AN OVERVIEW OF MULTI-VENDOR E-COMMERCE WEBSITE

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Abstract: **E-commerce could be a boom within the modern business, E-commerce means electronic commerce. E commerce involves buying and selling of products and services, or the transmitting of funds or data, over a system, predominantly the net, E-commerce could be a paradigm shift influencing both marketers and also customers. Rather, e- more particularly start-ups are increasingly using this selection as a differentiating business model. Moreover, E-Commerce has significant influences on the commerce is quite just different to spice up the prevailing business practices. It's leading to a whole change in the traditional way of doing business. This significant environment. Although the model is very employed in the current business scenario the choice has not been explored to its fullest. The present research and analyses had been undertaken to explain the condition of E-Commerce websites, and analyse the trends of E-Commerce.**

Index terms: **HTML, CSS, JAVASCRIPT, MERN STACK, Mongo DB, Express JS, React JS, Node JS**

1. INTRODUCTION

E-commerce is the process of conducting business online through computer networks. The main purpose of an e-commerce site is to sell goods and services online. Online shopping can be a type of electronic shopping store where the customer is directly on the seller's computer, often over the network. An individual sitting in his chair in front of a computer can access all the conveniences of the network to buy or sell products. Online shopping system helps to buy goods, products and services online by selecting the products listed on the website (e-commerce site). Karts are especially useful for those who do not have time to go shopping. Go-cart can be an important feature used in e-commerce to help people shop online. The buying and selling process is completed electronically or cash on delivery. Users can log in to the e-commerce website, after logging in, the go-cart will automatically be generated, when the user selects the item, the cart will be increased. Just in case the user thinks the selected item is not useful for them, they can remove the item from the cart. Reporting feature is provided by using Crystal Reports to create different report types like bar chart, pie chart and tabular chart etc. The proposed system helps to create a website to buy and sell products or goods online using an internet connection. Unlike traditional commerce that is distributed physically with an individual's effort to travel and search for products, e-commerce has made it easy for people to reduce manual labour and avoid wasting time. time. The basic concept of the app is to allow customers to make physical purchases using the network and to allow customers to purchase the things and items they choose from the store. E-commerce is rapidly gaining traction as an accepted and used business model.

2. SYSTEM DESIGN OF E-COMMERCE WEBSITE:

E-commerce web design is a modular, format-coding approach in HTML, CSS3 and JavaScript for the design, appearance and information of a system that meets simple needs. Coding (HTML CSS3, JavaScript)

- System Module Description:
  - Seller
  - Customer
  - Management
  - Shipping

Coding

Ecommerce websites are created using scripting languages like HTML CSS3, JavaScript, and Bootstrap. This markup language makes the website more attractive, useful and user-friendly to use and purchase. Markup languages help make things more engaging and imaginative.

E-Commerce Workflow Diagram
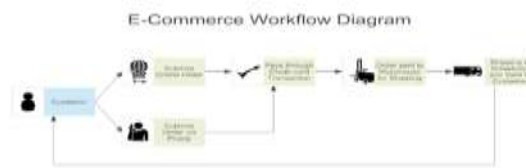
HTML

HTML is a hypertext markup language. Here is an emerging technology, Cascading Style Sheets, which can eliminate much of the HTML table that can be used to control the layout of a web page. A web designer can separate the header, body, and sidebar sections of a web page by placing each section in a separate cell. Alternatively, the network designer can put each link button on the header and sidebar in a separate cell so that he can set unique attributes for each button. Then, in the body of the page, the network designer can separate the text and graphic elements into different cells to adjust spacing and other properties individually.

CSS3

CSS can be a formatting language to which you want to add style to your page. This can be done by having the associated CSS document in your html page. The page then has selectors and attributes that affect the tags inside your html document. CSS was introduced in 1996. It was created to prevent people from having to repeat a lot of code.

JavaScript

JavaScript is a powerful client-side scripting language. JavaScript is mainly used to enhance user interaction with the website. In other words, you can make your web content more relatable and interactive with the help of JavaScript. JavaScript is increasingly widely used in game development and mobile application development.

MERN Stack consists of four main components or can say four main technologies:

1. M represents Mongo DB (Database), primarily utilized for planning record data set and is a No SQL (Non-Structured Query Language) Database System

2. E represents express, primarily utilized for creating Node.js web system

3. R represents React, primarily utilized for fostering a customer side JavaScript system

4. N represents js, primarily utilized for fostering the   chief JavaScript
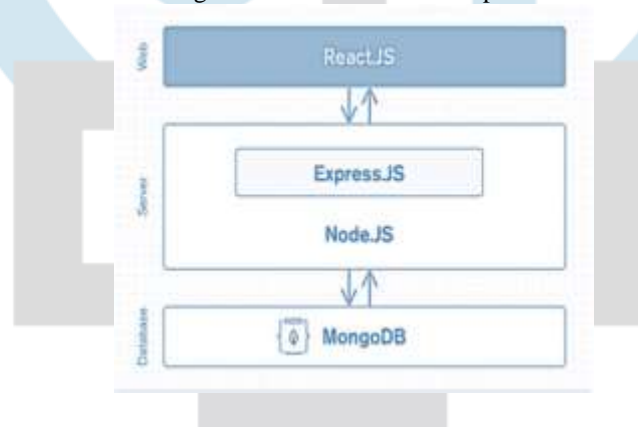
1. MONGO DB: We utilized Report Situated Data set for example MongoDB for our venture MongoDB is an information base where each record is an archive design. In the background on the server, MongoDB changes over our JSON information into a paired adaptation of it which is fundamentally put away and questioned all the more proficiently. MongoDB utilizes BSON to inquiry information base. MongoDB stores BSON design both inside, and over the organization, yet that implies we can't consider MongoDB a JSON information base. we can address any information in JSON design which can be locally put away in MongoDB, and recovered straightforwardly in JSON design. As we contemplated and executed MongoDB, we can say that it is adaptable and permits its clients to make construction, information bases, tables, and so on Subsequent to introducing MongoDB we had a choice, of utilizing Mongo shell as it gives us a JavaScript interface through which the clients can collaborate and complete any activities identifying with questioning. MongoDB is a record-arranged information base, so it is not difficult to list reports. Also, that is the explanation it handles reactions at a quicker pace. MongoDB is Adaptable In the MongoDB data set, we dealt with huge information by isolating it into a settled archived structure. MongoDB is an information base server that permits us to run different data sets on it. As innovation creates and the requirement for quick and enormous information trade emerges, a kind of NoSQL or unstructured data set arises. SQL and social information bases have table structures, while NoSQL has a configuration of document-oriented stores. Reconciliation issues came as difficult when the two distinct data sets were utilized on similar programming. Perhaps the most recent innovation in the information base field is No SQL (Not just Organized Inquiry Language).

2. EXPRESS JS: We utilized Express as it is a Node.js system. While building the application we concentrated on that as opposed to making heaps of hub modules and composing the code with Hub JS, Express simplified it and simpler to compose the back-end code and carry out it in an organized arrangement. Express aided us in planning our web applications and APIs needed in our venture as it upholds numerous middleware which makes the code more limited and more straightforward to compose. Nonconcurrent programming and Single-strung design are the greatest benefits of utilizing Express in our application. For our application hearty Programming interface Made another organizer to begin our express undertaking and the means for it are, we needed to add an order in the order brief to introduce the bundle. json record. From that point forward, we needed to acknowledge the default settings and proceed. Npm init is the order to begin.

3. REACT JS: React JS is an open-source, front-end JavaScript library to foster UI parts. It delivers quicker due to the virtual DOM, henceforth reloading can be made quicker. Some continuous items use React Js like Facebook, Netflix. React utilizes virtual DOM that concludes whether or not the part must be reloaded dependent on the present status of the part and the progressions that have happened. This keeps the application from re-delivering pointlessly. Aside from this Respond likewise presents one way information stream which assists with controlling the progression of the information inside the application which makes the following of the happened simpler and furthermore improves on the spread and the dependability. React.JS utilizes Parts. Parts are the structure squares of UI wherein every part had a rationale identified with our web-based business application and it added to the general UI of our web application. Parts can be reused, and it helped our code for web applications more straightforwardly to be perceived by different designers and generally speaking web applications better at execution. There is an explanation React is known as the best library for building UIs. How it approaches building UIs is extraordinary yet congenial. React.js breaks UIs into free, reusable pieces, and disconnected parts. This is the way you characterize a part, 'Welcome,' in ES6. Also, you don't need to record each part while building applications in Respond. There are numerous part libraries accessible in the Respond environment: React Material-UI, Respond Bootstrap, and Respond Beauty are a couple of models.

4. Node.JS: This section contains a brief technical overview of the Node.js platform Node.js is an open-source, cross-stage, back-end JavaScript runtime climate that sudden spikes in demand for the V8 motor and executes JavaScript code outside an internet browser. Node.js allows designers to utilize JavaScript to compose order line devices and for server-side prearranging—running contents server-side to deliver dynamic site page content before the page is shipped off the client's internet browser. Thusly, Node.js addresses a "JavaScript all over" paradigm,[6] bringing together web-application advancement around a solitary programming language, rather than various dialects for server-side and customer side contents

3.   IMPLEMENTATION OF ECCOMERCE WEBSITE
•   **CUSTOMER SECTION**

Fig: HOME PAGE

This is our home page on above right side of the page we see six buttons as 1. home 2. About 3.login 4. Products 5. Contact Us 6. search
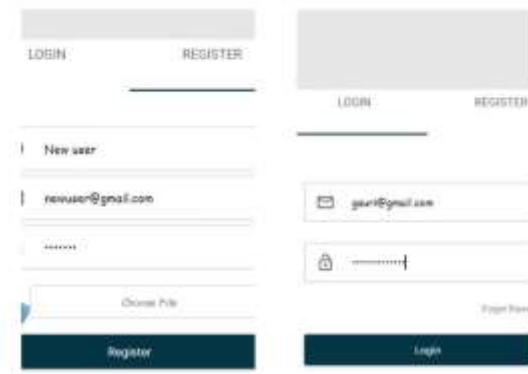
Fig. LOGIN/REGISTER PAGE

In this page we see two buttons 1. Login 2. Register

If new user come to our website this new user want to create an account. We can also create new password if we forgot by clicking on forgte password option. After Click on the log in we land to account page:
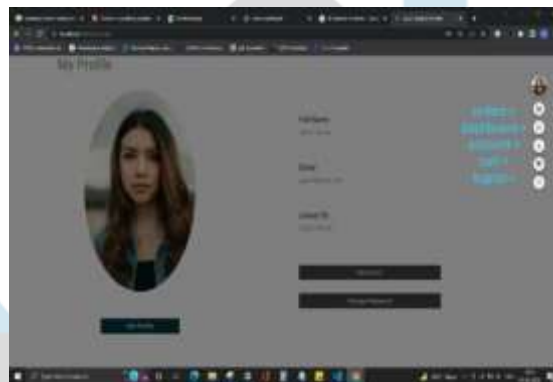

Fig. ACCOUNT PAGE

On this page, we can see the profile. If we want any changes in our profile we click on the edit profile button. Then we go back and click the on the product page
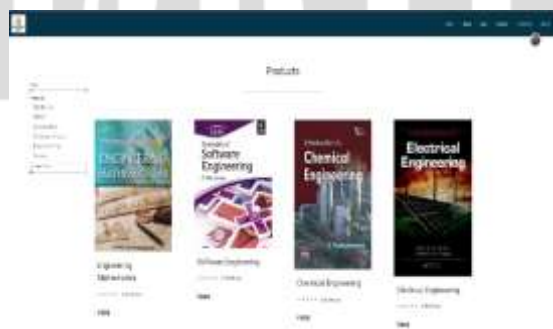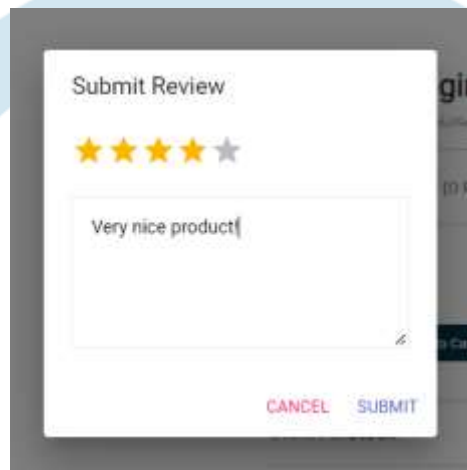

Fig. PRODUCT PAGE

In this page we can see all products. Wr can filter those products based on categories, price and ratings. Then we click on product:

Fig. PRODUCT DETAILS

We can also give ratings and add reviews.

We can see selected product details. On adding Add to cart option , we can go to cart option.

Fig. CART

In this page we can see our all selected products to purchase and its gross total. After that we click on check out button

Fig. SHIPPING DETAILS

In this page, we see shipping details. Now click on continue:

Fig. CONFIRM ORDER PAGE

In this page we confirm product and click on proceed to payment option:

Fig. PAYMENT PAGE

In this page we fill our card info and click on pay:

Fig. MY ORDER PAGE

After payment we see our all orders in this page.

- **SELLER SECTION**

Fig. DASHBOARD

In this page we can find 4 menus on left side i.e. dashboard, product, create product, orders and reviews we see all products order by customers.

Now click on products:

Fig. PRODUCT LIST PAGE

In this page we see all products list created by logged in user. He/She can delete or update the product.

Fig. SELLER ORDERS

In this page we see all order its status, Item Qty, Amount and Actions, we can process the order respectively, now we click on edit:

Fig. ORDER PROCESS PAGE

In this page we see shipping info and we can change order status.

- **ADMIN SECTION**

Fig. ADMIN DASHBOARD

This is admin dashboard. On clicking on Products menu on left,

Fig. ADMIN PRODUCTS LIST

Admin can see all thie products uploaded by every user.

Now clicking on orders option,

Fig. ADMIN ORDERS LIST

Admin can see order details of all the users.

Now clicking on users menu,

Fig. ADMIN USERS LIST

Admin can see all the users registered in the website.

Fig. UPDATE USERS

Admin can search reviews of particular product by id.

Fig. SEARCH REVIEW   Fig. FEEDBACK

Lastly we see the feedbacks given by the website users.

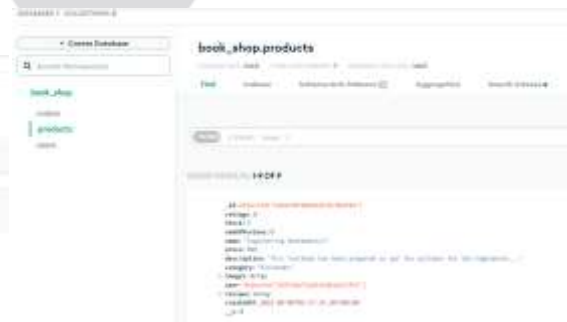- **DATABASE SECTION**

Fig.USER DATABASE

Fig. PRODUCT DATABASE

Fig. ORDER DATABASE

4.   CONCLUSION

The overview presented in the analysis asserts that MERN stack can be used efficiently to build an E-commerce website.The main theme was to build an e-commerce web site with all three i.e., Front end, back end, and database. This web site is a fully pledged working web site right from the login authentication, admin authorization, add items to cart, using payment gateway .The web site is easy for them to access and without much effort categories can be created and products can be added by them. Idea behind this project is to buy and sell second hand books (at college level).

REFERENCES:

[1] Masiello Eric, author. Mastering React Native. January 11; 2017. Accessed 1 Jan 2022

[2] Naimul Islam Naim, ReactJS: An Open-Source JavaScript library for front-end development, Metropolia University of Applied Sciences, accessed on 1 Jan 2022

[3] Stefanov Stoyan, editor. React: Up and Running: Building web Applications. First Edition; 2016. Accessed 1 Jan 2022

[4] Horton Adam. Vice Ryan, author. Mastering React; February 23; 2016. Accessed 1 Jan 2022

[5]]https://alexkondov.com/express-architecture-review

[6] https://expressjs.com

[7] https://www.techmagic.co/blog/node-js-vs-python-what-to-choose

[8] https://nodejs.dev/learn

[9] http://vschart.com

[10] http://en.wikipedia.org/wiki/MongoDB

[11] International Journal of Engineering Research & Technology Published by: www.ijert.org vol. 10 Issue 06, June-2021. Performance Optimization using MERN stack on Web Application.

[12] Lakshmi Prasanna Chitra, Ravikanth Satapathy Department of Computer Science Department of Computer Science GITAM University Visakhapatnam, India. Performance Comparison and Evaluation of Node.Js and Traditional Web Server (IIS)