

E-Commerce Web Application Using MERN Stack

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ABSTRACT

In today's generation, most of us using E-commerce web applications for shopping for clothes, groceries and electronics. In this generation most of the people are using technology for leading their lives and fulfilling their daily needs. We have developed one E-commerce web application by using MERN stack technology as it contains MongoDB, ExpressJS framework, ReactJS library, NodeJS platform. This application is fully functional with different user and admin views, as well as intergraded with payment gateway for checkout. Buyers search for the required product in the application which builds by the seller. We have developed administrative functions for the website such as create a product, create categories, admin categories for customers, they can quickly add their items to the cart. As indicated by the quick changing of business climate these days, we must be more compelling and quick in answering clients' necessities to make them ready to in a flash admittance to our items.

Keyword : - JavaScript, Library, Frameworks, ReactJS, MongoDB, NodeJS, ExpressJS

I. INTRODUCTION:-

We as a whole realize that innovation has turned into a fundamental instrument for internet advertising nowadays assuming we see all around the world the majority of individuals are showing interest to buy things in online. However we can see that there are many small shops and grocery store are selling their things offline.

e-commerce is the process of doing business online through computer network. The first goal of an e-commerce site is to sell goods & service online. Web based shopping might be a kind of electronic shopping store where the client is straightforwardly online to the merchant's PC as a rule through the net.

An individual sitting on his chair before of a computer can access all the facilities of the net to shop for or sell the product online shopping system helps in buying of product and services online by choosing the listed product from website (E-commerce site) that is called b2c (business to consumer) Electronic commerce uses technologies such as mobile commerce, electronic fund transfer, internet marketing, supply chain management system, automated data collection system.

An online store is a virtual market place on the internet where clients can browse the catalog of various product and services and select products of interest. The E-commerce enterprises build their own logistics supply chain system through the B2B2C mode and provide a unified service.

The platform helps merchants directly act as a seller, pushing the business directly to consumer and shortening the sales chain the internet business area in India is filling quickly in India. the web clients base in India may in one care be simple 400million, which is significantly less when contrasted with created countries of the world, yet it is extending step by step the accelerating growth of E-commerce in India is due to internet penetration and easily available smart phones retail sector is one of the largest growing sector in India as of now, as most would consider to be normal to develop in future with a rising rate. In developing countries local business sector has been major source of employment and it has major contribution in economy of country also.

We are going to make full stack application for his business where he can sell their product online mode. Web application is a structure where people all over the world can access these. It is easy and conventional to using the function of it.

With the help of web application the user can buy anything or anywhere according to there's need. Today's developer's around the world are making efforts to enhance user experience of application .technology is growing incredibly ford. The MERN Stack (MongoDB, Express.JS, React.JS & Node.JS) with the simplicity and uniformly has been recently developed to become a better solution for the performance, issue.

The web has evolved into a global environment for delivering all kinds of application ranging from small scale and short lived services to large scale.

II. II.LITERATURE SURVEY:-

1. Syed Emdad Ullah.,(2016) in this paper creator remarks about E-commerce growth people in developed world and a growing number of people now use E-commerce website on a daily basis to make their every purchase easily.
2. Sebastian molinillo., (2018) the author studies have focused on traditional E- commerce site with their own integrated social tools. This study contributes to consumer behavior theory by applying predictors of intention to improve their use of social tools this paper review on consumer behavior and social commerce intention.
3. Vinitha stephie.v.,(2017) this work is about the design of web portal for the trading how to design the user interface and implement in easy way and have security also the papergives framework model and having great quality assurance to client.
4. Anam Bhatti., (2020)this paper review about the E-commerce application situation during covid-19pandemic this article determined thee-commerce trends in covid-19 as well as how E-commerce progress that might affect consumer. This E-commerce sites grow due to corona virus because in Covid-19thepeople all around the world is loc-in home due to this it is hard to get needs of the people offline.
5. March (2012) By Asha mandava, in this paper we review technologies useful for design and development of web based application we also discuss about technologies that are used at the client side and server side of web application.

6. April (2022) By ss.wankhede and may or Isampuliwar, The purpose of this paper was to study the usability and functionality of each technology in the MERN stack the paper presented the development process of the application.

III. METHODOLOGY:-

- i. For creating this web application we are using MERN Technology i.e., (MongoDB, Express.JS, React.JS and Node.JS) which is easy to use and accessible frontend is assigned by React JS,HTML, and CSS and for Backend we used Node JS, Express JS which gives and provides various libraries. MongoDB is used as Data based windows 7/10/11, Linux used for operating system which there RAM is 4GB and deployment platform for misheroko and tools we used is Git, GitHub and VS code.
- ii. To access these website firstly we have to register ourselves or sign in to the account after completion of registration you can login to account
- iii. After Registration as a user. User can buy the products according to their wish list and add to cart (for example like – myntra, flip kart, Amazon)
- iv. On the other hand if the user is admin then they access they whole website where they have to manage products, user interface, and checking status if the user getting difficulties online websites is define as the process of buying and selling of product and services over the internet to shop or search for product.
- v. In their website there is dashboard where the user can see products, types and etc.
- vi. The website secures the security of peoples through authentication and APIs.
- vii. Internet is the world largest networks with high technology and grater controls, every day the standard of the internet is improving online shopping can relate to any offering of service quality, product quality or E-business quality where the objective is the customer based value creation for organization. Through this website the user gets affordable price and quality of the product offered by the companies.
- viii. The main factor of the website is consumer can access site 24hours for information, customer service and purchase opportunity to browse products and purchase at the consumer own leisure for shop the product the consumer need convenience to doing online website save time because you can purchase product or services after, a few more click on your computer, laptop, tablet or Smartphone. It also saves energy.
- ix. It also offers various deal to the product through their website the people can pay as per there convenience like COD(cash on delivery), through UPI, credit card, etc. which is safe and secure they also track their product to see they reach.

IV. MERN Stack Architecture:-

In MERN Stack architecture there is three main components which are React, Node or MongoDB.

React is a free and open source front end Java Script library for building user interface based on UI components . there components are engage to each other like services or Router, React Request to Node is easily employed as a server side proxy where it if can handle a large amount of simultaneous connections in non blocking manner it especially useful for proxying different services with different responses time or collecting data from multiple source points .

The reusability of the code empowers sharing inside React Js. React acts as router, controller and mongoose which is a database, mongoose is an Object Data Modeling (ODM) library for MongoDB and Node Js.

It manages relationship between data, provides scheme validation, and is used to translate between objects in code and the representation of these objects in MongoDB. Object mapping between Node and MongoDB managed Via mongoose.

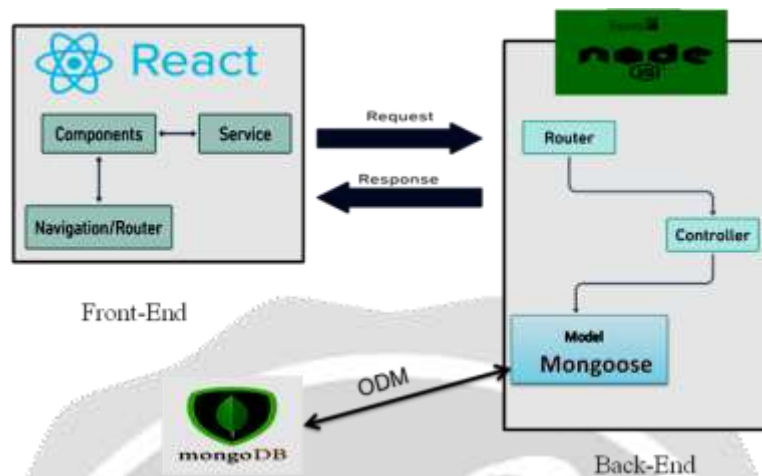


Figure 1. MERN Stack Architecture.

V. CONCLUSIONS:-

The main them is to build an E-commerce web application with all three i.e., Front end, back end, and Database. This web application is fully pledged working web application right from the login authentication, admin authorization, add items to cart, using payment gateway. The web application process easy for them customer and producer. It will be very attractive for the customer to see the products by sitting at home. A person's decision for buying Product is influence by friends, business partners rather than strangers. Web based business support the connection between the clients and organizations, for example, E-mail. With the MERN Stack you can ideally build any web application you want by learning just one language, JavaScript. With increased popularity of NoSQL databases, MongoDB is ago to database because of its scalability and flexible document schemas.

VI. REFERENCES:-

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