

# Quick Mart E-Commerce Website

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**ABSTRACT-** Today's generation as a whole uses technology to manage their lives and take care of their fundamental needs. Nowadays, the majority of us purchase for clothes, food, and electronics through e-commerce websites. Using the MERN stack technology, which includes React.JS, the Express.JS framework, MongoDB, and the Node.JS environment, we have created one e-commerce web application.

This software is completely functional, has many views for users and administrators, and is connected to a payment gateway for checkout. Via this website, we may buy a variety of t-shirt types and styles depending on our tastes. We have the flexibility to add and remove different items from this project. We have created administrative features for the website, including the ability to add items and categories as well as an admin dashboard and manage both products and categories. Customers may rapidly add their things to the cart by doing so. The bill is generated based on the goods in the basket, and the consumer may pay using stripe.

## 1. INTRODUCTION

E-commerce, which is typically a distinct sort of business on the internet is a business strategy, or a broader business model, that makes it possible for us or for others to interact via an electronic network-commerce fosters new connections through network and website activity. Customer actions in E-Commerce come in many different varieties.

These contacts range from different B2B (business to business), C2C (consumer to consumer), and C2B (consumer to business) exchanges (Consumer-to-Business). Electronic Data Interchange[1], often known as EDI, has been used for electronic transactions for a while.

Electronic data interchange, or EDI, is the computer-to-computer transmission of commercial records in a standard electronic format.

## 2. DEFINATION

Any business that involves the transmission of information via the Internet is referred to as "electronic commerce" or "E-Commerce." Through E-Commerce, users can Without regard to location or time constraints, products and services are electronically exchanged. E-commerce is the practise of conducting business using electronics and digital computing to create, assess, and alter connections between or among enterprises as well as between those organisations and customers.

## 3. TECHNOLOGY USED

With MongoDB, Express, React, and Node, MERN is complete. Our mission is carried out with the aid of these four primary technologies that make up our stack. One of the most popular web stacks is MERN. It is simple to use and can also be used with React Native for mobile programming.

The main change in the MERN stack is that we utilise MongoDB, React, Express, and Node.js instead of Angular. An open-source JavaScript library is React.js. JSX and JavaScript are used (Javascript XML). Better productivity is available. Better documentation is provided. The mobile application is supported.

All developers have a favourite development stack that includes React.js. A JavaScript framework called React.js is used to build dynamic client-side apps[2]. React.js enables us to construct any sophisticated application out of basic components. We link them to information stored on our backend server.

Back-end apps website data is kept in JSON format in MongoDB. NodeJS's ExpressJS framework. Running on top of Node.js is the back-end application Express.js. The user interface components of single-page web apps may be built more quickly using a library called ReactJS. NodeJS offers the JavaScript runtime environment for the back-end web application. Executing code outside of a browser could be advantageous.

## 4. WEB APPLICATION STRUCTURE

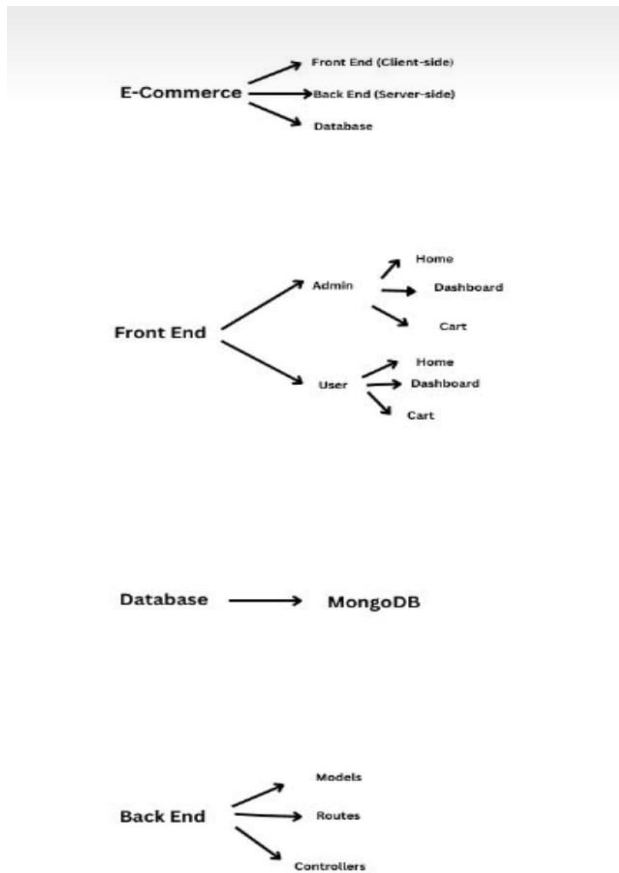


Fig: 01

### A. Front-End:

#### 1) Home Page:

The web application's home page mostly includes a list of the t-shirts that have been saved in the database. Also, if the user hasn't signed in or logged in yet, the options "Sign in" and "Sign up" will appear in the menu bar. For instance, this homepage offers many types of T-shirts such as Puppy T-shirt, Coffee T-shirt, and Friend T-shirt, all of which are offered to buyers. We can simply add a large selection of T-shirts if we wish to add another variety, and we can set different pricing for them based on their quality.

#### 2) Log in and register:

These two options take users to a page with a form they can fill out to either create or sign in to an account.

#### 3) Cart:

Users can view their merchandise on this page after picking any item, and the payment will then be processed.

The cart includes Stripe Payment, a third-party application that enables users to complete payments using certain debit cards, credit cards, and UPIs.

#### 4) Dashboard:

The user's version of this page will differ. The admin dashboard will provide him the opportunity to make new categories, add products to them[3], remove products from categories, and alter prices.

### Database:

Users data will be entered and kept in the database. These days, a huge number of databases are employed. This project entails as a database, MongoDB. Connecting to MongoDB is possible by using the mongoose library. This library has a wide variety of techniques for both creating schema and storing data in databases.

### Back-End:

#### 1) Models:

Here, we specify the data structure that belongs in the database. With the aid of some models, such as Mongoose, one of the well-known NodeJS modules, data can be stored in a database. The names and types of the data can be mentioned while creating the schemas with Mongoose.

#### 2) Routers:

This is where all of the page routing work was completed. This folder contains the code for CRUD operations and routing-related ExpressJS activities.

#### 3) Controllers:

The definitions of the functions that are declared in the routing will be saved in controllers, along with the middleware's source codes. The function definitions for the functions declared in the routers will be completed in the controller phase. We have middleware defined here as well.

## 5. SCOPE OF THE E-COMMERCE:

According to consumer demand, the E-Commerce industry is growing in popularity every day. The future expansion of E-Commerce in India will also be significantly influenced by the e-tailing sector, which mostly engages in the online sale of jewellery, clothing, and cooking equipment. websites like Myntra, Amazon, Flipkart, and Snapdeal,

Jabbing, and many others are proof of how well e-commerce has done in India. As the E-Commerce market saw a spectacular rise of 70% in 2016, India was its centre. The number of consumers is anticipated to reach 100 million in 2017[4], which guarantees that any e-commerce firm will quickly become the top business in India in terms of earnings and growth.

## 6. EDI (ELECTRONIC DATA INTERCHANGE)

The communication of business papers from one company to another using computers is known as electronic data interchange (EDI). EDI takes the place of mailing and faxing hardcopy documents.

EDI papers employ certain computer record formats that are based on generally accepted standards. Nevertheless, the standards' flexibility will be utilized differently by every organization to their business requirements.

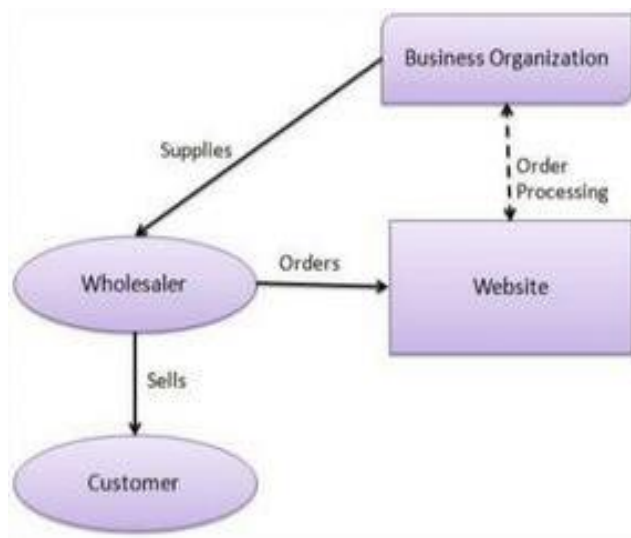


Fig :02

In EDI, we submit applications that have been transformed into Standard EDI format, which is then sent through a VAN, stored, and sent again in EDI format to convert the message for the recipient. A value-added community (VAN) is a personal network company (sometimes referred to as a turnkey communications line) that is employed with the aid of a business enterprise to facilitate electronic facts interchange (EDI) or furnish different community services.

## 7. TYPES OF E-COMMERCE

### 1:BUSINESS TO BUSINESS:

B2B commerce is the term used to describe business transactions that happen between two organisations over an electronic medium. According to this concept, the buyer and the vendor are each unique entities.

It is comparable to a producer supplying a shop or wholesaler with products. When a business transaction takes region between a commercial enterprise.



Fig:03

### 2: CONSUMER TO CONSUMER:

A C2C transaction is one in which a business transaction is conducted electronically between two consumers. Online marketplaces with free classified ads, auctions, and forums are available on numerous websites. Since 1995, there have been daily transactions between people using eBay's auction service.

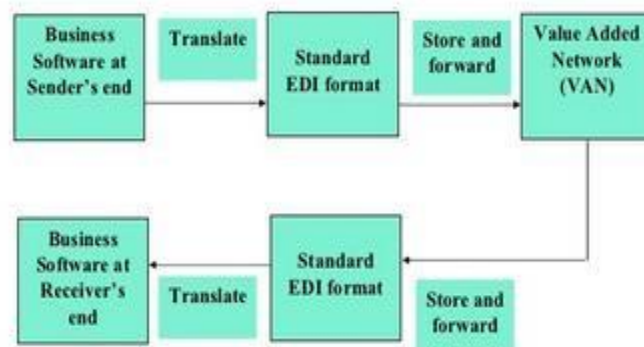


Fig:04

### 3: CONSUMER TO BUSINESS:

C2B transactions are those that happen when a business deal is done between a consumer and a business over an electronic platform[5]. Consider: E-banking.

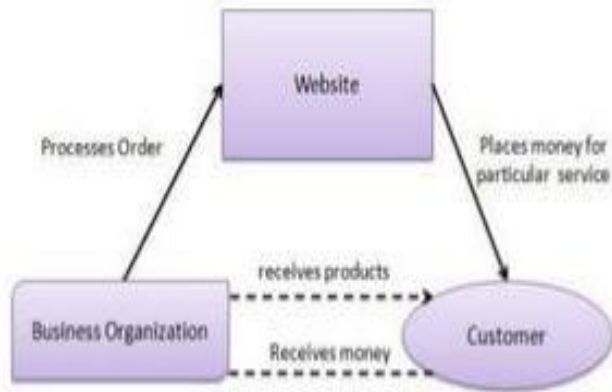


Fig:05

## 8. USES OF E-COMMERCE

- By letting you interact with other businesses, e-commerce can enhance your company's information flows and business operations.
- You can manage your daily financial transactions from home by connecting to the bank's computer system using your computer and the internet. Bank buildings and staff are reduced. Some customers can use this option to pay their invoices directly from their bank accounts.
- Using the internet has made it quite simple for consumers to shop from home. On the internet, various producers display their products. The website allows users to explore, order, and even pay with a different card. It has greatly facilitated shopping.
- E-commerce is a crucial component of global product marketing and advertising. Utilizing well-known websites can be a successful strategy for getting buyers to learn about a product.
- Using the internet, businesspeople may communicate with their clients. They can talk about a variety of problems relating to their goods. Additionally, they can address their grievances and provide them with a variety of services.

## 9. BENEFITS OF E-COMMERCE

- A faster buying/selling procedure, as well as products that are easily accessible.
- Greater client reach since there are no practical geographic restrictions.

- Better service quality and lower operating expenses.
- No requirement for physical business setups.

## 10. CONS OF E-COMMERCE

- Anyone can launch a business, regardless of their character. And there are lots of scam websites that squander customers' money.
- Product quality is not guaranteed.
- The implications of mechanical faults on the entire operation can be unexpected.
- Customer loyalty is always a concern because there is little opportunity of direct customer-company contact.
- Delivery of perishable items purchased online has the potential to ruin them.

## 11. CHALLENGES OF E-COMMERCE

- E-commerce has a number of problems, including privacy and security. Websites and external watchdogs do not provide any protection against the risks brought on by the exploitation of one's privacy.
- Another reason why e-Commerce in India is developing more slowly than in other industrialised countries like the USA and UK is the tax rate structure of the Indian market.
- Consumers are drawn physically to purchasing any things. Before purchasing, they examine and touch the goods first. they present a greater challenge to businesses.
- Every kind of logistical error may harm a startup's prospects and the reputation of the entire business. Also, include a return policy with guarantees. It's difficult to do this correctly.
- The business will get in touch with us if we make an online transaction to ask for our details. The address is not sufficient. The printed addresses have been somewhat standardised as a result of this.

## 12. CONCLUDING REMARK

By 2025, it is predicted that India's e-commerce market will have increased from an annual \$10 billion to between \$70 and 260 billion.

Although e-commerce is frequently used on travel websites, there are obstacles for businesses that operate in this sector.

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