MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE

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Project Report

on

Development of E-Commerce Website

Submitted By:
Rishika Shakya
0901CA221051

Industry Mentor:
Abhishek Parmar
(Project Guide, UBITECH Solutions Pvt. Ltd.)

Faculty Mentor:
Dr. Anshu Chaturvedi
(Professor)

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE
GWALIOR – 474005 (MP) est. 1957

Jan-June 2024

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A project report submitted in partial fulfilment of the requirement for the degree of

MASTER IN COMPUTER APPLICATION

in

COMPUTER SCIENCE AND ENGINEERING

Submitted By:

Rishika Shakya

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Jan – June 2024

Ubitech Solutions Pvt Ltd.
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Web: www.ubitechsolutions.com

1st April 2024

CERTIFICATE OF INTERNSHIP

This is to certify that **Ms. Rishika Shakya** has successfully completed her internship with Ubitech Solutions Pvt. Ltd. From December 2023 to March 2024. She has completed her internship in the field of **"Web Development"**.

During her tenure we found her to be hardworking & sincere. We wish her all the best in her future endeavors.

For Ubitech Solutions Pvt. Ltd

UBITECH SOLUTIONS PVT. LTD. Gwalior

Somya Batham

Program Coordinator

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE

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CERTIFICATE

This is certified that **Rishika Shakya** (0901CA221051) has submitted the project report titled **E-Commerce Website** under the mentorship of **Abhishek Parmar**, in partial fulfilment of the requirement for the award of degree of Master in Computer Application in Computer Science and Engineering from Madhav Institute of Technology and Science, Gwalior.

29/04/24

Dr. Anshu Chaturvedi

Faculty Coordinator

Professor

Computer Science and Engineering

Dr. Manish Dixit

Professor and Head,

Computer Science and Engineering

Manish Dixit
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Department of CSE
M.I.T.S. Gwalior

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DECLARATION

I hereby declare that the work being presented in this project report, for the partial fulfilment of requirement for the award of the degree of Master in Computer Application in Computer Science and Engineering at Madhav Institute of Technology & Science, Gwalior is an authenticated and original record of my work under the mentorship of Abhishek Parmar, **Project Guide,** UBITECH Solutions PVT. LTD.

I declare that I have not submitted the matter embodied in this report for the award of any degree or diploma anywhere else.

Rishika Shakya.

Rishika Shakya

0901CA221051

2nd Year,

Master in Computer Application,

Computer Science and Engineering

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ACKNOWLEDGEMENT

The full semester project has proved to be pivotal to my career. I am thankful to my institute, **Madhav Institute of Technology and Science** to allow me to continue my disciplinary project. I extend my gratitude to the Director of the institute, **Dr. R. K. Pandit** and Dean Academics, **Dr. Manjaree Pandit** for this.

I would sincerely like to thank my department, **Department of Computer Science and Engineering,** for allowing me to explore this project. I humbly thank **Dr. Manish Dixit,** Professor and Head, Department of Computer Science and Engineering, for his continued support during the course of this engagement, which eased the process and formalities involved.

I would like to extend my heartfelt appreciation to **Mr. Abhishek Parmar** (Project Guide, UBITECH Solutions Private Limited) for his exceptional mentorship, guidance, and assistance throughout the project. His valuable input and feedback during the course of the project have helped me enhance my knowledge and skills. His constant encouragement and support have been instrumental in the successful completion of this project.

I am sincerely thankful to my faculty coordinator. I am grateful to the guidance of **Dr. Anshu Chaturvedi** (Professor), Computer Science and Engineering, for her continued support and guidance throughout the project. I am also very thankful to the faculty and staff of the department.

Rishika Shakya
0901CA221051
2nd Year
Master in Computer Application,
Computer Science and Engineering

ABSTRACT

This abstract explores how e-commerce websites can be improved to make shopping online easier and more enjoyable for everyone. We'll talk about making the website easy to use, suggesting products that people might like, keeping payment information safe, and being there to help customers when they need it. We'll also discuss how important it is to make sure that people with disabilities can use the website too. By using smart technology and paying attention to what customers need, e-commerce sites can stand out and build trust with shoppers. Here we provide services like faster buying process that means they go online, fast and easy search options for an item, and get a fast response and user can purchase the product with the just one click. We can provide flexibility to customers and here is that the product and services are ready 24x7, with this we also provide free shipping, deals and discounts services to the customers. And we also provide a feedback option after the delivery of the product to make improved version of website and about product and the sellers.

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सार

यह सार यह बताता है कि सभी के लिए ऑनलाइन खरीदारी को आसान और अधिक मनोरंजक बनाने के लिए ई-कॉमर्स वेबसाइटों को कैसे बेहतर बनाया जा सकता है। हम वेबसाइट को उपयोग में आसान बनाने, लोगों को पसंद आने वाले उत्पादों का सुझाव देने, भुगतान जानकारी को सुरक्षित रखने और ज़रूरत पड़ने पर ग्राहकों की मदद करने के बारे में बात करेंगे। हम यह भी चर्चा करेंगे कि यह सुनिश्चित करना कितना महत्वपूर्ण है कि विकलांग लोग भी वेबसाइट का उपयोग कर सकें। स्मार्ट तकनीक का उपयोग करके और ग्राहकों की ज़रूरतों पर ध्यान देकर, ई-कॉमर्स साइटें अलग दिख सकती हैं और खरीदारों के बीच विश्वास बना सकती हैं। यहां हम तेज़ खरीदारी प्रक्रिया जैसी सेवाएं प्रदान करते हैं, जिसका अर्थ है कि वे ऑनलाइन जाते हैं, किसी आइटम के लिए तेज़ और आसान खोज विकल्प, और तेज़ प्रतिक्रिया प्राप्त करते हैं और उपयोगकर्ता केवल एक क्लिक के साथ उत्पाद खरीद सकता है। हम ग्राहकों को लचीलापन प्रदान कर सकते हैं और यहां यह है कि उत्पाद और सेवाएं 24x7 तैयार हैं, इसके साथ हम ग्राहकों को मुफ्त शिपिंग, सौदे और छूट सेवाएं भी प्रदान करते हैं। और हम उत्पाद की डिलीवरी के बाद वेबसाइट और उत्पाद तथा विक्रेताओं के बारे में बेहतर संस्करण बनाने के लिए फीडबैक विकल्प भी प्रदान करते हैं।

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Chapter - 1 Introduction

In todays digital age, the realm of shopping has transcended traditional boundaries, thanks to the advent of e-commerce. With the proliferation of internet connectivity and technological advancements, online shopping has become a staple in the lives of millions worldwide. Our e-commerce website stands at the forefront of this revolution, offering a seamless and convenient platform for consumers to explore, discover, and purchase a diverse array of products and services from the comfort of their homes. Our website is designed to cater to the evolving needs and preferences of modern consumers, providing an intuitive that prioritizes user experience. Whether you're in search of electronics, fashion apparel, or specialized services, our extensive catalogue boasts as curated selection of high-quality products sourced from trusted vendors and brands. With secure payment gateways and robust encryption protocols, we prioritize the privacy and security of our customer's transactions, fostering trust and confidence in every interaction. Additionally, our responsive customer support team is dedicated to addressing any inquiries or concerns promptly, ensuring a hassle-free shopping experience from start to finish.

1.1 Problem Identification

Here new customer hesitates to buy a product online from the website because they really don't know the quality and which website is affordable and provide free shipping services so here our website is totally secure and affordable according to the customers requirement and also gives the free shipping to the customers.

a. **Website Performance**: Identifying performance issues on e-commerce websites is vital for maintaining user satisfaction and preventing potential revenue loss. By actively monitoring metrics such as page load times, server response rates, and transaction processing speeds, businesses can swiftly address bottlenecks and optimize their platforms for seamless browsing and purchasing experiences.

b. **Product Information and Accuracy**: Inaccurate product descriptions, missing images, or misleading information can lead to dissatisfaction and returns. Ensuring that product listings are detailed, accurate, and up-to-date is crucial for building trust with customers.

c. **Inventory Management**: Out-of-stock items, inventory discrepancies, or delays in restocking can result in missed sales opportunities and frustrated customers. Implementing efficient inventory management systems to track stock levels and automate replenishment processes is essential.

d. **Customer Support**: Poor customer service, slow response times, or inadequate support channels can damage the brand reputation and lead to negative reviews. Providing responsive

customer support through multiple channels such as live chat, email, and phone is essential for addressing customer inquiries and resolving issues promptly.

e. **Shipping and Delivery**: Delays in shipping, high shipping cost, or inaccurate delivery estimates can lead to dissatisfaction and cart abandonment. Offering transparent shipping options, accurate delivery estimates, and affordable shipping rates is crucial for meeting customer expectations.

By addressing these identified problems, proactively and continuously optimizing the e-commerce website, businesses can enhance the overall user experience and drive customer satisfaction and loyalty.

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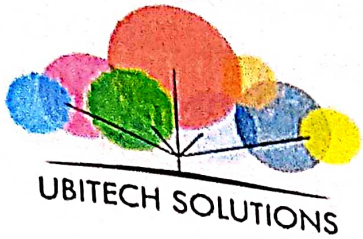
1.2 Parent Organization



UBITECH Solutions Pvt. Ltd.

UBITECH Solutions Pvt Ltd was founded in 2006 with a vision to revolutionize the technological landscape by providing innovative solutions to businesses worldwide. UBITECH solutions Pvt Ltd is a dynamic and forward-thinking technology company dedicated to providing cutting-edge solutions to meet the evolving needs of businesses in the digital age. Since our, inception we have been committed to delivering excellence through our innovative products, exceptional services, and unwavering dedication to customer satisfaction.

UBITECH Solutions Pvt Ltd was founded by a team of visionary entrepreneurs with a passion for technology and a drive to make a difference in the industry. In our formative years, we focused on establishing a strong foundation by assembling a talented team of professionals and investing in research and development to bring our ideas to life.

During this period, UBITECH Solutions experienced rapid growth and expansion, fueled by our relentless pursuit of innovation and our commitment to delivering value to our clients. We diversified our portfolio of services, expanded our client base, and forged strategic partnerships to strengthen our position in the market.

As we continued to grow, UBITECH Solutions achieved several significant milestones and accomplishment that solidified our reputation as a trusted technology partner. From winning prestigious awards for our innovative products to receiving accolades for our exceptional customer service, each milestone served as a testament to our dedication to excellence.

In recent years, UBITECH Solutions has expanded its global footprint and emerged as a leader in the technology industry. With a presence in multiple countries and a diverse portfolio of clients spanning various sectors, we have positioned ourselves as a preferred choice for businesses seeking cutting-edge solutions to drive their digital transformation initiatives.

1.3 Hardware and Software Specification

An E-Commerce System is designed and developed using FULL stack. It includes both the frontend such as HTML, CSS, BOOTSTRAP and backend such as PHP and with MySQL Database of the application. This website provides a product descriptions with good quality images and secure payment with scalability, and efficiently to the customers which helps the real and trustworthy products for purchasing.

1.3.1 Hardware Specification

a. **Processor**: During e-commerce website development, the processor of a laptop, such as an Intel Core i5, plays a crucial role in handling tasks efficiently.

b. **Memory**: It enables laptops equipped with an Intel Core i5 processor to handle multiple tasks simultaneously and efficiently. Typically ranging from 8 GB to 16 GB or more, the RAM capacity ensures smooth operation while running development tools, browsers, and other necessary software for building and testing e-commerce websites.

c. **Storage**: It is crucial for e-commerce website development on laptops with Intel Core i5 processors, provides ample space for storing project files, databases, and system resources. Typical storage options include fast SSDs (Solid State Drives) ranging from 256 GB to 1 TB or more, ensuring swift data access and smooth performance during development tasks.

d. **Display**: It is pivotal, typically featuring high-resolution screens (Full HD or higher) spanning 14 to 15.6 inches. This ensures crisp visuals and ample workspace for coding, designing, and testing websites with precision and clarity.

e. **Network**: Reliable network connectivity, including Wi-Fi and Ethernet options, ensures seamless access to online resources and collaboration tools during the development process.

1.3.2 Software Specification

a. **Operating System**: The operating system is a critical software specification for e-commerce website development, with popular choices including Windows 10 or macOS Catalina, providing a stable and versatile environment for coding, designing, and testing websites on laptops featuring Intel Core i5 processors.

b. **Development Environment**: The development environment, essential for e-commerce website creation, encompasses tools like integrated development environments (IDEs) such as Visual Studio Code or JetBrains IntelliJ IDEA, facilitating efficient coding and debugging processes on laptops powered by Intel Core i5 processors.

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c. **Dependencies:** Key dependencies for an e-commerce website typically involve frontend like HTML, CSS, Bootstrap, and backend technologies such as PHP, and databases like MySQL ensuring robust functionality and scalability.

d. **MySQL:** MySQL serves as a vital relational database management system in the development of e-commerce websites, facilitating efficient data storage and retrieval for seamless online transactions.

e. **Browser:** A browser, such as Google Chrome or Mozilla Firefox, is indispensable for testing and optimizing e-commerce websites, ensuring compatibility and smooth user experiences across different devices and platforms.

f. **Version Control:** Version control systems like Git are indispensable tools in e-commerce website development, enabling collaborative coding, tracking changes, and ensuring code integrity throughout the development process.

g. **Deployment:** Choose a deployment environment compatible with PHP and MySQL. This could be cloud platforms like AWS or Azure, or hosting services like Heroku or Digital Ocean.

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Chapter - 2 Systems Analysis

2.1 Problem Analysis

Identifying and addressing common problems which can help improve our website's usability, customer satisfaction, and conversion rates, ultimately leading to increased sales and profitability. Regular monitoring of customer feedback, usability testing, and continuous optimization are essential to address evolving customer needs and preferences in the online shopping landscape.

2.1.1 User Registration and Authentication

a. Registration Process: The registration process facilitates user account creation by collecting vital details such as name, email, and password, fostering engagement and tailored interactions within the platform.

b. Email Verification: Verify user email addresses to ensure account security and prevent fake or spam accounts.

c. Password Management: Implement password policies, including minimum length, complexity requirements, and password reset options.

2.1.2 Mobile Responsiveness Issues

a. Unoptimized Mobile Experience: The deficiency in mobile optimization results in a subpar user experience on smartphones and tablets, leading to diminished conversions from mobile users, highlighting the imperative need for enhancement to maximize engagement and sales on portable devices.

b. Broken Features: Some website features may not work properly on mobile devices, causing frustration and abandonment.

2.1.3 Poor Website Performance

a. Slow Loading Times: Long loading times can lead to high bounce rates as users become frustrated and abandon the site.

b. Server Downtime: Frequent server crashes or downtime disrupt the shopping experience and prevent users from completing transactions.

2.1.4 Customer Service Issue

a. Poor Response Times: Slow or unresponsive customer service leads to frustration and dissatisfaction among users seeking assistance.

b. Lack of Support Channels: Limited customer support options make it difficult for users to resolve issues or ask questions.

2.1.5 Payment and Security Concerns

a. Limited Payment Options: Offering only a few payment methods may alienate users who prefer alternative payment options.

b. Security Risks: Inadequate security measures expose users to the risk of fraud and identity theft, eroding trust in the website.

2.1.6 Search Functionality Limitations

a. Ineffective Search Filters: Inadequate search filters make it hard for users to refine their product searches and find relevant items.

b. Poor Search Relevance: Search results that are irrelevant or inaccurate frustrate users and impede their ability to find desired products.

2.1.7 Inadequate Product Information

a. Lack of Detailed Descriptions: Incomplete or inaccurate product descriptions make it challenging for users to make informed purchasing decisions.

b. Low-Quality Images: Poor-quality product images fail to showcase products effectively and may deter users from making purchases.

2.1.8 Complicated Navigation and User Interface:

a. Confusing Navigation: Complex navigation structures make it difficult for users to find products and complete purchases.

b. Cluttered Interface: Too much information or visual clutter on the website can overwhelm users and detract from the shopping experience.

2.1.9 Inventory Management Challenges

a. Inaccurate Stock Levels: Incorrect or outdated inventory information results in instances of out-of-stock products or overselling.

b. Difficulty Managing Returns and Exchanges: Complex return processes or restrictive policies discourage users from making purchases.

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2.2 Feasibility Study

"The feasibility study for our proposed e-commerce website for customers involved a comprehensive analysis across various dimensions. Market research revealed a sizable and growing target market with discernible preferences for online shopping. Technical feasibility assessments highlighted the need for robust web hosting, secure payment gateways, and efficient inventory management systems. Legal compliance considerations underscored the importance of adhering to consumer protection laws and data privacy regulations. Financial projections indicated favourable revenue potential, contingent upon prudent investment in website development, marketing, and operational expenses. Operational feasibility assessments focused on optimizing order processing, inventory management, and logistics for scalability. Marketing strategies were devised to leverage digital channels for customer acquisition and retention. Risk assessment identified potential challenges such as market competition and cybersecurity threats, with mitigation strategies proposed to address them. Resource requirements were outlined, encompassing the necessary human capital and technology infrastructure. Ultimately, based on the comprehensive analysis, we recommend proceeding with the development and launch of the e-commerce website, armed with insights to navigate challenges and capitalize on opportunities in the online retail landscape."

2.2.1 Technical Feasibility

The technical feasibility of an e-commerce website revolves around its ability to function reliably and efficiently. This involves ensuring that the website's architecture, backend systems, and frontend interfaces are robust and scalable to handle various user interactions, such as browsing, searching, adding items to cart, and completing transactions securely. Key considerations include selecting appropriate hosting solutions, implementing responsive web design for seamless user experiences across devices, integrating secure payment gateways, and optimizing site performance for fast loading times. Additionally, implementing measures for data security, backup, and disaster recovery is crucial to safeguarding customer information and maintaining business continuity. Overall, a technically feasible e-commerce website should prioritize stability, usability, security, and scalability to meet the demands of online commerce effectively.

a. **Original Design-** Ensure that the website design is unique and not copied from any existing e-commerce platform. You can hire web designers or use design tools to create original layouts and templates.
b. **Images and Multimedia-** Use original images and multimedia content for your products and website. If you need to use stock photos or videos, make sure to purchase the appropriate licenses to avoid copyright infringement.

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c. **Authentic Content Creation-** Generate original product descriptions, blog posts, and other textual content for the website. Refrain from duplicating content from other e-commerce sites to maintain authenticity and avoid plagiarism concerns.

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2.2.2 Economical Feasibility

The economic feasibility of an e-commerce website lies in its ability to generate revenue and provide a return on investment. By minimizing upfront costs through efficient resource allocation and leveraging scalable solutions, such as cloud hosting and open-source software, businesses can establish a cost-effective online presence. Implementing strategies for revenue generation, such as diversified product offerings, targeted marketing campaigns, and strategic pricing strategies, ensures sustainable profitability. Moreover, continuous monitoring of key performance indicators and financial metrics enables businesses to adapt their strategies and optimize operational efficiency for long-term economic viability. Ultimately, a plagiarism-free e-commerce website that demonstrates economic feasibility balances cost-effectiveness with revenue generation to achieve sustainable growth and profitability.

a. **Strategic Planning-** Develop a comprehensive business plan outlining goals, objectives, strategies, and tactics for achieving economic success and competitive advantage in the e-commerce marketplace.
b. **Scalability-** Evaluate the scalability of the business model and infrastructure to accommodate growth in sales volume, expansion into new markets, and introduction of new product lines or services.
c. **Operating Expenses-** Consider ongoing expenses such as website maintenance, hosting fees, payment gateway charges, marketing expenses, and personnel costs for customer support and order fulfilment.

2.2.3 Behavioural Feasibility

Behavioural feasibility of an e-commerce website centers on understanding and aligning with user behaviours and preferences to enhance usability and drive engagement. This involves conducting user research to gain insights into consumer habits, expectations, and pain points, which informs website design, navigation, and functionality. Implementing intuitive user interfaces, personalized recommendations, and streamlined checkout processes encourages positive user interactions and facilitates conversions. Additionally, fostering trust and credibility through transparent pricing, secure payment methods, and responsive customer support promotes repeat business and fosters long-term customer loyalty. Ultimately, prioritizing behavioural feasibility ensures that the e-commerce website effectively meets user needs and preferences, driving satisfaction and success in the online marketplace.

a. **Responsive Design-** Develop a comprehensive business plan outlining goals, objectives, strategies, and tactics for achieving economic success and competitive advantage in the e-commerce marketplace.

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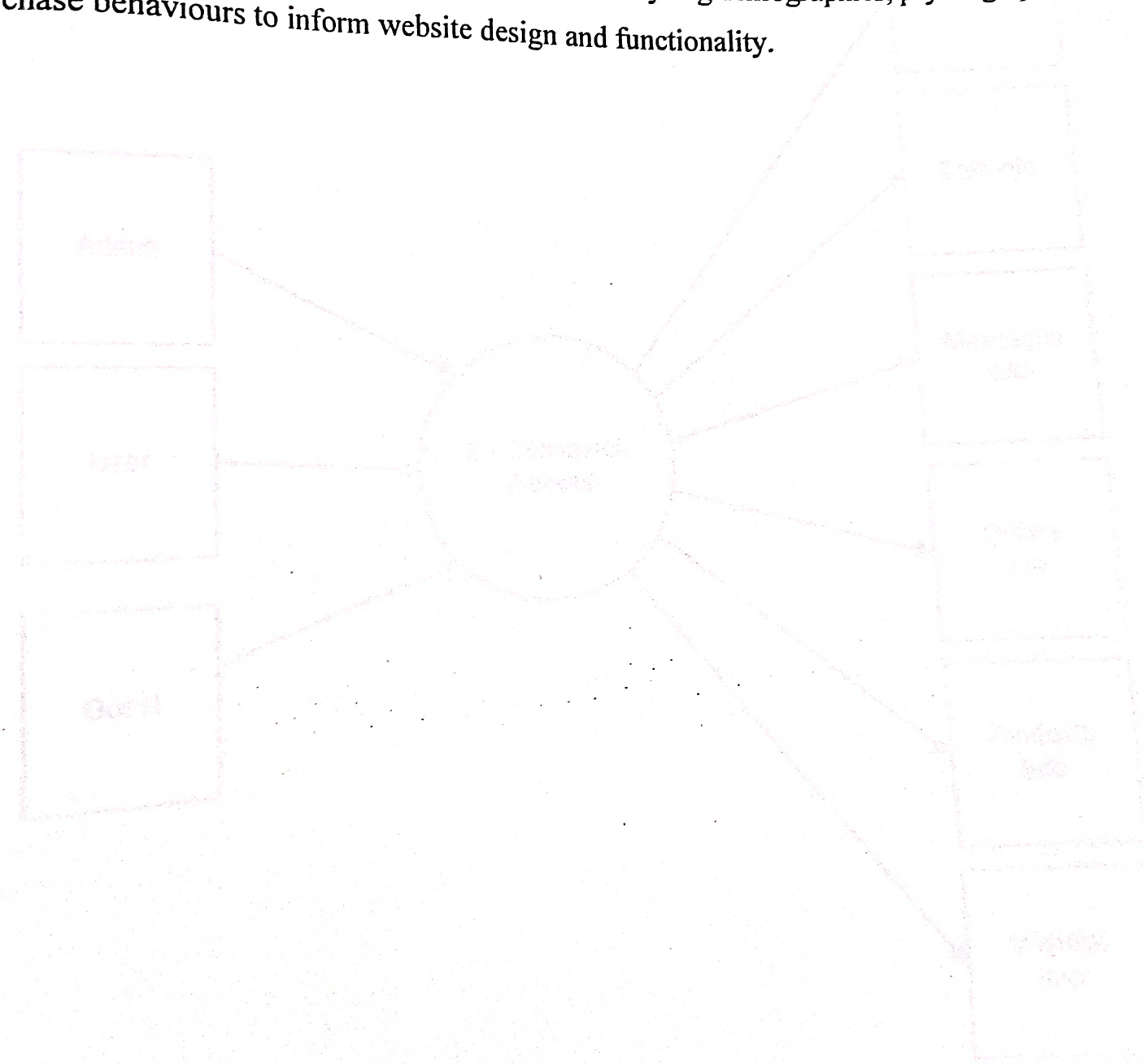
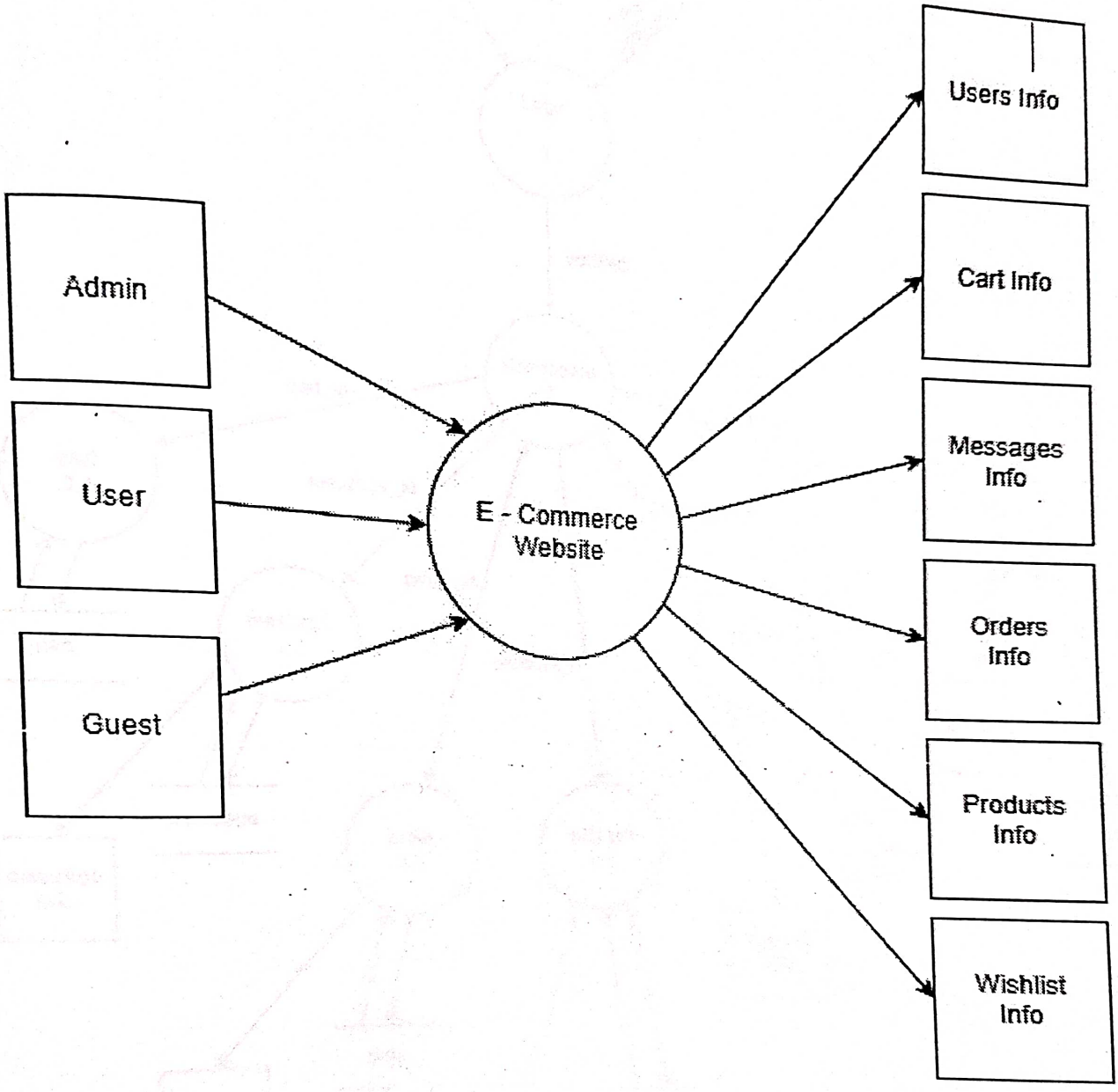
b. **Personalization-** Implement personalization features such as product recommendations, tailored content, and customized shopping experiences based on user preferences, browsing history, and purchase behaviour. Personalization enhances user engagement and fosters a sense of connection with the brand.

c. **User Research-** Conduct thorough user research to understand the needs, preferences, and behaviours of your target audience. This includes analysing demographics, psychographics, and purchase behaviours to inform website design and functionality.



2.3 Data Flow Diagram

2.3.1 DFD 0



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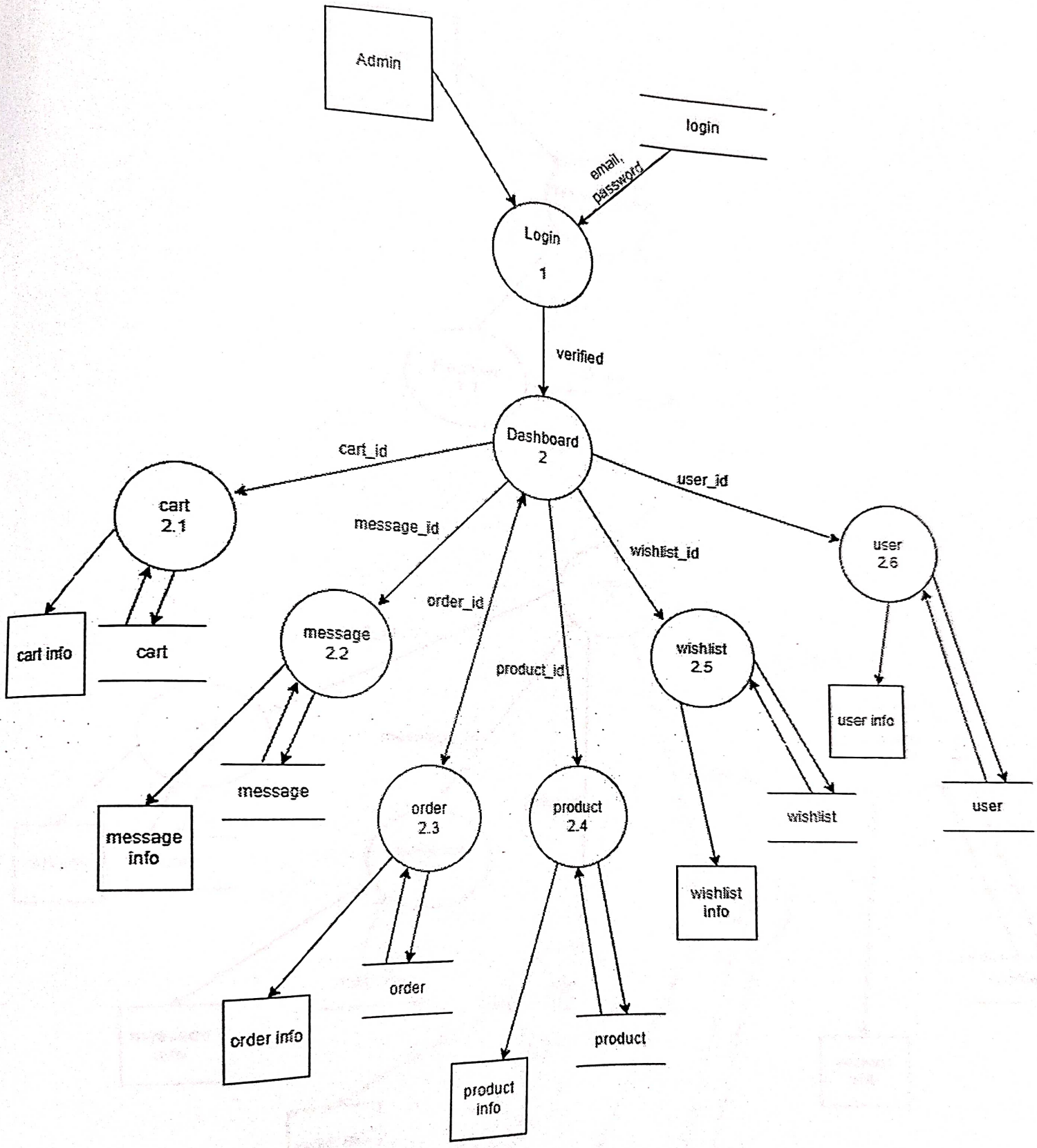
2.3.2 DFD 1 for Admin



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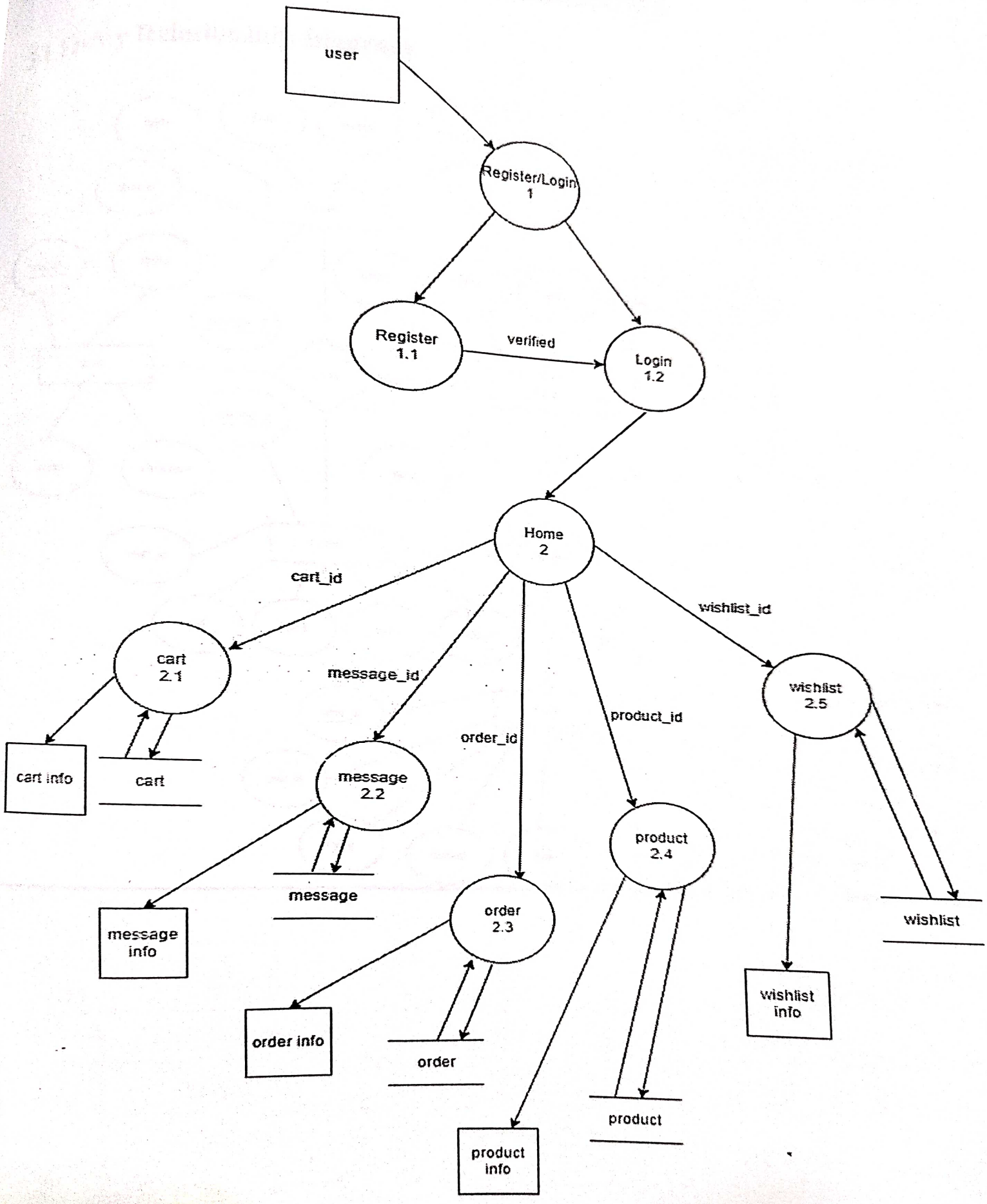
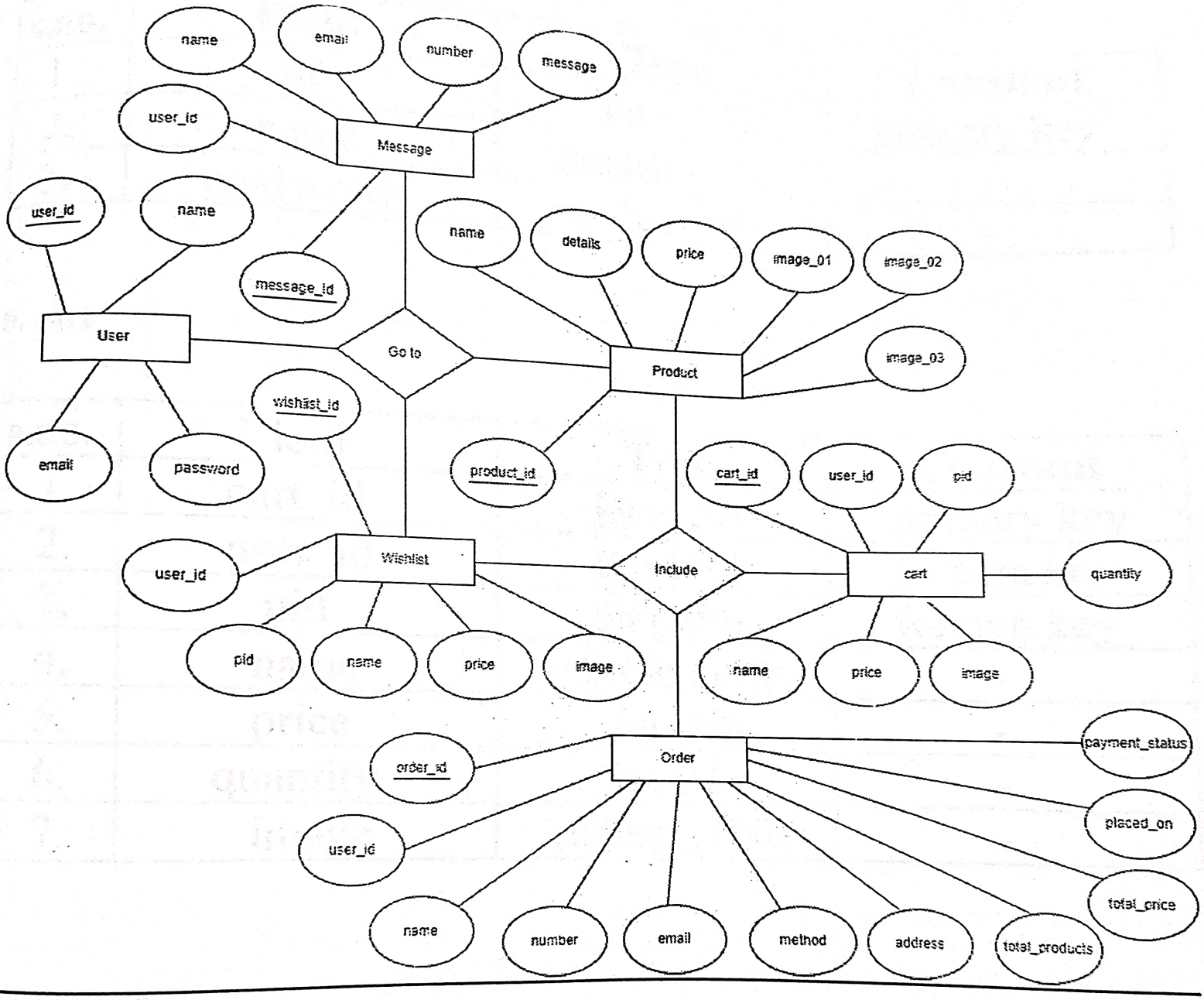
2.3.3 DFD 1 for User



Chapter - 3 Systems Design

3.1 Entity Relationship Diagram



3.2 Table Structure

a. admin

s.no.	Field	Type	Constant
1.	id	int (100)	primary key
2.	name	varchar (20)	-
3.	password	varchar (50)	-

b. cart

s.no.	Field	Type	Constant
1.	cart_id	int (100)	primary key
2.	user_id	int (100)	foreign key
3.	pid	int (100)	foreign key
4.	name	varchar (100)	-
5.	price	int (10)	-
6.	quantity	int (10)	-
7.	image	varchar (100)	-

c. messages

s.no.	Field	Type	Constant
1.	message_id	int (100)	primary key
2.	user_id	int (100)	foreign key
3.	name	varchar (100)	-
4.	email	varchar (100)	-
5.	number	varchar (12)	-
6.	message	varchar (500)	-

d. Orders

s.no.	Field	Type	Constant
1.	order_id	int (100)	primary key
2.	user_id	int (100)	foreign key
3.	name	varchar (20)	-
4.	number	varchar (10)	-
5.	email	varchar (50)	-
6.	method	varchar (50)	-
7.	address	varchar (500)	-
8.	total_products	varchar (1000)	-
9.	total_price	int (100)	-
10.	placed_on	date	-
11.	payment_status	varchar (20)	-

e. products

s.no.	Field	Type	Constant
1.	product_id	int (100)	primary key
2.	name	varchar(100)	-
3.	details	varchar(100)	-
4.	price	int (100)	-
5.	image_01	varchar(100)	-
6.	image_02	varchar(100)	-
7.	image_03	varchar(100)	-

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f. users

s.no.	Field	Type	Constant
1.	user_id	int (100)	primary key
2.	name	varchar (20)	-
3.	email	varchar(50)	-
4.	password	varchar (50)	-

g. wishlist

s.no.	Field	Type	Constant
1.	wishlist_id	int (100)	primary key
2.	user_id	int (100)	foreign key
3.	pid	int (100)	foreign key
4.	name	varchar (100)	-
5.	price	int (100)	-
6.	image	varchar (100)	-

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Chapter – 4 Testing

Testing an e-commerce website involves a comprehensive examination of its functionality, usability, security, and performance. This process includes conducting various tests such as functionality testing to ensure all features work as expected (e.g., search, checkout), usability testing to assess user experience and interface intuitiveness, security testing to identify vulnerabilities and protect user data, and performance testing to evaluate loading times and responsiveness under different conditions. Additionally, compatibility testing ensures the website works seamlessly across different devices and browsers. Automated tools, manual testing, and user feedback are typically utilized throughout the testing process to ensure the website meets quality standards before deployment.

4.1 Unit Testing

Unit testing for an e-commerce website involves the meticulous examination of individual components or code units in isolation to verify their correct functionality. Each unit, such as a specific function or method responsible for tasks like processing payments or updating inventory, undergoes testing independently using mock data or dependencies. This method enables early bug detection and ensures that every unit performs its intended function accurately. Automated unit tests are frequently executed during development to detect regressions promptly. By validating the correctness of individual units, unit testing contributes to maintaining high code quality and facilitates easier debugging and maintenance throughout the development cycle of the e-commerce website.

Test Case ID	Section	Element Name	Test Data	Expected Result	Actual Result	Test Result
TC-001	Admin Login	email, password	No Data	Error message displayed.	Please fill out the field.	Test case passed.
			admin@gmai....., **********, (Incorrect Data)	Pop-up message displayed.	Invalid email and password	Test case passed.
			admin@gmai....., **********, (Correct Data)	Pop-up message displayed.	Login successfully	Test case passed.

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4.2 Compatibility Testing

Compatibility testing for e-commerce platforms ensures a seamless user experience across various devices, browsers, and operating systems. Testers verify that the platform functions correctly and displays properly on different combinations of hardware and software, including popular browsers like Chrome, Firefox, Safari, and Edge, as well as various versions of operating systems such as Windows, macOS, iOS, and Android. They also assess responsiveness and adaptability to different screen sizes, resolutions, and orientations to ensure consistency and usability. Utilizing a combination of automated tools and manual testing, compatibility issues are identified and addressed promptly, ensuring optimal performance for all users regardless of their chosen platform or device.

Test Case ID	Element Name	Element Type	Test Condition	Expected Result	Actual Result	Test Result
TC-001	Device Compatibility	Responsiveness on different devices	Checking Responsiveness on devices for e.g., Laptops, tablets, Smartphones	Website will adapt different screen sizes on different devices without any disbalancing	As expected, the website is full responsive and working perfectly	Test case passed
TC-002	Operating System	Checking website behaviour on different operating systems	Working on different Operating Systems e.g., Android systems, macOS, iOS, Windows, etc.	There shouldn't be any changes in website Designing, Working, Accessibility and Performance speed, while switching the Operating System	Compatibility As Expected, The Website is working all same even on different Operating System expect Linux operating system	Partially Passed

TC-003	End-user Security	Data Security	Testing security measures of users	The logged in user will be able to see his/her own details related information only or correct user-profile is opened for user while logging in	As Expected, Details of login Email is shown, no details of other user are visible to all. Hence Secured	Test case passed

4.3 Functionality Testing

Functionality testing of an e-commerce platform ensures that all its features and functionalities work as expected. This testing involves examining various aspects such as navigation, product search, user registration, checkout process, payment gateways, order management, and account management. Testers simulate real-world scenarios to validate the platform's performance under different conditions, ensuring seamless user experience across devices and browsers. Automated tools and manual testing techniques are employed to identify and rectify any issues or bugs. Additionally, load testing is conducted to evaluate the platform's capability to handle concurrent user traffic. Overall, functionality testing guarantees the reliability, usability, and efficiency of the e-commerce platform, ultimately enhancing customer satisfaction and business success.

Chapter - 5 Implementation

Firstly, we need to install some IDE and other software for implementing our project successfully which are as follows: -

5.1 Visual Studio Code

a. To begin, download Visual Studio Code from its official website (https://code.visualstudio.com/) and install it on your system, selecting the compatible version for your operating system (Windows, macOS, or Linux), if you haven't done so already.

b. Launch Visual Studio Code: After installation, you can typically find Visual Studio Code in your applications menu (on Windows, it's in the Start menu; on macOS, it's in the Applications folder). You can also launch it by searching for "Visual Studio Code" in your operating system's search bar.

c. Open Visual Studio Code: Once launched, you'll see the main interface of Visual Studio Code. You can start coding right away by opening an existing folder or file, or by creating a new one.

d. Extensions (Optional): Explore additional functionality and language support for Visual Studio Code by accessing the Extensions view icon on the sidebar or utilizing the shortcut Ctrl+Shift+X, enabling you to enhance your coding environment according to your preferences and requirements.

e. Configure Settings (Optional): Tailor your Visual Studio Code experience to your workflow by accessing the settings menu through the gear icon in the bottom left corner and selecting "Settings," allowing you to customize various preferences according to your needs and preferences.

f. Start Coding: Once you've set up Visual Studio Code to your liking, you can start coding by opening a project folder, creating a new file, or opening an existing file. Use the built-in editor features, such as syntax highlighting, IntelliSense (code completion), and debugging tools, to enhance your coding experience.

That's it! You're now ready to use Visual Studio Code for your coding projects.

5.2 MySQL XAMPP

a. Open the XAMPP Control Panel. You can usually find it in the directory where you installed XAMPP (e.g., `C:\xampp` on Windows).
b. Once the XAMPP Control Panel is open, you'll see a list of modules including Apache, MySQL, PHP, etc.
c. Look for the MySQL module in the list. It's typically labelled as "MySQL" or "Database."
d. To start MySQL, click the "Start" button next to the MySQL module.
e. After clicking "Start," you should see the status indicator next to MySQL change to indicate that it's running. It usually turns from red or grey to green.
f. Once the status indicator turns green, MySQL has been successfully started in XAMPP.

That's it! MySQL is now running and you can start working with databases using XAMPP. You can access MySQL through phpMyAdmin, which is accessible through your web browser at `http://localhost/phpMyAdmin`. From there, you can manage your databases, tables, and perform various database operations.

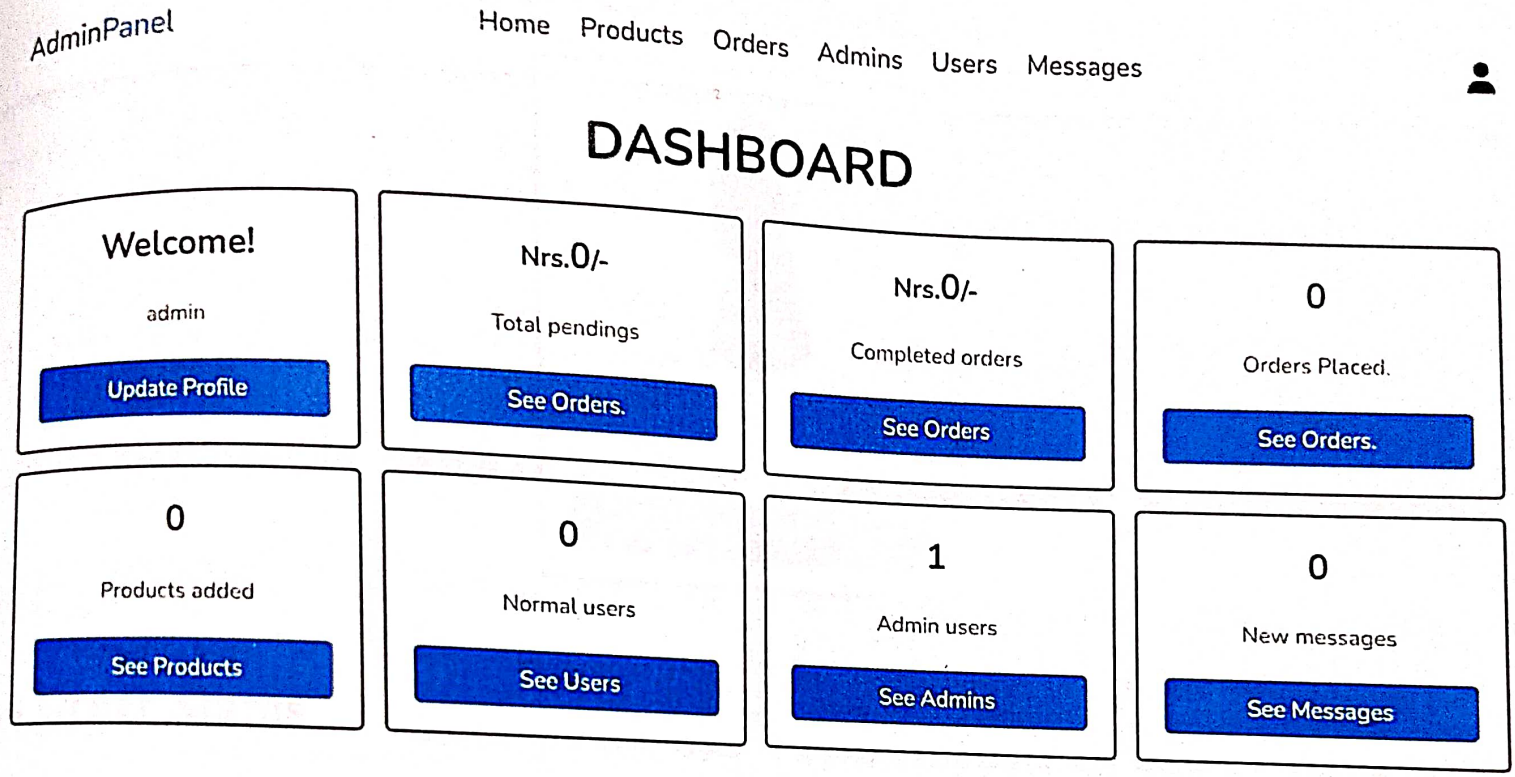
5.3 PHP

a. Open the XAMPP Control Panel. You can usually find it in the directory where you installed XAMPP (e.g., C:\xampp on Windows).
b. Once the XAMPP Control Panel is open, you'll see a list of modules including Apache, MySQL, PHP, etc.
c. Look for the Apache module in the list. It's typically labelled as "Apache" or "Web Server".
d. To start Apache (which includes PHP), click the "Start" button next to the Apache module.
e. After clicking "Start," you should see the status indicator next to Apache change to indicate that it's running. It usually turns from red or gray to green.
f. Once the status indicator turns green, Apache (and PHP) have been successfully started in XAMPP.

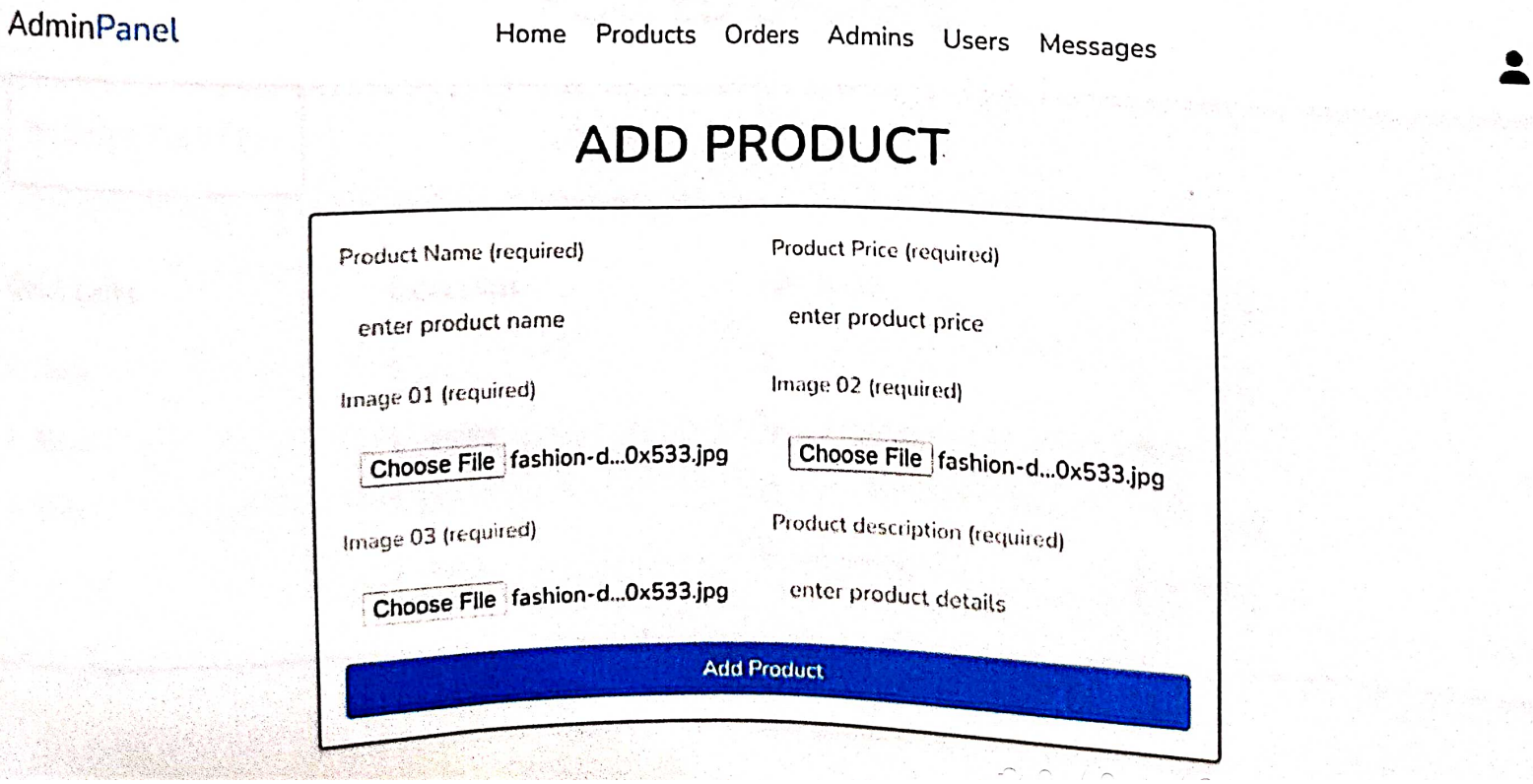
That's it! PHP is now running as part of the Apache server in XAMPP. You can now access PHP files through your web browser by navigating to http://localhost/ or `http://localhost/<your_php_file>.php`, where <your_php_file> is the name of your PHP file.

Chapter - 6 Sample Forms and Reports

6.1 Admin dashboard page



6.3 Add new product



6.3 Add to cart page

KinBech.Com Home About Us Orders Shop Now Contact Us Search (0) (0)

LATEST PRODUCTS.

Dresses

Nrs.700/- 1

Add To Cart

6.4 Order Status

KinBech.Com Home About Us Orders Shop Now Contact Us Search (0) (0)

PLACED ORDERS.

No Orders Placed Yet!

Quick Links

- Home
- About
- Shop
- Contact

Extra Links

- Login
- Register
- Cart
- Orders

Contact Us.

- +977 980 000 0000
- +977 974 000 0000
- harsh.221715@ncit.edu.np
- Kathmandu, Nepal

Follow Us

- facebook
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Chapter - 7 Conclusion & Future Scope

In conclusion, the development of an e-commerce website for customers represents a strategic opportunity to tap into the growing trend of online shopping and meet the evolving needs of modern consumers. By providing a user-friendly interface, seamless navigation, and secure transaction processes, businesses can enhance the shopping experience and cultivate customer loyalty. However, success in the competitive e-commerce landscape requires more than just technological proficiency; it necessitates a deep understanding of consumer behaviours, preferences, and market dynamics. Through continuous innovation, personalized marketing strategies, and responsive customer support, businesses can differentiate themselves and forge lasting relationships with their target audience. As e-commerce continues to shape the retail landscape, businesses must remain agile, adaptable, and customer-centric to thrive in this ever-changing environment.

Advantages

a. **Convenience** - Customers can shop anytime, anywhere, without being limited by store hours or geographical constraints. This flexibility allows for greater convenience and accessibility.

b. **Comparison Shopping** - Online platforms enable customers to easily compare prices, features, and reviews of products, empowering them to make informed purchasing decisions.

c. **Cost Savings** - E-commerce presents cost-saving advantages by eliminating the necessity for physical retail space, thereby reducing overhead expenses related to rent, utilities, and staffing. These savings enable businesses to offer competitive pricing and promotions, ultimately benefiting customers with more affordable products and services.

d. **Ease of Transaction** - With secure payment gateways and streamlined checkout processes, e-commerce websites facilitate quick and hassle-free transactions, enhancing the overall shopping experience for customers.

e. **Accessibility** - E-commerce websites provide accessibility to a global audience, enabling businesses to extend their reach beyond local markets and broaden their customer base, facilitating growth and expansion opportunities.

f. **24/7 Availability** - E-commerce websites offer round-the-clock availability, providing customers the flexibility to shop at any time, regardless of traditional operating hours, enhancing convenience and accessibility for shoppers worldwide.

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Future Scope

Looking ahead, there are several avenues for further enhancement and expansion of the admin site to better serve the needs of users and adapt to changing educational landscapes. Some potential areas for future development include:

a. **Personalization:** Implementing advanced personalization techniques based on user behaviour, preferences, and demographics can enhance the shopping experience. This includes personalized product recommendations, tailored content, and targeted promotions.

b. **Artificial Intelligence (AI) and Machine Learning (ML):** Utilizing Artificial Intelligence (AI) and Machine Learning (ML) technologies enables e-commerce platforms to analyze customer behaviour data effectively. This can be leveraged for predictive analytics, fraud detection, implementation of chatbots for customer service, and other innovative functionalities, enhancing overall user experience and business efficiency.

c. **Mobile Optimization:** As smartphone usage for online shopping rises, e-commerce websites must prioritize mobile optimization, encompassing responsive design, quick loading times, and intuitive navigation to ensure seamless and enjoyable mobile shopping experiences for users.

d. **Fast and Flexible Delivery Options:** Offering fast and flexible delivery options, including same-day delivery, click-and-collect, and subscription-based services, can attract and retain customers. Additionally, providing real-time tracking and delivery updates enhances the overall shopping experience.

e. **Enhanced Security:** With the increasing number of cyber threats, ensuring robust security measures is essential for e-commerce websites. This includes implementing SSL encryption, secure payment gateways, two-factor authentication, and regular security audits.

f. **Social Commerce:** Integrating social media platforms into the e-commerce experience allows customers to discover and purchase products directly from social channels. This includes shoppable posts, influencer collaborations, and social proof features like user-generated content and reviews.

By focusing on these areas of improvement and aligning with evolving customer requirements, e-commerce websites can stay competitive and provide exceptional shopping experiences to their cu

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FORTNIGHTLYPROGRESSREPORT(FPR)FROMINDUSTRYMENTOR

Name of student	Rishika Shakya		Department	CSE (Program: MCA)	
Industry/Organization	Ubitech solutions Pvt Ltd.		Date/Duration	01/01/24 – 15/01/24	
Criterion	**Poor**	**Average**	**Good**	**Very Good**	**Excellent**
Punctuality Timely completion of assigned work				✓	
Learning capacity Knowledge upgradation		✓			
Performance Quality of work			✓		
Behaviour/Discipline Team work			✓		
Sincerity Hard work			✓		
Comment on nature of work done/Area Topic	She is very active and punctual toward task. Nature is very good and follow the all rules and policy in company. Overall, your dedication to refining the technical aspects of the project is evident, and I'm confident that with continued effort, you'll overcome these hurdles successfully.				
OVERALL GRADE (Any one)	**POOR/AVERAGE/GOOD/VERY GOOD/EXCELLENT**				
Name of Industry Mentor	Abhishek Parmar				
Signature of Industry Mentor					

Receiving Date	01/4/24	Name of Faculty Men	Dr. Anshu Chaturvedi	Sign	

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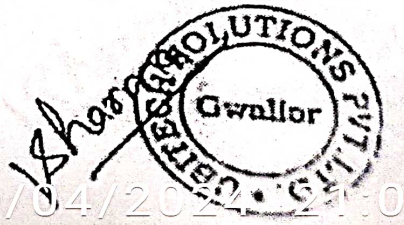
FORTNIGHTLY PROGRESS REPORT (FPR-2) FROM INDUSTRY MENTOR

FORTNIGHTLYPROGRESSREPORTFPRFROMINDUSTRYMENTOR

Nameofstudent	Rishika Shakya		Department	CSE (Program: MCA)	
Industry/Organization	Ubitech solutions Pvt Ltd		Date/Duration	10 | 01 | 24 - 31 | 01 | 24	
Criterion	**Poor**	**Average**	**Good**	**Very Good**	**Excellent**
Punctuality Timelycompletionofassignedwork				✓	
Learningcapacity Knowledge upgradation		✓			
Performance Qualityofwork			✓		
Behaviour Discipline Teamwork			✓		
Sincerity Hardwork			✓		
Commentonnatureofworkdone Area Topic	Recently she is working on frontend on her assigned Module/Project				
OVERALLGRADE(Anyone)	**POOR/AVERAGE/GOOD/VERYGOOD/EXCELLENT**				
NameofIndustryMentor	Abhishek Parmar				
SignatureofIndustry Mentor					

ReceivingDate	01/4/24	Name of Faculty Mentor	Dr. Anshu Chaturvedi	Sign	



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FORTNIGHTLY PROGRESS REPORT (FPR-3) FROM INDUSTRY MENTOR

FORTNIGHTLYPROGRESSREPORT(FPR)FROMINDUSTRYMENTOR

Nameofstudent	Rishika Shakya		Department	CSE (Program: MCA)	
Industry Organization	Ubitech solutions Pvt Ltd.		Date/Duration	01/02/24 – 15/02/24	
Criterion	Poor	Average	Good	Very Good	Excellent
Punctuality Timelycompletionofassignedwork				✓	
Learningcapacity/Knowledge upgradation				✓	
Performance Qualityofwork			✓		
Behaviour/Discipline/Team work				✓	
Sincerity/Hardwork			✓		
Commentonnatureofworkdone/Area/Topic	She developing skills and working on the project				
OVERALLGRADE(Any one)	POOR/AVERAGE/GOOD/VERYGOOD/EXCELLENT				
NameofIndustryMentor	Abhishek Parmar				
SignatureofIndustry Mentor					

ReceivingDate	01/4/24	Name of	Dr. Anshu Chaturvedi	Sign	

Sharma

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FORTNIGHTLYPROGRESSREPORT(FPR)FROMINDUSTRYMENTOR

Nameofstudent	Rishika Shakya		Department	CSE (Program MCA)	
Industry Organization	Ubtech solutions Pvt Ltd.		Date/Duration	29/12/24 - 15/02/25	
Criterion	Poor	Average	Good	Very Good	Excellent
Punctuality Timelycompletionofassignedwork			✓		
Learningcapacity Knowledge upgradation				✓	
Performance Qualityofwork				✓	
Behaviour Discipline/Teamwork			✓		
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Commentonnatureofworkdone Area/Topic	She is learning nodeJS and develop skills				
OVERALLGRADE(Any one)	**POOR/AVERAGE/GOOD/VERYGOOD/EXCELLENT**				
NameofIndustryMentor	Abhishek Parmar				
SignatureofIndustry Mentor					

ReceivingDate	01/4/24	Name of	Dr. Anuradha Chaturvedi	Sign	

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Name of student	Rishika Shakya		Department	CSE (Program MCA)	
Industry Organization	Ubiteeh solutions Pvt Ltd.		Date/Duration	29/02/24 - 13/03/24	
Criterion	**Poor**	**Average**	**Good**	**Very Good**	**Excellent**
Punctuality, Timely completion of assigned work			✓		
Learning spirit, Knowledge upgradation				✓	
Performance, Quality of work				✓	
Behaviour, Discipline, Team work			✓		
Sincerity, Hardwork				✓	
Comment on nature of work done/ Area/ Topic	She is learning nodeJS and develop skills				
OVERALL GRADE (Any one)	**POOR/AVERAGE/GOOD/VERYGOOD/EXCELLENT**				
Name of Industry Mentor	Abhishek Parmar				
Signature of Industry Mentor					

Receiving Date	01/4/24	Name of	Dr. Anshu Chaturvedi	Sign	

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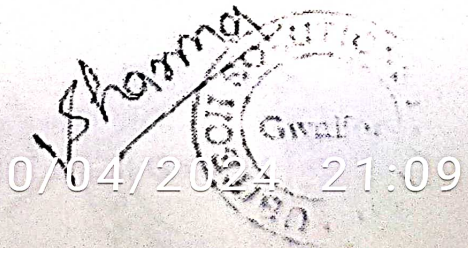
FORTNIGHTLY PROGRESS REPORT (FPR-6) FROM INDUSTRY MENTOR

FORTNIGHTLYPROGRESSREPORTFPRFROMINDUSTRYMENTOR

Nameofstudent	Rishika Shakya		Department	CSE (Program: MCA)	
Industry/Organization	Ubitech solutions Pvt Ltd		Date/Duration	2/2/24 – 15/2/24	
Criterion	Poor	Average	Good	Very Good	Excellent
Punctuality Timelycompletionofassignedwork				✓	
Learningcapacity Knowledge upgradation		✓			
Performance Qualityofwork			✓		
Behaviour Discipline Team work			✓		
Sincerity/Hardwork			✓		
Commentonnatureofworkdone/Area/Topic	Keep improving your backend skills: SQL, API design, security, performance, error handling, documentation, and testing. Keep it up!				
OVERALLGRADE(Any one)	POOR/AVERAGE/GOOD/VERYGOOD/EXCELLENT				
NameofIndustryMentor	Abhishek Parmar				
SignatureofIndustry Mentor					

ReceivingDate	1/4/24	Name of FacultyMen	Dr. Anurag Chaturvedi	Sign	



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Industry/Organization	Ubitech solutions Pvt Ltd.		Date/Duration	01/04/24 – 15/04/24	
Criterion	**Poor**	**Average**	**Good**	**Very Good**	**Excellent**
Punctuality/Timelycompletionofassignedwork					✓
Learningcapacity/Knowledge upgradation				✓	
Performance/Qualityofwork				✓	
Behaviour/Discipline/Team work					✓
Sincerity/Hardwork				✓	
Commentonnatureofworkdone/Area/Topic	Project is completed and the technologies used in project such as HTML, CSS, Bootstrap for frontend and PHP for backend and MySQL for database.				
OVERALLGRADE(Any one)	**POOR/AVERAGE/GOOD/VERYGOOD/EXCELLENT**				
NameofIndustryMentor	Abhishek Parmar				
SignatureofIndustry Mentor					

ReceivingDate	16/4/24	Name of Faculty mentor	Dr. Ankit Chouhadi	Sign	

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