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Ezycart: Multivendor E-Commerce Website

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Abstract: ***Due to the Pandemic, we saw a rise in the use of online or digital resources. Since the lockdown was imposed, thus day to day commute was affected severely. The vendors and markets that relied on customers this commute were severely affected. Thus, it saw the necessity to shift the business to online platforms like Amazon, Snapdeal, etc. From these experiences, the idea of Ezycart came into play, with a motive to boost the online infrastructure of E-Commerce specific to the needs and demands of the population of our country (India), easy-to-use, secure, and user-friendly Multi-vendor Website helping connect the local vendors and shops with the consumer and providing on-demand good and services.***
The objective of this project is to develop a general-purpose e-commerce store where any product can be bought from the comfort of home through the Internet. Unlike traditional commerce that is carried out physically with the effort of a person to go & get products, eCommerce has made it easier for humans to reduce physical work and to save time. E-Commerce which was started in the early 1990s has taken a great leap in the world of computers, but the fact that has hindered the growth of e-commerce is security. Security is the challenge facing e-commerce today & there is still a lot of advancement made in the field of security.

I. INTRODUCTION

Due to the Pandemic, Both the consumers and the business owners have been that context-based affected adversely. Consumers are looking for safe, cheap, and quality products delivered at their doorsteps on the same day (On-Demand Delivery). Micro and Small Business owners are looking for Online Establishment and Recognition for their Businesses. Since, both the consumer and the vendors are dependent on each other, thus they look for a platform or medium to connect. People are looking for a safe, reliable, user-friendly, and easy-to-use online application that can be accessed with ease and cross-platform compatibility. They want to have instant delivery of the services they require with proper safety measures and protocols in place. Similarly, vendors and other business owners need a reliable platform so that they can connect with their customers online and market their products with ease.

The Pandemic has taught the need for digital presence for various goods and services we require. People no longer intend to go to the markets to avail the services they are looking for. Thus, local sellers must also be allowed to develop their online market Hassle-Free and with a very user-friendly easy to use E-Commerce Platform, so that they can regain the trust of their local consumers in this pandemic hit situation. The main advantage of e-commerce over traditional commerce is the user can browse online shops, compare prices, and order merchandise sitting at home on their PC. For increasing the use of e-commerce in developing countries the B2B e-commerce is implemented for improving access to global markets for firms in developing countries. For a developing country advancement in the field of e-commerce is essential. The research strategy shows the importance of e-commerce in developing countries for business applications.

II. LITERATURE REVIEW

Taking into consideration and studying various Organizations like Amazon, Flipkart, Snapdeal, etc., and also analyzing performance and various startups like Merataskk, Urbanclap, and Dunzo, we decided to work on this project realizing the need for applications that are user-Friendly, safe, and reliable.

Fulfilling the growing demands of the customers in the present scope and keeping in mind the future objectives, the Business Models of various startups like Dunzo helped a great deal to formulate our future course of action.

A seminal study by DeLone and McLean is the fundamental framework to identify the model of website success employing a multidimensional construct and combining technological, behavioral, and organizational perspectives in this study. There are the website quality, features, use, and user satisfaction. Website quality is seen as a necessary measure for success when assessing and evaluating the website used. Two valid instruments to measure website quality have been generated. DeLone & McLean's studies found the quality to be a measure of success for e-commerce. They offered three types of quality, system, information, and services. System quality refers to how good the system is in terms of its operational characteristics, Information quality refers to how good the system is in terms of its output or information system output, in the meantime, Service quality refers to how good the service supplied by an information service provider is, in terms of the internal organization, external vendor and third party.

Features have been identified as factors in the success of website uses. Website features provide a medium for functionalities that can convey messages from text-based to multimedia and provide a richness of product information and responsiveness to the user (e.g. FAQ or feedback). The multimedia interactive format should provide medium richness and can utilize the 'frame' to access multiple pages simultaneously, such the website has been identified as a market space that creates innovative ways for companies to do business and interact with customers. The use has also been applied in several studies as the main measure of the model of website success. Website use is defined as 'everything involved in a visit to a website, to navigation within the site, to information retrieval, to execution of a transaction.

These factors are represented as the nature of the use, navigational pattern, number of site visits, and number of transactions executed or traffic is one of the most essential performance indicators of e-commerce success and is a good surrogate for other measures of website success such as page views or visits which cannot determine the ultimate success of a website. Wang, Tang, and Tang named user satisfaction as customer information satisfaction in digital marketing and defined it as the summary effective response of varying intensity that follows consumption, and is stimulated by focal aspects of sales activities, information systems (websites), digital products/services, customer support, after-sales service, and company culture.

User satisfaction in the e-commerce and website context describes feelings and attitudes or desires and expectations of users who perceive that they have received good service using an e-commerce application and are likely to repeat visits and purchase continuously (brand loyalty).

Unlike most prior studies which measure user satisfaction from user feelings and attitudes, the current study, which is company-based, measures user satisfaction as a response to user experiences while browsing within a website. In brief, the above literature review has related to the models of website success which were used to guide the development of the conceptual framework for the current research and to develop the research questions. Four main constructs were derived from these prior studies and used to identify the model of website success using quality, feature, user satisfaction, and use

III. METHODOLOGY

A. *Frontend Design*

1) *HTML5:* HTML5 includes detailed processing models to encourage more interoperable implementations; it extends, improves, and rationalizes the markup available for documents and introduces markup and application programming interfaces (APIs) for complex web applications.[7] For the same reasons, HTML5 is also a candidate for cross-platform mobile applications because it includes features designed with low-powered devices in mind.

2) *CSS3:* It is used with HTML to create content structure, with CSS3 being used to format structured content. It is responsible for font properties, colors, text alignments, graphics, background images, tables, and other components. This tool provides extra capabilities such as absolute, fixed, and relative positioning of various elements. This new technology delivers some interesting features that improve overall page appearance. It is not a requirement for a page to function; however, online users can observe that such a page will look good, be simple, be navigable, and function flawlessly. This makes it easier for developers to design a page to leave a lasting impression on visitors and potential buyers who love online browsing.

3) *JS:* Alongside HTML and CSS, JavaScript is one of the core technologies of the World Wide Web. Over 97% of websites use their client-side for web page behavior, often incorporating third-party libraries] All major web browsers have a dedicated JavaScript engine to execute the code on the user's device. As a multi-paradigm language, JavaScript supports event-driven, functional, and imperative programming styles. It has application programming interfaces (APIs) for working with text, dates, regular expressions, standard data structures, and the Document Object Model (DOM).

B. *MERN Stack used for BACKEND*

1) *M: MongoDB for Database:* MongoDB is a source-available cross-platform document-oriented database program. Classified as a NoSQL database program, MongoDB uses JSON-like documents with optional schemas. MongoDB is developed by MongoDB Inc. and licensed under the Server Side Public License (SSPL).MongoDB stores data in documents in spite of tables. You can change the structure of records (which filled as documents in MongoDB) simply by adding new fields or deleting existing ones. This ability of MongoDB help you to represent hierarchical relationships, to store arrays, and other more complex structures easily. MongoDB provides high performance, high availability, easy scalability and out-of-the-box replication and auto-sharing

2) *E: Expressjs for API Request Handling:* Express.js, or simply Express, is a back-end web application framework for Node.js, released as free and open-source software under the MIT License. It is designed for building web applications and APIs. It has been called the de facto standard server framework for Node.js. The original author, TJ Holowaychuk, described it as a Sinatra-inspired server, meaning that it is relatively minimal with many features available as plugins. Express is the back-end component of popular development stacks like the ME, AN, MERN or MEVN stack, together with the MongoDB database software and a JavaScript front-end framework or library.
3) *R : ReactJs for Frontend Server:* React (also known as React.js or ReactJS) is an open-source front-end JavaScript library for building user interfaces or UI components. It is maintained by Facebook and a community of individual developers and companies. React can be used as a base in the development of single-page or mobile applications. However, React is only concerned with state management and rendering that state to the DOM, so creating React applications usually requires the use of additional libraries for routing, as well as certain client-side functionality. React is a library for building composable user interfaces. It encourages the creation of reusable UI components, which present data that changes over time. Lots of people use React as the V in MVC. React abstracts away the DOM from you, offering a simpler programming model and better performance. React can also render on the server using Node, and it can power native apps using React Native. React implements one-way reactive data flow, which reduces the boilerplate and is easier to reason about than traditional data binding.
4) *N : Node Js for Backend:* Node.js is an open-source, cross-platform, back-end JavaScript runtime environment that runs on the V8 engine and executes JavaScript code outside a web browser. Node.js lets developers use JavaScript command-line and line tools and for server-side scripting—running scripts server-side to produce dynamic web page content before the page is sent to the user's web browser. Consequently, Node.js represents a "JavaScript everywhere" paradigm, unifying web application development around a single programming language, rather than different languages for server-side and client-side scripts. Though .js is the standard filename extension for JavaScript code, the name "Node.js" doesn't refer to a particular file in this context and is merely the name of the product. Node.js has an event-driven architecture capable of asynchronous I/O. These design choices aim to optimize throughput and scalability in web applications with many input/output operations, as well as for real-time Web applications (e.g., real-time communication programs and browser games)

IV. CONCLUSION

Hence, it is concluded that online shopping is the new age mantra and people are relying on it to a great extent nowadays. As we progress further the need for it will leap to bounds and beyond. Therefore, it becomes very important that things are made available to people at their doorsteps which can be implemented with the help of this website and will also help the new age multi-vendor grow their businesses. The same can be implemented through the use of websites that collaborate with various vendors and allow them to directly sell their products to the customers. Also, the technologies used to build the project can provide a seamless experience for the customers shopping online.

E-Commerce refers to all forms of business activities across the internet. This can include E-tailing, B2B, intranets and extranets, online advertising, and simply online presence of any form that is used for some type of communication. E-Commerce has several advantages and disadvantages as indicated in these papers. E-Commerce applications that started in the early 1970s need to be still developed in terms of security and efficiency. For a developing country like India advancement in e-commerce is a challenge to compete with the developed countries.

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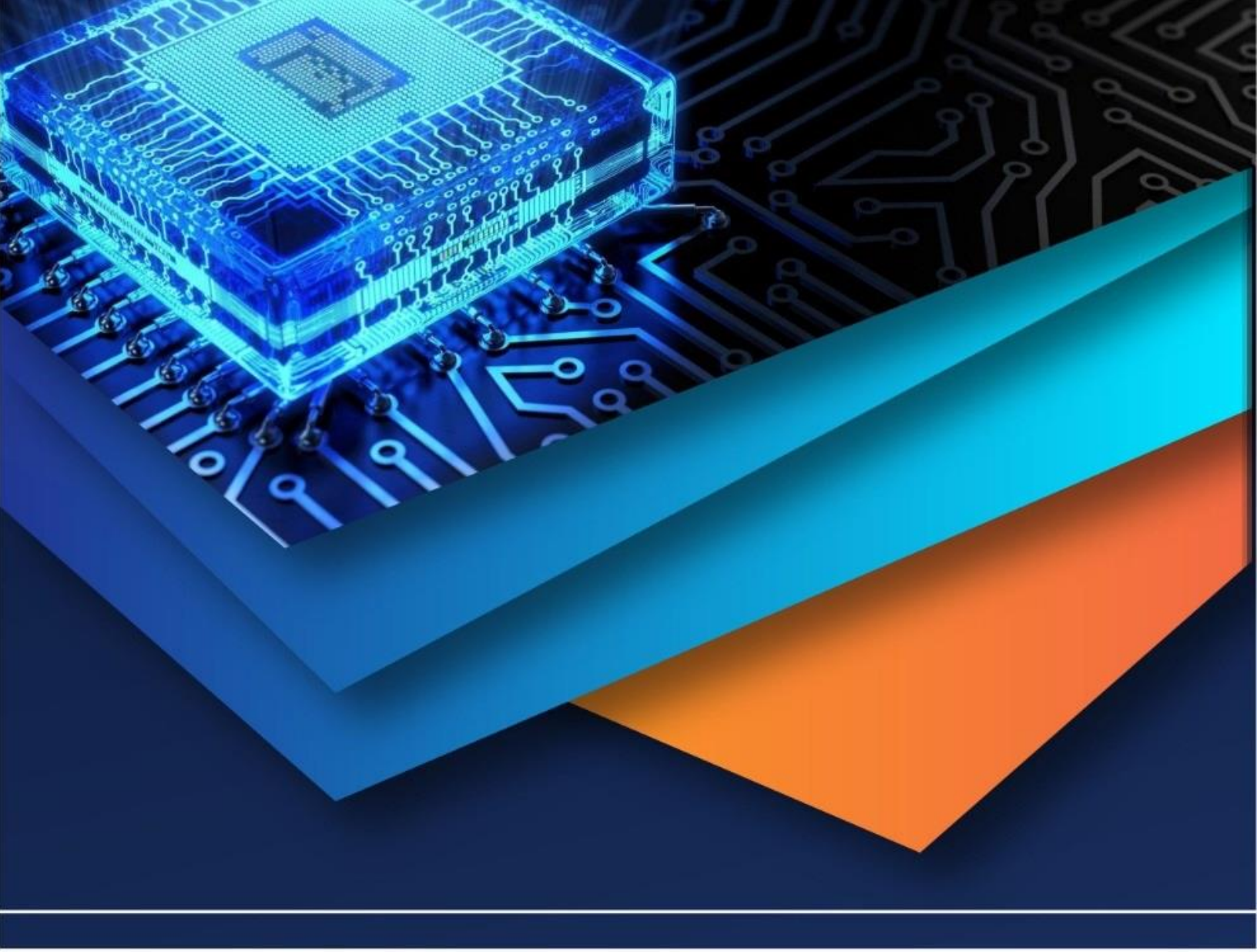

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