eCommerce Shopping Website

Tech Ninjas

Group Members

Osama Naaz- 11801087
Potla Harini- 11821595
Niharika Karanam- 11810493
Triveni- 11811560
Nirupama Karnam- 11810487
Jaswanth Koorpati- 11771147
Chengalva Naga Sharanya- 11800811
Rajasekhar Ponnuru- 11693961

Member Contribution Table

Member name	Contribution description	Overall Contribution (%)	Note (if applicable)
Harini	Project Description, Member Contribution Table	12.5%	
Osama	Project Timeline, File Submissions	12.5%	
Nirupama	Project Timeline, Risk Management	12.5%	
Jaswanth	Meeting minutes	12.5%	
Rajsekhar	Github README, directory Structure	12.5%	
Triveni	Team roles	12.5%	
Sharanya	Github README, directory structure, Team Roles	12.5%	
Niharika	Project Description, Risk Management	12.5%	

Team Roles

Project Management Lead	**Osama**
Requirements Lead	**Jaswanth**
Design Lead	**Harini**
Implementation Lead for front end	**Osama**
Implementation Lead for back end	**Jaswanth**
Configuration and Management Lead	**Rajsekhar**
Testing Lead	**Niharika**
Documentation Lead	**Triveni**
Demo and presentation Lead	**Sharanya**
System Administrator Lead	**Nirupama**

ABSTRACT

Project Name - Commerce Shopping Website

Electronic Commerce was process of doing business through online. person sitting home can access all facilities of Internet to buy,sell products. Ecommerce has made it easier for human to reduce physical work to save time. It has taken great leap in world of computers. main theme was user can browse online shops compare prices order merchandise sitting home on their mobiles PC s.

This project was web based shopping system for existing brand focus on development of comprehensive ecommerce website designed to help buying products through internet. Thus customer get benefit of comparing

- Brands so user could has choice to choose from multiple brands in one platform.
  Backend---- Python Django Node.js
  Frontend---- React.js Angular
  Database---- MySQL.
- Filters allow users to list down result based on specific criteria like size color style rating pricing which help user to find their appropriate match without having to browse through list of irrelevant items.
  Search Engines---- Elasticsearch.
  Frontend---- React.js.

- Pricing being prominent feature we provide benefit of discount coupons.
  Backend---- Node.js Django
  Database---- MYSQL
  Tools---- Dynamic Pricing Tool
- Shopping cart----
  Frontend---- React.js Angular
  Backend---- Node.js Python Django
  Local Storage---- Web Storage JavaScript API .
- Rating reviews provide feedback to user about product services it helps to identify areas of improvement to enhance customer satisfaction.
  Frontend---- React.js Angular
  Backend---- Node.js Python Django
  Database---- MySQL
  Third Party Services---- Google Reviews API
- Easy buying tracking return as per convenience from anywhere for both seller buyer.
  Backend---- Django

  Returns Refund----
  Backend---- Django Node.js
  Payment Gateway Integration---- Razor pay Refund APIs
  Database---- MYSQL

  Order Tracking----
  Backend---- Python Django .
- Flexible secure payment processing
  Mock Payment

- Integrated customer support to make it smooth along process of purchase. these being key features we ensure privacy high performance scalability security.
  Live Chat Integration---- Bot

  Privacy Settings----
  Frontend---- React.js

- Flexible customer interaction through Notifications Emails
  Push Notifications
  Email Notifications
  SMS Notifications
- User Profiling
  Authentication----
  Libraries---- JWT

  Address Management----
  Frontend---- React.js Angular
  Backend---- Django Node.js
  Database---- MySQL

  Previous Orders----
  Backend---- Node.js Django
  Database---- MySQL
- Additionally project includes to track user s most frequent visits interests suggest accordingly to optimize shopping experience.
  Search---- Elasticsearch

Technologies Libraries----

- Front end---- interface was built using React.js,Angular.js includes html CSS JavaScript to defines style structured layout.
- Back end---- server side work on Node.js for scalable application development.
- Database---- MySQL provides flexibility for managing user data.
- Design---- UX design.
- UML diagram---- Star UML
- Authentication---- JWT JSON Web Tokens implemented for authorization.
- Customer Support---- IBM Watson
- Hosting---- Application hosted on Azure,AWS,GCP,Vercelap,Heroku ensuring availability scalability.
- Analysis---- Manually tested to check accuracy.
- Payment---- Mock payment.

In conclusion by developing user friendly platform that stands out in competitive online market this eCommerce project successfully meets its goals. platform offers excellent shopping experience that was distinguished by safe transactions customized recommendations easy navigation through integration of advanced technologies. Driving customer satisfaction requires thorough understanding of market trends consumer needs which project clearly shows. All things considered; this eCommerce solution solves issues facing this market today.

Project Timeline

Phase 1: Project recruitment, proposal and planning (August 20th – September 9th)

- August 20th – August 27th
  - ✔ Team identification: Deciding what team who wants to be in
  - ✔ Teammate interviews: Interviewing fellow teammates to understand their backgrounds
  - ✔ Skill identification: Understanding what skills each teammate brings to the table

- August 27th – September 5th
  - ✔ Project idea proposals and feature identification: Gathering ideas and features of potential projects
  - ✔ Team Discussions: To finalize the project scope, features and tech stack
  - ✔ Responsibility assignment: Assigning leads to all the stacks in the project
  - ✔ Risk Management: Identification and mitigation strategies

- September 6th – September 8th
  - ✔ Write the project proposal including the project description, timeline, risk management.
  - ✔ Create presentation and 5 minute video

- September 9th
  - ✔ Submit Deliverable 1
    - Report in Github & Canvas
    - Powerpoint presentation and video submission in Canvas

Phase 2: System specifications and requirements (September 10th – September 30th)

- September 10th – September 20th
  - ✔ System Specifications: Define database schema, API Endpoints, UI Wireframes
  - ✔ Requirement Gathering and drafting technical details – 10 to 20 page report

- September 21st – September 25th
  - ✔ Discuss, review, refine and finalize system specifications
  - ✔ Finalize the System Specifications report

- September 26th – September 30th
  - ✔ Submit Deliverable 2
    - Submit the report on Github and Canvas

Phase 3: Project Phase 1 (October 1st – October 21st)

- October 1st – October 17h
  - ✔ Start frontend development
    - Login and signup page
    - Product Listing
    - Basic shopping cart facility
  - ✔ Start Backend Development
    - User Authentication
    - Product Listing API
    - Shopping Cart

        - Basic CRUD for Users, Products
    - ✔ Testing API and UI Integration
    - ✔ Start recommendation engine

- October 18th – October 21st
    - ✔ Project Phase 1 report: A 6-10 pages report summarizing the progress made and core functionalities implemented
    - ✔ Submit Deliverable 3

Phase 4: Project Phase 2 (October 22nd – November 11th)

- October 22nd – November 8th
    - ✔ Backend and Database Development Continues
        - Filters
        - Orders return and refund API
        - Notification and Email
        - Integrate recommendation engine
        - Address Management
        - Previous Orders
        - Wish List
    - ✔ Frontend Development Continues
        - Order returns, refund
        - Filters
        - Wish List
        - Previous orders
        - Address Management
        - Recommendation Engine Integration
    - ✔ Testing UI and API Integration

- November 8h – November 11th
    - ✔ Project Phase 2 report: A 7-11 pages report summarizing the progress made and core functionalities implemented
    - ✔ Submit Phase 2 report

Phase 5: Project Phase 3 (November 12th – December 5th)

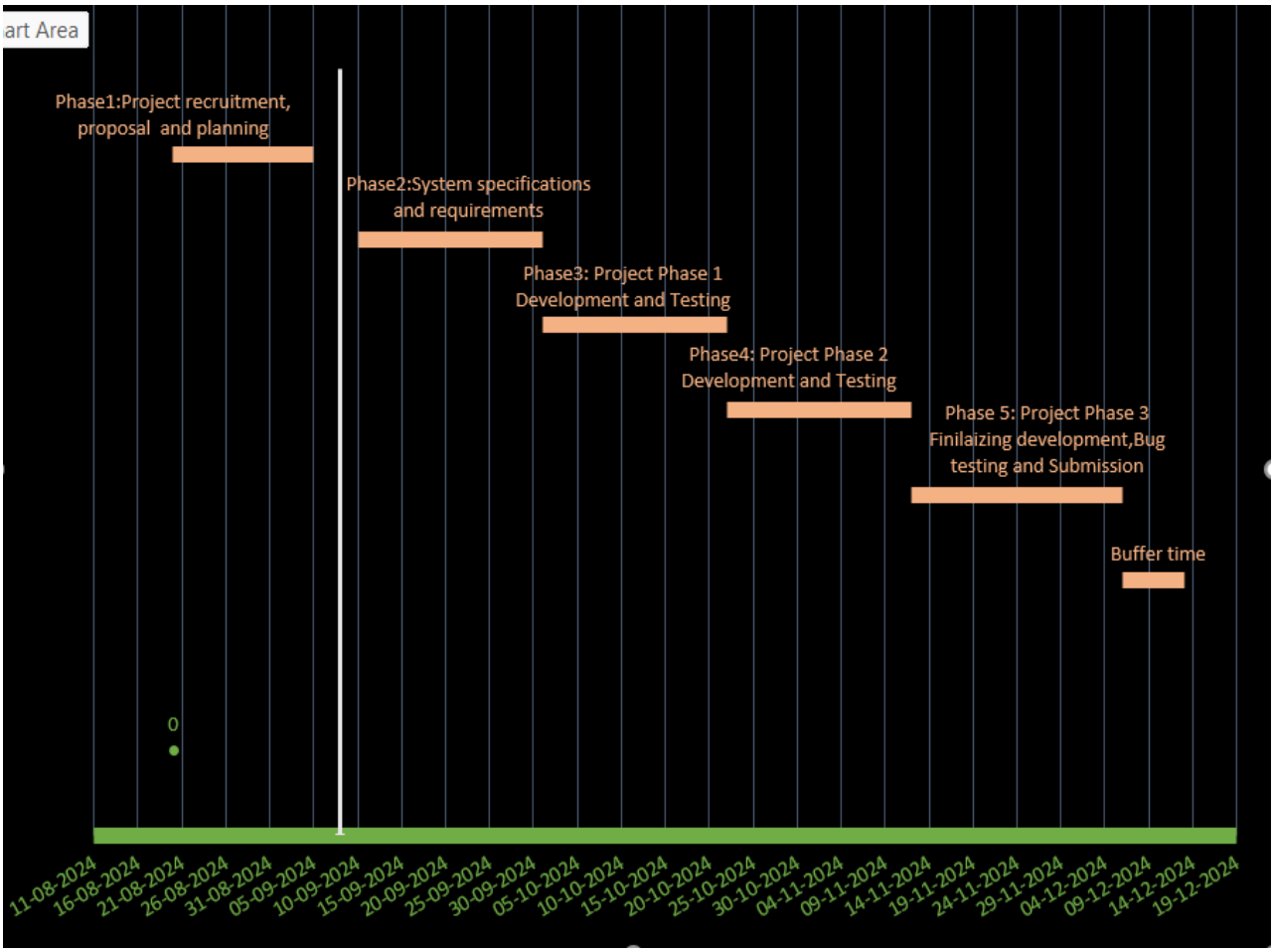
- November 12th – November 29th
    - ✔ Finalize frontend and backend development
    - ✔ Add support for discount and brands
    - ✔ Bug fixing and UI beautification

- November 30th – December 5th
    - ✔ Prepare final report and submit Deliverable 5

Buffer Time (December 6th – December 12th)

- This time is to polish the project, bug fixes, and presentation preparations

Gantt chart representation:


art Area
Phase1:Project recruitment, proposal and planning
Phase2:System specifications and requirements
Phase3: Project Phase 1 Development and Testing
Phase4: Project Phase 2 Development and Testing
Phase 5: Project Phase 3 Finilaizing development,Bug testing and Submission
Buffer time
0
11-08-2024
16-08-2024
21-08-2024
26-08-2024
31-08-2024
05-09-2024
10-09-2024
15-09-2024
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29-11-2024
04-12-2024
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14-12-2024
19-12-2024

Risk Management for Ecommerce shopping application:

For e commerce applications risk management involves identifying risks that could affect tasks determining probability impact of them creating plans to lower risks.

Monitoring Risks:

Regular monitoring was important to ensure detention of any potential risks at early stages

a. **Data Breaches Cybersecurity Risks:**

Monitoring Approach: Make use of automated safety measures to keep eye out for abnormal activity safety risks vulnerabilities.
Key metrics: Log total number of failed attempts to login detection of malware all login attempts.

b. **Website Downtime:**

Monitoring Approach: To keep checks on server site availability use uptime monitoring tools.

Key Metrics: percentage of uptime as well as frequency of errors

c. **Payment Gateway Failures:**

Monitoring Approach: Monitor success of transactions failure rates processing tym of payments.

Key Metrics: Average tym taken to process payments success failure rates of transactions.

Revaluation of risks:

a. **Quarterly risk assessments:** Meetings should be held for every four months to review known existing risks make changes in development accordingly.
Focus areas: Review logs reports of downtime to know emerging patterns conduct vulnerability scans.

b. **Updating risk profiles:** Gather information update risk matrix based on priority levels change priority of risks based on impacts allocate resources accordingly.

Contingency plans for risks:

a. **Data Breaches Cybersecurity Risks:** Backup sensitive important date on regular basis make recover plan followed by updating customers for any breaches offering support if sensitive data was threatened.
Backup plan: Enable multi factor authentication during high risk periods.

b. **Website downtime:** Use disaster recovery protocol for quick restoration of server load balancers to shift traffic to backup servers update customers about downtime.
Backup plan: Conduct regular performance tests on site.

c. **Payment gateway failures:** Use multiple payment gateway providers so that customers can have additional payment option in case of payment failure.
Backup plan: Temporarily record transaction data especially for failed transactions to process later.