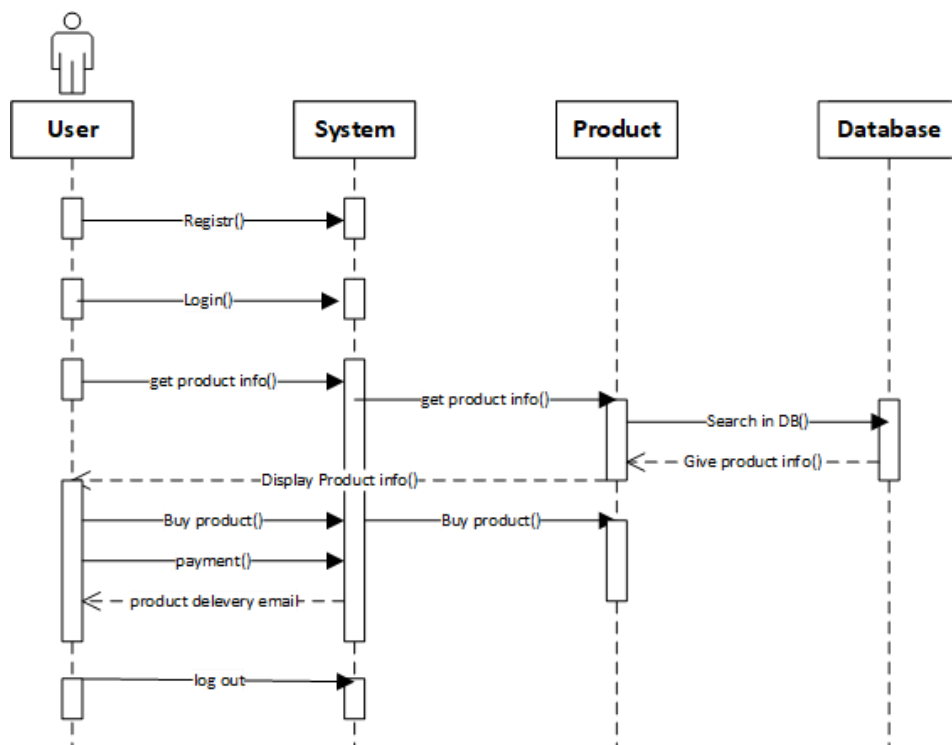
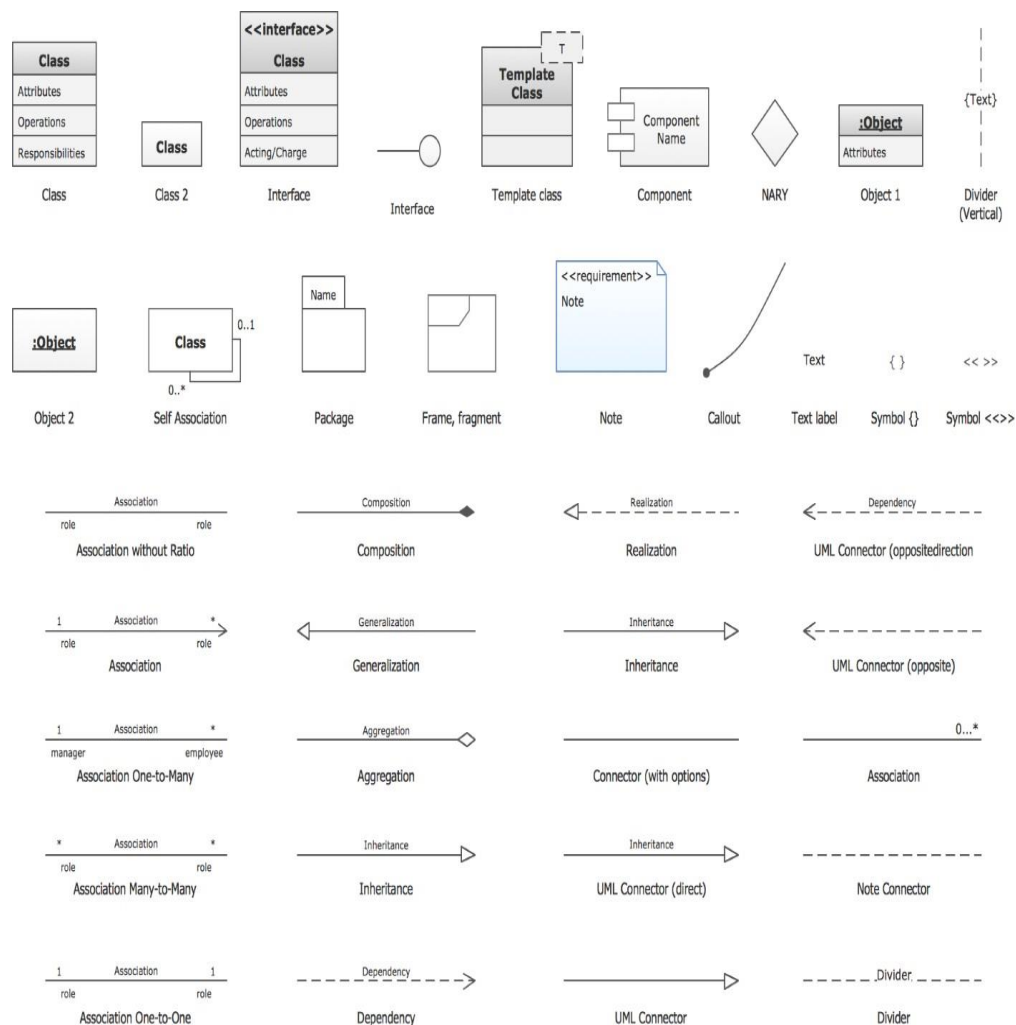


Fig 5.3.1Sequence Diagram

5.4 Class Diagram

A class diagram is a type of static diagram that provides a static view of an application. Its purpose is not only to visualize, describe, and document different aspects of a system but also to construct executable code for the software application. In a class diagram, the attributes, operations, and constraints of a class are described. It is extensively used in the modeling of object-oriented systems because it is the only UML diagram that can be directly mapped with object-oriented programming languages. A class diagram displays a group of classes, interfaces, associations, collaborations, and constraints. It is also referred to as a structural diagram.

Table 5.4: Symbols and components of Class Diagram



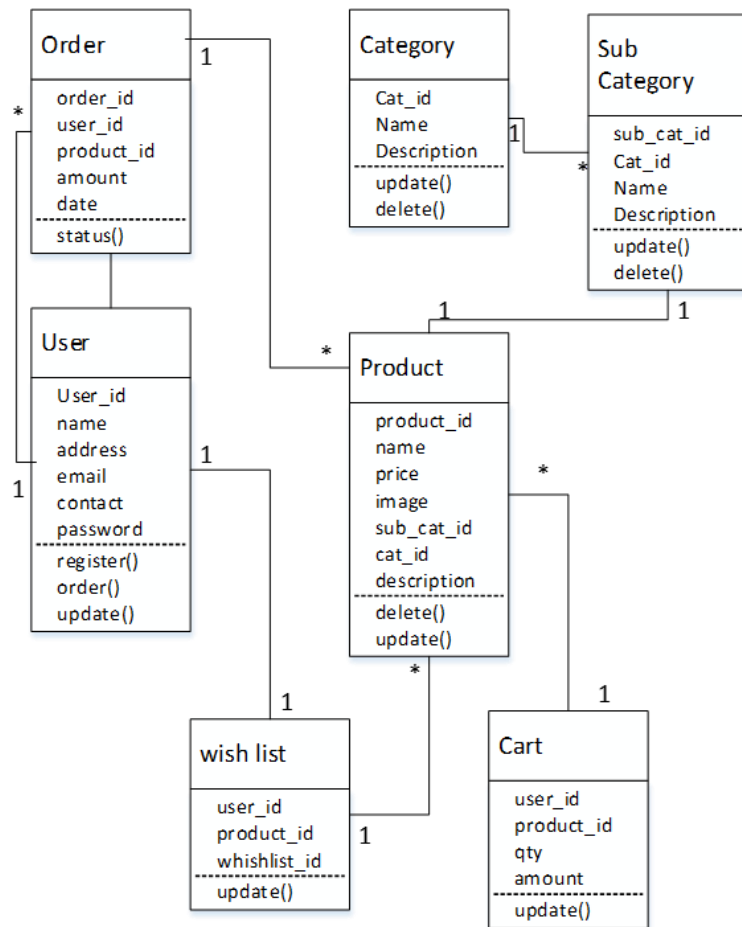







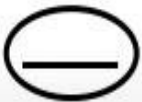
Fig.5.4.1 Class Diagram

5.5 ER Diagram

The Entity-Relationship (ER) model is a high-level data model used to define data elements and relationships in a system. It is used to develop a conceptual design for a database, providing a simple and easy-to-design view of data.

The ER model represents the database structure using an entity-relationship diagram, which is a graphical depiction of the entities, attributes, and relationships between them.

Table 5.5: Symbols and components of ER Diagram

Symbol Name	Symbol	Represents
Rectangles		Represents Entity
Ellipses		Represents Attribute
Diamonds		Represents Relationship
Lines		Links Attribute(s) to entity set(s) or Entity set(s) to Relationship set(s)
Double Ellipses		Represents Multivalued Attributes
Primary key		Represents Key Attributes / Single Valued Attributes

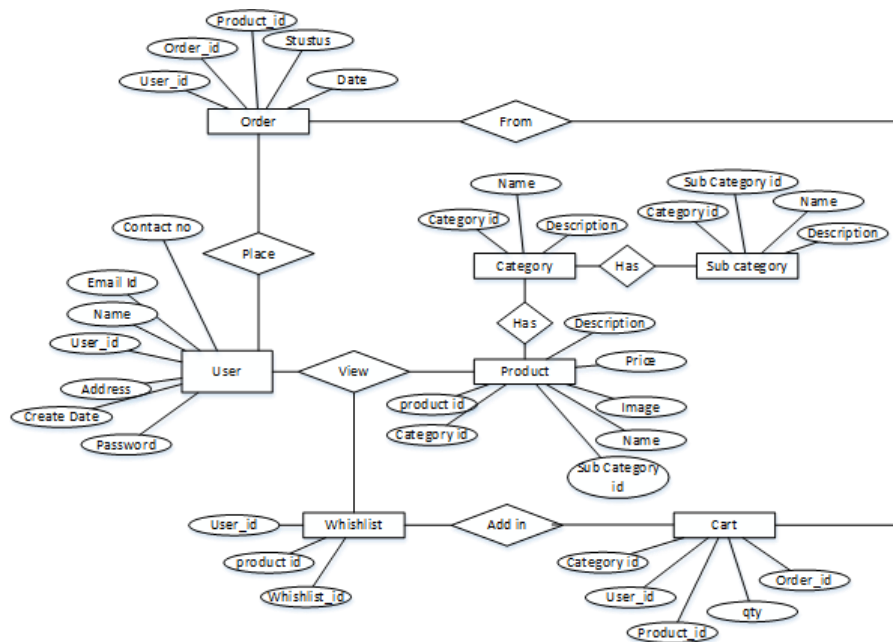







Fig 5.5.1 ER Diagram

5.6 Flow Chart

A flowchart is a graphical representation of a process or system that uses symbols and arrows to show the sequence of steps or actions. It is commonly used in business, engineering, and other fields to describe and analyze processes.

Table 5.6: Symbols and components of Flow Chart

Symbol	Name	Function
	Start/end	An oval represents a start or end point
	Arrows	A line is a connector that shows relationships between the representative shapes
	Input/Output	A parallelogram represents input or output
	Process	A rectangle represents a process
	Decision	A diamond indicates a decision

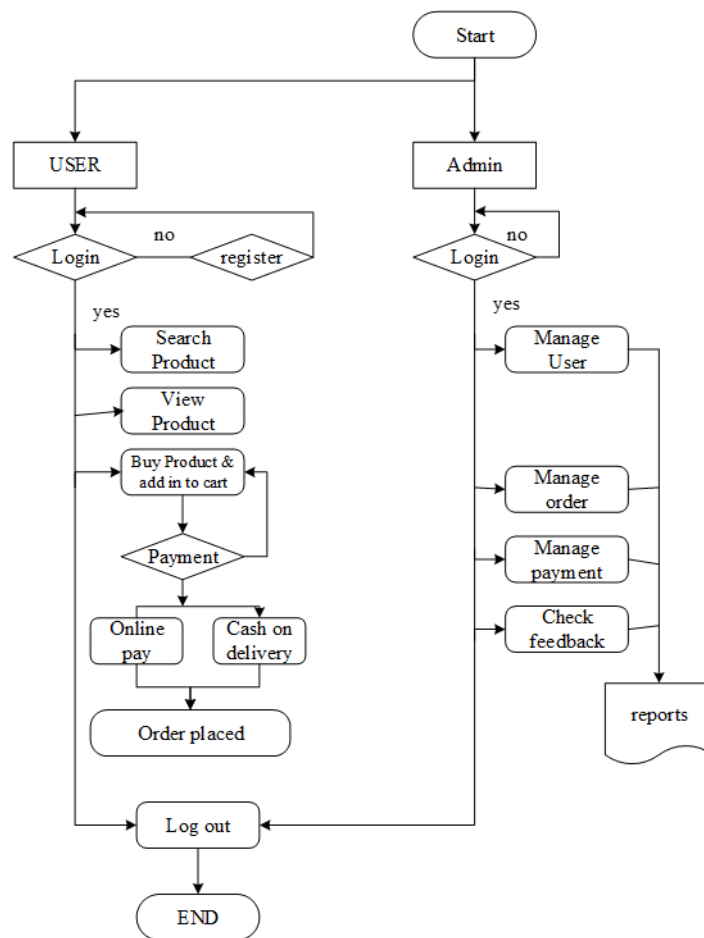

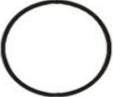




Fig 5.6.1 Flow Chart

5.7 Data Flow Diagram

A Data Flow Diagram (DFD) is a visual representation of how information flows through a system. It is a useful tool for representing the system requirements graphically and can be used for manual, automated, or hybrid systems. The diagram depicts how data enters and exits the system, as well as any modifications to the information and where data is stored. The purpose of the DFD is to demonstrate the system's scope and boundaries comprehensively, and it can serve as a communication tool between system analysts and individuals involved in the redesign process.

Table 5.7 Symbols and components of Data Flow Diagram

	dataflow	Arrows showing direction of flow
	process	circles
	file	horizontal pair of lines
	data-source, sink	rectangular box

Level-0

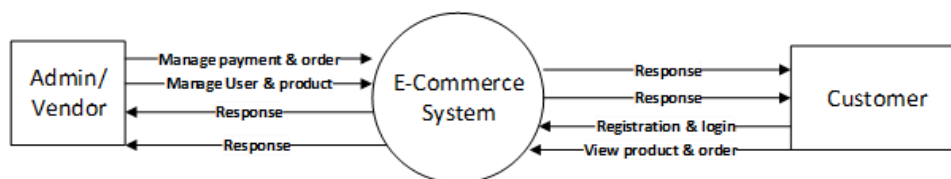


Fig 5.7.1 Data Flow Diagram

Level-1

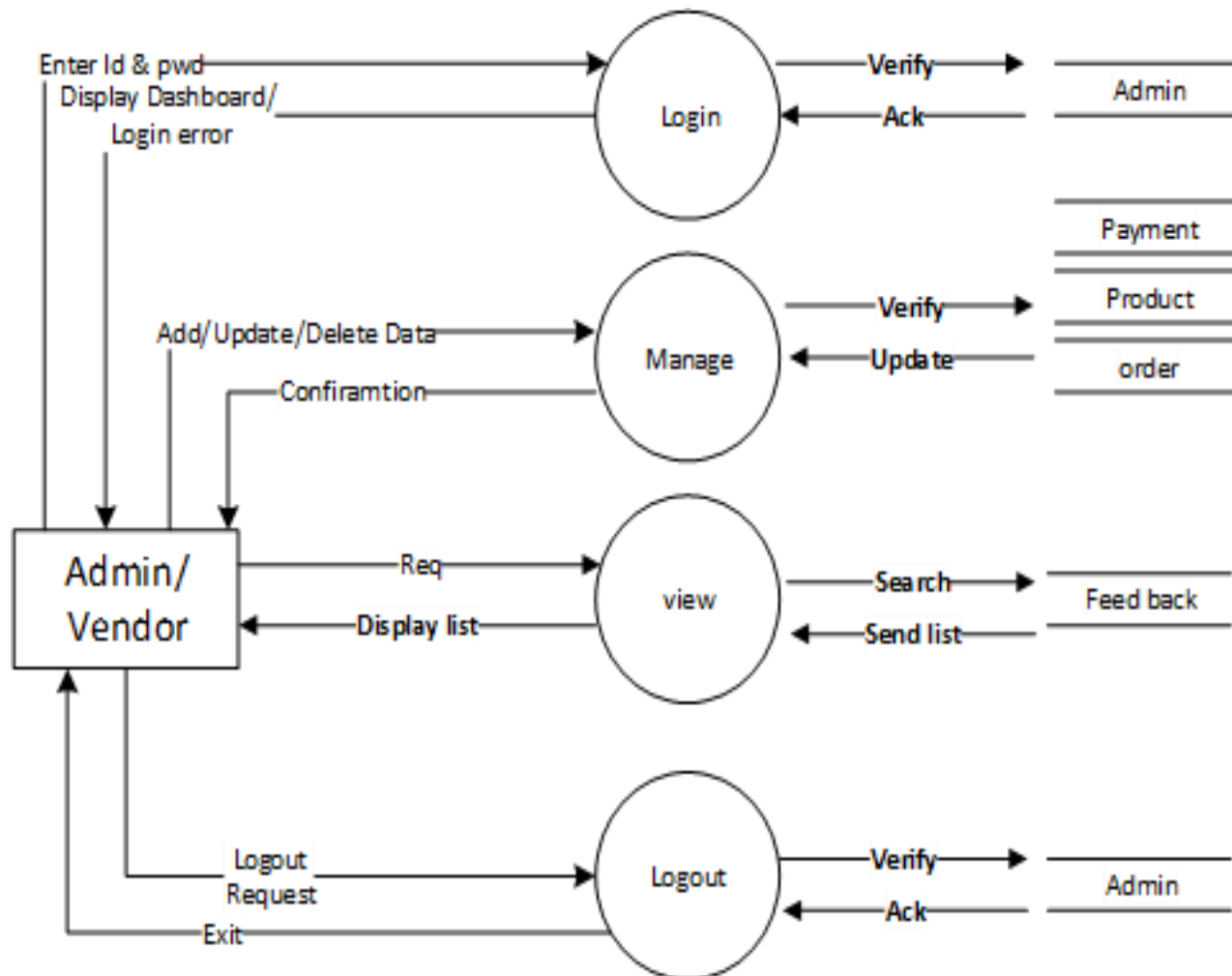


Fig 5.7.2 Data Flow Diagram(level-1)

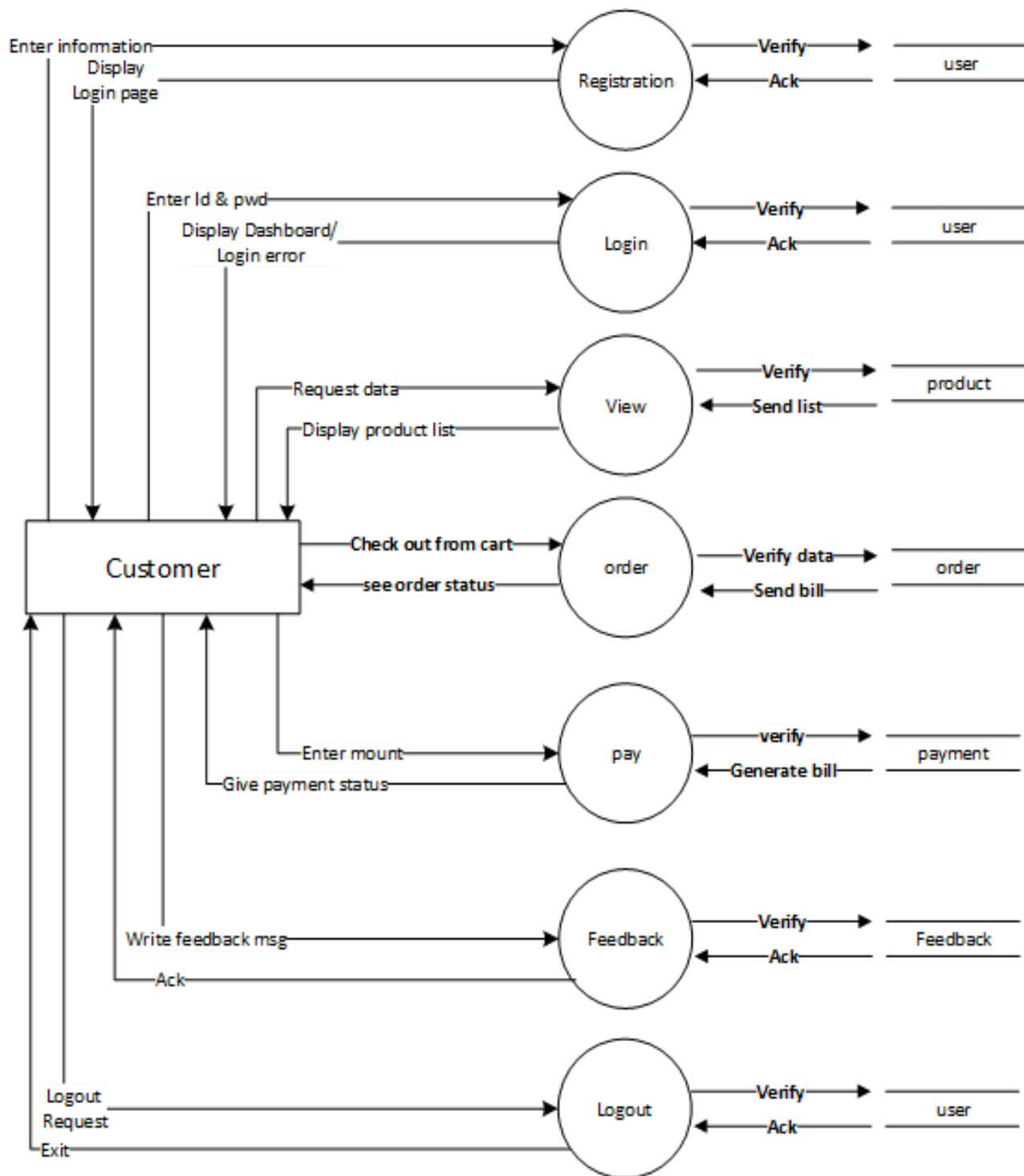


Fig 5.7.3 Data Flow Diagram(level-2)

6. TESTING

6.1 Type of Testing

Functional testing:

Functional testing is a type of software testing that verifies that a system or application meets the functional requirements or specifications. It involves testing individual functions or features of the system to ensure they work as intended and meet the business requirements.

- Functional testing can be manual or automated and typically includes the following types of tests:

Unit testing: This type of testing verifies that individual units or components of the system function correctly. It involves testing individual code modules or functions in isolation.

Integration testing: This type of testing verifies that different units or components of the system work together correctly. It involves testing how different parts of the system integrate with each other.

System testing: This type of testing verifies that the system meets the functional requirements. It involves testing the system from end-to-end to ensure all the features and functions work together as intended.

Acceptance testing: This type of testing verifies that the system meets the business requirements and is ready for deployment. It involves testing the system against predefined acceptance criteria to ensure it meets the expectations of the stakeholders.

- Functional testing can cover a wide range of tests, including:
 - Input validation testing to ensure that the system accepts valid inputs and rejects invalid ones.

Functional workflow testing to ensure that the system's features and functions work together as intended.

- Boundary value testing to ensure that the system functions correctly at the upper and lower limits of its parameters.
- Error handling testing to ensure that the system handles errors and exceptions correctly.

Performance testing to ensure that the system functions correctly under different load conditions.

- Compatibility testing to ensure that the system works correctly with different platforms, devices, and browsers.

Performance testing:

Performance testing is a type of software testing that evaluates how well a system or application performs under different workload conditions. The goal of performance testing is to identify performance issues such as slow response times, poor scalability, and bottlenecks in the system, and to ensure that the system meets the performance requirements of its intended users.

- Performance testing can be divided into the following types:

Load testing: This type of performance testing involves testing the system's performance under normal and peak loads. Load testing helps identify how the system behaves when there is an increase in the number of users or transactions, and it measures the system's response time, throughput, and resource utilization.

Stress testing: This type of performance testing involves testing the system's performance under extreme conditions. Stress testing helps identify how the system behaves when it is overloaded or when there are insufficient resources such as memory, CPU, or network bandwidth.

Endurance testing: This type of performance testing involves testing the system's performance over an extended period to ensure that it can handle continuous usage. Endurance testing helps identify how the system behaves over time, and it measures the system's stability and reliability.

Spike testing: This type of performance testing involves testing the system's performance when there is a sudden increase in the number of users or transactions. Spike testing helps identify how the system handles sudden spikes in traffic, and it measures the system's response time and throughput.

Volume testing: This type of performance testing involves testing the system's performance with a large volume of data. Volume testing helps identify how the system behaves when there is a large amount of data to process, and it measures the system's response time and throughput.

Security testing:

Security testing is a type of software testing that evaluates the security of a system or application by identifying vulnerabilities and potential threats. The goal of security testing is to ensure that the system or application is secure and protected against unauthorized access, theft, and damage to data.

- Security testing can be divided into the following types:

Vulnerability scanning: This type of security testing involves using automated tools to identify vulnerabilities in the system or application. Vulnerability scanning tests for weaknesses such as open ports, outdated software, and unsecured configurations.

Penetration testing: This type of security testing involves simulating a real-world attack on the system or application to identify potential security weaknesses. Penetration testing tests for vulnerabilities such as weak passwords, SQL injection, and cross-site scripting (XSS).

Security auditing: This type of security testing involves reviewing the system or application's security controls, policies, and procedures. Security auditing tests for compliance with security standards such as ISO 27001, NIST, or PCI DSS.

Risk assessment: This type of security testing involves identifying potential security risks and evaluating the likelihood and impact of a security breach. Risk assessment tests for vulnerabilities such as data loss, data theft, or system downtime.

Security code review: This type of security testing involves reviewing the system or application's source code to identify potential security vulnerabilities. Security code review tests for vulnerabilities such as buffer overflow, race conditions, and injection attacks.

Security testing can be done using a variety of tools, including vulnerability scanners, penetration testing tools, security auditing tools, and risk assessment tools.

overall, security testing is critical to ensure that a system or application is secure and protected against potential threats and vulnerabilities. By identifying security weaknesses early on, security testing helps organizations prevent security breaches and protect sensitive data.

Usability testing:

Usability testing is a type of software testing that evaluates how user-friendly and easy to use a system or application is. The goal of usability testing is to identify usability issues and to ensure that the system or application is easy to use and intuitive for its intended users.

Usability testing can be divided into the following types:

Exploratory testing: This type of usability testing involves exploring the system or application to identify potential usability issues. Exploratory testing tests for ease of use, intuitiveness, and learnability.

Task-based testing: This type of usability testing involves evaluating how well the system or application supports specific tasks that users will perform. Task-based testing tests for efficiency, accuracy, and satisfaction.

Comparative testing: This type of usability testing involves comparing the system or application against other similar systems or applications to identify usability differences. Comparative testing tests for ease of use, intuitiveness, and learnability.

Accessibility testing: This type of usability testing involves testing the system or application's accessibility for users with disabilities. Accessibility testing tests for usability for users with different needs such as visual, auditory, or motor impairments.

A/B testing: This type of usability testing involves testing different versions of the system or application to identify which version is more user-friendly. A/B testing tests for ease of use, intuitiveness, and learnability.

Usability testing can be done using a variety of tools, including user feedback surveys, usability testing software, and eye-tracking software. The results of usability testing are used to identify usability issues and to improve the system or application's usability by tweaking the user interface, navigation, or functionality.

Overall, usability testing is critical to ensure that a system or application is easy to use and intuitive for its intended users. By identifying usability issues early on, usability testing helps organizations improve the user experience and increase user satisfaction.

Compatibility testing:

Compatibility testing is a type of software testing that evaluates how well a system or application functions with different hardware, software, and network configurations. The goal of compatibility testing is to ensure that the system or application is compatible with a range of environments and configurations, including different operating systems, browsers, devices, and network setups.

- Compatibility testing can be divided into the following types:

Operating system compatibility testing: This type of compatibility testing involves testing the system or application's compatibility with different operating systems, such as Windows, macOS, Linux, and Android. Operating system compatibility testing tests for compatibility issues such as software,

dependencies, file system access, and memory management.

Browser compatibility testing: This type of compatibility testing involves testing the system or application's compatibility with different web browsers, such as Google Chrome, Mozilla Firefox, Microsoft Edge, and Safari. Browser compatibility testing tests for compatibility issues such as HTML, CSS, and JavaScript support, as well as differences in rendering and performance.

Device compatibility testing: This type of compatibility testing involves testing the system or application's compatibility with different devices, such as desktop computers, laptops, tablets, and smartphones. Device compatibility testing tests for compatibility issues such as screen resolution, hardware capabilities, and input methods.

Network compatibility testing: This type of compatibility testing involves testing the system or application's compatibility with different network configurations, such as LAN, WAN, Wi-Fi, and cellular networks. Network compatibility testing tests for compatibility issues such as network protocols, bandwidth requirements, and security settings.

Compatibility testing can be done using a variety of tools, including virtual machines, emulators, simulators, and real devices. The results of compatibility testing are used to identify compatibility issues and to ensure that the system or application is compatible with a range of environments and configurations.

Overall, a comprehensive testing plan for a B2B eCommerce platform is cover all aspects of the system to ensure it is functioning correctly, securely, and meets the business requirements.

6.2 Test Case

Table 6.2.1: Test cases for the proposed system

Test Case	Test Data	Expected Result	Actual Result	Status
Registration	Personal Detail	Move on Login Page	Login page	Pass
Login	User name & password	Move on Home page	Home page	Pass
Search Product	Product name	Product list	Display product list	Pass
add into cart	select product	cart page	Display cart page	Pass
add in to wish list	select product	wish list page	Display list page	Pass
check out	product with total amount	order confirmation page	Display out page	Pass
payment	amount & payment mode	payment mode selection page	selection page	Pass

7. IMPLEMENTAION

Home Page: This is the page when you first open the website.

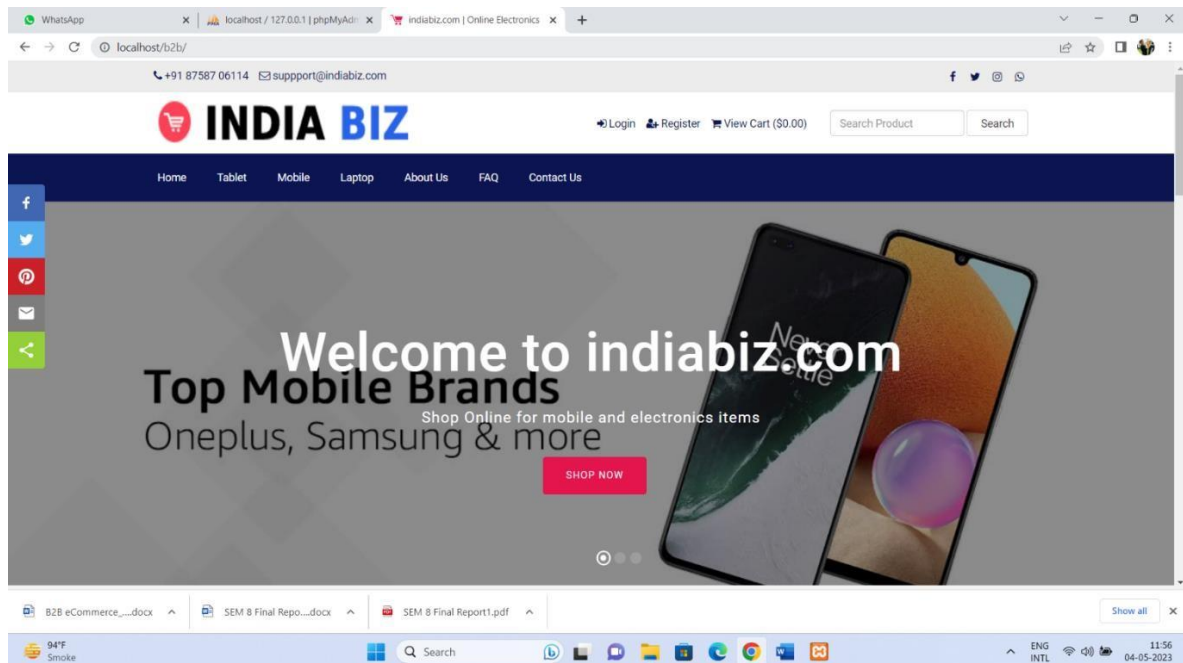


Fig 7.1 : Home page

Registration page: This is the page where new costumer can register with their details

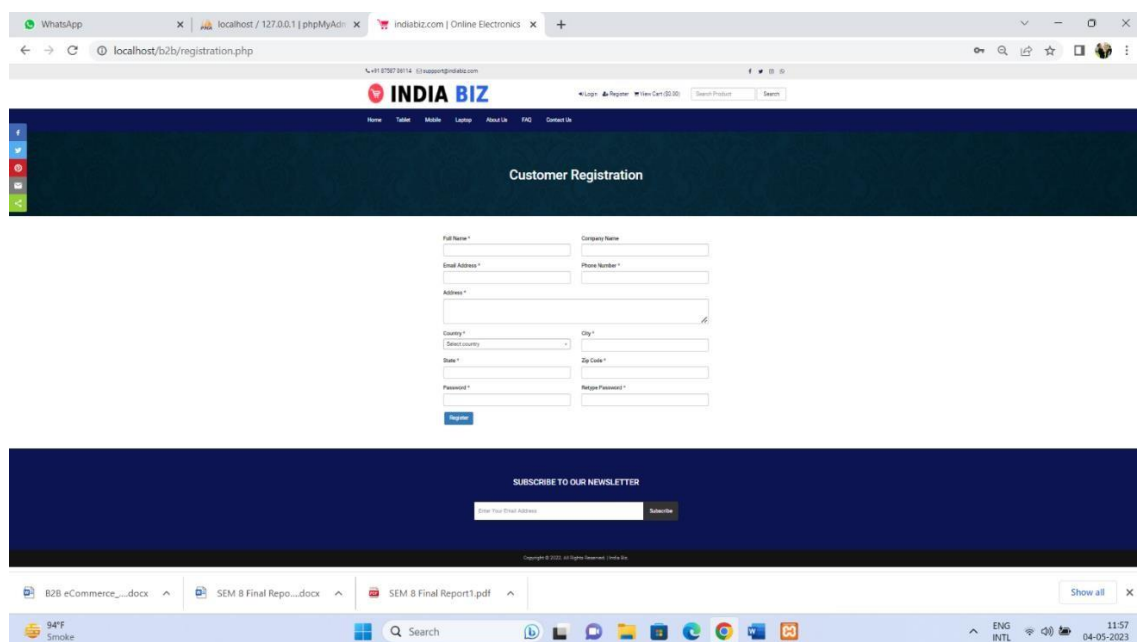


Fig 7.2 : Registration Page

Contact Us:

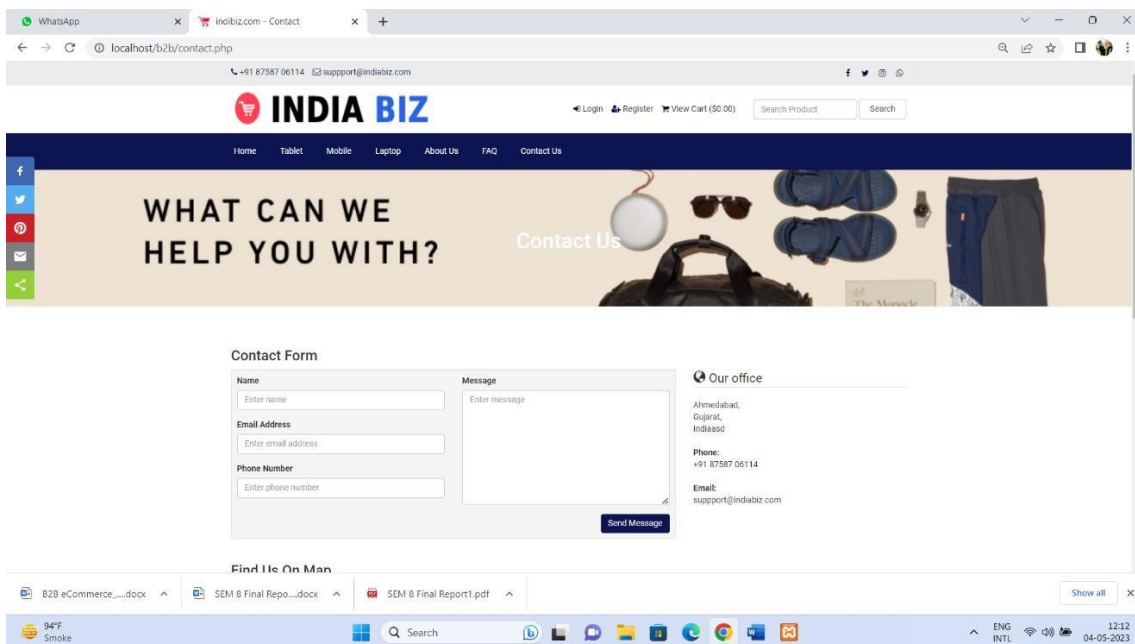


Fig 7.3 : Contact US

Cart Page:

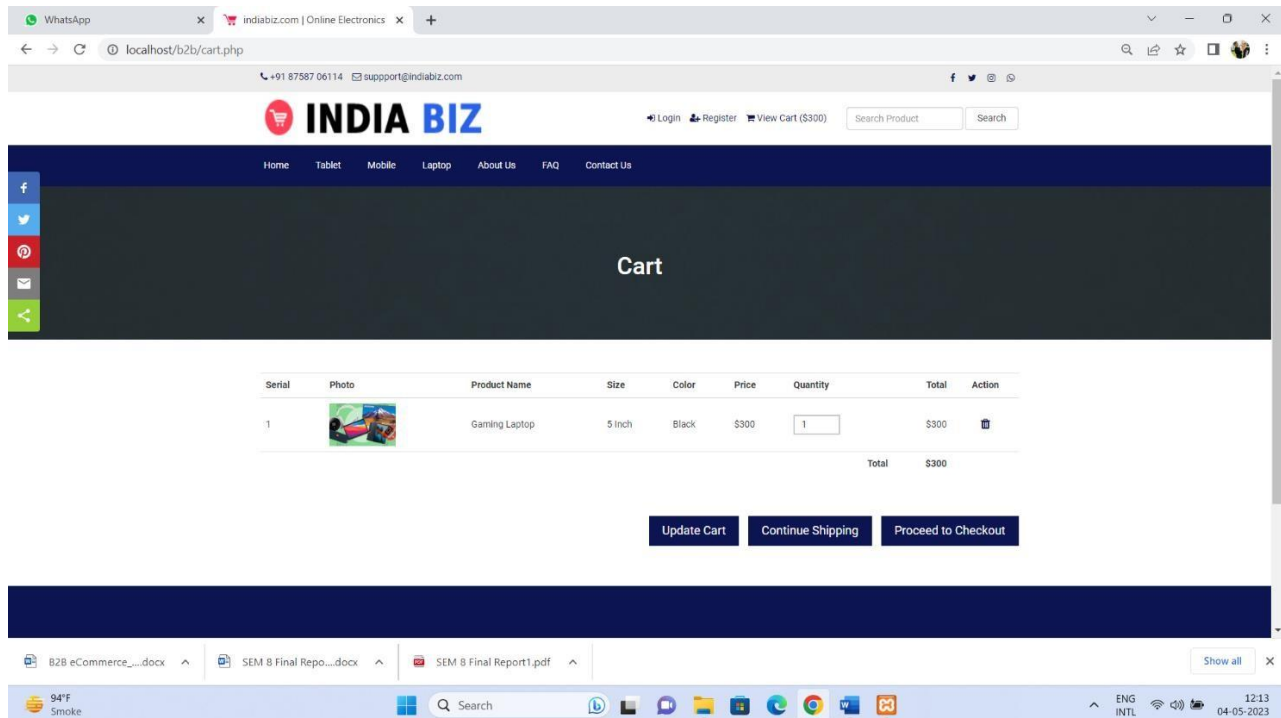


Fig 7.4 : Cart Page

Costumer Registration Page:

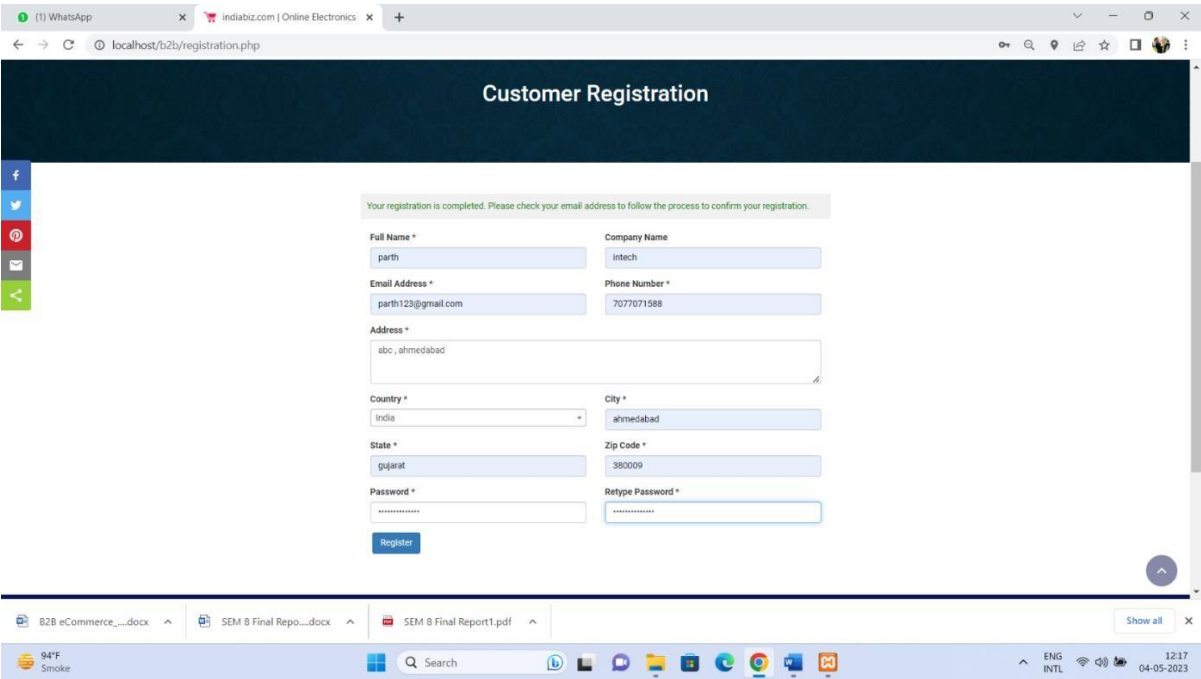


Fig 7.5 : Costumer Registration Page

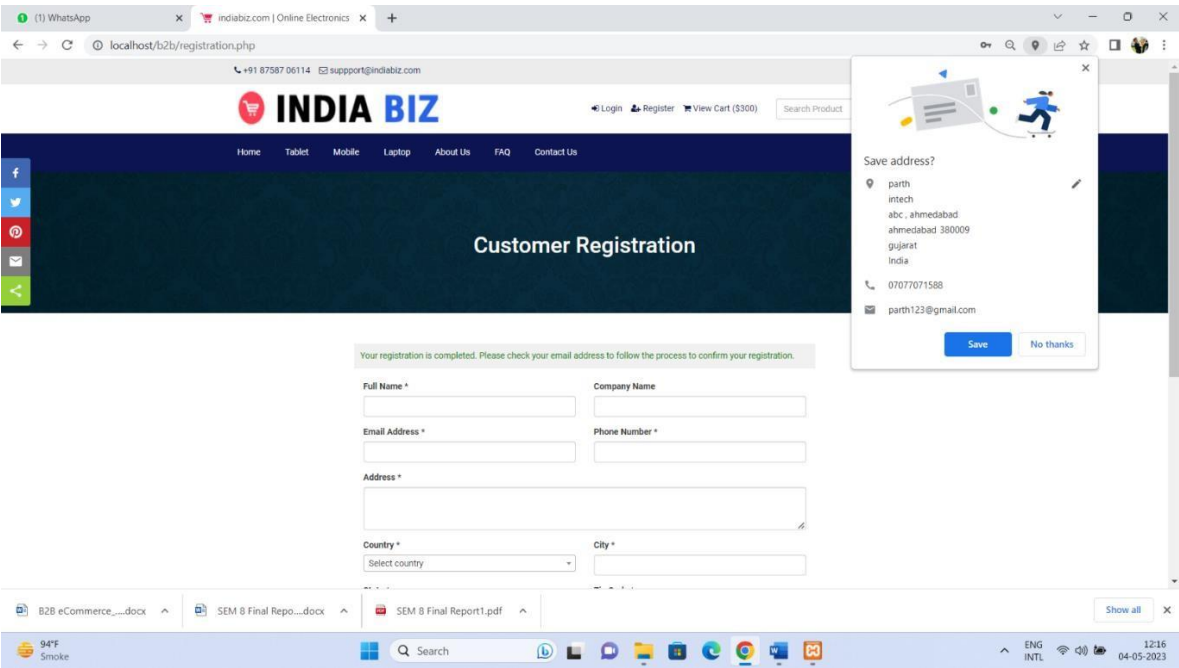


Fig 7.5.1 : Costumer Registration Page

After Customer Login page:

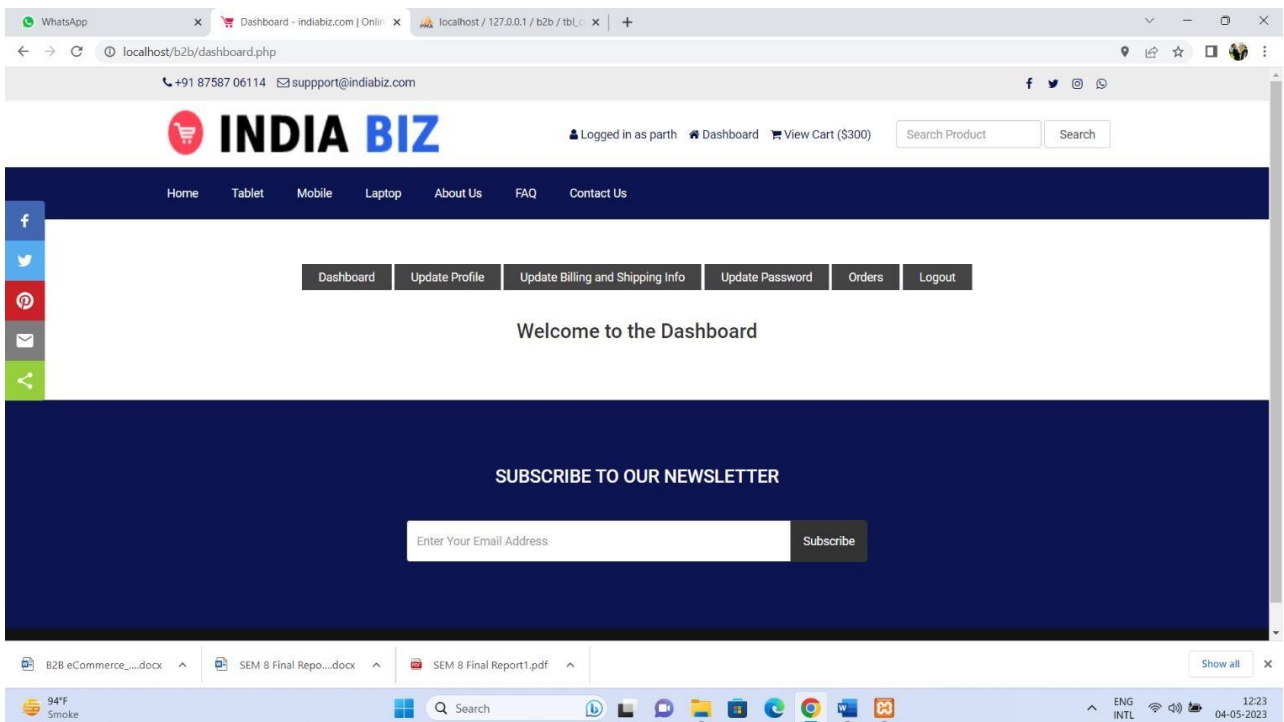


Fig 7.6: After Customer Login page

Customer Update their Profile:

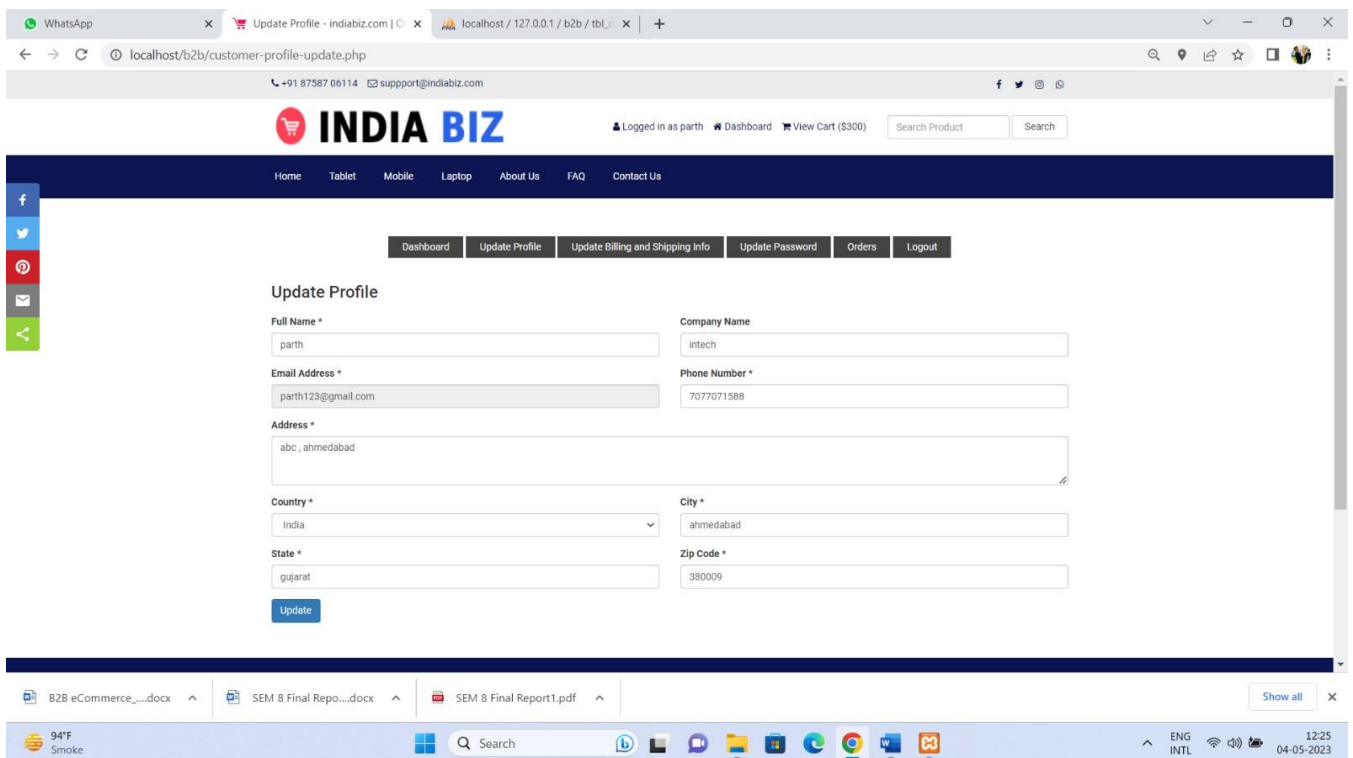
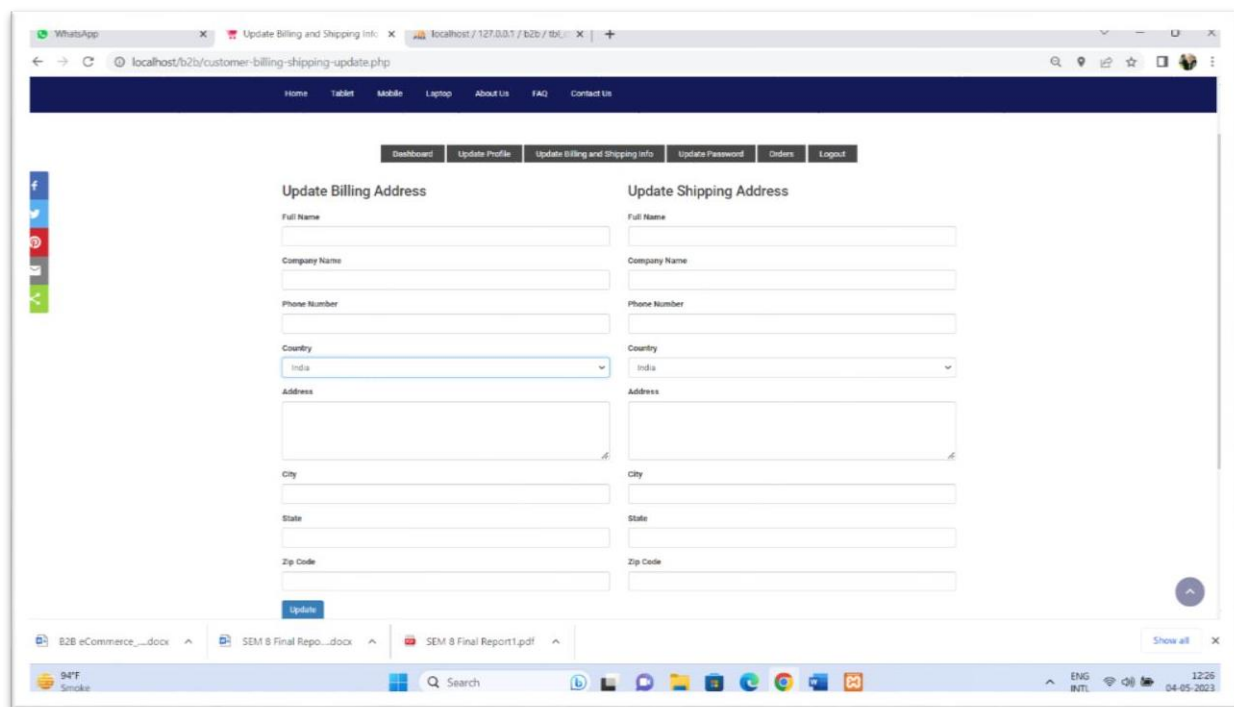


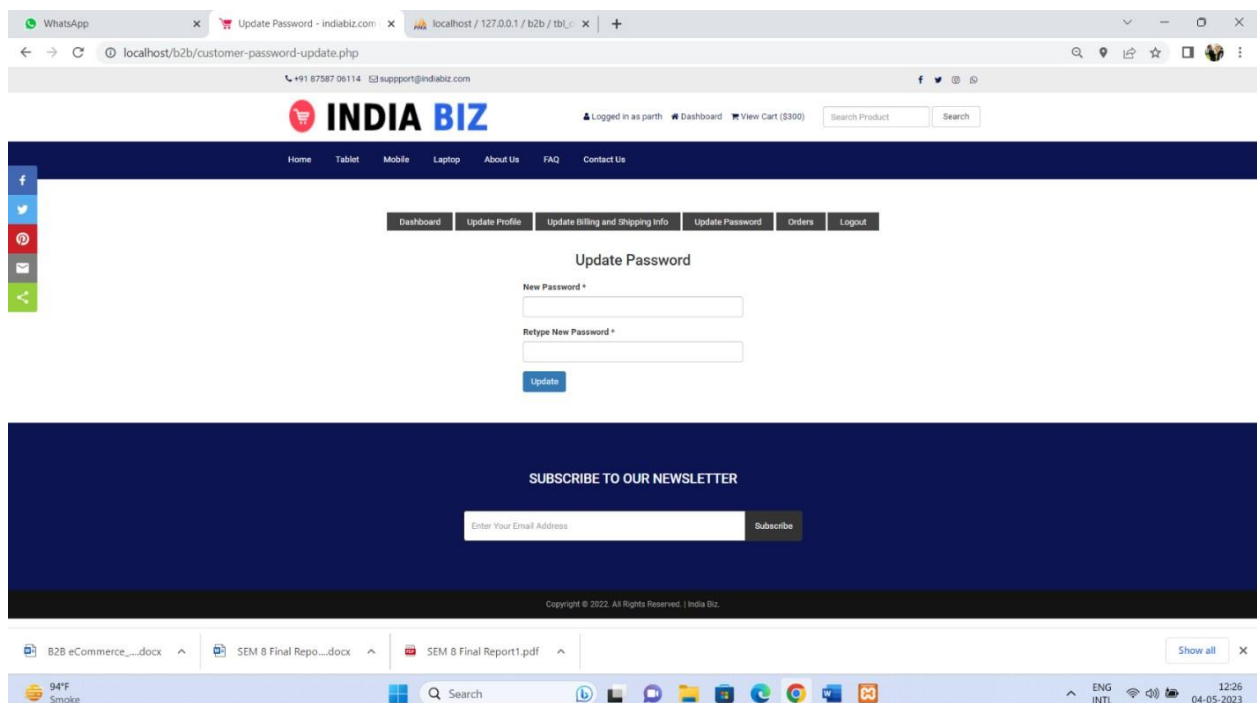
Fig 7.7: Customer Update their Profile

Customer update or change their billing address, password, or he can see his order history



The screenshot shows a web browser window with the URL `localhost/b2b/customer-billing-shipping-update.php`. The page has a dark blue header with navigation links: Home, Tablet, Mobile, Laptop, About Us, FAQ, and Contact Us. Below the header is a sub-header with tabs: Dashboard, Update Profile, Update Billing and Shipping Info (selected), Update Password, Orders, and Logout. The main content area is divided into two columns. The left column is titled 'Update Billing Address' and contains form fields for Full Name, Company Name, Phone Number, Country (a dropdown menu with 'India' selected), Address, City, State, and Zip Code. The right column is titled 'Update Shipping Address' and contains similar form fields. At the bottom of each column is an 'Update' button. The browser's taskbar at the bottom shows several open documents: 'B2B eCommerce...docx', 'SEM 8 Final Repo...docx', and 'SEM 8 Final Report1.pdf'. The system tray shows the temperature as 94°F, the location as Smoke, and the date and time as 12:26 on 04-05-2023.

Fig 7.8: Customer Billing address



The screenshot shows a web browser window with the URL `localhost/b2b/customer-password-update.php`. The page has a dark blue header with navigation links: Home, Tablet, Mobile, Laptop, About Us, FAQ, and Contact Us. Below the header is a sub-header with tabs: Dashboard, Update Profile, Update Billing and Shipping Info, Update Password (selected), Orders, and Logout. The main content area is titled 'Update Password' and contains two form fields: 'New Password *' and 'Retype New Password *'. Below these fields is an 'Update' button. At the bottom of the page is a dark blue banner with the text 'SUBSCRIBE TO OUR NEWSLETTER' and a form field 'Enter Your Email Address' with a 'Subscribe' button. The browser's taskbar at the bottom shows several open documents: 'B2B eCommerce...docx', 'SEM 8 Final Repo...docx', and 'SEM 8 Final Report1.pdf'. The system tray shows the temperature as 94°F, the location as Smoke, and the date and time as 12:26 on 04-05-2023.

Fig 7.9: Customer update their password

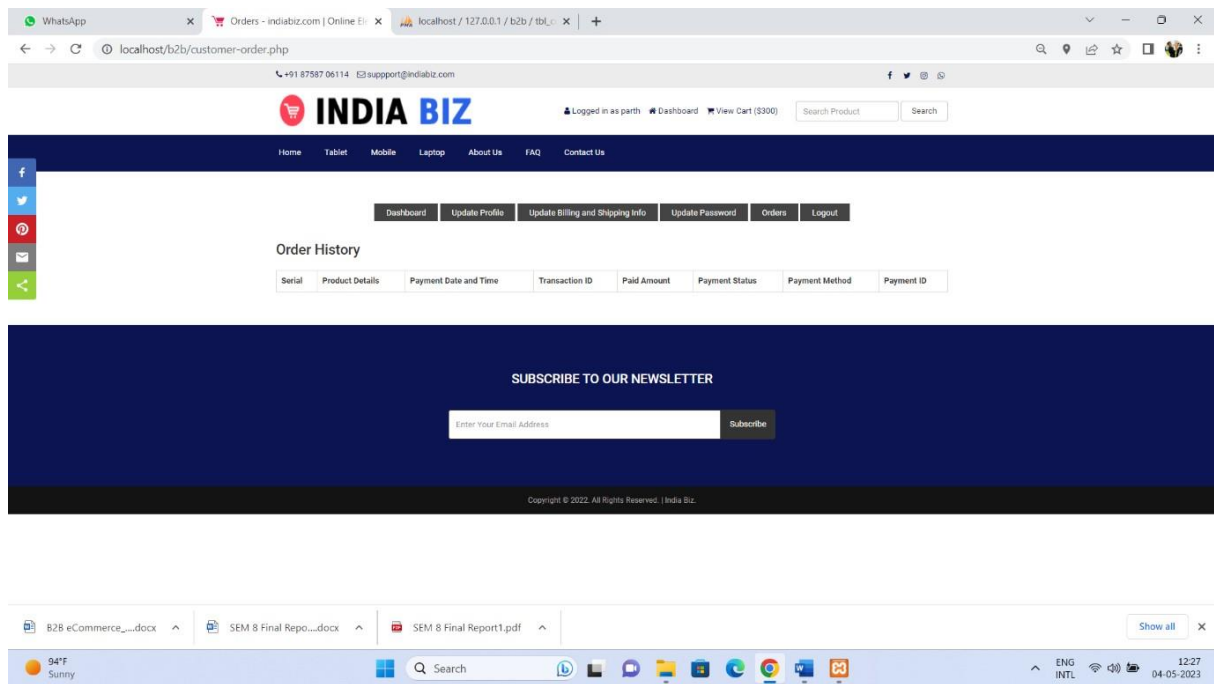


Fig 7.10: Costumer Order history

Admin Panel :

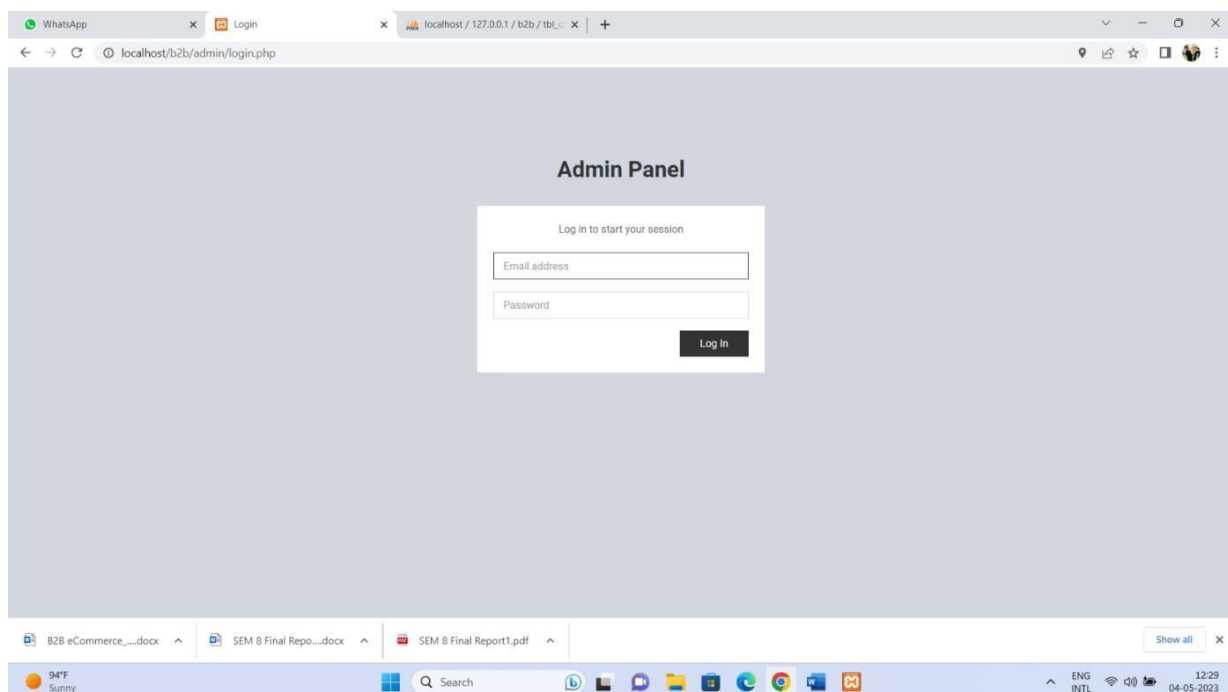


Fig 7.11: Admin Panel

Dashboard of admin panel:

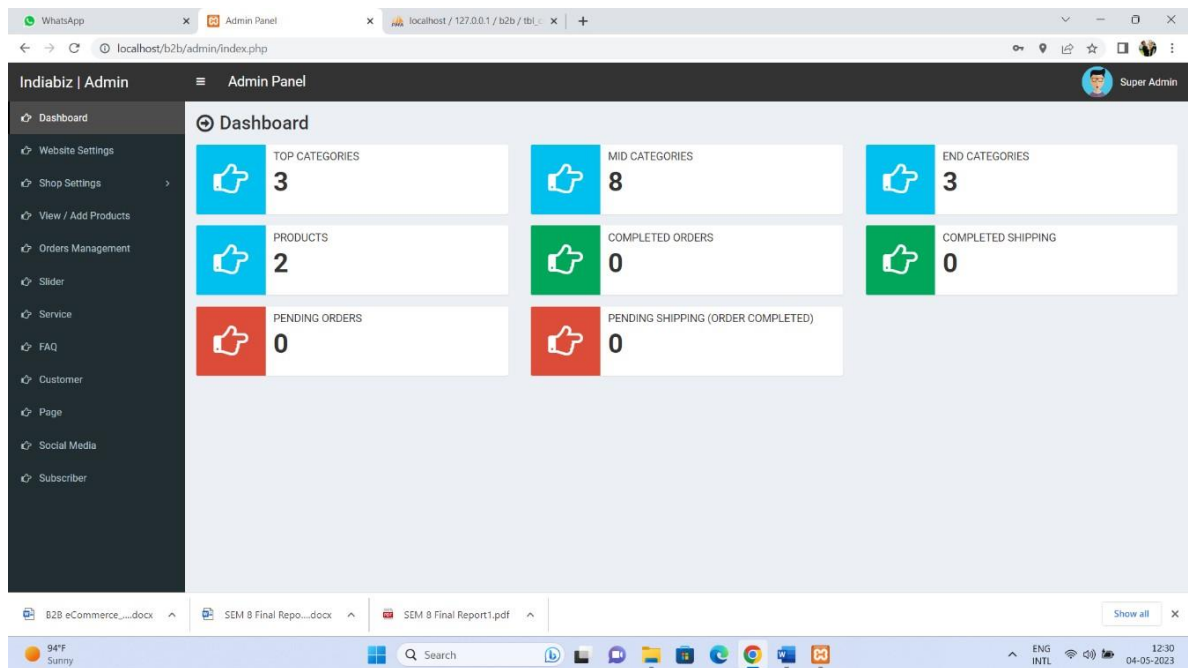


Fig 7.12: Dashboard of admin panel

After costumer Login Page:

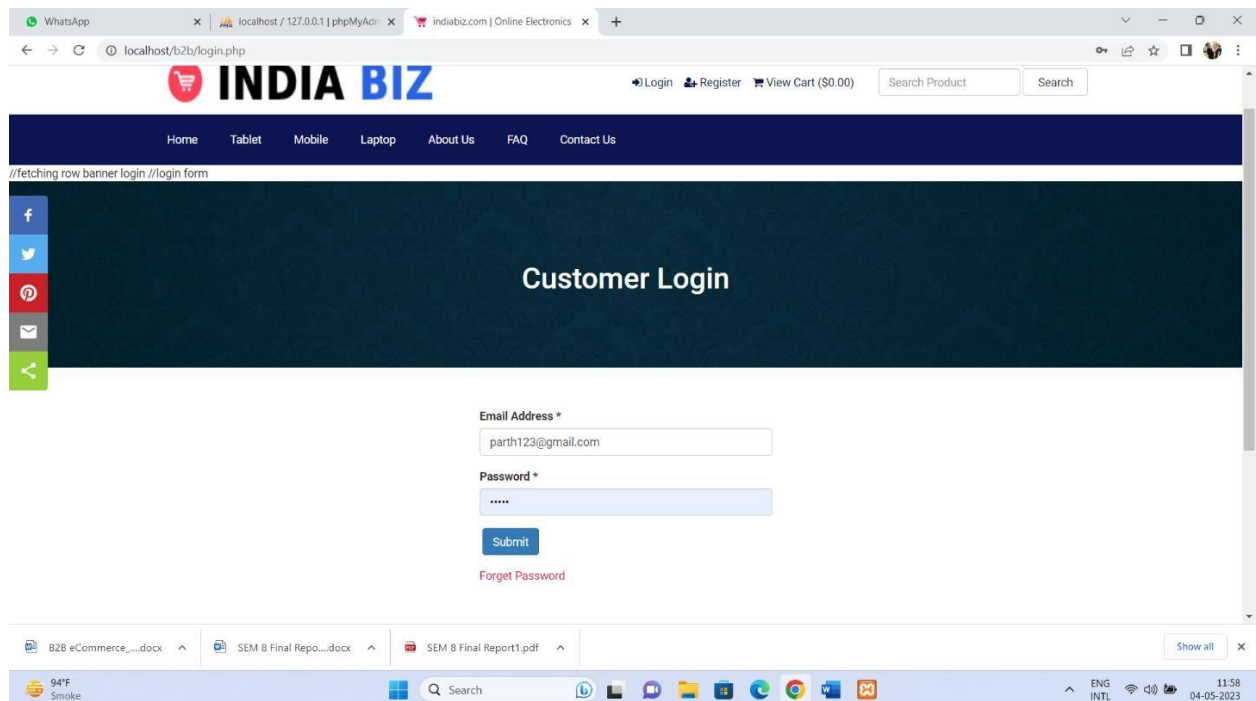


Fig 7.13: After costumer Login Page

After login costumer (parth) : when he checkout his items ,

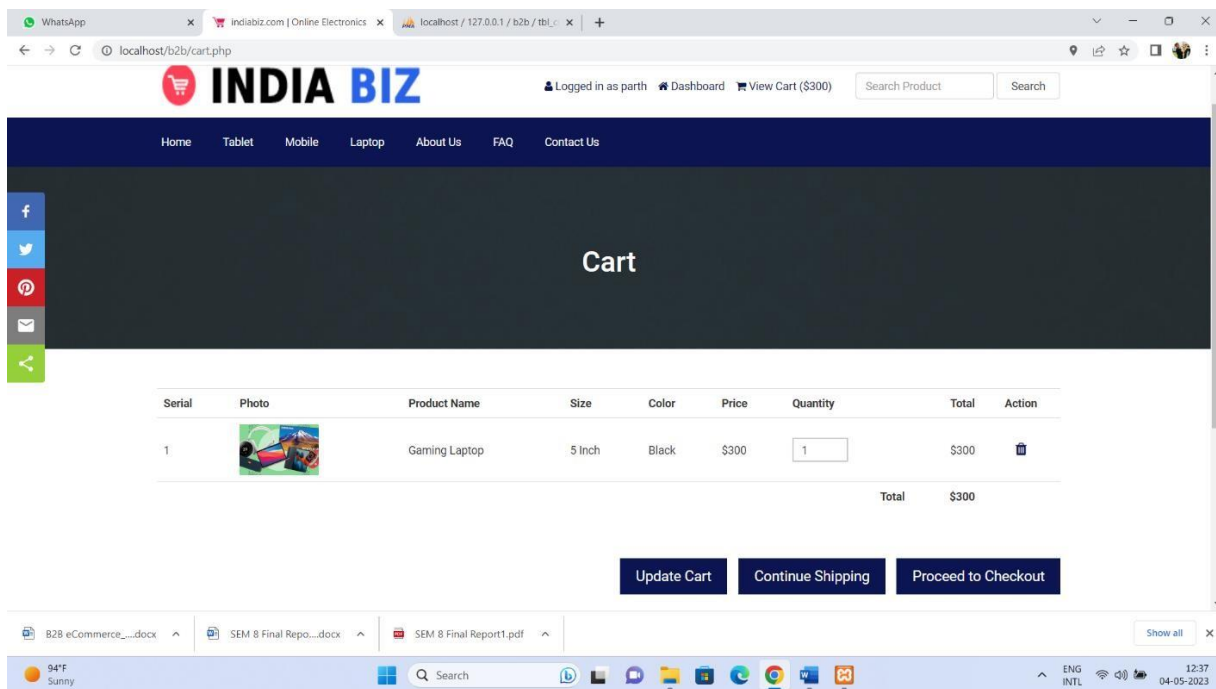


Fig 7.14: cart itmes

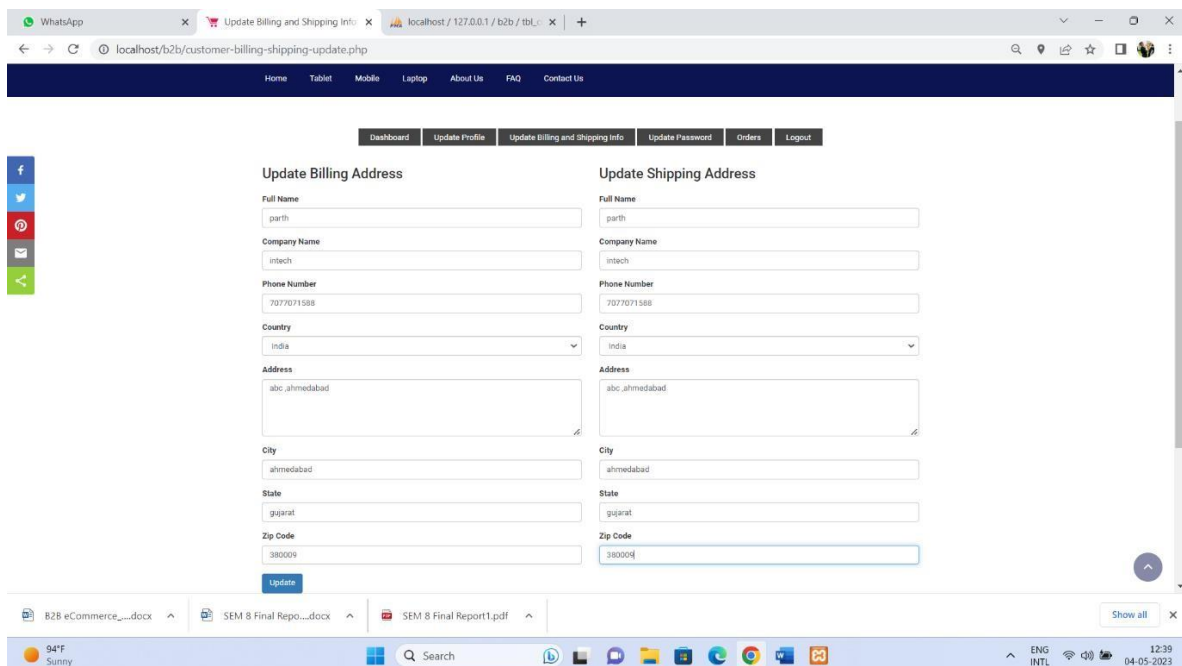


Fig 7.15: Fill-up Billing & Shipping address

WhatsApp Update Billing and Shipping Info localhost / 127.0.0.1 / b2b / tbl...

localhost/b2b/customer-billing-shipping-update.php

Dashboard Update Profile Update Billing and Shipping Info Update Password Orders Logout

Billing and Shipping Information is updated successfully.

Update Billing Address

Full Name: parth

Company Name: intech

Phone Number: 7077071588

Country: India

Address: abc, ahmedabad

City: ahmedabad

State: gujarat

Zip Code: 380009

Update

Update Shipping Address

Full Name: parth

Company Name: intech

Phone Number: 7077071588

Country: India

Address: abc, ahmedabad

City: ahmedabad

State: gujarat

Zip Code: 380009

94°F Sunny 12:40 04-05-2023

Fig 7.15.1: Fill-up Billing & Shipping address

After Checkout Orders:

WhatsApp indiabiz.com | Online Electronics localhost / 127.0.0.1 / b2b / tbl...

localhost/b2b/checkout.php

Order Details

Serial	Photo	Product Name	Size	Color	Price	Quantity	Total
1		Gaming Laptop	5 inch	Black	\$300	1	\$300
Sub Total							\$300
Shipping Cost							\$100
Total							\$400

Billing Address

Full Name: parth

Company Name: intech

Phone Number: 7077071588

Country: India

Address: abc, ahmedabad

City: ahmedabad

State: gujarat

Zip Code: 380009

Shipping Address

Full Name: parth

Company Name: intech

Phone Number: 7077071588

Country: India

Address: abc, ahmedabad

City: ahmedabad

State: gujarat

Zip Code: 380009

Back to Cart

Payment Section

Select Payment Method: RazorPay

Pay Now

94°F Sunny 12:41 04-05-2023

Fig 7.16: After Checkout Orders

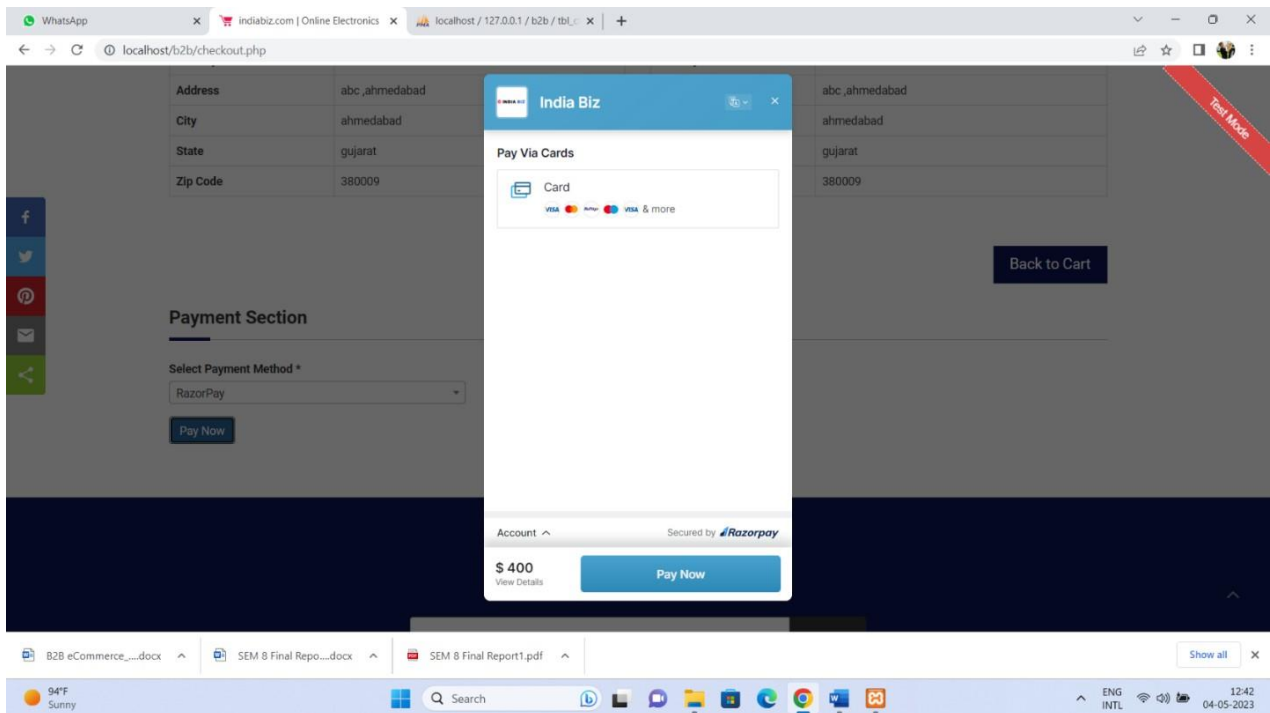


Fig 7.17: After Checkout Orders

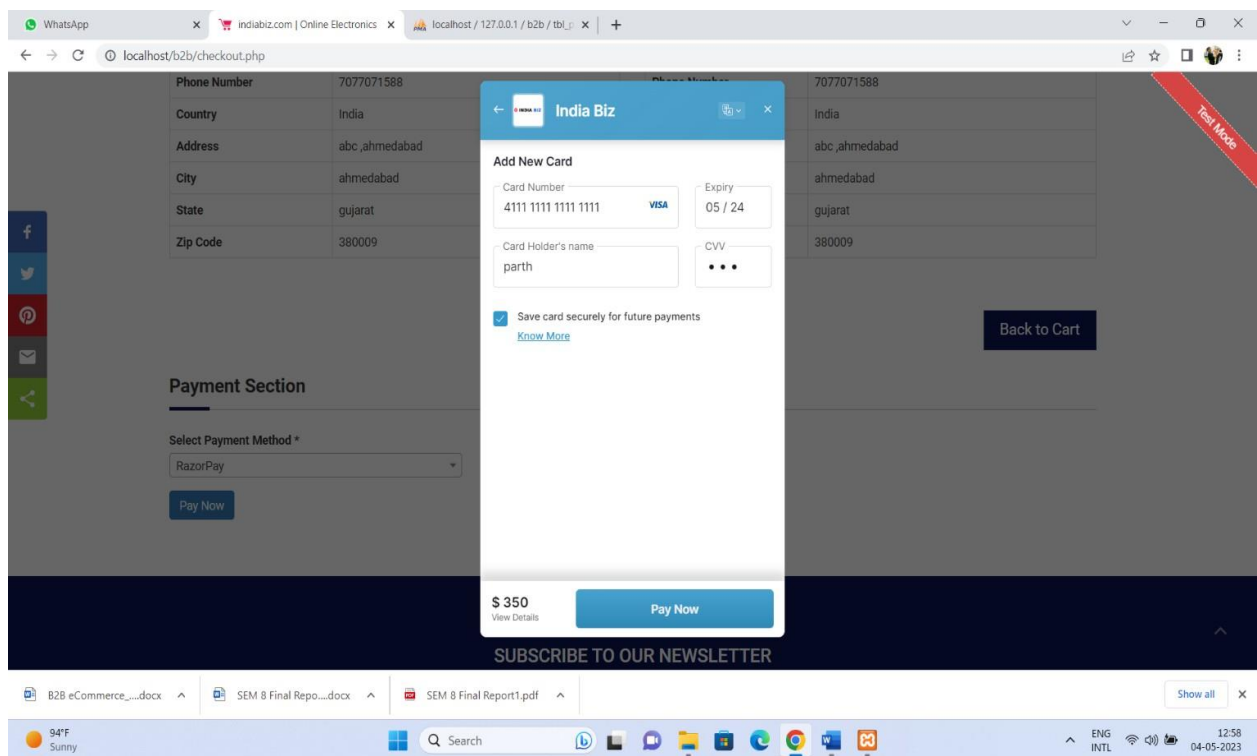


Fig 7.18: After Checkout Orders (card details)

WhatsApp x Orders - indiabiz.com | Online E... x localhost / 127.0.0.1 / b2b / tbi... x +

localhost/b2b/customer-order.php

+91 87587 06114 support@indiabiz.com

INDIA BIZ

Logged in as parth Dashboard View Cart (\$0.00) Search Product Search

Home Tablet Mobile Laptop About Us FAQ Contact Us

Dashboard Update Profile Update Billing and Shipping Info Update Password Orders Logout

Order History

Serial	Product Details	Payment Date and Time	Transaction ID	Paid Amount	Payment Status	Payment Method	Payment ID
1		2023-05-04 11:26:48		350	Pending	RazorPay	168318520887397586211
2		2023-05-04 11:25:10		350	Pending	RazorPay	1683185110187114295111
3	Product Name: Gaming Laptop 2 Size: 6.7" Inch Color: White Quantity: 1 Unit Price: 250	2023-05-04 11:23:44	pay_LIVHKD7waDAjzv	350	paid	RazorPay	1683185024179136553611
4		2023-05-04 11:21:36		400	Pending	RazorPay	168318489657138955511
5		2023-05-04 11:15:03		400	Pending	RazorPay	1683184503209469449411

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94°F Sunny Search ENG INTL 13:00 04-05-2023

Fig 7.19: after costumer check his order (when he paid successfully)

8. CONCLUSION

B2B e-commerce using PHP is a powerful tool for businesses to streamline their sales and purchasing processes. With the right implementation, it can improve efficiency, reduce costs, and increase profitability.

In conclusion, building a B2B e-commerce platform with PHP requires a solid understanding of both e-commerce and PHP development. It involves creating a robust back-end architecture that can handle complex business logic, integrating with various APIs and third-party tools, and designing a user-friendly interface that meets the needs of both buyers and sellers.

Furthermore, security is a top priority in the development of any B2B e-commerce platform. This includes measures such as data encryption, secure login authentication, and protection against SQL injection and cross-site scripting attacks.

Overall, B2B e-commerce using PHP offers many benefits for businesses looking to streamline their sales and purchasing processes, improve efficiency, and increase profitability. However, it requires careful planning, skilled development, and ongoing maintenance to ensure its success.

9. ANNEXURE

9.1 Glossary of terms & Abbreviations

- **API:** Application Programming Interface
- **B2B:** Business to Business
- **CMS:** Content Management System
- **CRM:** Customer Relationship Management
- **CSS:** Cascading Style Sheets
- **DNS:** Domain Name System
- **E-Commerce:** Electronic Commerce
- **FTP:** File Transfer Protocol
- **HTML:** Hypertext Markup Language
- **HTTP:** Hypertext Transfer Protocol
- **HTTPS:** Hypertext Transfer Protocol Secure
- **IP:** Internet Protocol
- **ISP:** Internet Service Provider
- **JavaScript:** Programming language for web development
- **JSON:** JavaScript Object Notation
- **LAN:** Local Area Network
- **PHP:** Hypertext Preprocessor
- **SaaS:** Software as a Service
- **SEO:** Search Engine Optimization
- **SQL:** Structured Query Language
- **SSL:** Secure Sockets Layer
- **UI:** User Interface
- **URL:** Uniform Resource Locator

- UX: User Experience
- VPN: Virtual Private Network
- WAN: Wide Area Network

10. About Tools & Technology

- B2B e-commerce platforms using PHP typically leverage a variety of technologies to provide a seamless and secure user experience.
- **PHP** - PHP is a server-side scripting language used to build dynamic web applications.
- **JavaScript** - JavaScript is a client-side scripting language that enables interactive web pages and real-time user interactions.
- **HTML5 and CSS3** - HTML5 and CSS3 are used to create the layout, structure, and style of web pages.
- **MySQL** - MySQL is a popular open-source database management system used for data storage and retrieval in B2B e-commerce applications.
- **APIs** - APIs (Application Programming Interfaces) allow B2B e-commerce platforms to connect with other systems, such as payment gateways and shipping providers.
- **Security Technologies** - Security technologies such as SSL certificates, firewalls, and two-factor authentication are used to ensure that B2B e-commerce platforms are secure and protect sensitive data during transactions.
- **Cloud Computing** - Cloud computing platforms like Amazon Web Services (AWS), provide scalable and flexible hosting solutions for B2B e-commerce applications.
- **Mobile Optimization** - As more users' access B2B e-commerce platforms via mobile devices, mobile optimization technologies, such as responsive design and mobile apps, are essential for providing a seamless user experience.
- These technologies, along with various development tools and frameworks, enable developers to build robust and secure B2B e-commerce platforms using PHP.

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About the Organization



- **Company Name:** BrainyBeam Technologies Pvt Ltd
- **Address:** 2nd Floor Dhanlaxmi Chamber, Near Gujarat Vidyapith, Income Tax, Ahmedabad
- **Contact No:** +91 9033237336
- **Email Id:** sagar@brainybeam.com
- **Website:** www.brainybeam.com

About Us

At BrainyBeam, we see Innovation as a clear differentiator. Innovation, along with focus on deep, long-lasting client relationships and strong domain expertise, drives every facet of our day-to-day operations.

BrainyBeam Technologies was founded with a vision to address growing businesses' needs of reducing the time to market and cost effectiveness required to develop and maintain unique and customized web and mobile solutions. We are uniquely and strategically positioned to partner with startups and leading brands to help them expand their business and offer the most effective and cost-efficient solutions that provide revenues and value to their business needs.

Vision

To become the most trusted and preferred offshore IT solutions partner for Startups, SMBs and Enterprises through innovation and technology leadership. Understanding your ambitious vision, honing in on its essence, creating a design strategy, and knowing how to technically execute it is what we do best. Our promise? The integrity of your vision will be maintained and we'll enhance it to best reach your target customers. With our primary focus on creating amazing user experiences, we'll help you understand the tradeoffs, prioritize features, and distill valuable functionality. It's an art form we care about getting right.

ABOUT COLLEGE:



**Ganpat
University**
॥ विद्यया समाजोत्कर्षः ॥

**U.V. Patel
College of
Engineering**

U.V.Patel College of Engineering, GANPAT UNIVERSITY

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