Online Auction System using Mern Stack

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ABSTRACT

An online auction is an auction which is held over the internet. It is a popular method for buying and selling products and services. Online Auction System s helps to customer to sell and buy product in best price. It is developed with the objective of making the system reliable, easier and fast. This application is used to sell the anything on the website from house. This application is used to sell the anything on the website from house.

It developed with the objective of making the system reliable, easier and fast. The application is made as simple as surfing a website. There by non-technical persons can also interact with the processing on the application easily. The Objective is to develop a user-friendly auctioning site where any kind of product can be auctioned and provide value-added services to the bidders and the sellers. The products will be authenticated and the site provides a safe environment for online users.

KEYWORDS:

Creating Auction , Selling, Buying.

1. Introduction:

The online auction system is a model where we participate in a bid for products and service. This auction is made easier by using online software which can regulate processes involved. There are several different auction methods or types and one of the most popular methods is English auction system.

This system has been designed to be highly-scalable and capable of supporting large numbers of bidders in an active auction. Online Auction System has several other names such as e-Auctions, electronic auction etc.

The requirement for online auction or online bidding can be more accurately specified by the client. It should be healthy and will be a good practice when it is made more transparent as a matter of fact.

Online Bidding has become more wide spread in all sorts of industrial usage. It not only includes the product or goods to be sold, it also has services which can be provided. Due to their low cost this expansion made the system to grow.

Applications of MERN Stack:

MERN stands for MongoDB, Express, React, Node, after the four key technologies that make up the stack.

MongoDB — document database

Express(.js) — Node.js web framework

React(.js) — a client-side JavaScript framework

Node(.js) — the premier JavaScript web server

React.js:

The top tier of the MERN stack is React.js, the declarative JavaScript framework for creating dynamic client-side applications in HTML. React lets you build up complex interfaces through simple components, connect them to data on your back-end server, and render them as HTML.

React is a free and open-source front-end JavaScript library for building user interfaces based on components. It is maintained by Meta and a community of individual developers and companies. React can be used to develop single-page, mobile, or server-rendered applications with frameworks like Next.js.

Express.js:

Express.js, or simply **Express**, is a back end web application framework for building restful APIs with Node.js, released as free and open source software. It is designed for building web applications and APIs. It has been called the de facto standard server framework for Node.js Express is a fast, assertive, essential and moderate web framework of Node.js. You can assume express as a layer built on the top of the Node.js that helps manage a server and routes. It provides a robust set of features to develop web and mobile applications.

Node.js:

Node.js is Server-side scripting which is used to build scalable programs. It is a web application framework built on Google Chrome's JavaScript Engine. It runs within the Node.js runtime on Mac OS, Windows, and Linux with no changes. This runtime facilitates you to execute a JavaScript code on any machine outside a browser. It can be used to design single-page, multi-page and hybrid web applications and allows to setup middlewares to respond to HTTP Requests.

Mongo DB

MongoDB is an open source NoSQL database management program. NoSQL (Not only SQL) is used as an alternative to traditional relational databases. NoSQL databases are quite useful for working with large sets of distributed data. MongoDB is a tool that can manage document-oriented information, store or retrieve information.MongoDB is used for high-volume data storage, helping organizations store large amounts of data while still performing rapidly. Organizations also use MongoDB for its ad-hoc queries, indexing, load balancing aggregation, server-side JavaScript execution and other features.

Structured Query Language (SQL) is a standardized programming language that is used to manage relational databases. SQL normalizes data as schemas and tables, and every table has a fixed structure.

2.Objective:

Online Auction Systems helps to customer to sell and buy product in best price. Online auction saves time and money for both buyers and sellers. It is developed with the objective of making the system reliable, easier and fast. It is less stressful, more convenient,larger reach and has more buyers. The main advantage of bidding via online is that it provides the opportunity to compare the price online**.**

III.METHODOLOGY

- **Research & Analysis**:We analyzed the auction system and got data about the processes and limitations.

- **Design**: After completion of analysis, we designed the architecture of MERN stack using NodeJS, ReactJS for the client side, and MongoDB for scalability, reliability, and efficiency.

- **Development**

- **Testing**

4. Conclusion:

An Online Auction, excluding a Live Auction, will close at the end of the time period specified for that Online Auction, provided there are no new successful bids during the limited period immediately preceding the end of the time period specified.

If there are any successful bids on a particular lot or item within that period of the time specified for the close of the Online Auction (the going, going, gone period), the auction will continue to be extended until there are no more within the Refresh Period.

We accept no responsibility for any missed or unsuccessful bids resulting from any slight variations that may occur in the length of the Refresh Period.

5. Future Scope:

The Online Bidding is a flexible solution for supporting lot- based online auctions. The system has been designed to be highly-scalable and capable of supporting large numbers of bidders in an active auction. To help businesses with financing the purchase of the Online Bidding. The Online Bidding is an enterprise-based system that runs on several servers in order to distribute database I/O and web transactions.

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