**PROJECT REPORT**

**On**

**E-COMMERCE WEBSITE**

**(CSE V Semester Mini project)**

**2021-2022**



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**ACKNOWLEDGMENT**

I wish to thank my parents for their continuing support and encouragement. I also wish to thank them for providing me with the opportunity to reach this far in my studies.

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1. **Introduction**

**Topic: Ecommerce-Website**

[Ecommerce](https://www.strikingly.com/content/blog/click-and-collect-a-guide-for-retail-businesses) or electronic commerce refers to a business model that involves sales transactions being done on the web. Now, a website that allows you to sell and buy tangible goods, digital products or services online is called an ecommerce website.

One of the obvious differences between an ecommerce website and an ordinary business or [company website](https://www.strikingly.com/content/blog/marketing-portfolio-examples/) is in the features that it supports. A company website may just contain information on the brand’s product and services hence the users will need to contact the company directly if they want to do business with them or obtain their products or services. Meanwhile, an ecommerce website works almost like a physical store. Users can purchase items, [arrange for delivery](https://www.strikingly.com/content/blog/fob-shipping-point) and payments on the same site without the need to call a human person to help them with their order.

A typical ecommerce website works like the following:

1. A potential customer navigates to an ecommerce website, whether via search engines, paid advertisements etc.
2. The ecommerce website connects to its database, which contains tons of data about the website’s categories, products, product dimensions and weight, articles and content, images, etc. The website requests this data to dynamically render any requested web pages.
3. After browsing the ecommerce website, a potential customer adds a product or service to their virtual shopping cart and decides to check out.
4. The shopper completes the checkout process and finalizes the transaction.
5. The shopper’s credit card information is encrypted and sent to a Payment Gateway like PayPal to handle the credit card processing securely and remotely.
6. Once the order is complete, and the payment has gone through, the website typically provides an estimated shipping time, a unique transaction number, postal tracking number, etc. Most of these processes are automated and part of a good eCommerce website’s core functionality.
7. As transactions take place, orders are stored in the website admin and sent to an order fulfilment team. Order fulfilment can be done in-house or by a third-party company/drop shipper.

**2.Motivation**

As I was just getting started with learning front-end development, I was enjoying the process of giving websites a completely different and appealing interface. Meanwhile I got curious about what goes on in the construction of a shopping website to make it more welcoming to the customers and how does it work. Therefore I chose this project to get better understanding of the operation of an ecommerce website which also allowed me to learn and explore basic concepts of React.js and Node.js. Now, I can use my lessons in making more web- based applications.

**3.Technology/Tools used**

1.React Router

A very important thing to consider in a React app is the navigation (moving from one page to another) of the users. Since react is a single page application, it doesn’t support multiple routes by default.

But the node packages come to our save. There’s a package named **react-router-dom**which allows us to create routes for our React project. Once we are done with the set up, we just need to inform the router whenever we create a new page.

npm install react-router-dom

2.React-Context API

The React Context API is a way for a React app to effectively produce global variables that can be passed around. It allows react to share state across the entire app (or part of it) lightly with ease.  It helps us to make application level states and we can get the data from those states through any component.

3.Firebase

Firebase comes in handy for **Authentication, Database, Functions and Hosting**

install dependencies named firebase and firebase-tools

npm install -g firebase-tools && npm install firebase && firebase login

When the login button is pressed, the value of the states of textboxes are passed to Firebase to authenticate and if the authentication is successful, it returns a promise or throws an error.

To deploy the product, we need to set up Firebase hosting.

firebase init

npm run build

This will basically ask React to build your app so that you can run this in production.

After the build has completed, type this command to finally deploy the application on the internet!

firebase deploy

Once this is completed, an URL is generated at the end of the process. This is the URL where our app is hosted online.

**4. CONCLUSION**

This mini project is my effort to make an interactive e-commerce website which is appealing to the user.

Through this project I want to improve as a web developer and learn more about the overall functioning and utility of react and JavaScript in web development.