**Minor Project**



# **E-Commerce Website Development**

**Submitted by**

|  |  |  |  |
| --- | --- | --- | --- |
| Vivek Pradhan  216301106 | Lakshay Goyal  216301050 | Chitresh Chandra  216320056 |  |

**Course**

Bachelor of Technology in Computer Science Engineering

**Instructor**

Prof. Shashank Sharma

**Department**

Department of Computer Science and Engineering

Faculty of Engineering and Technology

Gurukula Kangri (Deemed to be University)

Haridwar. (Uttarakhand)

September 7, 2024

#### 1. **Title Page**

* **Project Title**: E-Commerce Website Development
* **Student Name**: Vivek Pradhan, Lakshay Goyal, Chitresh Chandra
* **Roll Number**: 216301106, 216301050, 216320056
* **Course**: Bachelor of Technology in Computer Science Engineering
* **Instructor**: Dr. Nishant Kumar
* **Date**: September 7, 2024

#### 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.