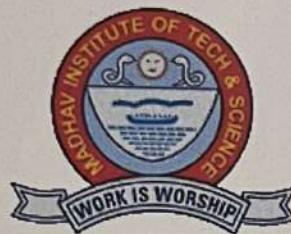


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**(Declared under Distinct Category by Ministry of Education, Govt. of India)**  
**NAAC Accredited with A++ Grade**



**Project Report**  
**On**  
**Development of Online Kirana Stores**

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:**  
Divyansh Vyas  
(0901CA221026)

**Industry Mentor:**  
Mr. Vishal Jain (Project Manager, Numeric Infosystem Pvt. Ltd.)

**Faculty Mentor:**  
Dr. Anshu Charturvedi (Professor)

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**  
**MADHAV INSTITUE OF TECHNOLOGY AND SCIENCE**  
**Gwalior – 474005 (M.P.) Estd.1957**

**January – June 2024**



NIS/24/Ref-250

Date: 18/04/2024

## **PROJECT COMPLETION CERTIFICATE**

This is to certify that **Mr. Divyansh Vyas** has successfully completed his project with us at **Numeric Infosystem Private Limited**, under the designation of **Software Developer** in the Information Technology Department. His project **commenced on 15th Jan 2024 and concluded on 15th May 2024**, during which he exhibited commendable conduct and professionalism.

Throughout the project, **Mr. Divyansh Vyas** actively contributed to the development of the **Online Kirana Store**, a dynamic web application aimed at enhancing user experience and functionality. His responsibilities encompassed frontend and backend development tasks, including designing user interfaces, writing clean and efficient code, and integrating various APIs.

For  
**NUMERIC INFOSYSTEM PVT. LTD.**



(Authorized Signatory)

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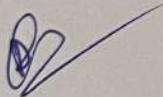
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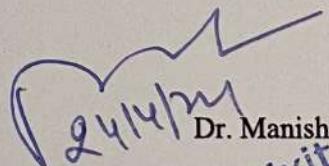
## **CERTIFICATE**

This is certified that Divyansh Vyas (0901CA221026) has submitted the project report titled **Development of Online Kirana Stores** under the mentorship of **Mr. Vishal Jain**, Project Manager (Software Developer Team), Numeric Infosystem Pvt. Ltd., in partial fulfillment of the requirement for the award of degree of **Master in Computer Application** of Computer Science and Engineering from **Madhav Institute of Technology and Science, Gwalior**.

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



Dr. Anshu Chaturvedi  
(Professor)  
Computer Science and Engineering



24/4/21  
Dr. Manish Dixit  
(Professor and Head)  
Computer Science and Engineering  
Dr. Manish Dixit  
Professor & HOD  
Department of CSE  
M.I.T.S. Gwalior

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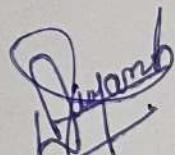
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## **DECLARATION**

I hereby declare that the work being presented in this project report, for the partial fulfillment of the 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 **Mr. Vishal Jain**, Project Manager (Software Developer Team), Numeric Infosystem 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.



Divyansh Vyas

0901CA221026

2022-2024

Master in Computer Application  
Computer Science and Engineering

# **MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE**

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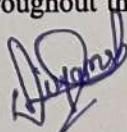
## **ACKNOWLEDGEMENT**

The full semester project has proved to be pivotal to my career. I am thankful to my institute, **Madhav Institute of Technology and Science** for allowing me to continue my disciplinary project. I extend my gratitude to the Director of the institute, **Dr. R. K. Pandit**, and the Dean of 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, of the Department of Computer Science and Engineering, for his continued support during this engagement, which eased the process and formalities involved.

I would like to extend my heartfelt appreciation to **Mr. Vishal Jain**, Project Manager(Software Developer's Team), Numeric Infosystem Pvt. Ltd. for his exceptional mentorship, guidance, and assistance throughout the project. His valuable input and feedback during 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 his continued support and guidance throughout the project. I am also very thankful to the faculty and staff of the department.



Divyansh Vyas

0901CA221026

2022-2024

Master in Computer Application  
Computer Science and Engineering

## Abstract

The "Online Kirana Stores" project creates user-friendly websites designed exclusively for small companies with the goal of bridging the gap between traditional Kirana stores and the online marketplace. Traditional Kirana stores struggle to compete with larger online retailers and hold onto clients in the present digital era of internet shopping. Nonetheless, Kirana stores can increase revenue, improve customer satisfaction, and streamline operations by utilising the internet's capabilities.

The goal of this project is to create and deploy unique websites for Kirana stores, which act as online storefronts for showcasing goods, interacting with consumers, and offering easy online shopping. The creation of websites, product showcases, online ordering platforms, tools for managing inventory, features for customer involvement, integration of payment gateways, mobile responsiveness, and support for digital marketing are among the main goals.

Kirana stores can expand their client base, gain a competitive edge, enhance consumer convenience, boost operational efficiency, and support the uplift of local communities by creating an online presence. In the end, this initiative seeks to provide Kirana store owners with the digital tools they need to prosper in the contemporary retail environment, promoting resilience, growth, and innovation in the Kirana industry.

## सार

प्रोजेक्ट "किराना स्टोर्स" का उद्देश्य इन छोटे व्यवसायों के लिए विशेष रूप से तैयार की गई उपयोगकर्ता-अनुकूल वेबसाइटों को विकसित करके पारंपरिक किराना स्टोर्स और डिजिटल मार्केटप्लेस के बीच की खाई को पाटना है। वर्तमान डिजिटल युग में, जहां ऑनलाइन शॉपिंग प्रमुख है, पारंपरिक किराना स्टोर्स को चुनौतियों का सामना करना पड़ता है। ग्राहकों को बनाए रखने और बड़े ऑनलाइन खुदरा विक्रेताओं के साथ प्रतिस्पर्धा करने में, हालांकि, इंटरनेट की शक्ति का लाभ उठाकर, किराना स्टोर अपने ग्राहक आधार का विस्तार कर सकते हैं, संचालन को सुव्यवस्थित कर सकते हैं और लाभप्रदता बढ़ा सकते हैं।

यह परियोजना किराना स्टोरों के लिए अनुकूलित वेबसाइटों को डिजाइन करने और लागू करने, उत्पादों को प्रदर्शित करने, ग्राहकों से ऑनलाइन जुड़ने और सुविधाजनक खरीदारी अनुभव प्रदान करने के लिए वर्चुअल स्टोरफ्रंट के रूप में काम करने पर केंद्रित है। मुख्य उद्देश्यों में वेबसाइट विकास, उत्पाद प्रदर्शन, ऑनलाइन ऑर्डरिंग सिस्टम, ग्राहक सहभागिता सुविधाएँ, इन्वेंट्री प्रबंधन उपकरण, भुगतान गेटवे एकीकरण, मोबाइल प्रतिक्रिया और डिजिटल मार्केटिंग समर्थन शामिल हैं।

ऑनलाइन उपस्थिति स्थापित करके, किराना स्टोर अपनी पहुंच बढ़ा सकते हैं, ग्राहकों को बेहतर सुविधा प्रदान कर सकते हैं, प्रतिस्पर्धात्मक लाभ प्राप्त कर सकते हैं, परिचालन दक्षता में सुधार कर सकते हैं और स्थानीय समुदायों के सशक्तिकरण में योगदान कर सकते हैं। अंततः, इस परियोजना का उद्देश्य किराना स्टोर मालिकों को आधुनिक खुदरा परिवृश्य में आगे बढ़ने, किराना क्षेत्र में विकास, नवाचार और लचीलेपन को बढ़ावा देने के लिए आवश्यक डिजिटल उपकरणों के साथ सशक्त बनाना

## List Of Figures

Figure Number	Figure Caption	Page No.
2.3	Data Flow Diagram	12
2.3.1	DFD 0	12
2.3.2	DFD 1 for user	13
2.3.3	DFD 1 for admin	14
3.1	Database Design	16
3.2	System Flow Chart	17
3.2.1	For Admin	17
3.2.2	For User	18
3.3	ER Diagram	19

## List Of Tables

Table Number	Figure Title	Page No.
3.4.1	User Table	20
3.4.2	Products Table	20
3.4.3	Prices Table	21
3.4.4	Offers Table	21
3.4.5	Categories Table	22
3.4.6	Billproduct Table	22
3.4.7	Bill Table	23
3.4.8	Admin Table	24
3.4.9	Address Table	24

### Chapter 2: System Analysis

2.1 Problem Analysis	6
2.2 Feasibility Study	6
2.2.1 Economic Feasibility	6
2.2.2 Technical Feasibility	6
2.2.3 Behavioral Feasibility	7
2.2.4 Operational Feasibility	7
2.2.5 Legal Feasibility	8
2.3 Data Flow Diagram	9
2.3.1 DFDs	9
2.3.2 DFDs for User	10
2.3.3 DFDs with Admin	11

### Chapter 3: System Design

3.1 Database Design	13
3.1.1 System flow chart for Admin	14
3.1.2 System flow chart for User	15
3.2 I-E Diagram	16
3.3 System design	17-31

### Chapter 4: Testing

4.1 Unit Testing	25-26
4.2 Compatibility Testing	27

## TABLE OF CONTENTS

<b>TITLE</b>	<b>PAGE NO.</b>
Abstract	v
सार	vi
List of Figures	vii
List of Tables	viii
<b>Chapter 1. Introduction</b>	<b>1</b>
1.2 Problem Identification	2
1.3 About Organization	3
1.4 Hardware and Software Specification	4
<b>Chapter 2. System Analysis</b>	<b>6</b>
2.1 Problem Analysis	6
2.2 Feasibility Study	6
2.2.1 Economical Feasibility	6
2.2.2 Technical Feasibility	6
2.2.3 Behavioral Feasibility	7
2.2.4 Operational Feasibility	7
2.2.5 Legal Feasibility	8
2.3 Data Flow Diagram	9
2.3.1 DFD 0	9
2.3.2 DFD 1 for User	10
2.3.3 DFD a for Admin	11
<b>Chapter 3. System Design</b>	<b>12</b>
3.1 Database Design	13
3.2.1 System flow chart for Admin	14
3.2.2 System flow chart for User	15
3.3 E-R Diagram	16
3.4 System design	17-21
<b>Chapter 4. Testing</b>	<b>23-24</b>
4.1 Unit Testing	25
4.2 Compatibility Testing	

4.3 Recovery Testing	26
4.4 Function Testing	26
<b>Chapter 5. Implementation</b>	26
<b>Chapter 6. Sample Forms and Report</b>	28-29
<b>Chapter 7. Conclusion</b>	31-35
7.1 Future Scope	37
7.2 Bibliography	38
Plag report	39
FPR reports	40
	40-46

- 1.2 Website Delivery Model: Create webhooks to receive notifications when a customer places an order, and use this data to update inventory levels and shipping status.

# CHAPTER 1

## INTRODUCTION

1.3 Inventory Management: Implement a system for tracking product availability, monitoring inventory levels, and triggering reordering processes.

1.4 Payment Gateway Integration: Make seamless transactions possible by connecting well-known payment gateways, giving clients a simple and safe checkout experience.

1.5 Support for Digital Marketing: Give business owners advice and resources on utilizing digital marketing techniques to bring their online visibility and attract more customers.

## Chapter-1. Introduction

In the current digital era, traditional Kirana stores are finding it difficult to compete with larger online retailers and keep clients in the age of increased online purchasing. However, Kirana retailers may use the Internet to increase their consumer base, improve overall profitability, and streamline operations with the correct technology advancements.

By creating user-friendly websites for these establishments, the "Vipin Kirana Store" project seeks to close the gap between physical Kirana stores and the online world. These websites will function as online showrooms, allowing Kirana store owners to present their goods, communicate with clients, and provide easy online shopping.

### Project Objectives:

- 1.1 Website Development:** Create websites that are specifically suited to the needs and tastes of Kirana stores.
- 1.2 Product Showcase:** Provide Kirana store owners with an easy-to-use platform on which to display their inventory of groceries, home goods, and other necessities.
- 1.3 Online Ordering System:** Set up an online ordering system that enables clients to easily explore merchandise, place orders, and arrange for pickups or deliveries.
- 1.4 Customer Engagement:** To improve engagement and encourage customer loyalty, incorporate elements like user reviews, ratings, and tailored recommendations.
- 1.5 Inventory management:** To assist Kirana store owners in monitoring stock levels, controlling replenishments, and maximizing product availability, incorporating inventory management systems.
- 1.6 Payment Gateway Integration:** Make safe online transactions possible by connecting well-known payment gateways, giving clients a simple and easy checkout experience.
- 1.7 Support for Digital Marketing:** Give Kirana store owners advice and assistance on utilizing digital marketing techniques to boost their online visibility and draw in more customer

## 1.2 Problem identification

**1.2.1 Limited Online Presence:** The absence of an online presence for many Kirana stores makes them less visible and inaccessible to potential consumers, especially those who like to purchase online.

**1.2.2 Competitive disadvantage:** Due to their conventional business strategy and limited digital skills, Kirana stores find it difficult to effectively compete in the face of increased competition from huge e-commerce platforms.

**1.2.3 Manual Operations:** Kirana stores frequently use manual procedures to process orders, maintain inventory, and communicate with customers. This results in errors, delays, and inefficiencies.

**1.2.4 Customer Convenience:** Many Kirana businesses are unable to offer the amenities that customers anticipate from online shopping, such as home delivery, online ordering, and product browsing. As a result, consumers are placing an increased emphasis on these capabilities.

**1.2.5 Tech Literacy Gap:** Some Kirana business owners might not have the means or technical know-how to create and manage a successful online presence, which makes it more difficult for them to embrace digital transformation.

### 1.3 Parent Organisation

A drive for success with perfection led to the existence of our company. Numeric Infosystem is offering a complete range of mobile and web solutions including IOS / Android App development, web designing & development, e-commerce solutions, business solutions and many more. We started this journey in 2009 with a team of few enthusiasts who thrive to achieve fame with hard work and perfection. Our team creates highly customized solutions with an approach to deal with future, once in use they will work for many years with minimum modifications. Our team is fully dedicated and we work till clients satisfaction.

It is involved in software supply, consulting, and publishing. Software publishing include the creation, distribution, and documentation of operating systems, commercial and other application software, computer games for all platforms, and ready-made (non-customized) software. Consulting involves assessing the wants and issues of the user and then offering the best solution in the form of custom software. Made-to-order software that is based on orders from particular users is also referred to as custom software. Included are also writing software of any kind in accordance with user instructions, software maintenance, and web page design.

## 1.4 Hardware And Software Specification: -

### 1.4.1 Hardware Specification: -

Hardware Component	Minimum Requirement
Processor	Intel Core i3 or equivalent
RAM	4 GB
Hard Disk	250 GB
Display	15-inch monitor with a resolution of 1366x768 pixels
Input Devices	Keyboard and Mouse
Internet Connectivity	Broadband or Wi-Fi connection
Operating System	Windows 7 or later, macOS X 10.11 or later, Ubuntu Linux 18.04 or later
Browser	Google Chrome (Latest Version), Mozilla Firefox (Latest Version)
Other Requirements	Node.js (Latest Version), MongoDB (Latest Version)

### 1.4.2 Software Specification: -

Software Component	Version
Node.js	14.x or later
Express.js	4.x or later
React	17.x or later
MongoDB	4.x or later
Mongoose	5.x or later
Axios	0.21.x or later
Bootstrap	5.x or later
Font Awesome	5.x or later
JSON Web Token	8.x or later
Bcrypt	5.x or later

### 2.1 Problem Analysis

Traditional retailers in India, known as "Kiran stores," are facing a number of difficulties in changing business. Organized retail chain and e-commerce platforms are increasing their market share by offering a wider selection of products at reasonable rates, giving a competitive edge to them. Involvement in the supply chain, such as retail supply and distribution channels, helps overcome the cost of procurement and cuts problems with storage and delivery. The legacy of product Kiran stores are often constrained by their stores.

## CHAPTER 2 SYSTEM ANALYSIS

### 2.2.1 Technical Feasibility :

- The MEDEV stack was selected as the system's technology, and all required components were available.
- The database design of the system was enhanced for effective data storage and retrieval. Data and transaction data is protected thanks to the security and privacy features of the system.

### 2.2.2 Economic Feasibility

- After analysis, it was discovered that the system development cost is reasonable.
- The projected maintenance expense for the system is also reasonable.
- When the system's expenses and benefits to the organization, the results for the system are feasible.

## Chapter-2. System Analysis

### 2.1 Problem Analysis: -

Traditional retailers in India, known as "Kirana stores," are facing a number of difficulties in a changing industry. Organized retail chains and e-commerce platforms, which give a modern shopping experience and a broader selection of products at reasonable rates, provide a formidable threat for them. Inefficiencies in the supply chain, such as erratic supply and a lack of economies of scale, increase the cost of procurement and cause problems with stock management. The variety of product Kirana stores can retain is constrained by their small physical spaces, which affects consumer attraction and retention. These small-scale merchants also have substantial challenges in satisfying the evolving demands of consumers for convenience, variety, and service quality, as well as in adjusting to digital innovations. These elements require Kirana stores to innovate and strategically adapt in order to remain viable in retail store.

### 2.2 Feasibility Study: -

The potential of creating the Online Kirana Store was investigated through a feasibility study. Three primary areas of viability were examined in the study: operational, economic, and technical.

#### 2.2.1 Technical Feasibility :

- The MERN stack was selected as the system's technology, and all required equipment and materials were on hand.
- The database design of the system was enhanced for effective data storage and retrieval.
- Sensitive organization data is protected thanks to the security safeguards built into the system.

#### 2.2.2 Economic Feasibility:

- After an estimation, it was discovered that the system's development costs fell inside the project's budget.
- The predicted maintenance expenses for the system were also determined to be reasonable.
- When the system's expenses and benefits were examined, it was discovered that the former exceeded latter.

### 2.2.3 Operational Feasibility:

- After analysis, the requirements for the system were determined to be reachable.
- After an assessment of the system's usability and friendliness, it was discovered that it satisfied users' needs.
- After evaluating how the system will affect the organization's current workflows and processes, it was determined that the software would increase the Online Kirana Store's efficacy and efficiency.

### 2.2.4 Behavioral Feasibility:

**2.2.4.1 User Adoption:** knowing how consumer behaviour and preferences affect the store's ability to succeed. It entails evaluating consumers' propensity to purchase at Kirana locations, as well as their purchasing patterns, tastes in goods and services, and reactions to developments like modernization or digitalization initiatives. It also takes into account how easily store owners can adopt new technology and business strategies that improve the shopping experience.

**2.2.4.2 User Experience (UX) Design:** Evaluate the entire experience and user interface of the system. A user-friendly interface with simple navigation and instructions is crucial. Users are inclined to adopt a system that is easy to use and navigate.

**2.2.4.3 Trust and Security:** Discuss concerns regarding privacy, data security, and the security of online payments. Users need to feel comfortable disclosing personal information or doing financial transactions. Install robust security measures and be transparent with users about them.

**2.2.4.4 Preferences for Communication:** Ascertain how users prefer to communicate (for example, by email, notifications, or in-app messaging) and ensure the system supports them.

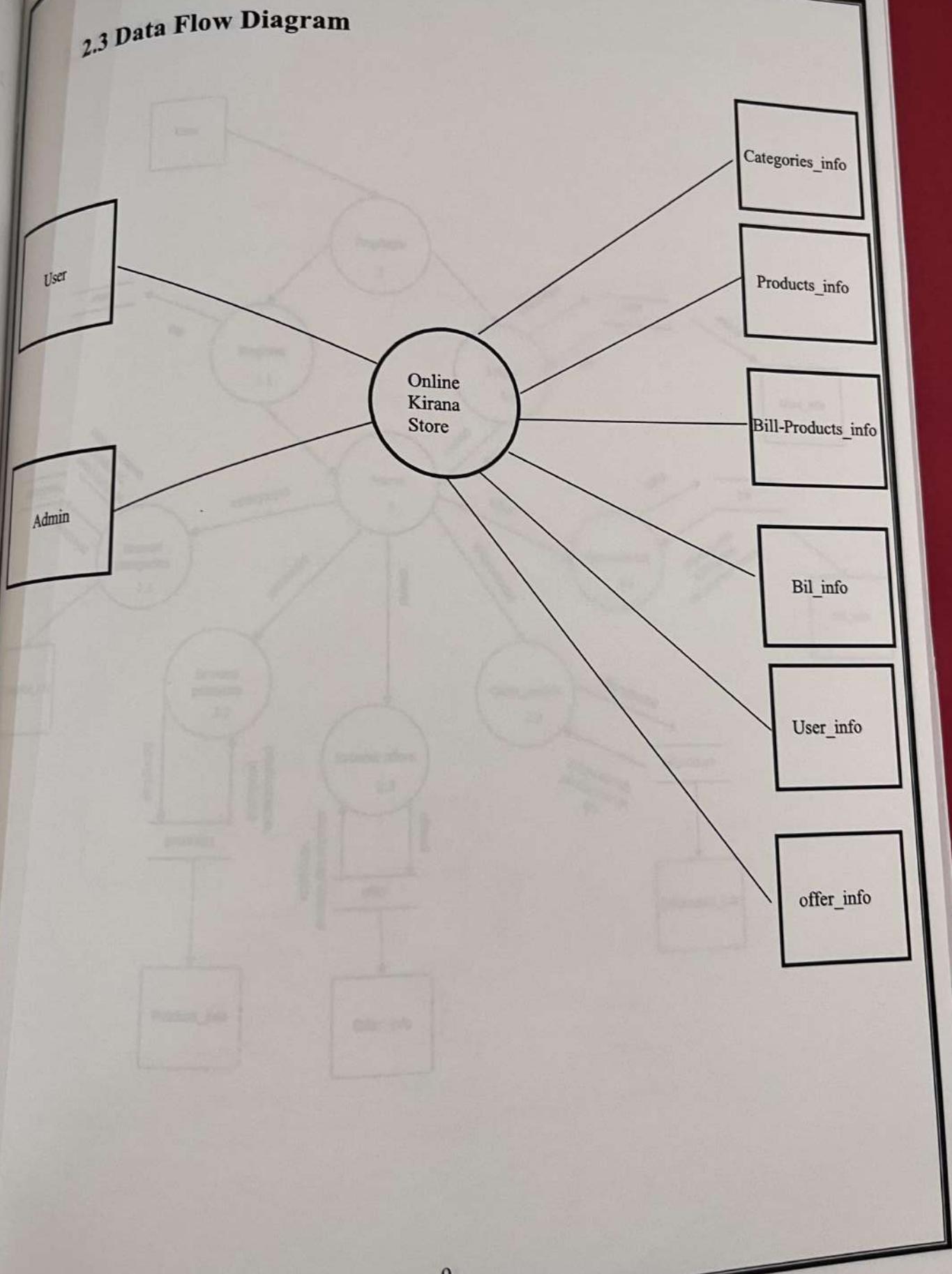
### 2.2.5 Legal Feasibility:

2.2.5.1 All applicable laws and regulations were taken into consideration when designing the system, and the legal requirements for the handling and storage of data were examined.

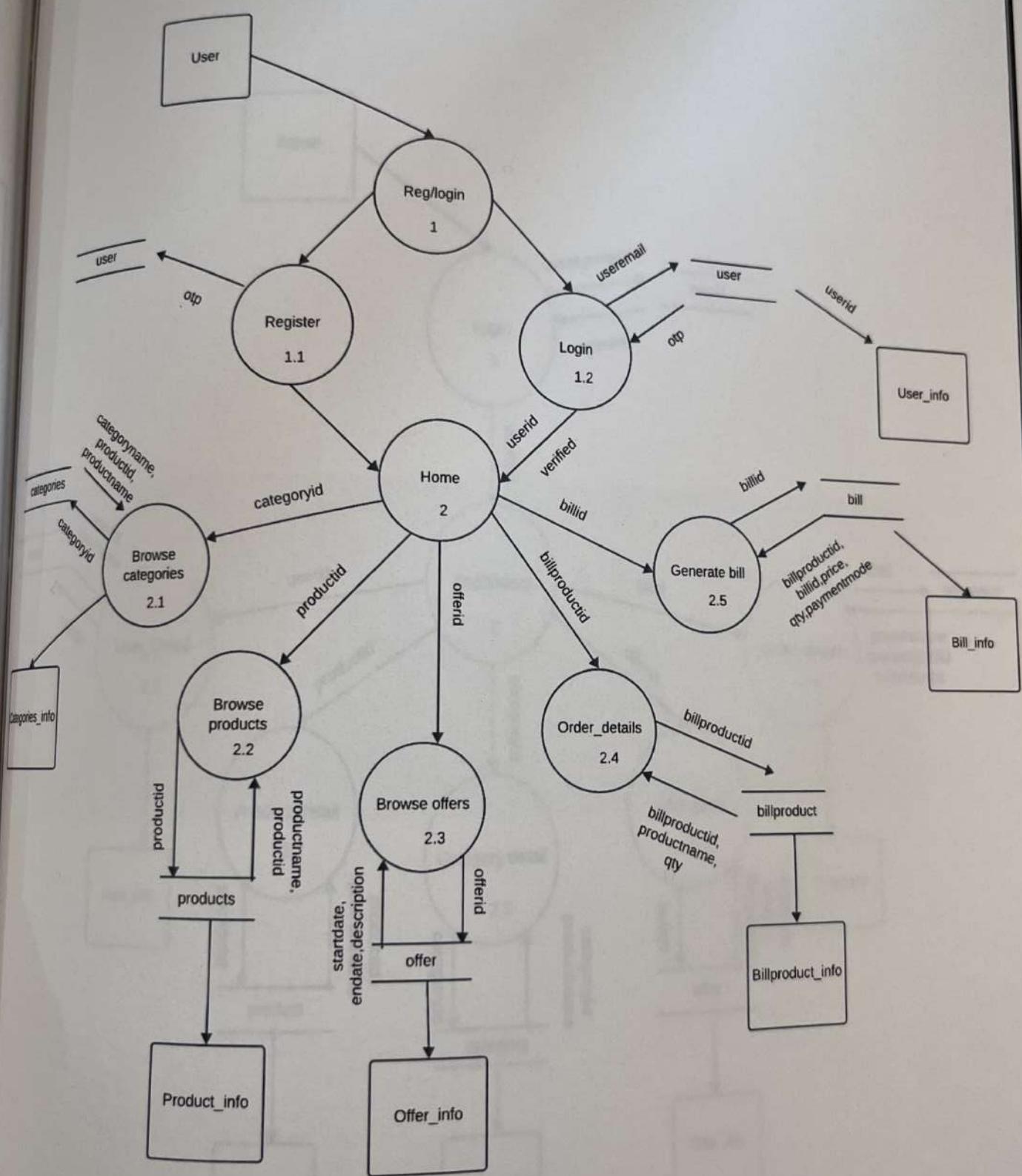
2.2.5.2 The security features of the system were created to safeguard the privacy and confidentiality of organisational data.

2.2.5.3 The privacy policy and terms of service were written to make sure the programme complied with the law. Prior to beginning the development process, the authorities granted the required permissions and approvals.

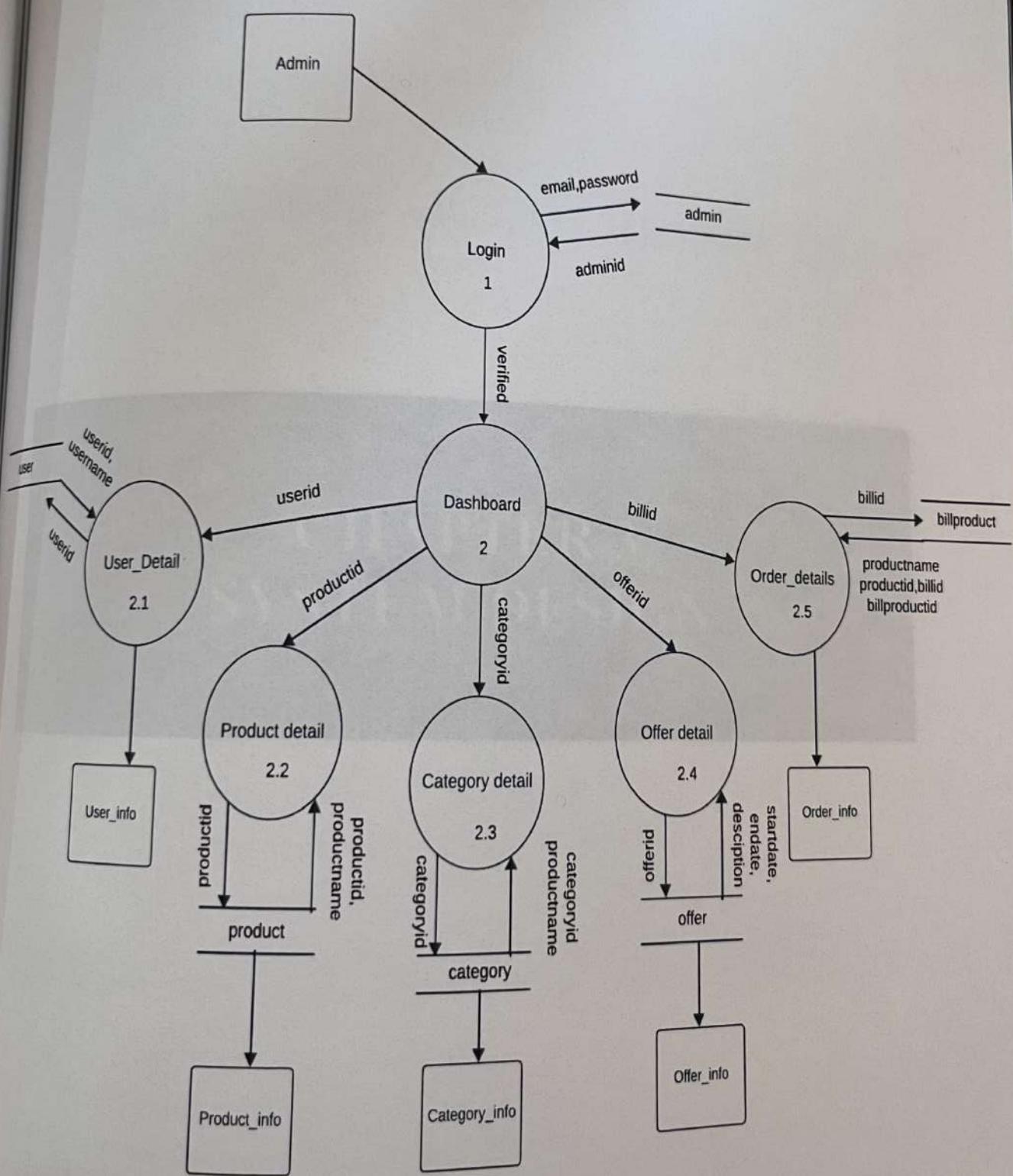
### 2.3 Data Flow Diagram



### 2.3.1 Dfd for user



## 2.3.2 Dfd for admin

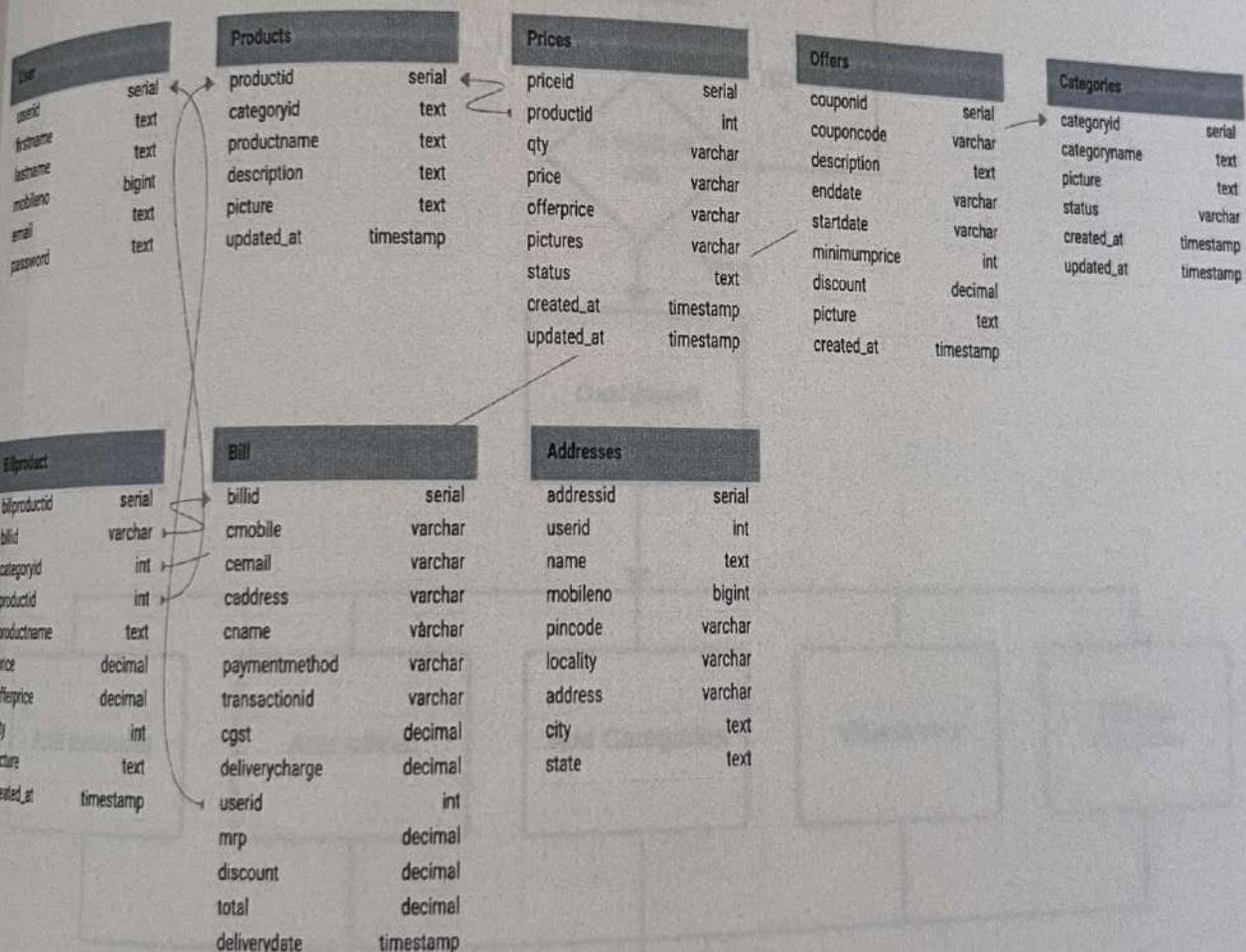


# CHAPTER 3

# SYSTEM DESIGN

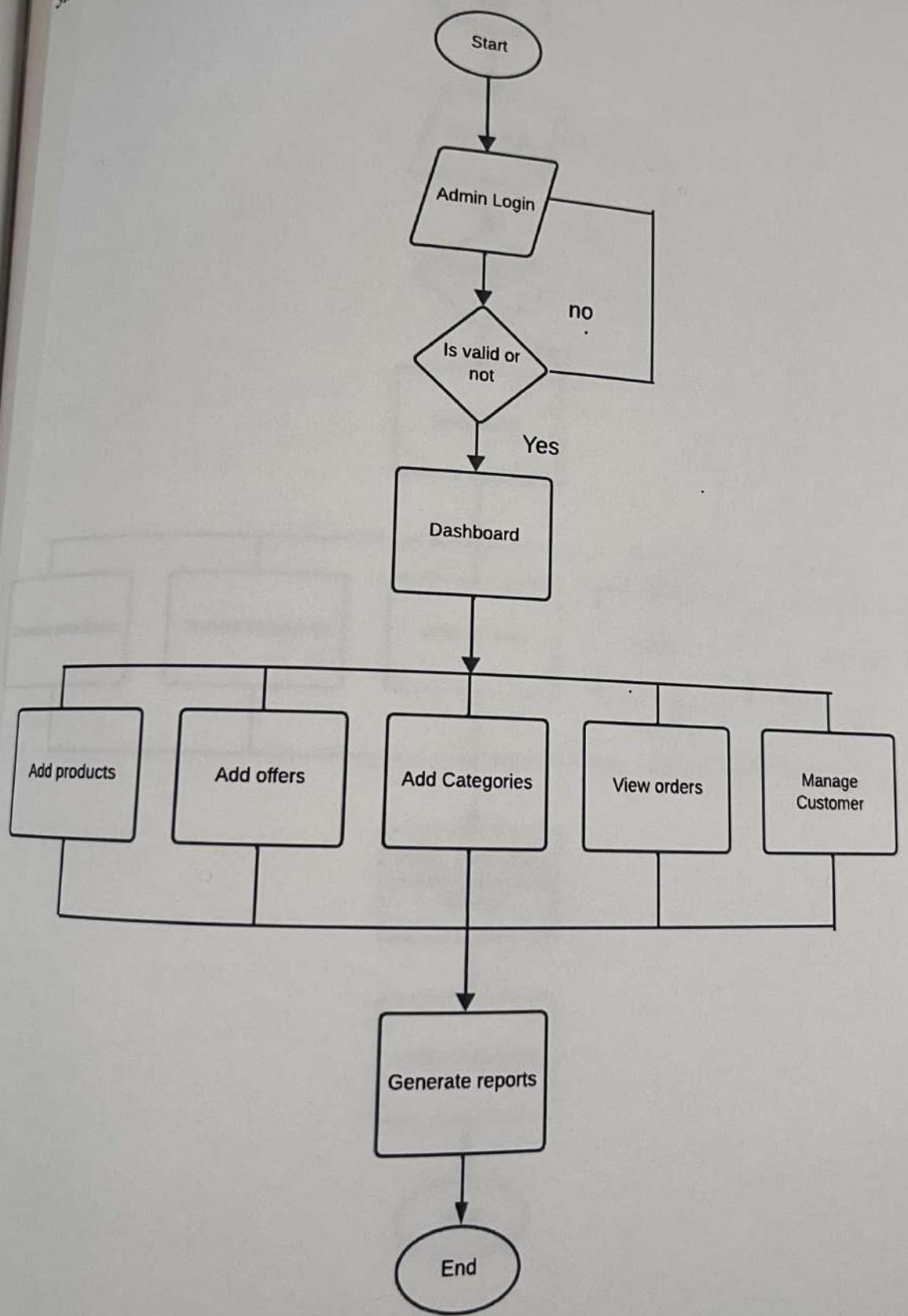
# Chapter-3 System Design

## 3.1 Database design

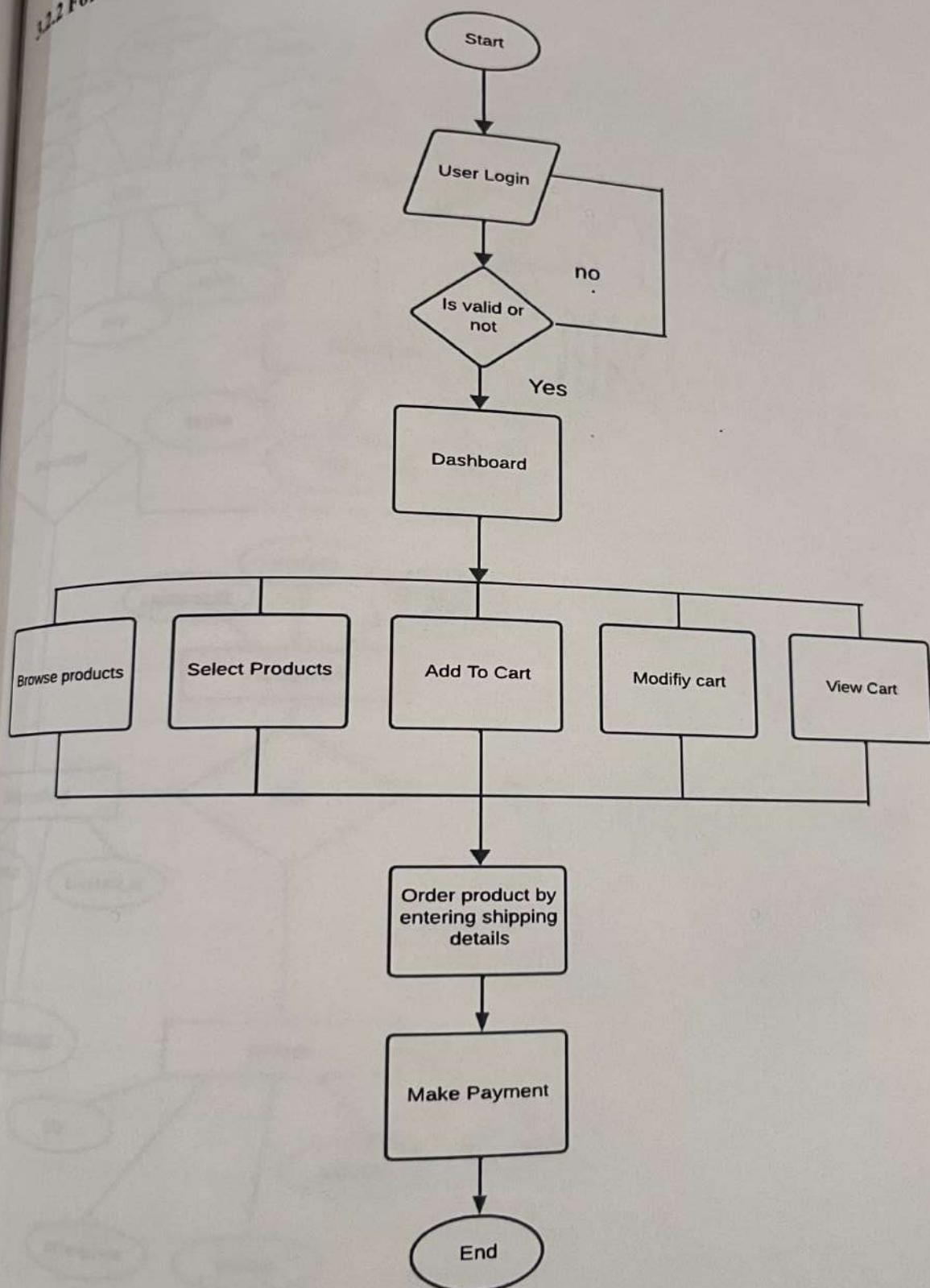


### 3.2 System Flow chart

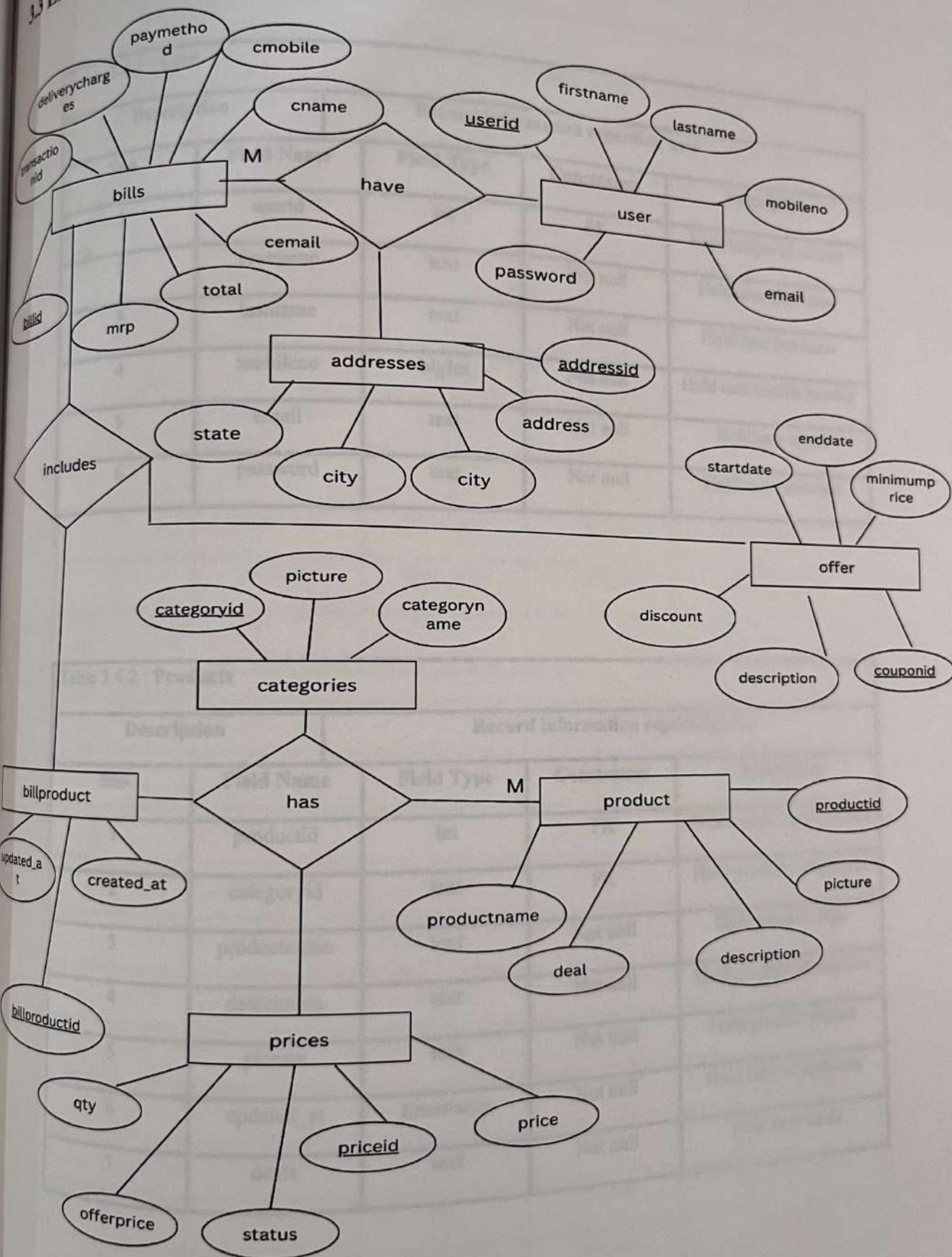
#### 3.2.1 For admin



3.2.2 For user



### 3.3 ER Diagram



# SYSTEM DESIGN

Table 3.4.1 : User

Description		Record information regarding user		
Sno	Field Name	Field Type	Constraints	Description
1	userid	int	PK	Hold unique id of user
2	firstname	text	Not null	Hold user first name
3	lastname	text	Not null	Hold user last name
4	mobilenos	bigInt	Not null	Hold user mobile number
5	email	text	Not null	Hold user email
6	password	text	Not null	Hold user password

Table 3.4.2 : Products

Description		Record information regarding user		
Sno	Field Name	Field Type	Constraints	Description
1	productid	int	PK	Hold unique id of product
2	categoryid	text	FK	Hold product category id
3	productname	text	Not null	Hold product name
4	description	text	Not null	Hold product description
5	picture	text	Not null	Hold product picture
6	updated_at	timestamp	Not null	Hold time of updation
7	deals	text	Not null	Hold new deals

Table 3.4.3: Prices

Description		Record information regarding user		
Sno	Field Name	Field Type	Constraints	Description
1	priceid	int	PK	Hold unique id of priceid
2	productid	varchar	FK	Hold productid
3	qty	Varchar	Not null	Hold qty
4	price	varchar	Not null	Hold price
5	offerprice	varchar	Not null	Hold offerprice
6	pictures	varchar	Not null	Hold time of pictures
7	status	text	Not null	Hold new status
8	created_at	timestamp	Not null	Hold creation
9	updated_at	timestamp	Not null	Hold updation

Table 3.4.4 : Offers

Description		Record information regarding user		
Sno	Field Name	Field Type	Constraints	Description
1	couponid	int	PK	Hold unique id of couponid
2	couponcode	varchar	Not null	Hold couponcode
3	description	text	Not null	Hold description
4	enddate	Varchar	Not null	Hold enddate
5	startdate	varchar	Not null	Hold startdate
6	minimumprice	int	Not null	Hold time of minimumprice
7	discount	decimal	Not null	Hold new discount
8	picture	text	Not null	Hold picture
9	created_at	timestamp	Not null	Hold creation

Table 3.4.5 : categories

Description		Record information regarding user		
Sno	Field Name	Field Type	Constraints	Description
1	categoryid	int	PK	Hold unique id categoryid
2	categoryname	text	Not null	Hold product categoryname
3	picture	text	Not null	Hold product price
4	status	varchar	Not null	Hold product status
5	created_at	timestamp	Not null	Hold product creation
6	updated_at	timestamp	Not null	Hold time of updation

Table 3.4.6 : billproduct

Description		Record information regarding user		
Sno	Field Name	Field Type	Constraints	Description
1	billproductid	int	PK	Hold unique id of billproductid
2	billid	varchar	FK	Hold billid
3	categoryid	varchar	FK	Hold categoryid
4	productid	varchar	FK	Hold productid
5	productname	text	FK	Hold productname
6	price	decimal	Not null	Hold price
7	offerprice	decimal	Not null	Hold offerprice
8	qty	int	Not null	Hold qty
9	picture	text	Not null	Hold picture
10	created_at	timestamp	Not null	Hold creation

Table 3.4.7 : bill

Description		Record information regarding user		
Sno	Field Name	Field Type	Constraints	Description
1	billid	int	PK	Hold unique id of billid
2	cmobile	varchar	Not null	Hold user mobile
3	cemail	varchar	Not null	Hold cemail
4	caddress	varchar	Not null	Hold caddress
5	cname	varchar	Not null	Hold cname
6	paymentmethod	varchar	Not null	Hold paymentmethod
7	transactionid	varchar	Not null	Hold transactionid
8	cgst	decimal	Not null	Hold cgst
9	deliverycharge	decimal	Not null	Hold delivercharge
10	userid	varchar	FK	Hold userid
11	mrp	decimal	Not null	Hold mrp
12	discount	decimal	Not null	Hold discount
13	total	decimal	Not null	Hold total
14	deliverydate	timestamp	Not null	Hold deliverydate

Table 3.4.8 : admin

Description		Record information regarding user		
Sno	Field Name	Field Type	Constraints	Description
1	adminid	int	PK	Hold unique id of adminid
2	adminname	text	Not null	Hold adminname
3	username	text	Not null	Hold username
4	password	text	Not null	Hold password
5	mobile	Big int	Not null	Hold mobile
6	created_at	timestamp	Not null	Hold creation
7	update_at	text	Not null	Hold updation

Table 3.4.9 : addresses

Description		Record information regarding user		
Sno	Field Name	Field Type	Constraints	Description
1	addressid	int	PK	Hold unique id of addressid
2	userid	varchar	Not null	Hold userid
3	name	text	Not null	Hold name
4	mobilenumber	Big int	Not null	Hold mobilenumber
5	pincode	varchar	Not null	Hold pincode
6	locality	varchar	Not null	Hold locality
7	address	varchar	Not null	Hold address
8	city	text	Not null	Hold city
9	state	text	Not null	Hold state
10	landmark	varchar	Not null	Hold landmark

## Chapter-4 Testing

Testing is the process of executing a program or software. Programs are developed and operated to accomplish. It entails running the program to detect and identify the functions or methods in order to find and fix any problems before the product is released. Testing is essential in the project development process.

Testing of individual components should be tested to make sure they work correctly.

# CHAPTER 4 TESTING

## Chapter-4 Testing

In project development, testing is the process of assessing a system or software programme to make sure it satisfies requirements and operates as intended. It entails running the programme or system in order to look for bugs or confirm that it functions as intended. In order to find and fix any problems before the product is made available to end customers, testing is essential to the project development process.

### 4.1 Unit Testing

Software modules or individual components should be tested to make sure they operate properly when used alone.

#### a) Test cases

Test Case Id	Test Scenarios	Test case description	Test Data	Expected result	Actual result
001	User login	Enter your mobile number	No data	Error message displayed.	Enter 10 digits mobile number
			9898765432 (Incorrect mobile number)	Error message displayed	Invalid mobile number.
			6262876544	Message displayed (incorrect otp)	Incorrect otp.
			6262876544	Message displayed	Logged in successful
002	Admin login	Enter your email and password	No data	Error message displayed	Enter valid email & password
			Admin32@.com (incorrect gmail)	Error message displayed	Enter valid email & password
			<u>Admin231@gmail.com</u> (correct gmail & password)	Message displayed	Login successfully
003	Add category	Enter category	Rice (already exist)	Message displayed	Category already exists
			Spices & masala	Message displayed	Category add successful

004	Add deals	Enter deal type, start time , end time	Summer sale 10 feb 2024 – 10 march 2023 (incorrect date entered) Summer sale 10 feb 2024 – 10 march 2024	Error message displayed Message displayed	Enter valid date Deal added successfully
005	Add product	Enter product name , price, image	Basmati rice, image.jpg, 150 (already exists)	Message displayed	Product already exists
			Tuar daal , 220, image.jpeg	Message displayed	Product added successful
006	Add to cart	Select product and press add to cart button	Mustard oil selected and pressed add to cart button (Item exists in cart)	Message displayed	Product already exists in the cart.
			Soyabean oil selected and pressed add to cart button (Item not exists in cart)	Message displayed	Product added to the cart successfully
007	Order Item	Enter your delivery details	Delivery details filled. (payment failed)	Message displayed	Cannot order payment failed
			Delivery details filled. (payment failed)	Message displayed	Order placed successfully

## Compatibility Testing

Compatibility testing refers to programmes that examine how well a system or application works with various hardware configurations, operating systems, web browsers, databases, network settings, and other programmes. To make that the application can function as intended and provide a satisfying user experience in a range of scenarios, compatibility testing is carried out.

Test Case Id	Element name	Element type	Test condition	Expected result	Actual result
001	Operating system	Checking software on different operating systems	Testing the programme on many platforms, including iOS, Android, Linux, macOS, and Windows	No changes should be found on changing different operating systems.	No changes found in the designing, working, speed, responsiveness of the software even on testing it on different operating system platforms.
002	Hardware Platforms	Testing on different hardware platforms	Test the software on different hardware devices such as laptop, desktop, mobile, ipad	No difference should be found on changing the hardware.	Software is working same on all the hardware platforms. No changes are found in the responsiveness or design of the software.
003	Web Browsers	Testing on different hardware platforms	Testing the programme on a range of web browsers, including Internet Explorer, Firefox, Safari, Edge, and Chrome, to make sure it works in a variety of browsing settings	No difference should be found on changing the web browser.	Working similar on all the web browsers. NO changes found in any part of the software.

**4.3 Recovery testing:** Recovery testing is software testing that focuses on evaluating a system's ability to correctly recover from mistakes or disturbances. Recovery testing looks to check if the system can bounce back from a range of errors or incidents, such as unexpected inputs, hardware malfunctions, power outages, or software crashes, and then go back to normal operation and restore data integrity. By performing recovery testing, software developers and testers can identify weaknesses in the system's recovery capabilities and implement modifications to improve resilience and reliability. By doing this, you might improve the system's ability to withstand mistakes and disruptions and provide a more reliable and consistent user experience.

**4.4 Function testing:** Functional testing, often called function testing, is a type of software testing that focuses on verifying that a system's or software application's features or functions work as intended and meet predefined standards. The goal of function testing is to make sure the program performs the tasks it is supposed to precisely and efficiently.

Software developers and testers can find and fix functional flaws, confirm that the program satisfies user and business requirements, and guarantee a high degree of quality and dependability in the final result by carrying out function testing.

## Chapter-5 Implementation

# CHAPTER 5 IMPLEMENTATION

## Chapter-5 Implementation

Firstly, we need to install some IDE software for implementing our project which is as follows: -

### 5.1 Visual Studio Code:

6.1.1 Go to the official Visual Studio Website:

<https://visualstudio.microsoft.com/downloads/>

6.1.2 Click on the “Download” button for the version of Visual Studio you want to install.

6.1.3 Choose the components you want to install, such as languages, frameworks, and tools.

6.1.4 Click on the “Install” button to start the installation process.

6.1.5 Follow the installation wizard and select the options that suit your needs.

### 5.2 MySql Workbench

- Open the MySQL website on a browser. Click on the following link: MySQL Downloads.
- Select the Downloads option.
- Select MySQL Installer for Windows.
- Choose the desired installer and click on download.

### 5.3 Node Js:

- Obtain the Node.js Installer for Windows. To obtain the necessary binary files, go to <https://nodejs.org/en/download/>.
- Complete the installation. Double-clicking the downloaded.msi file will launch the installation.
- Carry out the installation steps. Click the "Next" button on this screen to begin the Node.js download and installation.
- Accept the requirements On the next screen, acknowledge the license agreement, and then click the Next button.
- Complete the installation procedure. Click the Finish button to complete the installation.

React :->

Open the terminal and enter the following command: Utilising -g build-react-app to install npm  
At this moment To create a new folder where your React app will be placed, use the following command: mkdir  
newfolder • Run create-react-app from within this folder now. Initially, YOUR\_APP\_NAME  
Open the React App Newfolder installation folder (in the example above) after selecting your favourite  
integrated development environment (IDE), such as Visual Studio Code. The name of your app—reactapp, in our  
example—will be seen inside the folder. Use the terminal to navigate around the "your app" folder. Execute "cd  
reactapp" (your app's name).

Enter the command below to start your application: npm start

#### 4.4 React :->

- Open the terminal and enter the following command: Utilising -g build-react-app to install npm
- At this moment To create a new folder where your React app will be placed, use the following command: mkdir newfolder • Run create-react-app from within this folder now. Initially, YOUR\_APP\_NAME
- Open the React App Newfolder installation folder (in the example above) after selecting your favourite integrated development environment (IDE), such as Visual Studio Code. The name of your app—reactapp, in our example—will be seen inside the folder. Use the terminal to navigate around the "your app" folder. Execute "cd reactapp" (your app's name).
- Enter the command below to start your application: npm start

# CHAPTER 6

## SAMPLE FORMS AND REPORTS

# Chapter-6 Sample Forms and Reports

Categories Deals What's New Pickup & Delivery Search  Rits

## Shop All Categories



Dal & Pulses



Biscuits



Rice



Dried Fruits, Nuts & Seeds



Namkeen



Whole Grains



Juices



Oils



Spices And Masala



Pickles



Atta



Biscuits & snacks



Categories Deals

What's New

Pickup & Delivery

Search  Rits



CHECK PIN

### Maggi 8 Packs

3.6 173 Ratings & 19 Reviews

Special price

₹112 ~~₹12~~ ₹0.00 off

Available offers

- test\_01 50% off on order above 999 T&C
- test\_02 test\_02 T&C
- New 50 off T&C

[View more offer](#)

Delivery

Pincode

Check

Quantity

1 kg

Services

No Returns Applicable  
 Cash on Delivery available

### Specifications

In the Box

**Categories** **Deals** **What's New** **Pickup & Delivery** **Search** **Rits** **Cart**

**TOTAL MRP**  
Rs. 1998

**DISCOUNT**  
15.50%

**OUR PRICE**  
Rs. 1650

**TOTAL MRP**  
Rs. 1998

**DISCOUNT**  
15.50%

**OUR PRICE**  
Rs. 1650

**TOTAL MRP**  
Rs. 1998

**DISCOUNT**  
15.50%

**OUR PRICE**  
Rs. 1650

**COMBO OFFER**  
YOU SAVE Rs.308

**COMBO OFFER**  
YOU SAVE Rs.308

**COMBO OFFER**  
YOU SAVE Rs.308

[www.vipinkirana.in](http://www.vipinkirana.in)

[www.vipinkirana.in](http://www.vipinkirana.in)

[www.vipinkirana.in](http://www.vipinkirana.in)

Pickup & Delivery

ADD A NEW ADDRESS

Name *	10-digit mobile number *
Pincode *	Locality *
Address (Area and Street) *	
City/District/Town *	State *
Landmark (Optional)	Alternate Phone (Optional)

address type  
 Home  Work

**SAVE** **CANCEL**

APPLY COUPON

DETAILS

10% (1 item)

Product Discount

Delivery Fee

Total Amount: ₹ 12

Day delivery

vishal Dashboard

- Category
- Product
- Banner
- Offers
- Orders
- Logout

Product Entry

Category	Product Name
Description	
Price Type	

Trending:  
 Yes  No

Deals:  
 Yes  No

Status:  
 Available  Not Available

 **RESET**

**SUBMIT**

Category

Category

Status:

Available  Not Available



SUBMIT

RESET

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Categories

Deals

What's New

Pickup & Delivery

Search

Rits

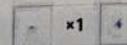


Add Address? [here](#)

 Maggie 8 Packs (1)

Maggie 8 Packs

₹112 ~~₹112~~ ₹0 off



COUPONS

 APPLY COUPONS

 APPLY

PRICE DETAILS

MRP (1 item) ₹ 112

Product Discount ₹ 0

Delivery Fee Free

Total Amount ₹ 112

You will save ₹ 0 on this order

Same Day delivery

Quick picks under 24 hours 

 Safe and Secure payments. Easy returns. 100%

PLACE ORDER

## vishal Dashboard

Search Order

SEARCH

### MY ORDERS

Search

ACTIONS	STATUS	MOBILE	EMAIL ADDRESS	ADDRESS	NAME	PAYMENT METHOD
 	Cancelled by Admin ▾	9174537339	vishaljain2504@gmail.com	Morar, Gwalior	Vishal Jain	Cash on delivery
 	Cancelled by User ▾	9174537339	vishaljain2504@gmail.com	Morar, Gwalior	Vishal Jain	Cash on delivery
 	Cancelled by User ▾	9174537339	vishaljain2504@gmail.com	Morar, Gwalior	Vishal Jain	Cash on delivery
 	Delivered on ▾	9174537339	vishaljain2504@gmail.com	Morar, Gwalior	Vishal Jain	Cash on delivery
 	Cancelled by Admin ▾	9174537339	vishaljain2504@gmail.com	Morar, Gwalior	Vishal Jain	Cash on delivery

## vishal Dashboard

### Offers

Coupon Code

Discount

Description

Minimum Price

Start Date  
04/21/2024

End Date  
04/21/2024



Status:  
 Available  Not Available

SUBMIT

RESET

Copyright © Your Website 2024

- Category
- Product
- Banner
- Offers
- Orders
- Logout

## Chapter-7 Conclusion

Chapter 7 Conclusion: The final section of the book, titled 'Chapter-7 Conclusion', discusses the overall goals, objectives, and scope of the book. It covers the impact of digital technology on various aspects of business, including operational efficiency, boosting customer service, and digitizing inventory. The chapter also highlights the positive effects of digitalization on things like higher revenue, more efficient operations, better customer service, and enhanced supplier relations. It also covers things like expanding the number of store types, new product offerings or functionalities, or looking into joint ventures with other players in the industry.

# CHAPTER 7 CONCLUSION

## Chapter-7 Conclusion

Understanding the project's goals, objectives, and scope is essential for concluding Kirana shop's projects. It involves raising revenue, increasing operational efficiency, boosting customer service, and digitizing inventory management. It affects things like higher revenue, more efficient operations, happier customers, or better competitiveness against bigger retailers. It also affects things like expanding the solution to more Kirana stores, adding new features or functionalities, or looking into joint ventures with other players in the retail industry.

With the project website, Kirana retailers now have a digital platform for effective inventory management, which has empowered them. Retailers now have more control over their inventory operations because of features like automated replenishment alerts, product categorization, and real-time stock tracking.

Retailers may now make well-informed judgments about pricing and stock ordering thanks to the use of sales prediction algorithms. The system provides insightful analysis of past sales data and industry trends, enabling the optimization of inventory levels and the maximization of sales potential. Retailers may guarantee product availability and provide customers with personalized recommendations, so improving their overall shopping experience, by improving inventory management and sales forecasting. Increased customer satisfaction and service quality lead to higher customer loyalty and repeat business.

## Future Scope:-

**1.1 Advanced Analytics and Machine Learning:** Combine machine learning and advanced analytics algorithms to generate recommendations for inventory optimisation and sales forecasts that are more precise. Retailers can make data-driven decisions instantly by using predictive analytics models to enable the system to adjust to shifting market conditions and customer preferences.

**1.2 Integration with Online Marketplaces:** Look into integrating with well-known online marketplaces to facilitate multi-channel sales and order fulfilment. Retailers who sync inventory data between online and offline channels can expand their reach and customer base while maintaining centralised inventory management.

**1.3 Cooperation between Distributors, Suppliers, and Retailers:** Make use of the platform to facilitate cooperation between distributors, suppliers, and retailers. To improve connections and the supply chain ecosystem, put in place systems for automated order replenishment, real-time inventory updates, and supplier communication.

**1.4 Customer Engagement Tools:** You may enhance customer engagement by integrating loyalty programmes and customer relationship management (CRM) tools into the platform. Give companies the resources they require to manage targeted marketing campaigns, collect customer data, and monitor previous transactions in order to foster repeat business and customer loyalty.

References	Website Links
Node.JS official Website	<a href="https://nodejs.org/en">https://nodejs.org/en</a>
React.JS Docs	<a href="https://react.dev/">https://react.dev/</a>
Blinkit	<a href="https://blinkit.com">https://blinkit.com</a>
BigBasket	<a href="https://www.bigbasket.com">https://www.bigbasket.com</a>
Swiggy Insta mart	<a href="https://www.swiggy.com">https://www.swiggy.com</a>
Jio Mart	<a href="https://www.jiomart.com">https://www.jiomart.com</a>
You tube	<a href="https://www.youtube.com">https://www.youtube.com</a>
Express.JS official Website	<a href="https://expressjs.com/">https://expressjs.com/</a>
Uber eats	<a href="https://ubereats.com">https://ubereats.com</a>

## Plag Report

### Similarity Report

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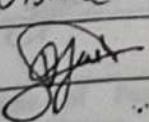
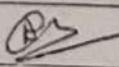
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## FPR Reports

### FORTNIGHTLY PROGRESS REPORT (FPR) FROM INDUSTRY MENTOR

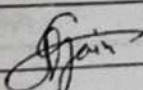
Name of student	<i>Divyansh Yar</i>		Department	MCA	
Industry/Organization	<i>Humairi Infotech Pvt.</i>		Date/Duration	15/01/24 - 31/01/24	
Criterion	Poor	Average	Good	Very Good	Excellent
Punctuality/Timely completion of assigned work					✓
Learning capacity/Knowledge up gradation					✓
Performance/Quality of work					✓
Behaviour/Discipline/Team work					✓
Sincerity/Hard work					✓
Comment on nature of work done/Area/Topic	<ul style="list-style-type: none"> <li>- Understanding project requirements</li> <li>- Learned about UI requirements</li> </ul>				
<u>OVERALL GRADE (Any one)</u>	<u>POOR/AVERAGE/GOOD/VERY GOOD/EXCELLENT</u>				
Name of Industry Mentor	<i>Vishal Jain</i>				
Signature of Industry Mentor	 				
Receiving Date	6/1/24	Name of Faculty Mentor	Ms. Anshu Chaturvedi	Sign	

**FORTNIGHTLY PROGRESS REPORT (FPR) FROM INDUSTRY**  
**MENTOR**

Name of student	Divyansh Vyas		Department	MCA	
Industry/Organization	Numerix Infotech		Date/Duration	01/02/24 - 15/02/24	
Criterion	Poor	Average	Good	Very Good	Excellent
Punctuality/Timely completion of assigned work					✓
Learning capacity/Knowledge up gradation				✓	
Performance/Quality of work					✓
Behaviour/Discipline/Team work					✓
Sincerity/Hard work					✓
Comment on nature of work done/Area/Topic	<p>- Learned new components of react  - Focused on basics of Node.js</p>				
OVERALL GRADE (Any one)	POOR/AVERAGE/GOOD/VERY GOOD/EXCELLENT				
Name of Industry Mentor	Vishal Jain				
Signature of Industry Mentor					

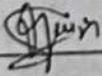
Receiving Date	05/3/24	Name of Faculty Mentor	Sign	AB
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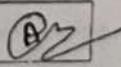
**FORTNIGHTLY PROGRESS REPORT (FPR) FROM INDUSTRY**  
**MENTOR**

Name of student	Divyamsh Vyas		Department	MCA	
Industry/Organization	Numeric Infotech		Date/Duration	16/02/24 - 29/02/24	
Criterion	Poor	Average	Good	Very Good	Excellent
Punctuality/Timely completion of assigned work					
Learning capacity/Knowledge up gradation	.				
Performance/Quality of work				✓	
Behaviour/Discipline/Team work					✓
Sincerity/Hard work					✓
Comment on nature of work done/Area/Topic	<ul style="list-style-type: none"> <li>- Focused on advanced functioning using react.js</li> <li>- Learned dynamic functioning of JavaScript</li> </ul>				
<u>OVERALL GRADE (Any one)</u>	<u>POOR/AVERAGE/GOOD/VERY GOOD/EXCELLENT</u>				
Name of Industry Mentor	Vishal Jain				
Signature of Industry Mentor	 				

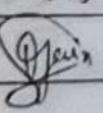
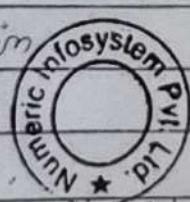
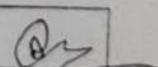
Receiving Date	5/3/24	Name of Faculty Mentor		Sign	
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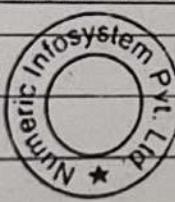
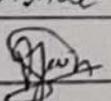
Name of student	Divyansh Vyas		Department	MCA	
Industry/Organization	Numeric Infosys		Date/Duration	01/03/24 - 15/03/24	
Criterion	Poor	Average	Good	Very Good	Excellent
Punctuality/Timely completion of assigned work				✓	
Learning capacity/Knowledge up gradation					✓
Performance/Quality of work					✓
Behaviour/Discipline/Team work					✓
Sincerity/Hard work					✓
Comment on nature of work done/Area/Topic	Work on JSON, development of database using SQL in workbench				
OVERALL GRADE (Any one)	POOR/AVERAGE/GOOD/VERY GOOD/EXCELLENT				
Name of Industry Mentor	Vishal Jain				
Signature of Industry Mentor	 				

Receiving Date	20/03/24	Name of Faculty Mentor	DR. ANSHU CHATURVEDI	Sign	
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**FORTNIGHTLY PROGRESS REPORT (FPR) FROM INDUSTRY**  
**MENTOR**

Name of student	Dijyansh Vyas		Department	MCA	
Industry/Organization	Numerical Infotech		Date/Duration	16/03/24 - 31/03/24	
Criterion	Poor	Average	Good	Very Good	Excellent
Punctuality/Timely completion of assigned work			✓		
Learning capacity/Knowledge up gradation					
Performance/Quality of work				✓	
Behaviour/Discipline/Team work			✓		
Sincerity/Hard work			✓		✓
Comment on nature of work done/Area/Topic	Learned Queries for the backend.				
OVERALL GRADE (Any one)	POOR/AVERAGE/GOOD/VERY GOOD/EXCELLENT				
Name of Industry Mentor	Vishal Jain				
Signature of Industry Mentor	 				
Receiving Date	05/04/24	Name of Faculty Mentor	DR. ANISHU CHATURVEDI	Sign	

**FORTNIGHTLY PROGRESS REPORT (FPR) FROM INDUSTRY  
MENTOR**

Name of student	Dnyanesh Vyas		Department	MCA	
Industry/Organization	Numeritec Infotech		Date/Duration	01/04/24 - 15/04/24	
Criterion	Poor	Average	Good	Very Good	Excellent
Punctuality/Timely completion of assigned work				✓	
Learning capacity/Knowledge up gradation				✓	
Performance/Quality of work				✓	
Behaviour/Discipline/Team work				✓	
Sincerity/Hard work				✓	
Comment on nature of work done/Area/Topic	<p>-Worked on API integration            -Built functionalities such as mapping, filter, sorting</p>				
OVERALL GRADE (Any one)	POOR/AVERAGE/GOOD/VERY GOOD/EXCELLENT				
Name of Industry Mentor	Vishal Jain				
Signature of Industry Mentor	 				

Receiving Date	20/04/24	Name of Faculty Mentor	DR. ANSHU CHATURVEDI	Sign	
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