Minor Project

E-Commerce Website Development

Submitted by

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Course

Bachelor of Technology in Computer Science Engineering

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1. Title Page

- **Project Title**: E-Commerce Website Development
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- **Course**: Bachelor of Technology in Computer Science Engineering
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2. Introduction

- **Background**: With the rise of digital platforms, online shopping has become an essential part of modern commerce. E-commerce websites enable businesses to reach a global audience, offering convenience and ease of access to a wide range of products and services.

- **Problem Statement**: Many small businesses struggle to build functional and scalable e-commerce platforms that cater to user needs, provide a smooth user experience, and ensure secure transactions.
- **Objectives**: To develop a fully functional e-commerce website that allows users to browse products, add items to a shopping cart, and complete transactions securely. To integrate responsive design for a seamless user experience across devices. To implement user authentication, product management, and payment gateway integration.

3. Methodology

- **Approach**:
  • Develop the website using a full-stack approach.
  • Frontend development using React.js to provide an interactive user interface.
  • Backend development using Node.js and Express for handling server-side functionality.
  • Database integration using MongoDB for storing product, user, and order data.
- **Tools and Technologies**:
  • Frontend: HTML, CSS, JavaScript, React.js, Redux.
  • Backend: Node.js, Express.js
  • Database: MongoDB
  • Payment Gateway: Stripe

4. Project Plan

- **Timeline**:
  - **Week 1-2**: Requirement analysis and initial design of the website layout.
  - **Week 3-4**: Frontend and backend development, user authentication setup.
  - **Week 5-6**: Payment gateway integration and database setup.
  - **Week 7-8**: Testing and debugging, finalizing the user interface, and deployment.
- **Milestones**:
  - Initial prototype by Week 4.
  - Final e-commerce platform deployment by Week 8.

5. Expected Outcomes

- **Deliverables**:
  • A responsive and functional e-commerce website with product browsing, shopping cart, and checkout functionality.
  • Project report and code documentation.
  • Deployment of the website on a cloud platform.
- **Impact**:
  • The e-commerce website will allow businesses to expand their reach and improve
  customer satisfaction by providing a seamless online shopping experience.

6. Resources

- **Required Tools**:
  • Frontend: HTML, CSS, JavaScript, React.js, Redux.

  - Backend: Node.js, Express.js
  - Database: MongoDB
  - Payment Gateway: Stripe
- **Other Resources**:
  - Access to product data for populating the website.
  - Cloud platform for hosting the website.