

# ELECTRO WEB-APP (An e-Commerce Web-app)

1) Mr. BASUTKAR VASANT SANJAY, 2) Mr. KODAM NAVIN NAGNATH,  
3) Mr. KOTA RAVIKIRAN AMBADAS, 4) Ms. MANGRULE SHRUTI SHARANAPPA  
Brahmdevdada Mane Institute of Technology, Belati, Solapur.

## ABSTRACT :

In today's fast-changing business environment, it's extremely important to be able to respond to client needs in the most effective and timely manner. If your customers wish to see your business online and have instant access to your products or services. Online Shopping is a lifestyle e-commerce web application, which retails various fashion and lifestyle products (Currently Electronics Shop). This project allows viewing various products available, enables registered users to purchase desired products instantly using the Online Payment & Pay Later Payment Option, and also can place an order by using the Cash on Delivery option. This project provides easy access to Administrators and Managers to view orders placed using Pay Later and Instant Pay options. Customers will be able to place, manage and track orders within the provided dashboard. We are also taking care of the security and privacy of users.

In order to develop an e-commerce website, a number of Technologies must be studied and understood. These include JavaScript implementation technologies such as ReactJs, NodeJs Framework, programming language (such as JS), AWS, and Firebase for Authentication services as well as Stripe Payment Gateway. This is a project with the objective to develop a basic website where a consumer is provided with a shopping cart application and also to know about the technologies used to develop such an application.

This document will discuss each of the underlying technologies to create and implement an eCommerce web app.

**Keywords:** ReactJs, Nodejs, Firebase, AWS, Javascript, MongoDB, Stripe.

## 1. INTRODUCTION :

E-Commerce is the process of doing business online through computer networks. The first goal of an e-commerce site is to sell goods and services online. Online shopping may be a type of electronic shopping store where the customer is directly online to the seller's computer usually via the net. An individual sitting on his chair before a computer can access all the facilities of the net to shop for or sell the products. The online Shopping System helps in buying products, products, and services online by choosing the listed products from the website (ECommerce site).

The go-cart is especially useful for those who haven't time to travel shopping. Go-cart may be an important feature employed in e-commerce to help people make purchases online. The buy and sell process is completed electronically or cash on delivery. Users can log in to the eCommerce website, once he is logged in then automatically one go-cart is going to be created, once the user selects an item it'll increase the cart. Just in case the user thinks the chosen item isn't useful for him, then he can delete that item from the cart. Report generation feature is provided using Crystal Reports to come up with different styles of

reports like bar graphs, pie charts table type charts, etc. The proposed system helps in building an internet site to shop for, sell products or goods online using an internet connection. Unlike traditional commerce that's distributed physically with the effort of an individual to travel and find products, eCommerce has made it easier for humans to scale back physical work and to avoid wasting time.

The fundamental concept of applying is to permit the customer to buy virtually using the net and permit customers to shop for the things and articles of their desire from the shop. E-commerce is fast gaining ground as an accepted and used business paradigm.

## 2. Problem Statement

To develop an E-commerce platform that will provide Electronics Products Online to reach and sell products to their customers easily.

### 2.1 Overall Scenario:

#### 2.1.1 Description:

- ❖ Any member can register and view available products.
- ❖ Only registered members can purchase multiple products regardless of quantity.
- ❖ ContactUs page is available to contact Admin for queries.
- ❖ There are two roles available: Visitor, User.

-Visitors can view available products.  
-Users can view and purchase products.  
-An Admin has some extra privileges Including All.

privileges of visitor and user.

- Admin can add products, edit product information and add/remove products.
- Admin can add users, edit user information, and can remove users.
- Admin can ship orders to the user based on orders placed by sending confirmation mail & SMS.

## 3. TECHNOLOGY & LANGUAGE USED

In our project we are going to work on React Js Technology by using Firebase & AWS along with the Node Js Framework & Stripe Payment Gateway.

### 3.1 React Js:

React is a JavaScript-based UI development library. Facebook and an open-source developer community run it. Although React is a library rather than a language, it is widely used in web development. The library first appeared in May 2013 and is now one of the most commonly used frontend libraries for web development. React offers various extensions for entire application architectural support, such as beyond more UI.

### 3.2 Node Js :

#### Introduction :

*Node.js* is an open-source, cross-platform runtime environment that allows developers to create all kinds of server-side tools and

applications in JavaScript. The runtime is intended for use outside of a browser context (i.e. running directly on a computer or server OS). As such, the environment omits browser-specific JavaScript APIs and adds support for more traditional OS APIs including HTTP and file system libraries.

### 3.3 AWS:

Amazon Web Services or AWS is the cloud infrastructure and web services division of Amazon.com, the biggest retail player in the world. It is designed to bring immense benefits to organizations. Some organizations, in their excitement to benefit from Amazon, move their applications to AWS without even considering or adopting the lift and shift approach.

#### Why use AWS?

The flexibility and power of AWS enable businesses that are technology-based to reach the marketplaces with a limited initial investment. It also allows them to use a subscription model to scale their IT infrastructure. But, the advantages that the software offers extend to small, medium, and large companies, and some of these are shared below

### 3.4 Firebase:

Firebase is a product of Google which helps developers to build, manage, and grow their apps easily. It helps developers to build their apps faster and in a more secure way. No programming is required on the firebase side which makes it easy to use its features more

efficiently. It provides services to android, ios, web, and unity. It provides cloud storage. It uses NoSQL for the database for the storage of data

In the era of rapid prototyping, we can get bright ideas, but sometimes they are not applicable if they take too much work. Often, the back-end is the limiting factor - many considerations never apply to server-side coding due to lack of knowledge or time.

We are using firebase for user authentication using Google and Facebook Login.

#### Why use Firebase?

- Firebase manages real-time data in the database. So, it easily and quickly exchanges the data to and from the database. Hence, for developing mobile apps such as live streaming, chat messaging, etc., we can use Firebase.
- Firebase allows syncing real-time data across all devices - iOS, Android, and Web - without refreshing the screen.
- Firebase provides integration to Google Advertising, AdMob, Data Studio, BigQuery DoubleClick, Play Store, and Slack to develop our apps with efficient and accurate management and maintenance.
- Everything from databases, analytics to crash reports is included in Firebase. So, the app development team can stay focused on improving the user experience.
- Firebase applications can be deployed over a secured connection to the

firebase server.

- Firebase offers a simple control dashboard.

### 3.5 Stripe:

#### Stripe Payment Gateway:

These days, starting an online business is a pretty straightforward proposition. There are countless tools and platforms that can help you set up a storefront, track orders, and collect payments.

In 2010, however, things were much different. Setting up an e-commerce store or other internet business meant a lot of hard work building websites and figuring out how to make legacy payment processors work with a brand-new type of commerce. This was the marketplace that Stripe Payments was born into.

#### What is Stripe Payments?

Stripe was founded in 2010 with the mission of making it easier to accept payments over the internet. At the time, taking credit cards meant working with a legacy processor or a middleman broker who would provide you with access to a processor.

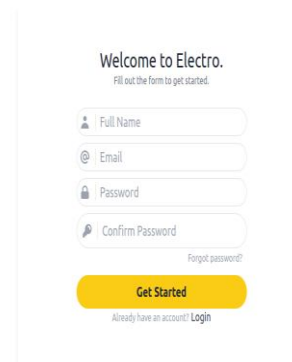
Then there were the banks you had to deal with, the credit card companies themselves, and a slew of additional services that were often poorly explained and sold by various third parties. Long story short, accepting

credit cards was an incredibly complicated and poorly explained process.

Stripe set out to fix a lot of that by streamlining the process. They added services and features like fraud protection, fixed rates regardless of network, and an application programming interface (API) that allowed app makers to easily incorporate card processing into their apps.

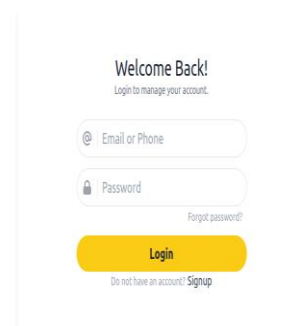
## 4. Results/Outputs :

### 4.1 SignUp Page :



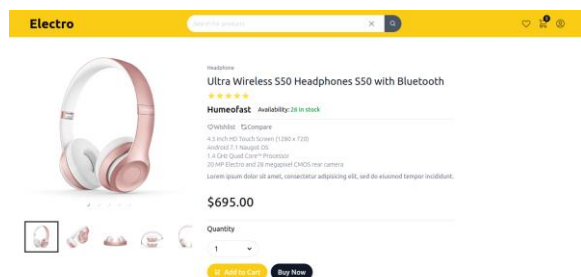
The screenshot shows a web form titled "Welcome to Electro." with the instruction "Fill out the form to get started." Below the title are four input fields: "Full Name" (with a person icon), "Email" (with an @ icon), "Password" (with a lock icon), and "Confirm Password" (with a checkmark icon). A "Forgot password?" link is located below the "Confirm Password" field. At the bottom of the form is a yellow "Get Started" button. Below the button is a link that says "Already have an account? Login".

### 4.1 Login Page :

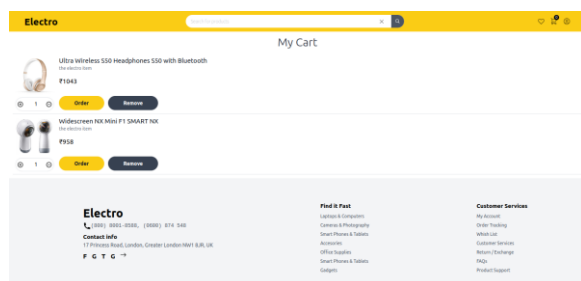


The screenshot shows a web form titled "Welcome Back!" with the instruction "Login to manage your account." Below the title are two input fields: "Email or Phone" (with an @ icon) and "Password" (with a lock icon). A "Forgot password?" link is located below the "Password" field. At the bottom of the form is a yellow "Login" button. Below the button is a link that says "Do not have an account? Signup".

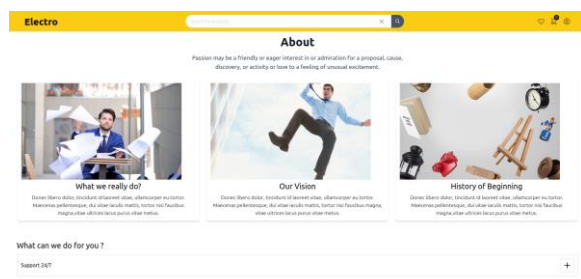
### 4.3 Product Page :



### 4.4 Add To Cart Page :



### 4.5 About Page :



## 5. Conclusions :

E-Commerce is not an IT issue but a whole business undertaking. Companies that use it as a reason for completely re-designing their business processes are likely to reap the greatest benefits. Moreover, E-Commerce is a helpful technology that gives the consumer access to businesses and companies all over the world.

The internet has opened so many

opportunities for doing business online, and e-commerce is one of the most popular ones. Not only does it require low investment, it actually is a type of business that does not require a full-time commitment, especially if you are selling a limited number of products. You just make an online presence and promote the business here and there using both free and paid methods. However, as each business, it has its positive and negative sides. If you want to achieve success, you will have to create an organized strategy that is based on realistic goals and comprehensive analysis of the market.

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