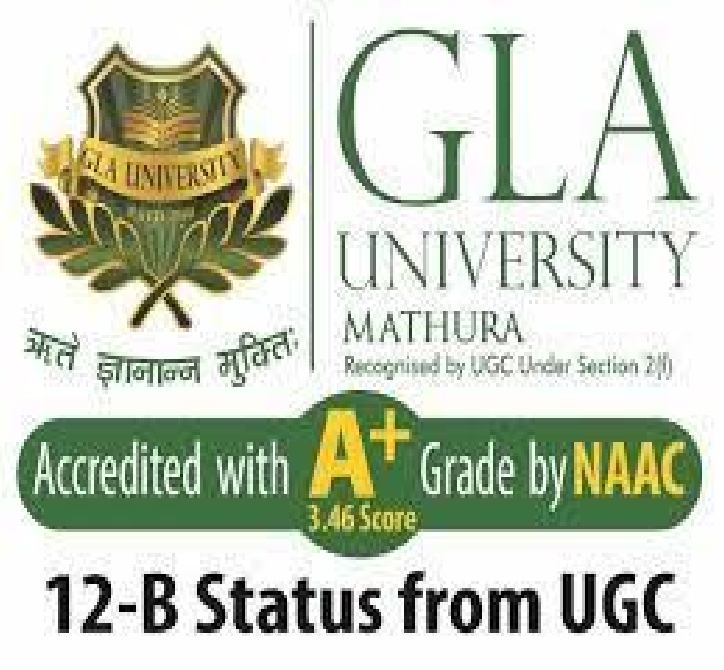

A PROJECT REPORT

ON

E-COMMERCE WEBSITE

Submitted by

Aayush Singh(2115000008)

in partial fulfillment for the award of the degree of

BACHELOR OF TECHNOLOGY

IN

COMPUTER SCIENCE

GLA University, Mathura

Nov 2023

BONAFIDE CERTIFICATE

Certified that this project report **" Automotive e-commerce "** is the bonafide work of " Aayush singh **"** who carried out the project work under my/our supervision.

SIGNATURE

Mr. Rohit Agrawal

HEAD OF THE DEPARTMENT

B. Tech.

SIGNATURE

Ms. Ruchi gupta

SUPERVISOR

B. Tech.

Submitted for the project viva voce examination held on

INTERNAL EXAMINER

EXTERNAL EXAMINER

CERTIFICATE

This is to certify that we Aayush Singh of B.Tech. (C.S.E.) 5th Semester from G.L.A. University, Mathura has presented this project work entitled " Automotive e-commerce", an online auction website in partial fulfillment of the requirements for the award of the degree of Bachelor of Computer Applications under our supervision and guidance.

ACKNOWLEDGEMENT

The success of this project has been a result of our dedication, and the immense contributions of individuals who have shown me their support, guidance, and encouragement. I would like to take this opportunity to express my heartfelt gratitude to these wonderful souls.

I would also express my appreciation to my project mentor,Ms.Ruchi Gupta, for their unwavering mentorship for the entire duration of this project. Through their expertise, timely feedback, high standards, and support, I have been able to come up with quality work that I am immensely proud of. Their constant support has provided adequate guidance to us. Their words of encouragement dispel all forms of fear of failure and give me the strength and determination to carry on even in the face of challenges.

I would like to acknowledge my participants whose contributions provided me with the required data for this project. They gave me their precious time and provided me with valuable insights that made the process of data analysis without errors.

I am indebted to my family for their never-ending encouragement and support throughout my academic journey. Their unwavering life and belief in me have always propelled me to do better. and encouraging me to see this through despite the stress and difficulties encountered.

In conclusion, I am forever grateful for the gift of wonderful humans who have made this mini project a success. Their immense support fueled my passion and determination to excel. I am grateful to have been blessed with these amazing individuals and organizations.

TABLE OF CONTENTS:

1. Abstract

This abstract provides an overview of a dynamic e-commerce website project that leverages HTML, CSS, Node.js, and MongoDB to create a user-friendly online shopping experience. The project aims to seamlessly integrate front-end and back-end technologies to ensure a responsive and efficient platform for both customers and administrators.

The front-end development utilizes HTML and CSS to design an intuitive user interface that enhances the overall user experience. Responsive web design principles are implemented to ensure accessibility across various devices, providing users with a consistent and visually appealing interface.

On the server side, Node.js is employed to build a scalable and high-performance backend infrastructure. This technology facilitates real-time data processing, ensuring quick response times and a seamless shopping experience. Node.js also enables the implementation of asynchronous operations, enhancing the overall efficiency of the e-commerce platform.

For data storage and management, MongoDB, a NoSQL database is chosen to handle the dynamic and diverse nature of e-commerce data. The document-oriented database structure of MongoDB allows for flexible and scalable data storage, accommodating the growing needs of an expanding e-commerce platform.

Throughout the development process, emphasis is placed on security, scalability, and performance optimization. The combination of HTML, CSS, Node.js, and MongoDB provides a robust foundation for building a modern e-commerce platform capable of handling diverse user interactions and data management requirements.

2. Introduction

Welcome to our innovative e-commerce website project, where cutting-edge technologies converge to create an online shopping experience. Built with HTML and CSS for a sleek and responsive design, powered by Node.js for dynamic server-side functionalities, and supported by MongoDB for robust and scalable Are you ready to elevate your driving experience to unprecedented heights? Look no further than SupercarElite.com – the ultimate destination for those with a passion for precision, power, and pure automotive excellence.

At SupercarElite.com, we redefine the ordinary, curating a virtual showroom that brings together the world's most extraordinary supercars in one seamless online platform. Whether you're in pursuit of adrenaline-pumping speed, cutting-edge design, or uncompromising luxury, our website is designed to cater to the discerning tastes of enthusiasts and collectors alike.

3. Objective of the Project

The objective of the e-commerce website project is to create a dynamic and user-friendly online platform using HTML, CSS, Node.js, and MongoDB. This project aims to provide a seamless shopping experience by implementing secure payment gateways, robust product management, and user authentication features. Additionally, the system will leverage MongoDB for efficient data storage and retrieval, ensuring scalability and responsiveness for an enhanced e-commerce experience.

4. Technologies Used

1. Frontend Development with HTML and CSS:

   HTML (Hypertext Markup Language): The standard markup language for creating the structure of web pages.

   CSS (Cascading Style Sheets): Used for styling and layout to enhance the visual presentation of HTML elements.

2. Backend Development with Node.js:

   Node.js: A JavaScript runtime that allows server-side execution of JavaScript. It is commonly used to build scalable and efficient backend systems for web applications.

3. Database Management with MongoDB:

   MongoDB: A NoSQL database that stores data in JSON-like documents with a flexible, schema-less structure. It's well-suited for handling large volumes of unstructured or semi-structured data, common in e-commerce applications.

4. Express.js for Web Application Framework:

   Express.js: A minimalist and flexible Node.js web application framework. It simplifies the process of building robust and scalable web applications, making it popular for creating the backend of e-commerce sites.

5. Project Scope

1. Platform Overview:

   - Develop a comprehensive e-commerce website using HTML and CSS for frontend presentation, Node.js for backend server logic, and MongoDB for efficient data storage.

   - Implement a user-friendly interface with responsive design, ensuring seamless navigation across various devices, such as desktops, tablets, and smartphones.

2. Core Functionality:

   - Build essential e-commerce features, including product catalog management, user authentication, shopping cart functionality, and secure checkout processes.

   - Implement a robust product management system, allowing administrators to add, edit, and remove products, along with features like product categorization and search functionality.

3. User Authentication and Authorization:

   - Develop a secure user authentication system, allowing customers to create accounts, log in, and manage their profiles.

   - Implement role-based access control to differentiate between customers, administrators, and potentially other user roles, ensuring data security and privacy.

4. Integration with MongoDB:

- Establish a connection to MongoDB for efficient data storage and retrieval, focusing on the organization of product information, user profiles, and transaction history.

- Implement data validation and error handling mechanisms to ensure data integrity and enhance the overall reliability of the system.

6. FRONT-END:

Welcome to our innovative e-commerce website project, where cutting-edge technologies converge to create an online shopping experience. Built with HTML and CSS for a sleek and responsive design, powered by Node.js for dynamic server-side functionalities, and supported by MongoDB for robust and scalable Are you ready to elevate your driving experience to unprecedented heights? Look no further than SupercarElite.com – the ultimate destination for those with a passion for precision, power, and pure automotive excellence.

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BOOK YOUR CAR

Home About Super Cars Featured

Featured Luxury Cars

All

Tesla
Model X

$98,900

Tesla
Model 3

$45,900

Audi
E-tron

$175,900

BOOK YOUR CAR

Home About Super Cars Featured

More Features

BOOK YOUR CAR

Home About Super Cars Featured

Pick Your Best Car

Ferrari 458

RELENTLESS FORCE

7. Dashboard:

This page will be different for the user. Admin Dashboard will have a chance to create some categories and can add products to those categories, as well as admin can delete products and he can change prices.

8. BACK-END:

Models:

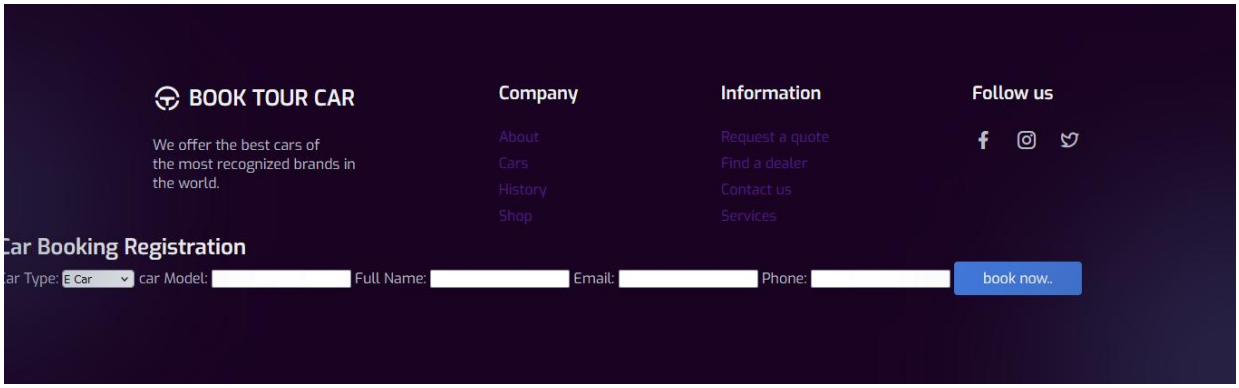
Here we define the structure of the data that should be in the database. By using some models which help to store the data in the database like Mongoose, it is one of the famous libraries in NodeJS. Creating the schemas by Mongoose can mention the names and types of the data.

Routers:

All the work related to the routing of the pages was done here. ExpressJS is a popular library for routing. CURD operations and routing-related code are saved in this folder.

Controllers:

In controllers, the definitions of the functions that are declared in the routing will be stored and the codes of the middleware are stored in this folder. In the controller phase, the function definitions of the function that are declared in the Routers will be done. We are having some middleware also defined here.



Data that is entered by the users will be stored in the database. There are so many databases that are been used nowadays. In this project, we have MongoDB as a database. Using the Mongoose library, we

can connect to MongoDB. There are so many methods in this library to create schema and also to save the data in the database.

9. CONCLUSION

The main theme is to build an e-commerce supercar selling web application with all three i.e., Front end, back end, and database. This web application is a fully pledged working web application right from the login authentication, admin authorization, and adding items to the cart, using a payment gateway. It can be used by any textile industry on either a small scale or a larger scale. The web application is easy for them to access and without any effort, categories can be created and products can be added by them. It will be very attractive for the customer to see the products by sitting at home or office. It will be very helpful for small-scale industries without selling to wholesales, large retail mediators they can directly sell to the customer .

10. REFERENCES

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