ABSTRACT

This project focuses on developing a Dress Rental Website that offers users a convenient, affordable, and sustainable way to access stylish outfits for various occasions. With the rising demand for fashion flexibility, the platform will provide a seamless experience for browsing, booking, and renting high-quality dresses without the need for ownership.

The website will feature a diverse collection of dresses, catering to different events such as weddings, parties, and formal gatherings. Users will benefit from advanced search and filtering options based on size, color, occasion, and designer, ensuring they find the perfect outfit effortlessly.

To enhance trust and usability, the platform will integrate secure payment gateways, streamlined booking processes, and verified user reviews. By leveraging modern web technologies, this project aims to make high-end fashion more accessible while promoting sustainability by reducing fast fashion waste.

सार

इस परियोजना का लक्ष्य एक ड्रेस रेंटल वेबसाइट बनाना है जो उपभोक्ताओं को कई घटनाओं के लिए फैशनेबल पोशाक प्राप्त करने के लिए एक आसान, किफायती और पर्यावरण के अनुकूल तरीके से प्रदान करता है। प्लेटफ़ॉर्म फैशन लचीलेपन की बढ़ती मांग के जवाब में एक चिकनी ब्राउज़िंग अनुभव प्रदान करेगा।

वेबसाइट औपचारिक समारोहों, पार्टियों और शादियों सहित विभिन्न अवसरों के अनुरूप कपड़े की एक विस्तृत श्रृंखला की पेशकश करेगी। उपयोगकर्ता आकार, रंग, अवसर और डिजाइनर के आधार पर परिष्कृत खोज और फ़िल्टरिंग विकल्पों के लिए आसानी से धन्यवाद के साथ आदर्श पहनावा पाएंगे।

प्लेटफ़ॉर्म में सुरक्षित भुगतान गेटवे, शीघ्र बुकिंग प्रक्रियाओं, और मान्य उपयोगकर्ता समीक्षाओं को उपयोगिता और विश्वास में सुधार करने के लिए शामिल किया जाएगा। इस परियोजना का लक्ष्य समकालीन वेब प्रौद्योगिकियों का उपयोग करके लक्जरी फैशन बनाना है।

Chapter1: INTRODUCTION

A dress rental website is a online system where user can rent dresses or special occasion Outfits for a limited time rather than buying them. It offers a affordable and durable Way to access high end fashion for event like wedding, parties and festivals.

1.1 Recognition of Need

A dress rental website is a smart solution for those seeking top-tier fashion without the high price tag or environment impact. Designer dresses can be costly and are often worn just once, so renting becomes a affordable and practical optional. Renting promotes durability by increasing garment lifecycle and decreasing production needs and minimizing textile waste. It also provide access to immense styles without wardrobe limitation. It's win for both consumer and earth.

1.2 Problem Identification and Requirements

(i) Customer login :

Problem: User have to register every time they go to the website, which is time taking and frustrating.

Solution: Users only have to sign up once. After their first sign up , a profile is created and saved. The next time they go the website, they can simply log in using their email and password, making the process easy for users.

(ii) Dress Display and Search filters:

Problem: It may be difficult for users to find the right dress due to many options without problem categorization.

Solution: Including a **smart search** with may **filters** like size, color , price range, and more will make it much easier for users to find the dress as per their requirement. This way they can, narrow down their options and select the perfect dress without any struggle.

(iii) Rental Process:

Problem: If the rental process is too complex, users might get irritated and leave their booking midway through. Uncertain pricing, confusion about rental duration, or unclear availability issues can make the experience annoying.

Solution: A simple, step-by-step and clear checkout process will make renting dress easy. Users can choose their rental period, see clear pricing, and complete the booking in a few steps. Real-time availability updates will help avoid confusion and ensure a easy experience..

(iv) Payment Integration:

Problem: It may be difficult for User to complete the payment process due to complex process and the process may seem uncertain or inconvenient.

Solution: By providing a secure and reliable payment gateway that supports many payment methods, including credit cards ,debit cards, UPI, and other popular options. This will give users a smooth and easy checkout experience, assuring they can pay easily and without any complication.

(v) Rating and Feedback:

Problem : Interested renters may fear to make a choice without knowing about the dress's fit quality, or customer experience.

Solution: Letting customers to give detailed reviews and ratings will help future renters to make a choice. Reviews can have fit, dress quality, comfort, and overall customer experience, will give new renter a clear idea about dress. This will build customer faith, increase clarity, and make the rental process more trustworthy for customer.

1.3 Information Gathering Tools:

(i) Review of literature:

By exploring many online website like **flyrobe.com** and **WWW.Rentanattire.com** we analyse that these platform focus on automation to manage tasks such as renting dress, stock management and payment process the deployment of automated website reduces faults and improve user experience by providing real - time stock updates. Studies also suggest that interactive rental platform with clear guidelines and easy interface have greater customer experience.

(ii) On-site observation

The On-Site Observation were performed by the group members to gain knowledge ,the observation focus on customer registration dress, stock management and return principles we performed On-Site Observation at Sudha-collection (add: Near Dewan Gas, Chitnis Ki Goth, Lashkar, Gwalior) the owner of the rental store "Sudha Jain" told us about the main issues such as delays manual data entry, poor management of dress availability and absence of real – time stock updates. She also told us that some customers returns dresses late or with small damage , causing disturbance and extra cost for cleaning or repairing.

(iii) Interviews

Counducted by – Nancy ,Shaloo

Respondent – Gitanjali Yadav (customer)

Date: 15/02/25

(a) What challenges do you face with the current dress rental system?
Gitanjali told us that offline rental systems often have a limited selection of dresses and require an on-site visit to the store, making the process time-consuming. If an online platform were introduced with real-time stock updates, it would make renting easier.

(b) What type of features do you expect in online dress rental system?
Gitanjali recommended features like a virtual try – on option, a Sizing chart, home delivery, and a easy to return process to reliable user experience.
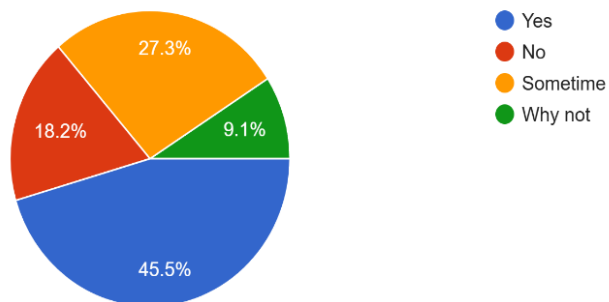
(iv) **<u>Survey/Questionaries</u>**

For survey we created a google form and shared it on social media . This form included questions like.
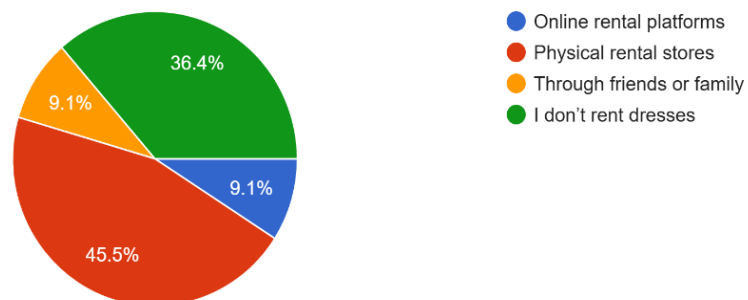
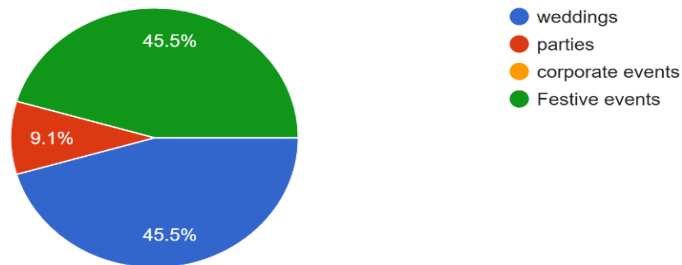**(a) Have you ever used an online dress rental service ?**
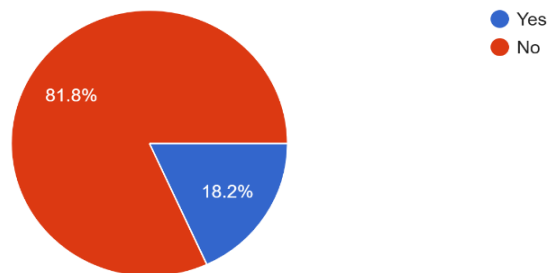
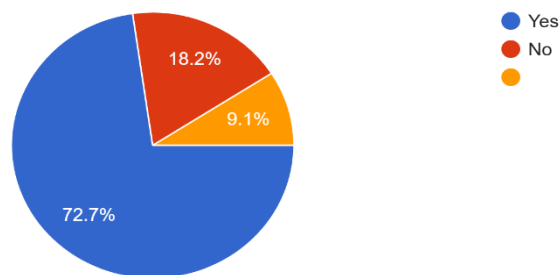**(b) Would you prefer renting dresses rather than buying?**

(c) How do you usually rent dresses?

(d) What type of event would you prefer to rent dresses for?

(e) What additional features would you like to see in an online dress rental system ?

(d) What additional features would you like to see in an online dress rental system ?

An online dress rental system should provide a vast variety of dresses with detailed descriptions, such as quality, size, price, and dress material. Should have features like user reviews, styling tips, and previous customer photos improve decision-making. High level visualization through 3D rendering and VR allows renters to view dresses from all angles and try dress on virtually, ensuring a smooth and secure shopping experience.

Chapter 2: SYSTEM ANALYSIS

2.1 Feasibility study

2.1.1 Economic Feasibility

Sno.	Specialist	Cost
1.	Database Developer(1)(18 days)(in 3 months)	Rs 4000
2.	Software analyst(2)(60 days)(in 3 months)	Rs 7000
3.	GUI Designer(1)(15 days)(in 3months)	Rs 8000
		Total cost: Rs 19,000

Sno.	Other Expensees	Cost
1.	Electricity	60 unit(8rs/unit)
2.	Stationary for (documentation)	Rs.400
3.	Workplace facilities	Rs 500
4.	System (for process)	Rs 300
5.	Hardware cost	Rs 5000
6.	Software cost	Rs 6000
		Total cost: Rs 12,200

Total Expense : 31,200

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2.1.2 <u>Technical Feasibility</u>

The technical feasibility is performed to assure the available technology , skills, and resources , can efficiently help the project implementation.

(a) <u>Software Requirement</u>

S.NO	Title	Details	Description
1.	Operating System	Windows 11	<u>Windows 11</u> provide development environment with built in security features, provide multitasking, and suitable for latest web development tools.
2.	Browser	Chrome	<u>Google chrome</u> Facilitates quick, trustworthy te sting and debugging using developer tools.
3.	IDE	Vs code	<u>VS Code</u> – A code editor that allow multiple web development tools with extensive extensions and debugging support.
4.	Frontend	HTML,CSS,Javascript	<u>HTML, CSS, JavaScript</u> – HTML provides structure, CSS handles layout and styling, and JavaScript introduces dynamic behavior and interactivity.
5.	Backend	Node.js	<u>Node.js</u> – Node.js provides a secure, scalable framework for fast development, while Node.js ensures high-performance, real-time server-side processing.
6.	Database	PostgresSQL	<u>PostgreSQL</u> – A robust, open-source relational database that provide scalability, security, and efficient data management for web applications

(b) Hardware Requirement

S.NO.	Title	Details	Description
1.	CPU	AMD Ryzen 5	AMD Ryzen 5 – Provides fast processing power and multitasking capabilities for efficient coding and testing.
2.	RAM	16 GB	16GB - Ensures smooth performance when running several multiple development tools, browsers, and virtual environments.
3.	Storage	512 GB	512GB SSD – Provide enough space for file access, project storage, and overall system responsiveness.

2.1.3 Behavior Feasibility

Behavioral feasibility examines whether users will accept and effectively utilize the system. It guarantees a user-friendly experience that facilitates smooth adoption.

1.Guidance & Support: We offer clear instructions and training materials to empower users in troubleshooting and operating the system with confidence.

2.Warranty & Assistance: A one-year warranty provides prompt support and quick resolution for any issues that may arise.

3. 24/7 Support: Our team is available at all times to assist with any main concerns.

2.1 <u>Data flow diagram</u>

<u>**DFD Level - 0**</u>

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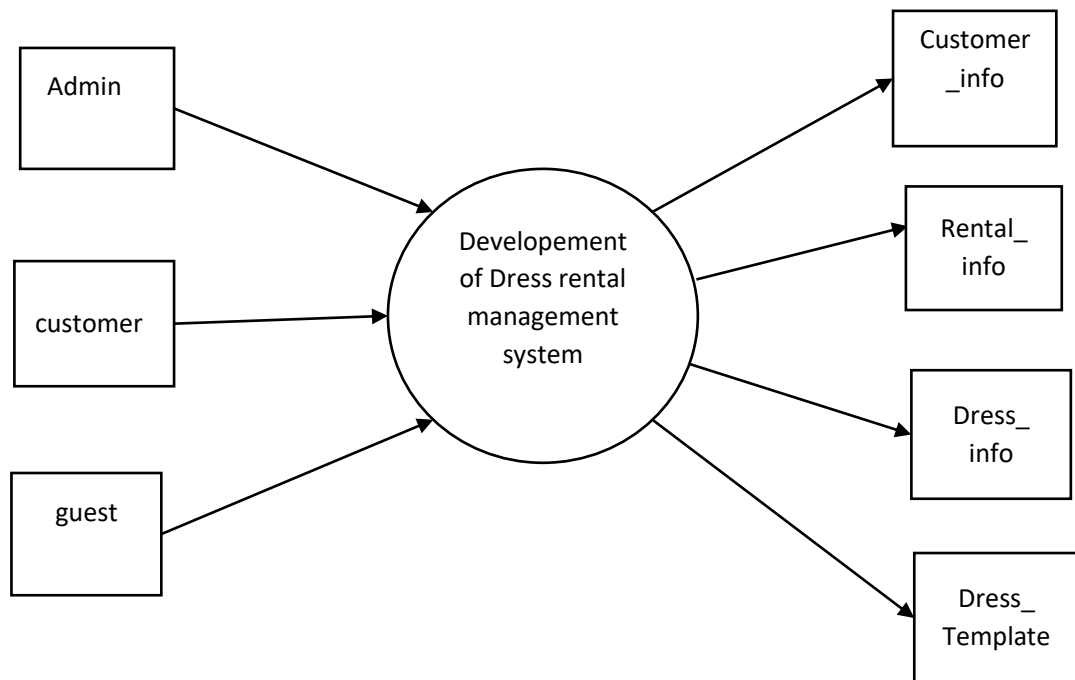
DFD level -1 for shops

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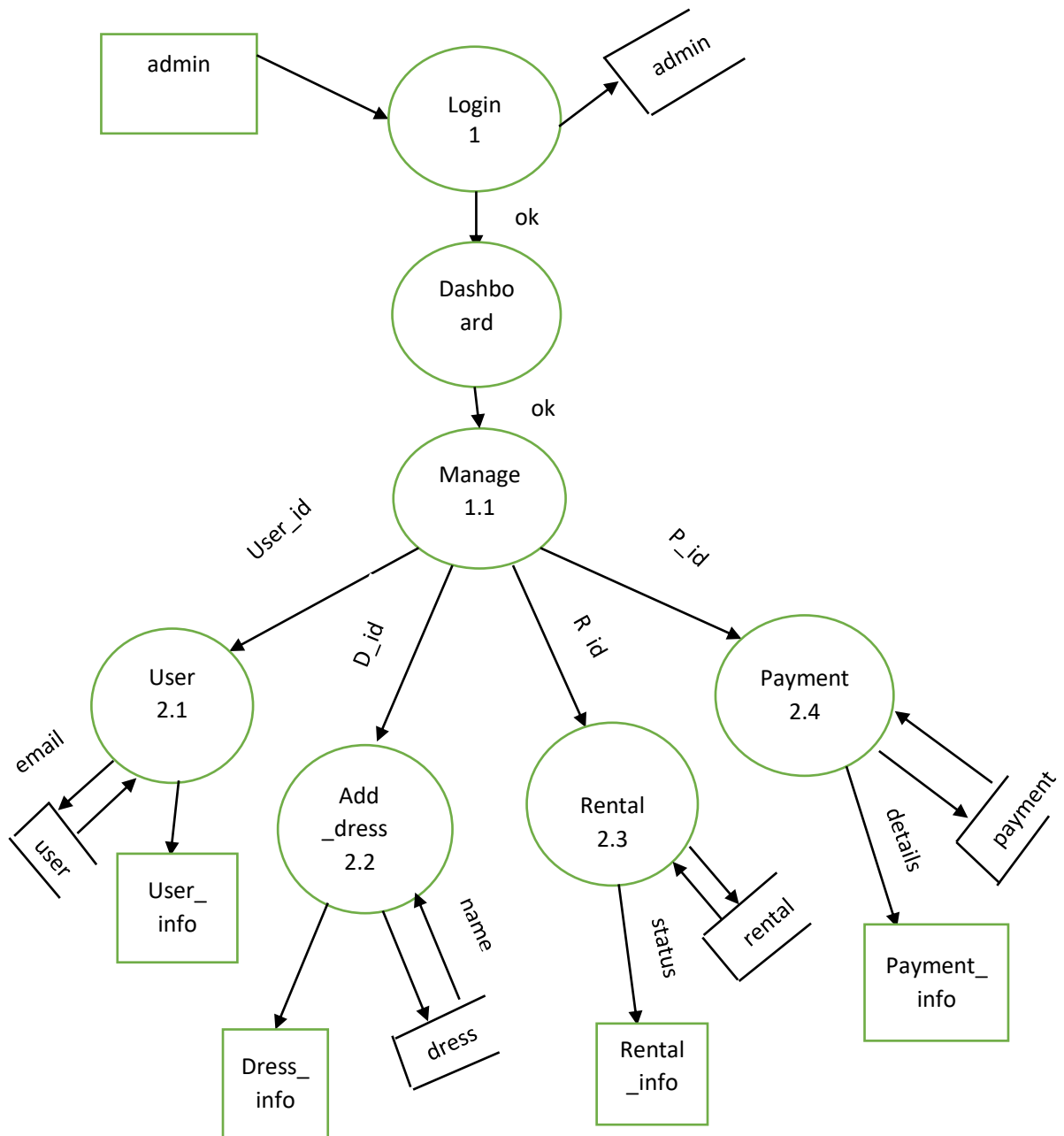
DFD Level - 1 for Customer

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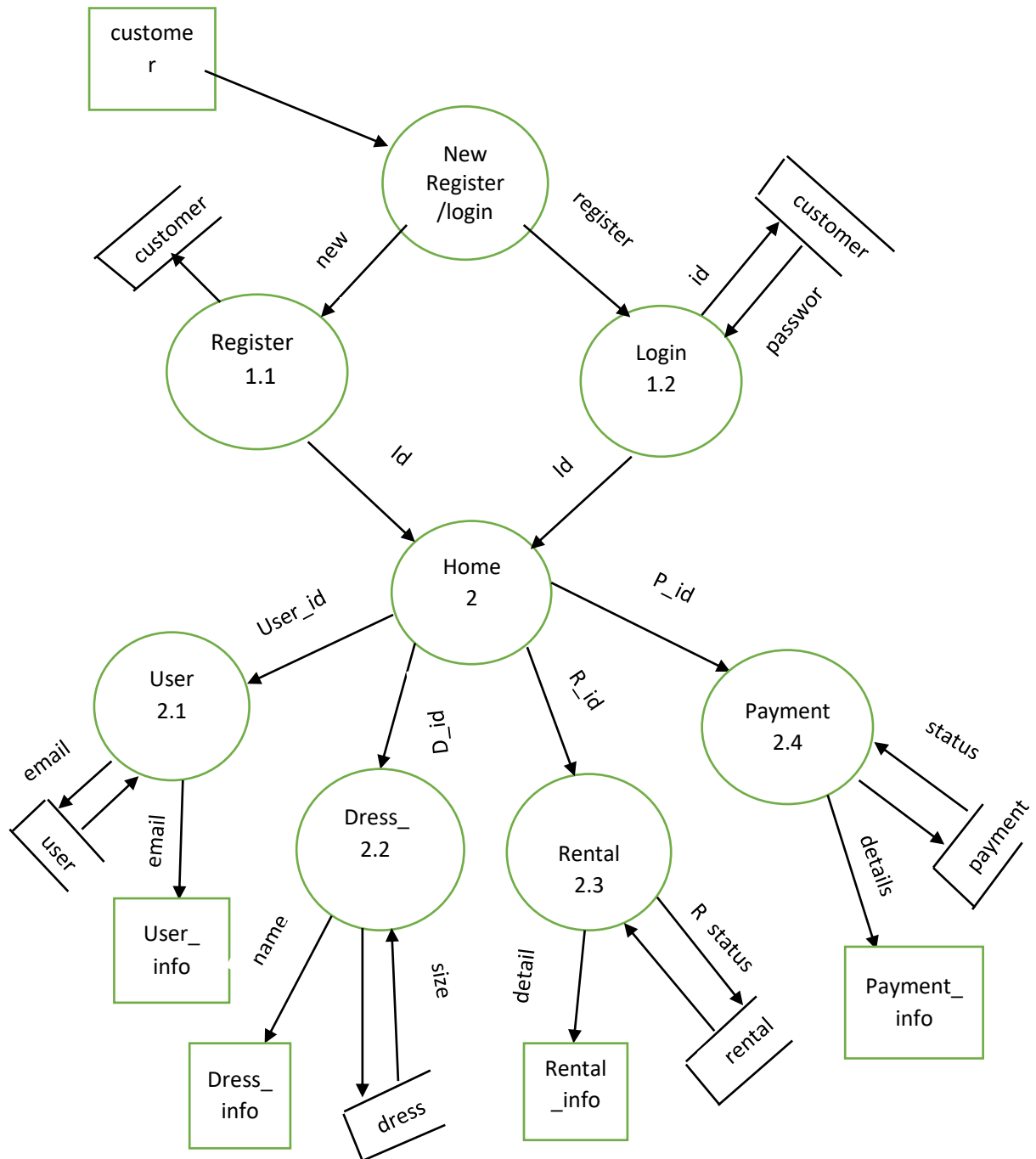
Chapter 3: Database Design

3.1 Structure Chart

Customer table

Column Name	Data type	Constraints
C_id	Varchar(10)	Primary key
C_name	Varchar(45)	Not null
C_address	Text	Not null
C_email	Varchar(50)	Not null
Contact	Int	Not null

Shops table

Column Name	Data type	Constraints
S_id	Varchar(10)	Primary key
S_name	Varchar(50)	Not null
S_address	Text	Not null
S_contact	Int	Not null

Dresses table

Column Name	Data type	Constraints
D_id	Varchar(10)	Primary Key
S_id	Varchar(10)	Foreign key
D_name	Varchar(50)	Not null
Prize_per_day	Bigint	Not null
Availability	Boolean	Not null
Size	Varchar(10)	Not null
Type	Varchar(50)	Not null
Color	Varchar(10)	
Late_fee	Bigint	Not null
Stock_count	int	Not null

Order table

Column name	Data type	Constraints
O_id	Varchar(10)	Primary key
S_id	Varchar(10)	Foreign key
C_id	Varchar(10)	Foreign key
D_id	Varchar(10)	Foreign key
O_date	Date	Not null
Return_date	Date	Not null
O_status	Varchar(50)	Not null

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Payment table

Column name	Data type	Constraints
P_id	Varchar(10)	Primary key
O_id	Varchar(10)	Foreign key
Amount	Bigint	Not null
P_date	Date	Not null
method	Varchar(50)	Not null
P_status	Varchar(50)	Not null

Feedback Table

Column name	Data type	Constraints
F_id	Varchar(10)	Primary key
C_id	Varchar(10)	Foreign key
D_id	Varchar(10)	Foreign key
Rating	Int	
Comment	Text	
Review	Text	
F_date	Date	

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3.2 Entity Relationship Diagram

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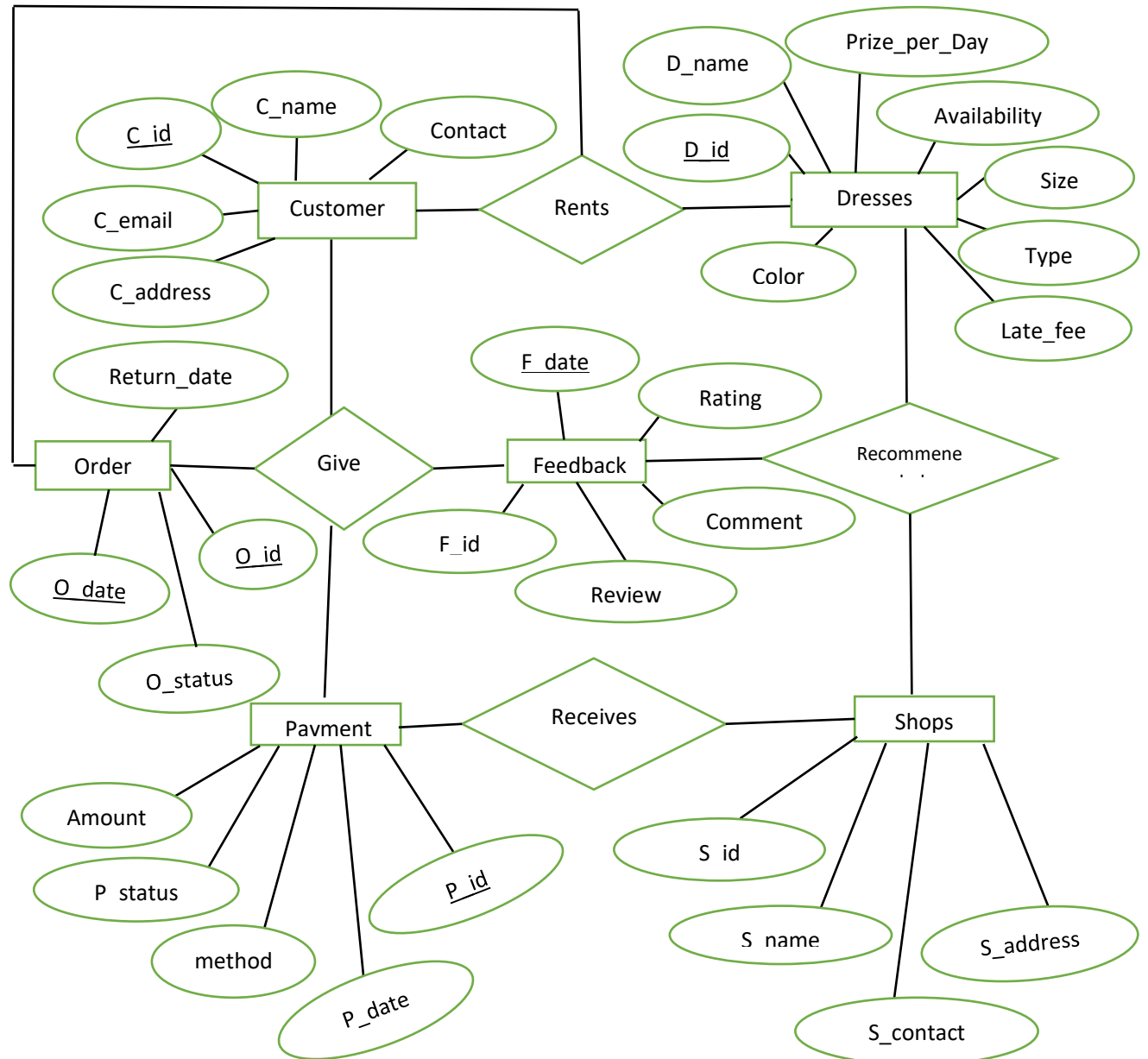
Chapter 4: Testing

4.1 Unit testing

We performed unit testing on each element of the website , ensuring its seamless operation. We experimented with different inputs to confirm the expected output.

Test case	Section	Element name	Test Data	Expected result	Actual Result
Tc-001	Admin login	Email,password	No data	Something is missing	Test case Passed
			nancy@gmail.com ****	Incorrect username	Test case Passes
			nancy@gmail.com *****	Login Successful	Test case passes
Tc-002	Customer login	c_id,c_name, c_email, address,contact	No data	Please fill out this form	Test case passed
			C_1,rashi,jiwaji-chowk,8964817923	Please fill out the mandatory feilds	Test case passed
			C_1,rashi,rashi@gmail.com, Jiwaji-chowk,8964817923	Login-successful	Test case passesd
Tc-003	Adding dress	D_id,d_name,price_per_day,size ,availability	No data	Please fill Out the this form	Test case passesd
			D_1,Lehenga,1000,L	Please fill Out the mandatory fields	Test case passed

			D_1,2000,1000,L,yes	Incorrect D_name give valid D_name	Test case passed
			D_1,Lehenga,1000,L,yes	Dress added successfully	Test case passed
Tc-004	Renting dress	R_id,rent_date, Return_date,	No data	Dress added successfully	Test case passed
			R_1,15-04-25	Please fill out the mandatory fields	Test case passed
			R_1,15-04,25,17-04-25	Dress rented successful	Test case passed
Tc-005	Payment	P_id,P_method, Amount,date	No data	Please fill out this form	Test case passed
			P_1, online,13-04-2025	Please fill out the mandatory fields	Test case passed
			P_1, online,2000,23-04-25	Payment successful	Test case passed
Tc-006	Feedback	F_date,Rating, review	No data	Please fill out the fields	Test case passed
			F_1	Please fill out the mandatory fields	Test case passed
			F_1,4,Nice dress	Please fill out the mandatory fields	Test case passed

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Chapter 5: Implementation

For the implementation of our project , various tools and Web development technologies are used to set up the development environment .These tools are required for handling frontend , backend and managing the database. Below are the step by step method for setting up each one.

5.1 Visual Studio Code

Visual Studio Code is a tool for writing code and debugging code. It allow programmers to write code in many languages and support all development tools , it becomes a suitable development tool web development.

(i) Download Visual Studio Code

(a) Go to the official visual studio code download page - **https://code.visualstudio.com/download**

(b) Select your Operating system (windows,macOS,Linux) and download the latest version.

(ii) Installation process

(a) Click on the installed file.
(b) Follow the setup wizard to finish installation.
(c) Optionally ,you can create a desktop icon by ticking 'create desktop icon' checkbox.

(ii) Configuration

(a) Open vs code after installation.
(b) Can add extension if needed
(c) You can enable settings like autosave,code-formatting,and syntax highlighting for efficient developement.

5.2 Node.js

Node.js is a backend engine that handles server side request ,database communication and real time processing of data.

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(i)Download Node.js

   (a) Visit the official website.

     https://nodejs.org/en/download

   (b) Download the suggested version based on your OS.

(ii)Installation Process

   (a) Once downloaded , open the installer and follow the setup instruction.

   (b) Add node.js to the system path for command line access.

(iii) Verification

   (a) To verify the installed version of node.js, open a terminal or command prompt and type node -v.

   (b) This command should display the node.js version number ,confirming a successful installation.

5.3 Express.js

Web servers and APIs can be created with the help of the robust yet user-friendly Express.js framework. It facilitates Web development by offering robust middleware and routing support.

(i)Install via npm

   (a) Open the terminal in your project folder.

   (b) Type the following command to install express.js

     npm install express

(ii) Basic setup

   (a) Create a file server.js.

   (b) Import Express and start a server.

(iii) Usage

   (a) You can use express to define routes , handle HTTP requests and built APIs.

   (b) You can add middleware like body-parser as needed.

5.4 **Postgre SQL**

Postgres is a powerful open-source relational database system used to store structured data such as user detail, dress inventory, and booking information.

(i)Download PostgresSQL

   (a) Go to the official PostgresSQL website.

     https://www.postgresql.org/download

   (b) Select the Installer as per your OS.

(ii) Installation Process

   (a) Once downloaded , open the installer and follow the setup instruction.

   (b) Set the password for the postgreSQL superuser .This password will be used when setting up the connection between your project and database in the backend code.

   (c) Choose the component you want(pgAdmin).

(iii) Configuration and usage

   (a) Open pgAdmin or you can connect via terminal using -u postgres.

   (b) Create a new database for your project.

   (c) Use SQLqueries to interact with database.

Chapter 6: Sample Forms

6.1 Home Page
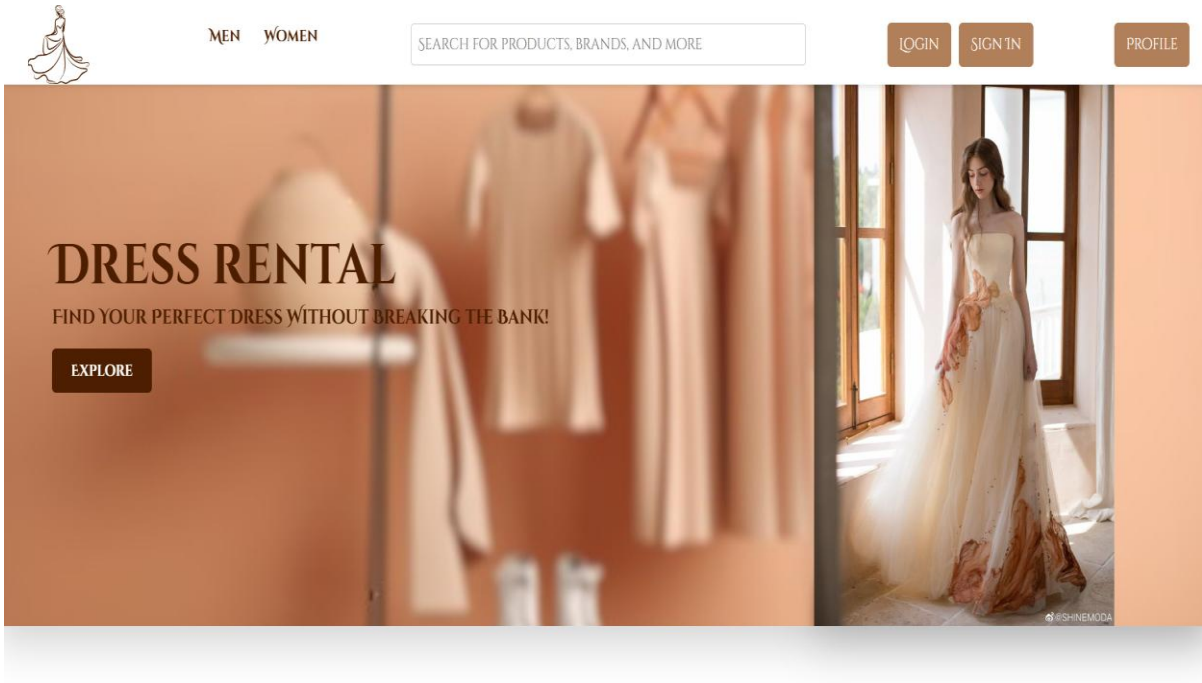
6.2 Sign In page

6.3 Login Page

6.5 Dress Display

6.4 Search page

6.6 Rent This Dress

Rent This Dress

Full Name

Nancy Gupta

Phone Number

8964817923

Address

mama ka bazaar ,lashkar,gwalior

Pincode

474001

City

Gwalior

Alternate Number

7864756789

Delivery Date

16 - 05 - 2025

Return Date

18 - 05 - 2025

Number of Days

2

☐

Urgent Delivery (+₹199)

Amount: ₹8000

Payment Method

🔘

Cash on Delivery

⭕

Online Payment

Place Rental Order

Chapter 7: Conclusion and Future Scope

Conclusion

For consumers looking for fashionable clothing without the expense or commitment of ownership, the dress rental platform provides an ingenious, environment friendly option. It supports eco-friendly consumer behavior by encouraging the reuse of fashion items and gives access to a large selection of attire for cultural events, weddings, and parties.

The platform manages rental duration selection, image uploads, dress listings, user registration, and safe payment processing. For contemporary consumers, it streamlines the rental procedure, guarantees prompt delivery, and increases fashion's adaptability and affordability.

Future Scope

Future improvements to the dress rental platform could include AR/VR integration for virtual try-ons and AI-based suggestions to customize user experiences. Accessibility will be enhanced by moving to mobile apps, and subscription-based business models can draw repeat customers with extra perks. Vendor dashboards will increase inventory variety by enabling boutiques and individuals to directly manage listings. Enhancements in logistics, expedited delivery, and sustainability monitoring will increase customer satisfaction and encourage eco-friendly fashion choices.