

LAB REPORT

Submitted by

Pulipaka Prabhav (RA2111032010034)

Under the Guidance of

Dr. Gouthaman. P

Assistant Professor, Department of Networking and Communications

In partial satisfaction of the requirements for the degree of

**BACHELOR OF TECHNOLOGY
in
COMPUTER SCIENCE AND ENGINEERING**

with specialization in Internet of Things



SCHOOL OF COMPUTING

**COLLEGE OF ENGINEERING AND TECHNOLOGY SRM
INSTITUTE OF SCIENCE AND TECHNOLOGY
KATTANKULATHUR - 603203**

MAY 2023



COLLEGE OF ENGINEERING & TECHNOLOGY SRM
 INSTITUTE OF SCIENCE & TECHNOLOGY
 S.R.M. NAGAR, KATTANKULATHUE – 603 203
 Chengalpattu District

BONAFIDE CERTIFICATE

Register No. RA2111032010034 Certified to be the
 bonafide work done by Pulipaka Prabhav of II Year/IV Sem
B. Tech Degree Course in the Practical Course – 18CSC206J - Software Engineering and Project Management in SRM INSTITUTE OF SCIENCE AND TECHNOLOGY,
 Kattankulathur during the academic year 2022 – 2023.

SIGNATURE

Faculty In-Charge
Dr. Gouthaman. P
 Assistant Professor
 Department of Networking and Communications
 SRM Institute of Science and Technology

SIGNATURE

HEAD OF THE DEPARTMENT
Dr. Annapurani Panaiyappan. K
 Professor and Head,
 Department of Networking and Communications
 SRM Institute of Science and Technology

ABSTRACT

A fashion e-commerce website is an online platform that allows consumers to purchase clothing, accessories, and other fashion products. The success of a fashion e-commerce website depends on several key factors, including the quality of the user experience, the range and availability of products, and the effectiveness of marketing and promotional strategies. This abstract provides an overview of the key features and best practices for building a successful fashion e-commerce website, including the importance of responsive design, streamlined navigation, and effective product categorization. It also highlights the role of social media integration, search engine optimization, and email marketing in driving traffic and increasing conversions. In addition, this abstract discusses the need for robust security measures to protect both the website and customer data. Overall, a successful fashion e-commerce website requires a strategic approach that balances user experience, product availability, and marketing efforts to build a loyal customer base and drive sales.

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LIST OF ABBREVIATIONS

NO	WORD	ABBREVIATION
1	TSV	TREE STRUCTURE VIEW
2	WBS	WORK BREAKDOWN STRUCTURE
3	ER	ENTITY RELATION
4	DFD	DATA FLOW DIAGRAM
5	UI	USER INTERFACE
6	SWOT	STRENGTHS, WEAKNESSES, OPPORTUNITIES AND THREATS
7	RMMM	RISK MITIGATION, MONITORING AND MANAGEMENT



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Course Code: 18CSC206J

Course Name: Software Engineering and Project Management

Experiment No	1
Title of Experiment	To identify the Software Project, Create Business Case, Arrive at a Problem Statement
Name of the candidate	Pulipaka Prabhav
Team Members	M.Sai Praneeth Yadav, Bharadwaj Karthik
Register Number	RA2111032010034
Date of Experiment	26-01-2023

Mark Split Up

S. No	Description	Maximum Mark	Mark Obtained
1	Exercise	5	5
2	Viva	5	4
Total		10	10



A handwritten signature in black ink, appearing to read "P. Gautham" followed by a date "31/1/2023".

Staff Signature with date

Aim

To Frame a project team, analyze and identify a Software project. To create a business case and Arrive at a Problem Statement for Fashion E-commerce.

Team Members:

S. No	Register No	Name	Role
1	RA2111032010034	Pulipaka Prabhav	Lead/Rep
2	RA2111032010037	M.Sai Praneeth Yadav	Member
3	RA2111032010047	CH. Bharadwaj Karthik	Member

Project Title: Fashion E-Commerce

Project Description

- Main motive of our project is to provide a platform for the normal people to sell their own clothing products...which enables them to grow through self-employment. We want to add more value to their precious work by our platform.
- Main hurdles and challenges that we face to accomplish this project is we have to make it user-friendly and one could easily and efficiently understand this platform and use it for the purpose. For this we decided to create a application/website. We have to get in touch with local weavers and spread awareness among them and approach handloom weavers' organization/community to publicize our platform.
- The objective of this project is to develop a general-purpose e-commerce store where any product can be bought from the comfort of home through the Internet. However, for implementation purposes, this paper will deal with an online store.

DATE	Jan 26, 2023
SUBMITTED BY	Pulipaka Prabhav, M. Sai Praneeth Yadav, Bharadwaj Karthik
TITLE / ROLE	Fashion E-Commerce

THE PROJECT

- To Increase Self Employment
- To Sell the product at the affordable prices
- To decide their own price for their product
- To create a platform without interference of the distributors between sellers and consumers.

THE HISTORY

- There is no proper platform for the local weavers.
- Self-Employment is minimal.
- Mediators quoting very less price for the weavers.

LIMITATIONS

- Need proper Internet (Especially for the local weavers).
- Need for skilled manpower.
- Requires large databases.

APPROACH

- For Establishing this project, we need resources and skillset from several computer languages.
- For developing the website, we highly require the usage of HTML, CSS, JS.
- For maintaining the website, we require the usage of Python, MySQL.
- We require high usage of cloud so that we can manage the data i.e., Amazon Web Services (AWS).

BENEFITS

- The system automates the manual procedure of managing activities.
- Local weavers can view their records of their sales through the application created.
- It generates proper bills and proof of purchase to the local weavers and the loyal customers.
- The system is convenient and flexible to be used
- It saves their time, efforts, money and resources.

Result:

Thus, the project team formed, the project was described, the business case was prepared and the problem statement was arrived.



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Course Code: 18CSC206J

Course Name: Software Engineering and Project Management

Experiment No	2
Title of Experiment	Identification of Process Methodology and Stakeholder Description
Name of the candidate	Pulipaka Prabhav
Team Members	M.Sai Praneeth Yadav, Bharadwaj Karthik
Register Number	RA2111032010034
Date of Experiment	02-02-2023

Mark Split Up

S.No	Description	Maximum Mark	Mark Obtained
1	Exercise	5	5
2	Viva	5	5
Total		10	10

P. P. Prabhav 3/2/2023
Staff Signature with date

Aim

To identify the appropriate Process Model for the project and prepare Stakeholder and User Description.

Team Members:

Sl No	Register No	Name	Role
1	RA2111032010034	Pulipaka Prabhav	Rep/Member
2	RA2111032010037	M. Sai Praneeth Yadav	Member
3	RA2111032010047	CH. Bharadwaj Karthik	Member

Project Title: Fashion E-Commerce

Agile Methodology

- Agile technology is flexible and suitable for our platform in different ways such as:-
- As we know that agile is known for continuous improvement and customer feedback it is timely delivered to the client.
- Anybody can adapt to the project in the agile model.
- Agile Model proclaims transparency to the client.
- The Agile Model gives continuous improvement in the project.
- Due to these continuous improvements there would be higher profits.

On other hand waterfall methodology is inapposite to our platform and it is not pliable because:

- As we know in the waterfall model the documentation is done at the beginning so whenever the client requires the changes it looks pretty hard to rectify or modify.
- Projects may take more time to deliver as compared with agile
- No working software is produced until late during the life cycle.
- High amounts of risk and uncertainty.
- Not a good model for complex and object-oriented projects.
- Poor model for long and ongoing projects.

Stakeholder Name	Activity/ Area /Phase	Interest	Influence	Priority (High/ Medium/ Low)
Product Owner	pays attention to the stakeholders' needs.	<ul style="list-style-type: none"> • Achieve targets • Liability • Increase sales margin 	Low	Low
Project Manager	Commit and provide appropriate resources to the project team	<ul style="list-style-type: none"> • Lead with integrity. • Identify stakeholders early. • Manage expectations. 	High	High
Project Team Members	Identify constraints and assumptions.	<ul style="list-style-type: none"> • New product excitement • Demand end of year bonuses. • Retain and expand skill levels. 	High	Med
Project Sponsors	Provides approval and funding for the project	<ul style="list-style-type: none"> • Successfully addresses the needs of customers. • Provides a new market to expand the venture. 	Med	High
Executives	The vision is aligned to the organization's strategic goals	<ul style="list-style-type: none"> • Organizational alignment. • Resource allocation. • Decision making. 	High	High
Customers	They decide whether the business will be successful or not.	<ul style="list-style-type: none"> • Quality products and services. • Low prices. • Value for money 	Low	High

Result

Thus the Project Methodology was identified and the stakeholders were described.



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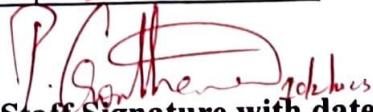
Course Code: 18CSC206J

Course Name: Software Engineering and Project Management

Experiment No	3
Title of Experiment	System, Functional and Non-Functional Requirements of the Project
Name of the candidate	Pulipaka Prabhav
Team Members	M. Sai Praneeth Yadav, CH. Bharadwaj Karthik
Register Number	RA2111032010034
Date of Experiment	9-02-2023

Mark Split Up

S.No	Description	Maximum Mark	Mark Obtained
1	Exercise	5	4
2	Viva	5	5
Total		10	10


Staff Signature with date

Aim

To identify the system, functional and non-functional requirements for the project.

Team Members:

S No	Register No	Name	Role
1	RA2111032010034	Pulipaka Prabhav	Rep/Member
2	RA2111032010037	M. Sai Praneeth Yadav	Member
3	RA2111032010047	CH. Bharadwaj Karthik	Member

Project Title: Fashion E-Commerce

System Requirements:

System requirements are the product features or functions that developers must implement to enable users to accomplish their tasks.

- Operating System (Windows, Mac, Android, IOS etc..)
- Computer speed and processor (Intel Core i3/i5/i7/i9, Mac M1/M2)
- RAM Minimum Requirements 2GB
- Screen Resolution (1920 X 1080)
- Internet Speed (1mbps)
- Web Browser (Chrome, Edge, Firefox)

Functional Requirements:

The Functional Requirements are responsible for our website and can vary as per the requirements, here the important functional requirements.

- 3rd Party Integrations
- Mobile Responsive
- Product Attributes
- Order and checkout flow
- Social Sharing

Non-Functional Requirements:

The Non-Functional Requirements are responsible for the positive user experience and optimal website performance, here are the major non-functional requirements:

- Usability
- Security
- Performance
- Maintainability
- Scalability

Result:

Thus the requirements were identified and accordingly described.



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Course Code: 18CSC206J

Course Name: Software Engineering and Project Management

Experiment No	4
Title of Experiment	Prepare Project Plan based on scope, Calculate Project effort based on resources and Job roles and responsibilities
Name of the candidate	Pulipaka Prabhav
Team Members	M.Sai Praneeth Yadav, CH.Bharadwaj Karthik
Register Number	RA2111032010034
Date of Experiment	10-02-2023

Mark Split Up

S.No	Description	Maximum Mark	Mark Obtained
1	Exercise	5	5
2	Viva	5	5
	Total	10	10

P. Goutham 17/2/2023
Staff Signature with date

Aim

To Prepare Project Plan based on scope, Calculate Project effort based on resources, Find Job roles and responsibilities

Team Members:

Sl No	Register No	Name	Role
1	RA2111032010034	Pulipaka Prabhav	Lead
2	RA2111032010037	M.Sai Praneeth Yadav	Member
3	RA2111032010047	CH.Bharadwaj Karthik	Member

1. Project Management Plan

Focus Area	Details
Schedule Management	<p>Define Milestones</p> <ul style="list-style-type: none">1) Requirement Gathering: 23-30 January 20232) Development Period: 5th February - 5th May 20233) Testing Period: 8th May - 20th May 20234) Deployments: 24th May 20235) Commencement Of Agile Scrum Sprints
Cost Management	<p>Estimate Effort:</p> <p>The project manager estimates the total cost of an e-commerce website development project at 1000000Rs. This estimate is based on historical data from similar projects, input from subject matter experts, and experience.</p> <p>The project manager estimates that it will take a total of 1,200 hours to complete the project. This includes 120-240 hours for design, 200-400 hours for development, 360 hours for testing, and 200 hours for project management.</p> <p>Assign Team:</p> <p>A team of 3 developers, 2 designers, and 1 project manager to the project. Each team member is assigned to specific tasks based on their skills and expertise.</p> <p>Budget Control:</p> <p>The project manager monitors project spending on a weekly basis, reviewing expenses and adjusting the budget as needed.</p>

	<p>If a particular task is taking longer than expected or requires additional resources, the project manager will work with the team to identify the issue and take corrective action, such as reassigning resources or adjusting the schedule.</p>
Communication Management	<p>Communication Requirements:</p> <p>Type of communication: Weekly progress update Schedule: Every Friday At 3:00PM Mechanism: E-Mail Recipient: Project Manager, Team leads, Stakeholders</p> <p>Roles And Responsibilities:</p> <p>Project Manager: Responsible for overall communication on the project, including developing the communication plan, scheduling and conducting meetings, and ensuring that all stakeholders are kept informed.</p> <p>Team Leads: Responsible for communicating progress updates to the Project Manager, and ensuring that their team members are informed of any changes or updates.</p> <p>Stakeholders: Responsible for providing feedback and input on the project as it progresses, and for attending meetings and providing status updates as needed.</p> <p>Tools and Techniques:</p> <p>Email: Used for quick updates and status reports, as well as for scheduling and confirming meetings.</p> <p>PowerPoint: Used for monthly project status reports, which include key metrics and progress updates.</p> <p>Regular Meetings: Used to discuss project progress, review action items, and address any issues or concerns that arise. Meetings can be held in person, via phone or video conference, or using a combination of these methods.</p>

2. Estimation

2.1. Effort and Cost Estimation

Activity Description	Sub-Task	Sub-Task Description	Effort (in hours)	Cost in INR
Design the user screen	E1R1A1T1 (Effort-Requirement-Activity-Task)	Confirm the user requirements (acceptance criteria)	3	1500
	E1R1A1T2	Content and functionality	30-60	15000-30000
	E1R1A1T3	Performance and security	20-40	10000-20000
Identify Data Source for displaying units of Energy Consumption	E1R1A1T1	Go through Interface contract (Application Data Exchange) documents	5	2500
	E1R1A1T2	Document	24-48	12000-24000

Effort (hr)	Cost (INR)
1	500

2.2. Infrastructure/Resource Cost [CapEx]

Infrastructure Requirement	Qty	Cost per qty	Cost per item
Computers	2	40000	40000
Laptops	3	100000	100000
Internet Connectivity	20mbps	1000	1000

2.3 Maintenance and Support Cost [OpEx]

Category	Details	Qty	Cost per qty per annum	Cost per item
People	Network, System, Middleware and DB admin Developer , Support Consultant	3	2,000,000	6,000,000
License	Operating System Database Middleware IDE	10	10000	100,000
Infrastructures	Server, Storage and Network	20	20000	400,000

3. Project Team Formation

3.1. Identification Team members

Name	Role	Responsibilities
Pulipaka Prabhav	Key Business User (Product Owner)	Provide clear business and user requirements
M. Sai Praneeth Yadav	Project Manager	Manage the project
CH.Bharadwaj Karthik	Business Analyst	Discuss and Document Requirements
Pulipaka Prabhav	Technical Lead	Design the end-to-end architecture
M. Sai Praneeth Yadav	UX Designer	Design the user experience
CH. Bharadwaj Karthik	Frontend Developer	Develop user interface
M. Sai Praneeth Yadav	Backend Developer	Design, Develop and Unit Test Services/API/DB
Pulipaka Prabhav	Cloud Architect	Design the cost effective, highly available and scalable architecture
CH. Bharadwaj Karthik	Cloud Operations	Provision required Services
M. Sai Praneeth Yadav	Tester	Define Test Cases and Perform Testing

3.2. Responsibility Assignment Matrix

RACI Matrix		Team Members			
Activity		CH. Bharadwaj Karthik (BA)	M.Sai praneeth Yadav(Developer)	M.Sai Praneeth Yadav(Project Manager)	Pulipaka Prabhav
User Requirement Documentation	A	C/I	I	R	
Design And Prototyping	C	R	A	I	
Development And Coding	C	R	A	I	
Maintenance And Support	A	C	R	I	

A	Accountable
R	Responsible
C	Consult
I	Inform

Reference

1. <https://www.pmi.org/>
2. <https://www.projectmanagement.com/>
3. <https://www.tpsgc-pwgsc.gc.ca/biens-property/sngp-npms/ti-it/ervcpgrm-dsfvpmpt-eng.html>

Result:

Thus, the Project Plan was documented successfully.



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SRM IST, Kattankulathur – 603 203

Course Code: 18CSC206J

Course Name: Software Engineering and Project Management

Experiment No	5
Title of Experiment	Prepare Work breakdown structure, Timeline chart, Risk identification table
Name of the candidate	Pulipaka Prabhav
Team Members	M. Sai Praneeth Yadav, CH. Bharadwaj Karthik
Register Number	RA2111032010034
Date of Experiment	23-02-2023

Mark Split Up

S.No	Description	Maximum Mark	Mark Obtained
1	Exercise	5	5
2	Viva	5	5
Total		10	10


P. Goutham 28/3/2023
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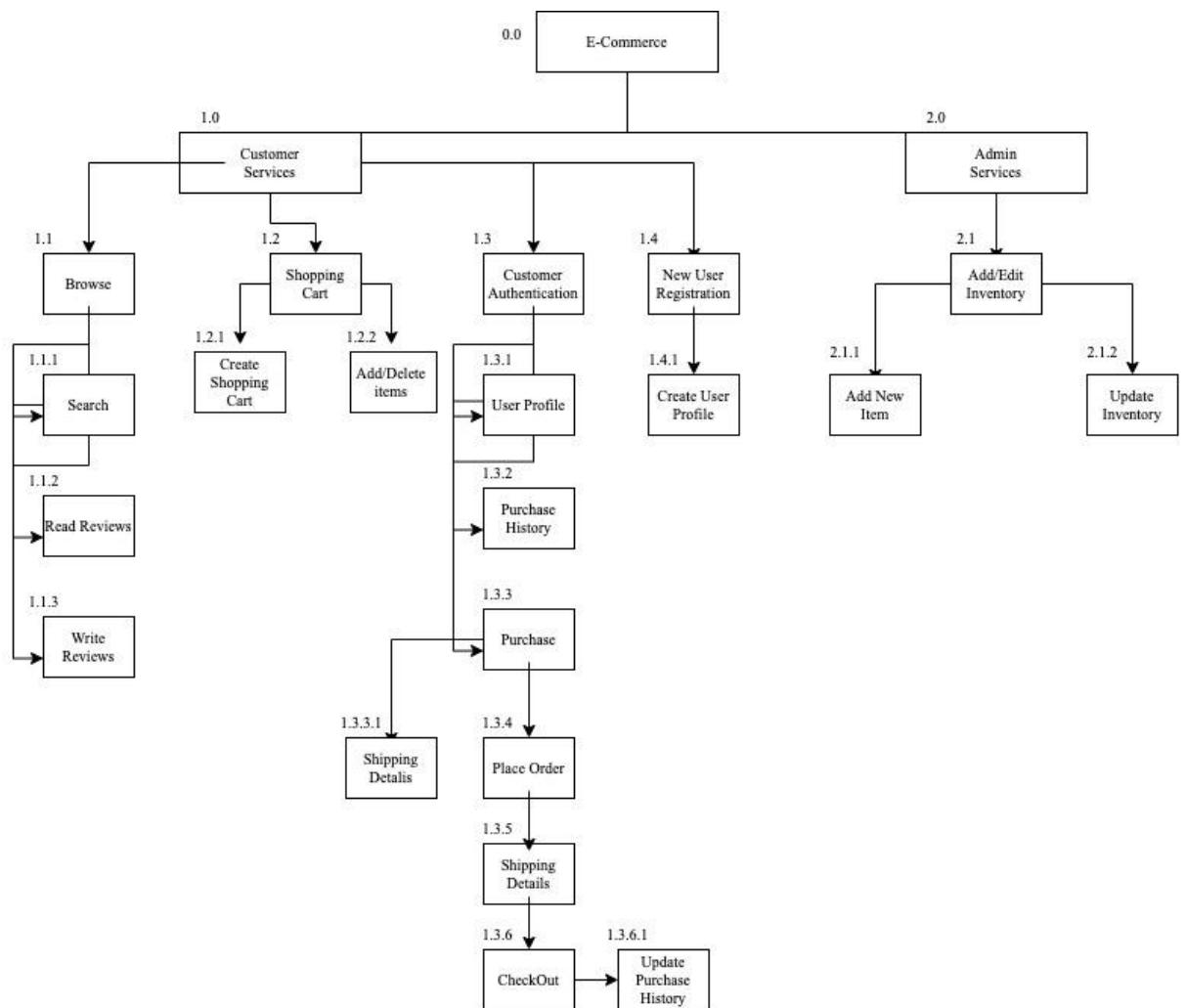
Aim

To Prepare Work breakdown structure, Timeline chart and Risk identification table

Team Members:

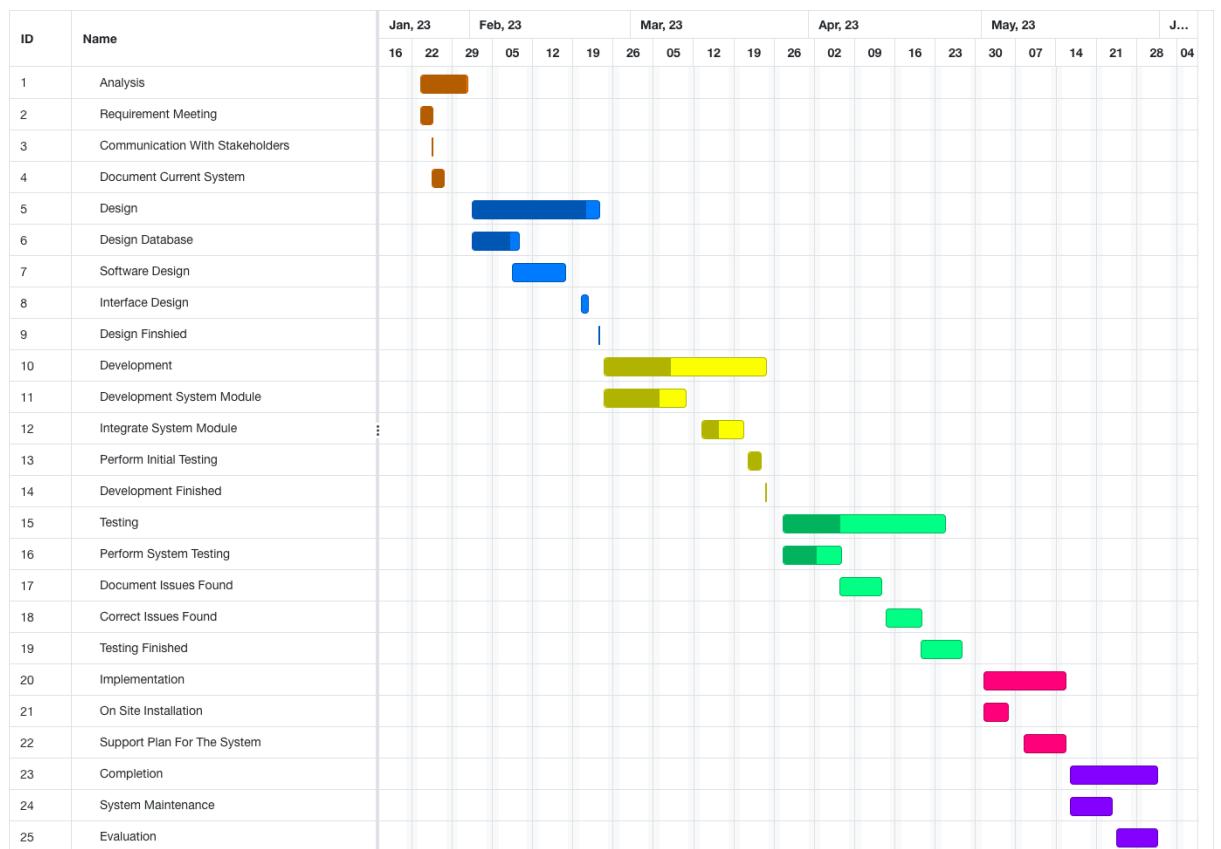
Sl No	Register No	Name	Role
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2	RA2111032010037	M. Sai Praneeth Yadav	Member
3	RA2111032010047	CH. Bharadwaj Karthik	Member

WBS(Work Breakdown Structure) of Fashion E-Commerce



- 0.0 E-Commerce
- 1.0 Customer Services
 - 1.1 Browse
 - 1.1.1 Search
 - 1.1.2 Read Reviews
 - 1.1.3 Write Reviews
 - 1.2 Shopping Cart
 - 1.2.1 Create Shopping Cart
 - 1.1.3 Add/Delete items
 - 1.3 Customer Authentication
 - 1.3.1 User Profile
 - 1.3.2 Purchase history
 - 1.3.3 Purchase
 - 1.3.3.1 Shipping Details
 - 1.3.4 Place Order
 - 1.3.5 Shipping Details
 - 1.3.6 CheckOut
 - 1.3.6.1 Update Purchase History
 - 1.4 New User Registration
 - 1.4.1 Create User Profile
- 2.0 Admin Services
 - 2.1 Add/Edit Inventory
 - 2.1.1 Add New Item
 - 2.1.2 Update inventory

TIMELINE – GANTT CHART



RISK ANALYSIS – SWOT & RMMM

Risk Summary	Risk Category	Probability	Impact(1-4)	RMMM
There is a whole range of security threats out there to be aware of including malware, phishing attacks, and spam mails.	Business Impact	50%	Catastrophic	Use Firewalls, Employ Multilayer Security and Secure your server and admin panels.
The internet service provider server could crash your online payment system could show errors and ecommerce could have bugs.	Technology to be built	33.33%	Critical	Start by removing any plugins,coding or features that slow the experience of the user.
A customer might not have received their order, their credit card was charged twice, the product they received didn't fit the online description.	Customer Characteristics	20%	Marginal	Tracking orders from time to time and making sure the product is delivered safely without any interruptions.
Customers personal data could be compromised and used for spamming identify theft and associated marketing	Customer Characteristics	20%	Marginal	Product card industry data standard is an industry standard that ensures credit card information collected online is being transmitted and stored in a secure manner.

SWOT ANALYSIS

Strength	Weakness	Opportunity	Threat
Wide Product Range	Change In Fashion Trends	Online Shopping	High Competition
Quality Products	Third-Party Suppliers	Improved Lifestyle	Established Brands
In-House Production	Entering New Markets	Spending On Fashion Products	Changing Trends

Result:

Thus, the work breakdown structure with timeline chart and risk table were formulated successfully.



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SRM IST, Kattankulathur – 603 203

Course Code: 18CSC206J

Course Name: Software Engineering and Project Management

Experiment No	6
Title of Experiment	Design a System Architecture, Use Case and Class Diagram
Name of the candidate	Pulipaka Prabhav
Team Members	M.Sai Praneeth Yadav, CH.Bharadwaj Karthik
Register Number	RA2111032010034
Date of Experiment	02-03-2023

Mark Split Up

S.No	Description	Maximum Mark	Mark Obtained
1	Exercise	5	4
2	Viva	5	3
	Total	10	7


P. Gautham 28/3/2023
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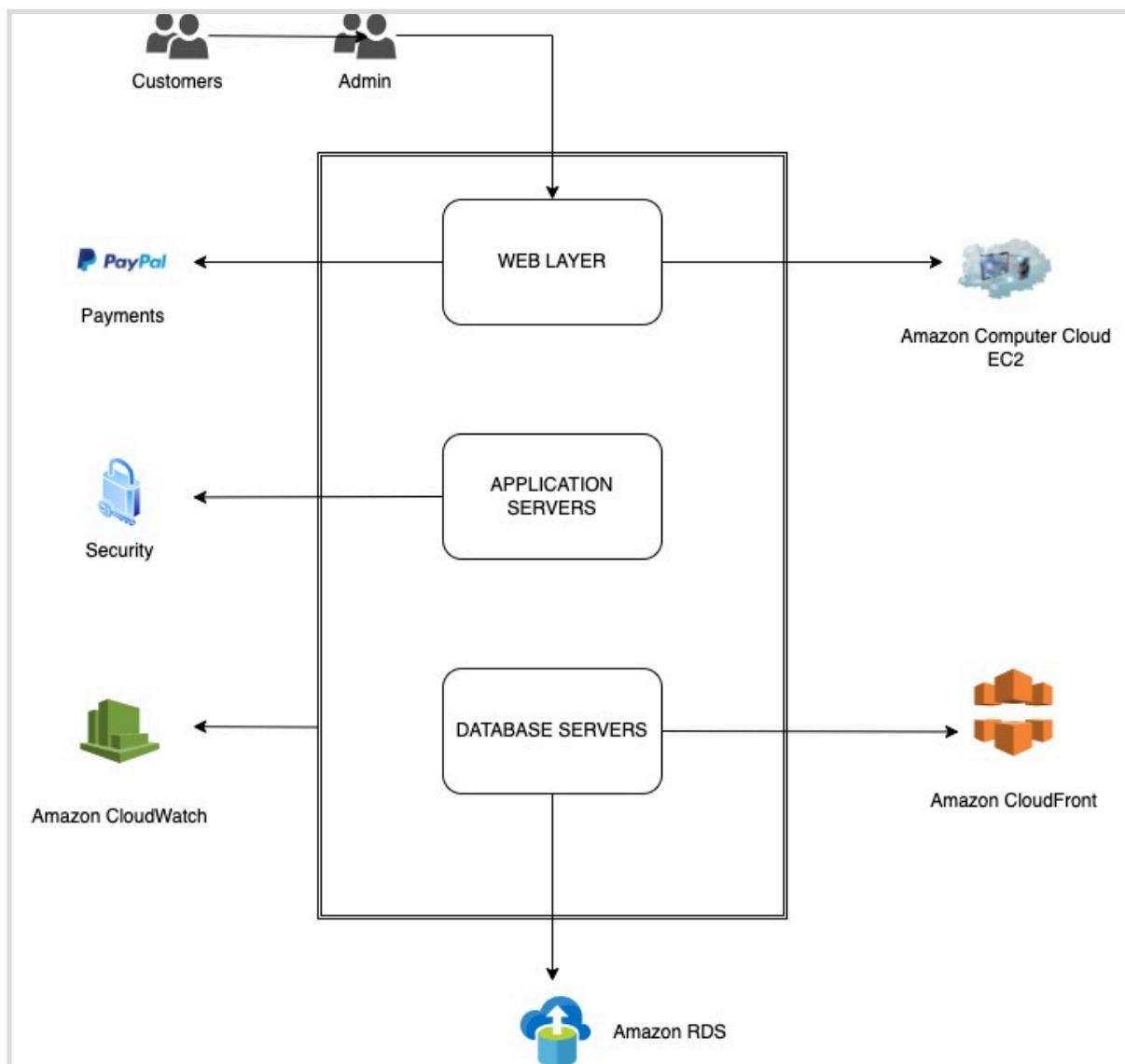
Aim

To Design a System Architecture, Use case and Class Diagram

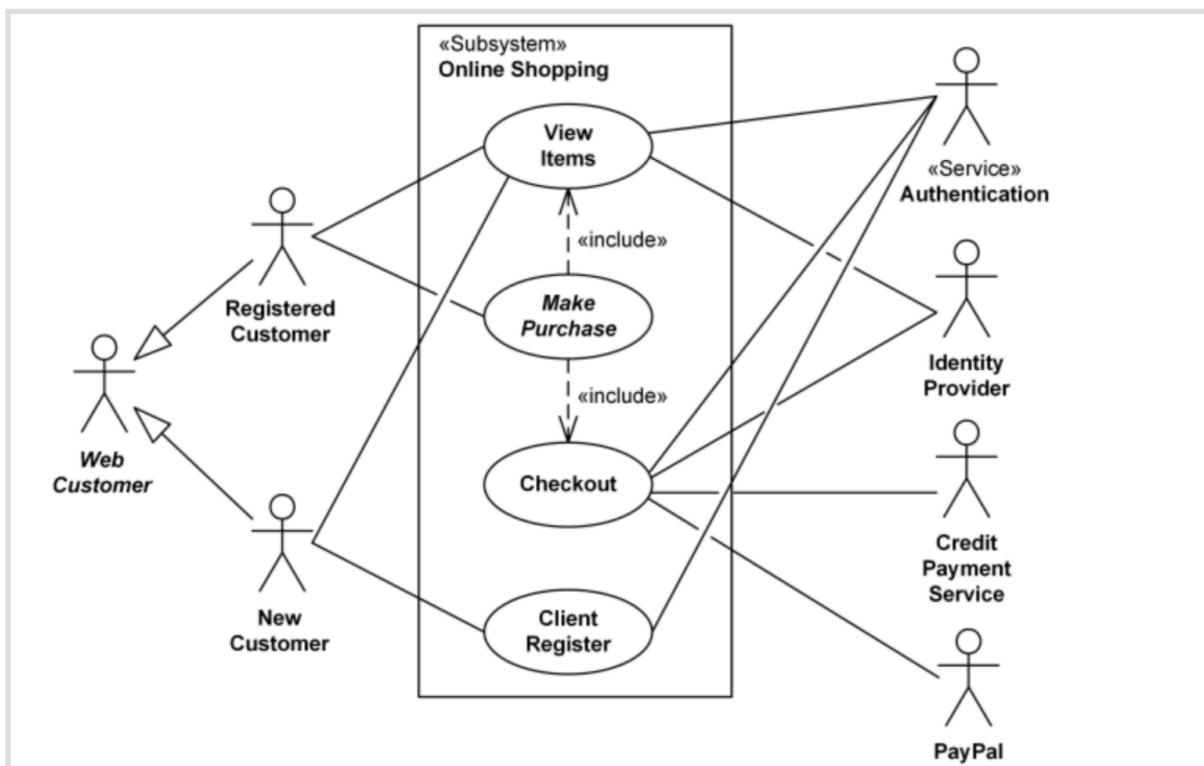
Team Members:

Sl No	Register No	Name	Role
1	RA2111032010034	Pulipaka Prabhav	Rep
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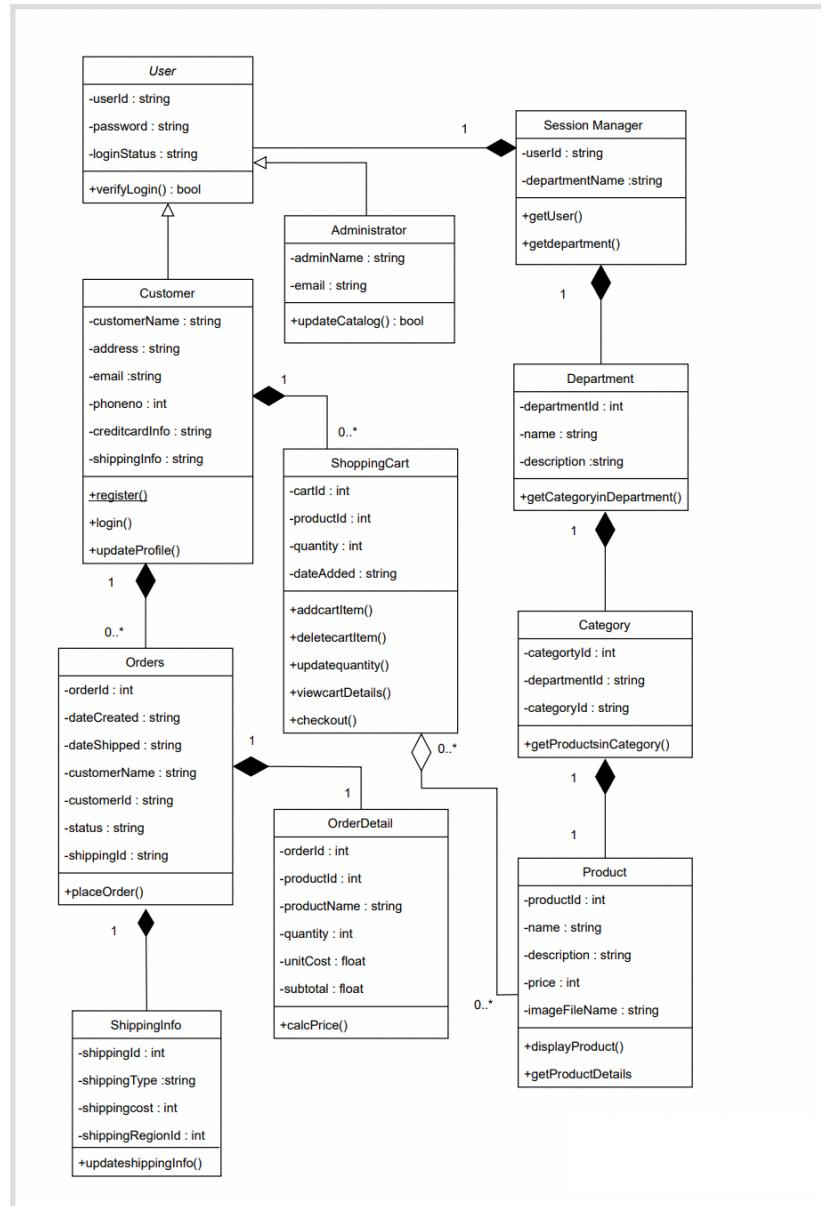
SYSTEM ARCHITECTURE



USE CASE DIAGRAM



CLASS DIAGRAM



Result:

Thus, the system architecture, use case and class diagram created successfully.



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Course Code: 18CSC206J

Course Name: Software Engineering and Project Management

Experiment No	7
Title of Experiment	Design a Entity relationship diagram
Name of the candidate	Pulipaka Prabhav
Team Members	M.Sai Praneeth Yadav, CH.Bharadwaj Karthik
Register Number	RA2111032010034
Date of Experiment	12-03-2023

Mark Split Up

S. No	Description	Maximum Mark	Mark Obtained
1	Exercise	5	4
2	Viva	5	3
Total		10	7


P. Govthene 28/3/2023
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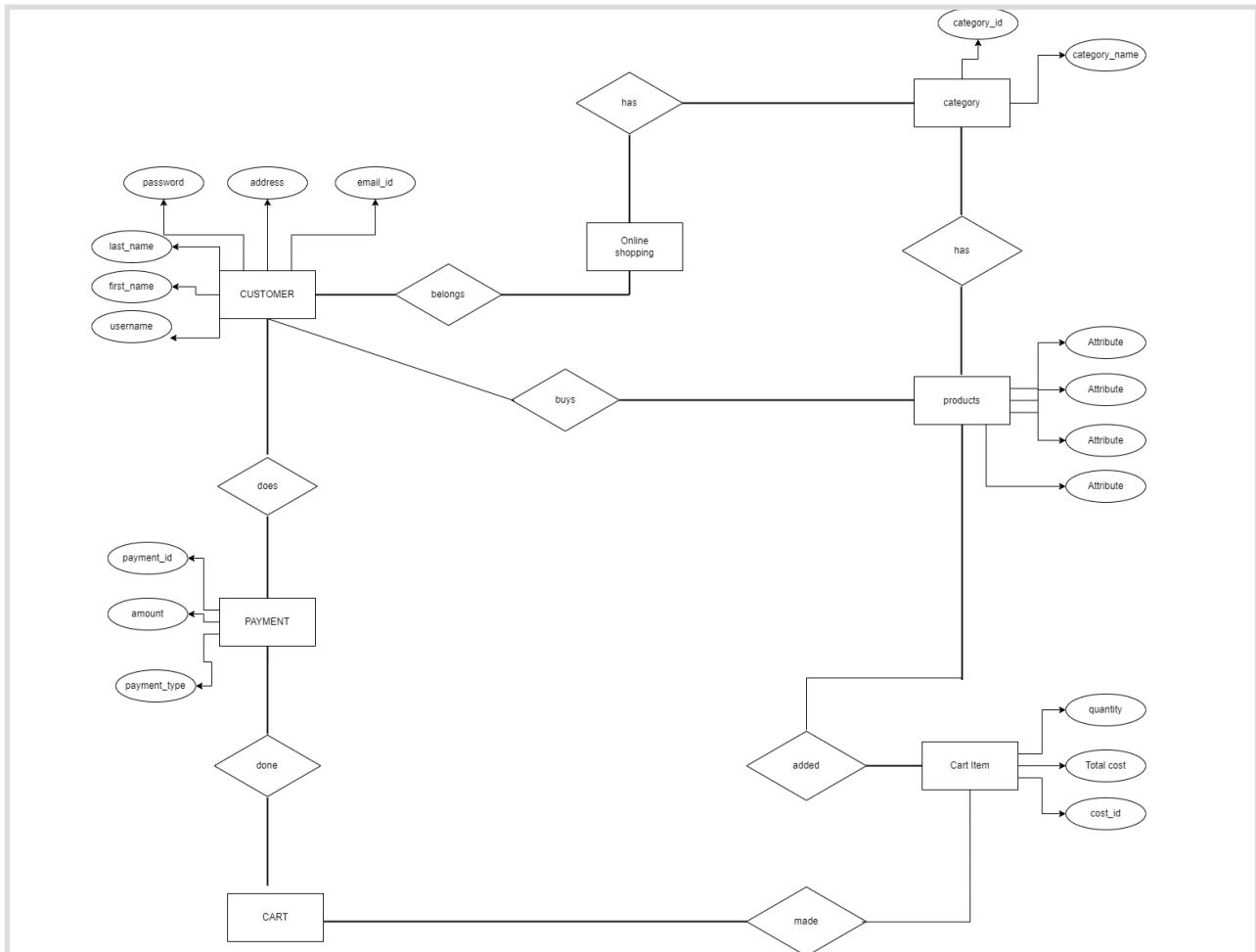
Aim

To create the Entity Relationship Diagram

Team Members:

S No	Register No	Name	Role
1	RA2111032010034	Pulipaka Prabhav	Rep
2	RA2111032010037	M.Sai Praneeth Yadav	Member
3	RA2111032010047	CH.Bharadwaj Karthik	Member

ER DIAGRAM



Result:

Thus, the entity relationship diagram was created successfully.



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Course Code: 18CSC206J

Course Name: Software Engineering and Project Management

Experiment No	8
Title of Experiment	Develop a Data Flow Diagram (Process-Up to Level 1)
Name of the candidate	Pulipaka Prabhav
Team Members	M.Sai Praneeth Yadav, CH.Bharadwaj Karthik
Register Number	RA2111032010034
Date of Experiment	19-03-2023

Mark Split Up

S. No	Description	Maximum Mark	Mark Obtained
1	Exercise	5	5
2	Viva	5	4
	Total	10	9

P. Goutham 28/3/2023
Staff Signature with date

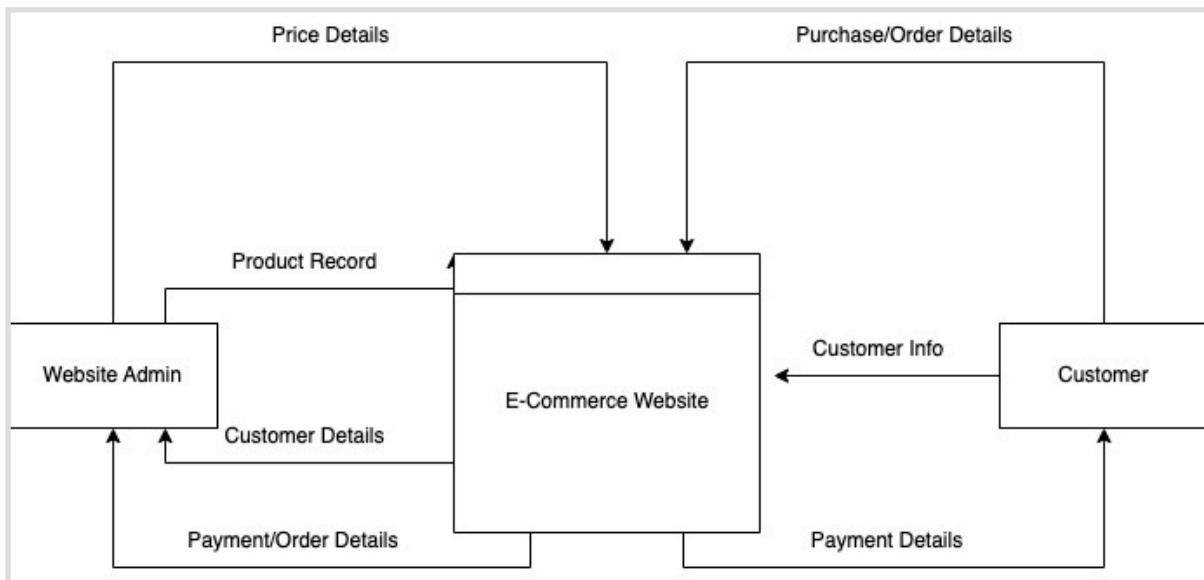
Aim

To develop the data flow diagram up to level 1 for the Fashion E-Commerce

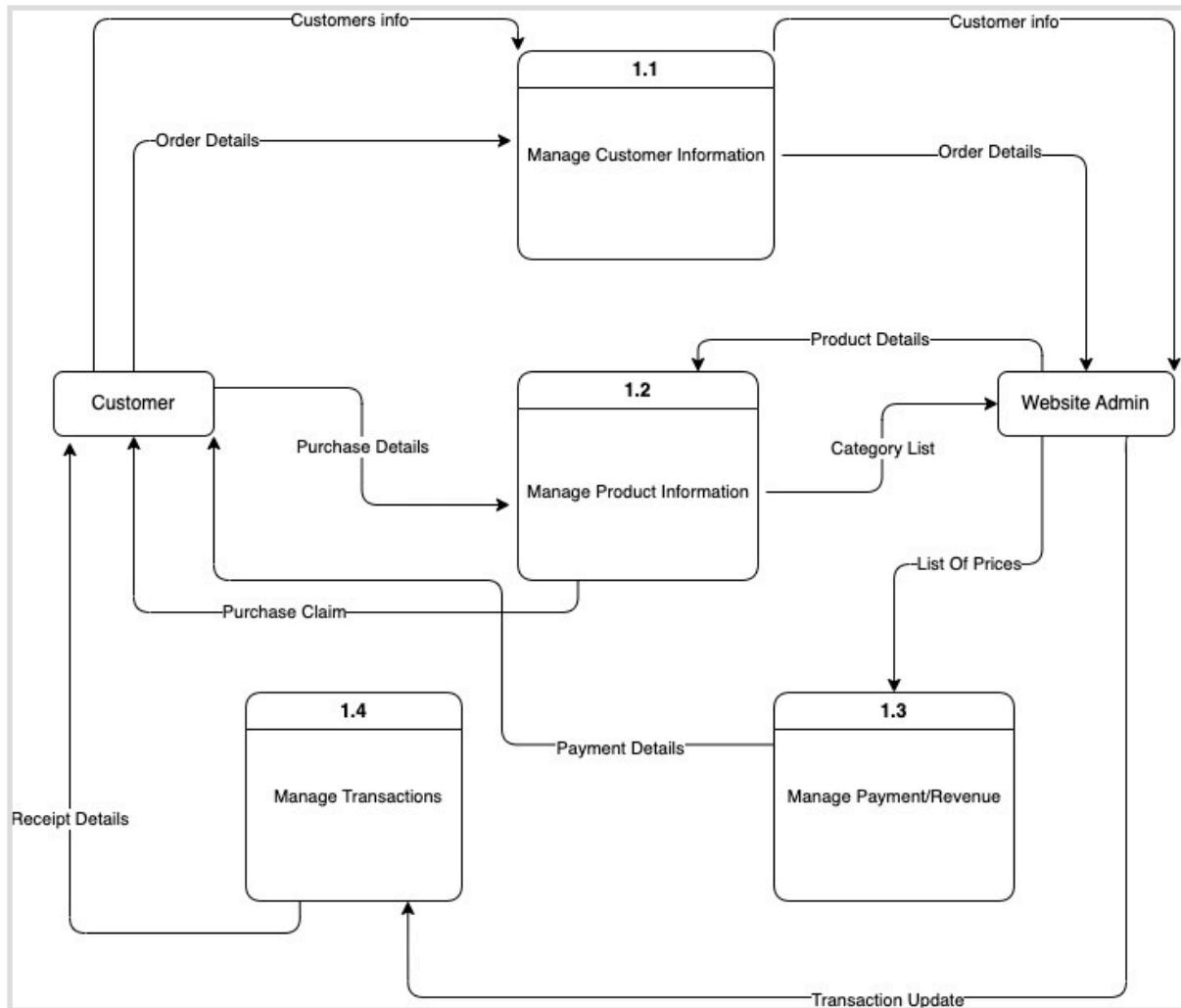
Team Members:

S No	Register No	Name	Role
1	RA2111032010034	Pulipaka Prabhav	Rep
2	RA2111032010037	M.Sai Praneeth Yadav	Member
3	RA2111032010047	CH.Bharadwaj Karthik	Member

DFD Level 0



DFD Level 1



Result:

Thus, the data flow diagrams have been created for the Fashion E-Commerce.



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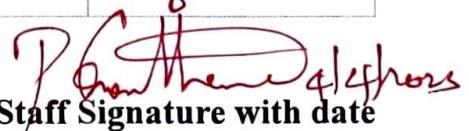
Course Code: 18CSC206J

Course Name: Software Engineering and Project Management

Experiment No	9
Title of Experiment	Design a Sequence and Collaboration Diagram
Name of the candidate	Pulipaka Prabhav
Team Members	M.Sai Praneeth Yadav, CH.Bharadwaj Karthik
Register Number	RA2111032010034
Date of Experiment	28-03-2023

Mark Split Up

S. No	Description	Maximum Mark	Mark Obtained
1	Exercise	5	4
2	Viva	5	4
	Total	10	8


Staff Signature with date

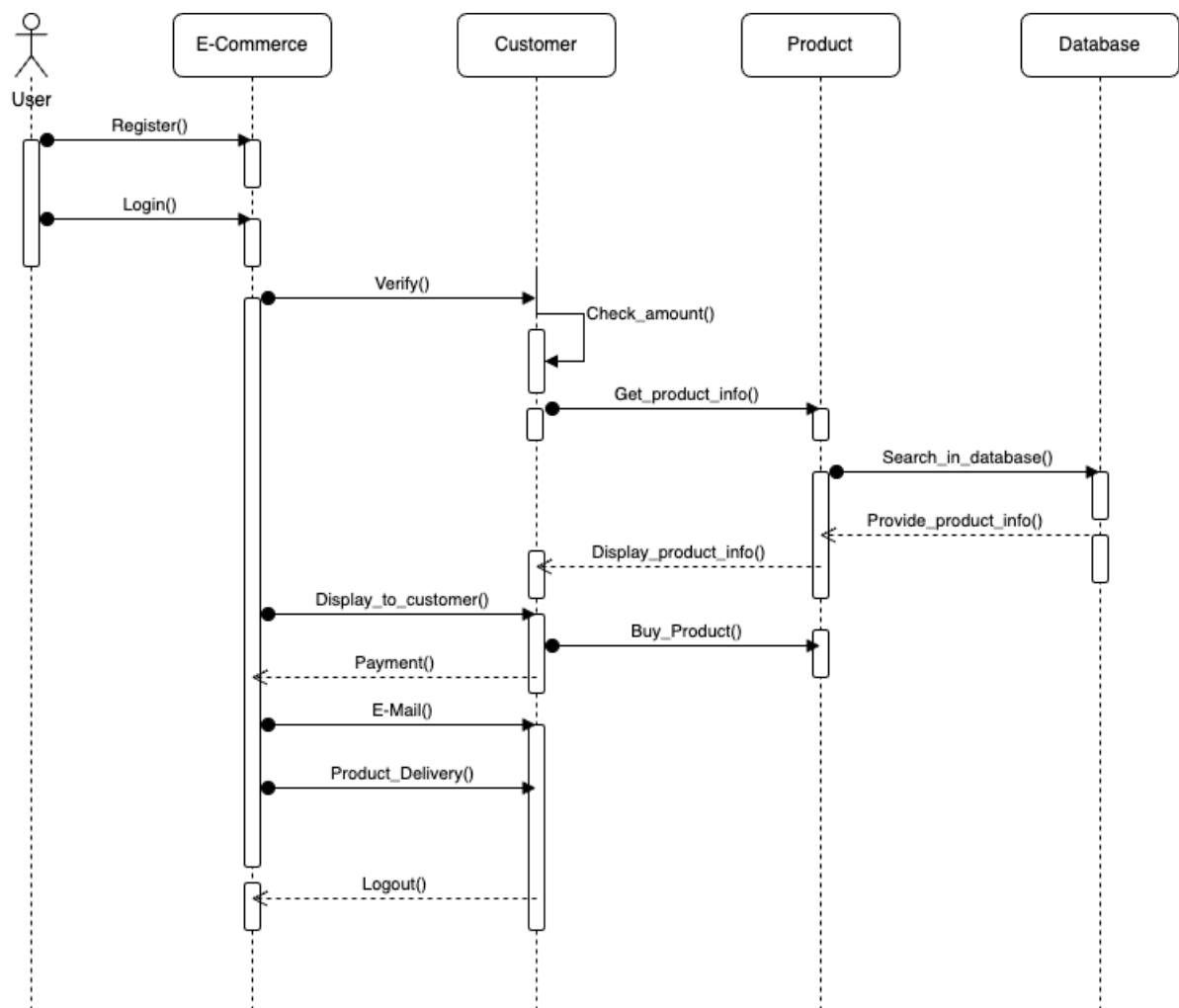
Aim

To create the sequence and collaboration diagram for the Fashion E Commerce

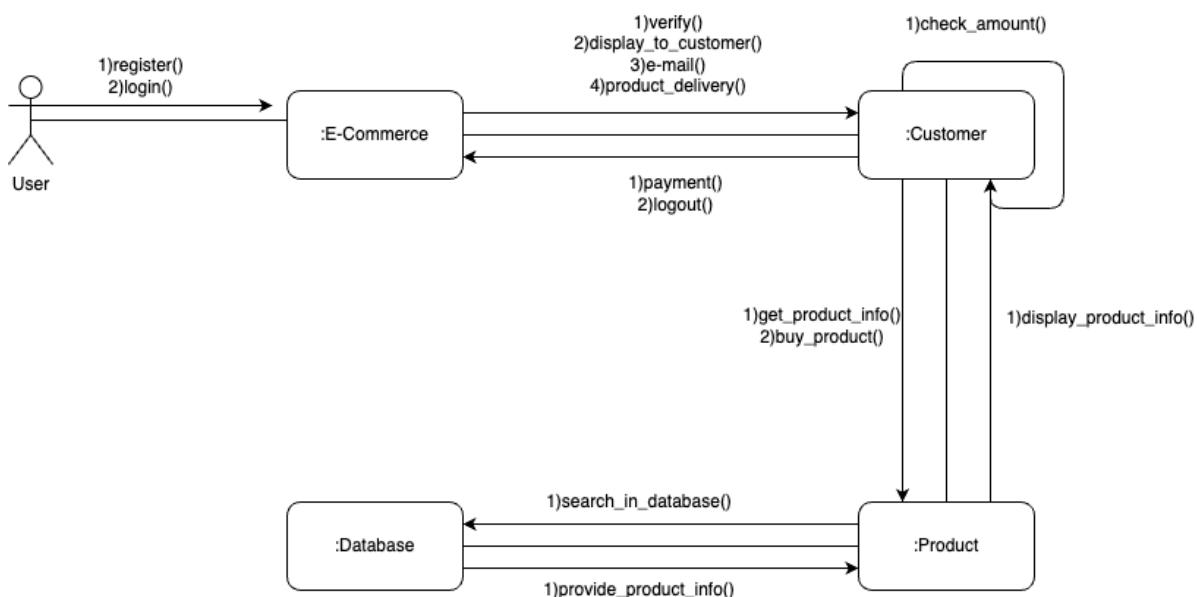
Team Members:

S No	Register No	Name	Role
1	RA2111032010034	Pulipaka Prabhav	Rep/Member
2	RA2111032010037	M.Sai Praneeth Yadav	Member
3	RA2111032010047	CH.Bharadwaj Karthik	Member

Sequence Diagram



Collaboration Diagram



Result:

Thus, the sequence and collaboration diagrams were created for the Fashion E Commerce.



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SRM IST, Kattankulathur – 603 203

Course Code: 18CSC206J

Course Name: Software Engineering and Project Management

Experiment No	10
Title of Experiment	Develop a Testing Framework/User Interface
Name of the candidate	Pulipaka Prabhav
Team Members	M.Sai Praneeth Yadav, CH.Bharadwaj Karthik
Register Number	RA2111032010034
Date of Experiment	10-04-2023

Mark Split Up

S. No	Description	Maximum Mark	Mark Obtained
1	Exercise	5	5
2	Viva	5	5
Total		10	10

P. Goutham 12/4/2023
Staff Signature with date

Aim

To develop the testing framework and/or user interface framework for the Fashion E-Commerce.

Team Members:

S No	Register No	Name	Role
1	RA2111032010034	Pulipaka Prabhav	Rep/Member
2	RA2111032010037	M.Sai Praneeth Yadav	Member
3	RA2111032010047	CH.Bharadwaj Karthik	Member

Executive Summary

Scope: The scope of testing an e-commerce website should include all of the website's functionalities and features. This includes evaluating the front-end and back-end systems of the website, as well as the user interface, database, security features, and integration with third-party services. To ensure compatibility, the website should be tested across numerous devices, operating systems, and browsers.

Objective: The goal of testing an e-commerce website is to guarantee that it performs correctly and efficiently, that it meets business criteria and user expectations, and that it provides customers with a seamless purchasing experience. The testing should discover any problems or issues that may have an impact on the usability, security, or performance of the website.

Approach:

The following actions should be taken while testing an e-commerce website:

- 1) Test Planning: Create a complete test strategy that covers testing objectives, scope, testing methodology, resources, and timelines.
- 2) Setup the testing environment to be as close to the production environment as feasible, including hardware and software configurations, databases, and third-party integrations.
- 3) Test Case Development: Create test cases that address all of the website's functional and non-functional needs. The navigation, search capabilities, product pages, shopping cart, checkout process, payment gateways, and user registration and login are all tested.

4) Test Execution: Run the test cases and document the findings. Any problems or flaws discovered during testing should be documented and tracked in a defect tracking system.

5) Reporting Defects: Report any defects or issues found during testing to the development team for resolution. The development team should also verify the resolution of the defects.

Test Plan

Scope of Testing

Functional: Is an approach of software testing in which the software system is validated against the functional requirements/specifications. The goal of functional testing is to test each function of a software programme by giving adequate input and comparing the output to the Functional requirements.

S.No	Test Item	Description
1)	User Registration	Test the user registration process to confirm that users may successfully create an account and that their personal and financial information is safe.
2)	Product Catalogue	Check that the product catalogue displays the correct product information, photos, sizes, colours, and prices.
3)	Shopping Cart	Test the shopping cart to ensure that it is working properly and that customers can easily add and remove items, adjust amounts, and proceed to checkout.
4)	Checkout Process	Test the checkout process to ensure that users can complete the payment procedure without encountering any errors or problems. Integrate payment gateways with a variety of payment options.
5)	User Account Management	User account management functionality such as order history, address management, and user profile change should be tested.

S.No	Test Item	Description
6)	Search Functionality	Test the search capability to ensure that consumers can quickly locate the products they want, such as searching by product name, category, brand, color, and size.

Non-Functional: Is defined as a type of software testing that examines a software application's non-functional features (performance, usability, dependability, and so on).

S.No	Test Item	Description
1)	Performance Testing	To guarantee that the website reacts swiftly and smoothly, test its performance under various traffic loads. Load testing, stress testing, and performance tuning are all part of optimising website speed and response time.
2)	Usability Testing	Test the usability of the website to ensure that it is simple to use, browse, and comprehend. This involves testing for usability, responsiveness, and consistency across devices and platforms.
3)	Accessibility Testing	Check the website's accessibility to guarantee that persons with disabilities can use it. This involves testing for accessibility requirements compliance, such as the Web Content Accessibility requirements. (WCAG).

S.No	Test Item	Description
4)	Security Testing	Examine the website's security features to ensure that user data is safe and secure, and that there are no weaknesses that attackers could exploit. This includes compliance testing with security requirements such as the Payment Card Industry Data Security Standard. (PCI DSS).
5)	Compatibility Testing	To guarantee that the website functions properly on all browsers, operating systems, and devices, test its compatibility with them.

Types of Testing, Methodology, Tools

Category	Methodology	Tools Required
Functional Requirements	Manual	Word Template
Performance Testing	Load Testing, Stress Testing	LoadRunner
Security Testing	Manual Testing, Automated Testing	OWASP ZAP

Result:

Thus, the testing framework/user interface framework has been created for the Fashion E-Commerce .



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SRM IST, Kattankulathur – 603 203

Course Code: 18CSC206J

Course Name: Software Engineering and Project Management

Experiment No	11
Title of Experiment	Test Cases & Reporting
Name of the candidate	Pulipaka Prabhav
Team Members	M.Sai Praneeth Yadav, CH.Bharadwaj Karthik
Register Number	RA2111032010034
Date of Experiment	17-04-2023

Mark Split Up

S. No	Description	Maximum Mark	Mark Obtained
1	Exercise	5	4
2	Viva	5	5
Total		10	9


Staff Signature with date

Aim

To develop the test cases manual with manual test case report for the Fashion E Commerce.

Team Members:

S No	Register No	Name	Role
1	RA2111032010034	Pulipaka Prabhav	Rep
2	RA2111032010037	M.Sai Praneeth Yadav	Member
3	RA2111032010047	CH.Bharadwaj Karthik	Member

Functional Test Cases

Test ID (#)	Test Scenario	Test Case	Execution Steps	Expected Outcome	Actual Outcome	Status	Remarks
TC1	User Login	Valid Login	<ol style="list-style-type: none"> 1. Navigate to the login page 2. Enter valid login credentials 3. Click on login button 	User should be successfully logged in to the website		Not Executed	N/A
TC2	User Login	Invalid Login	<ol style="list-style-type: none"> 1. Navigate to the login page 2. Enter invalid login credentials 3. Click on login button 	User should not be able to log in and an error message should be displayed		Not Executed	N/A
TC3	Search Functionality	Search for a product	<ol style="list-style-type: none"> 1. Navigate to the homepage 2. Enter a valid product name in the search bar 3. Click on the search button 	The website should display all the relevant products for the search term		Not Executed	N/A
TC4	Add to Cart	Add a product to your cart	<ol style="list-style-type: none"> 1. Navigate to a product page 2. Select a product size and quantity 3. Click on the add to cart button 	The product should be added to the user's cart		Not Executed	N/A

TC5	Checkout Process	Checkout with valid details	<ol style="list-style-type: none"> 1. Navigate to the cart page 2. Click on the checkout button 3. Enter valid checkout details 4. Click on the place order button 	The order should be successfully placed and a confirmation page should be displayed		Not Executed	N/A
TC6	Checkout Process	Checkout with invalid details	<ol style="list-style-type: none"> 1. Navigate to the cart page 2. Click on the checkout button 3. Enter valid checkout details 4. Click on the place order button 	The website should display an error message and not place the order		Not Executed	N/A
TC7	Payment Gateway	Payment with valid details	<ol style="list-style-type: none"> 1. Navigate to the payment page 2. Enter valid payment details 3. Click on the pay button 	The payment should be successfully processed and the user should be redirected to the order confirmation page		Not Executed	N/A

Non-Functional Test Cases

Test ID (#)	Test Scenario	Test Case	Execution Steps	Expected Outcome	Actual Outcome	Status	Remarks
NF 1	Performance	Page load time	<ol style="list-style-type: none"> 1. Access website 2. Navigate to a product page 3. Measure the time taken for the page to load completely 	Page should load in 3 seconds		Not Executed	N/A
NF 2	Usability	Mobile Responsiveness	<ol style="list-style-type: none"> 1. Access website from a mobile device 2. Navigate to various pages and features 3. Verify that all pages and features are easily accessible and usable 	The website should be fully responsive and easy to use on a mobile device		Not Executed	N/A
NF 3	Security	Login Authentication	<ol style="list-style-type: none"> 1. Enter valid login credentials 2. Intercept the login request using a proxy tool 3. Verify that the login request is encrypted and secure 	Login request should be encrypted and secure to protect user data		Not Executed	N/A

NF 4	Compatibility	Browser Compatibility	<ol style="list-style-type: none"> 1. Access website from different browsers (Chrome, Firefox, Safari, etc.) 2. Navigate to various pages and features 3. Verify that all pages and features are displayed correctly and function as expected 	The website should be compatible with all major browsers and function correctly on each		Not Executed	N/A
NF 5	Accessibility	KeyBoard Navigation	<ol style="list-style-type: none"> 1. Access website 2. Navigate to various pages and features using only the keyboard 3. Verify that all pages and features can be accessed and used without a mouse 	The website should be fully accessible via keyboard navigation to accommodate users with disabilities		Not Executed	N/A

Category	Progress Against Plan	Status
Functional	Amber	In-Progress
Performance	Green	Completed
Security	Amber	In-Progress
Compatibility	Amber	In-Progress

Functional	Test Case Coverage (%)	Status
User Registration	100%	Completed
Login/Logout	100%	Completed
Product Search	100%	Completed
Checkout Process	65%	In-Progress
Non-Functional	Test Case Coverage (%)	Status
Performance	100%	Completed
Security	50%	In-Progress
Compatibility	80%	In-Progress
Usability	80%	In-Progress

Result:

Thus, the test case manual and report has been created for the Fashion E Commerce.



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SRM IST, Kattankulathur – 603 203

Course Code: 18CSC206J

Course Name: Software Engineering and Project Management

Experiment No	12
Title of Experiment	Provide the details of Architecture Design/Framework/Implementation
Name of the candidate	Pulipaka Prabhav
Team Members	M.Sai Praneeth Yadav, CH.Bharadwaj Karthik
Register Number	RA2111032010034
Date of Experiment	24-04-2023

Mark Split Up

S. No	Description	Maximum Mark	Mark Obtained
1	Exercise	5	4
2	Viva	5	5
Total		10	9



P. Gautham
27/4/2023
Staff Signature with date

Aim

To provide the details of architectural design/framework/implementation

Team Members:

S No	Register No	Name	Role
1	RA2111032010034	Pulipaka Prabhav	Rep/Member
2	RA2111032010037	M.Sai Praneeth Yadav	Member
3	RA2111032010047	CH.Bharadwaj Karthik	Member

Login Page

CARVE



LOGIN HERE!



USERNAME

PASSWORD



"Fashions fade, style is eternal."

Home Page



Find your style



Casual Jeans
Rs.999



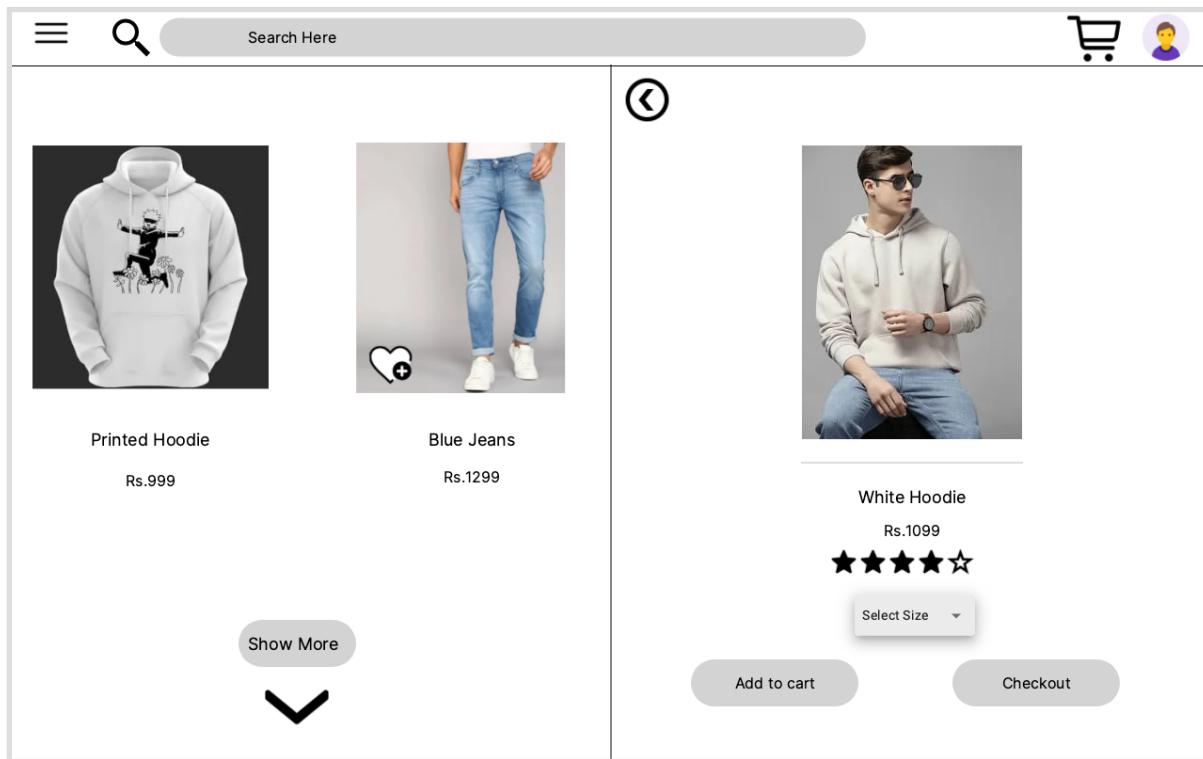
Blue Jeans
Rs.1500



Olive Green Shirt
Rs.1299



Item Check



Payment Gateway

The screenshot shows a payment gateway interface for the brand "CARVE". On the left, there is a "Payment" section with fields for "Card Type" (Credit Card or Debit Card) and "Card Number" (with a placeholder "Enter Card Number" and a VISA logo). Below these are fields for "Card Holder Name" (with a placeholder "Card Holder Name" and a person icon), "Expiry Date" (with a calendar icon), and "CVV" (with a placeholder "CVV" and a keyhole icon). At the bottom left is a "Back" button with a left arrow icon. On the right, there is an "Order" summary table:

Order	
	Printed Hoodie Rs.999 <input checked="" type="checkbox"/> Validate
	Olive Green Shirt Rs.1299 <input type="checkbox"/> Validate
Subtotal:	Rs.999
Shipping:	Rs.50
Total:	Rs.1049

Result:

Thus, the details of architectural design/framework/implementation along with the screenshots were provided.

Conclusion

In conclusion, the fashion e-commerce website project should aim to provide a seamless online shopping experience for customers. The website should have an attractive and user-friendly design, high-quality product images, detailed product descriptions, and easy navigation. The website should also have robust search and filtering options, secure payment options, and a responsive customer support system.

To ensure the success of the project, it is important to conduct thorough research and analysis of the target market, competitors, and industry trends. This will help in identifying the unique selling proposition of the website and creating a comprehensive marketing strategy to attract and retain customers.

Additionally, implementing analytics tools to track website performance, user behavior, and sales data can provide valuable insights for making data-driven decisions and improving the website's overall performance.

Overall, a successful fashion e-commerce website requires a combination of high-quality design, user-friendly functionality, and effective marketing strategies to attract and retain customers.

References

1. Atlassian Jira - <https://www.atlassian.com/software/jira> - Jira is a popular project management tool used by software development teams to plan, track, and manage their work.
2. Trello - <https://trello.com/> - Trello is a visual project management tool that allows teams to organize their work using boards, lists, and cards.
3. GitLab - <https://about.gitlab.com/> - GitLab is a web-based Git repository manager that provides code management, issue tracking, and continuous integration/continuous deployment (CI/CD) capabilities.
4. <https://www.onlinegantt.com/#/gantt>
5. <https://app.diagrams.net/>
6. https://icons8.com/lunacy?utm_source=google&utm_medium=cpc&utm_campaign=unc_pa_search_alternatives&gclid=CjwKCAjwuqiiBhBtEiwATgvixFrTZHm5UouXQ2PWsa3vUr_5oEm2NUxrL5y4-flj1UYmFEUOpvdIYhoCoA4QAvD_BwE