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An Efficient Cloud-Powered Bidding Marketplace

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Abstract:- "Cloud Bid: Bidding for Basics - An Efficient Cloud-Powered Bidding Marketplace" presents an innovative approach to online commerce by merging cloud computing and traditional bidding systems. This study explores the potential of "Cloud Bids" to revolutionize online auctions and negotiations. Harnessing cloud resources and cutting-edge algorithms to offer real-time scalability, efficiency, and data-driven decision-making. With applications across e-commerce, supply chain management, and public procurement, Cloud Bids promises increased transparency, cost-effectiveness, and strategic insights. Addressing security and privacy concerns, this research underscores the significance of understanding Cloud Bids in the evolving digital marketplace, marking a transformative shift in the way goods and services are traded online to get a full overview of the status of the products. This real time bidding application will ensure both the selling and buying seamless and hasslefree for the user. It's time to explore the cloud based bidding marketplace to ensure your new way of shopping for your daily necessary stuff.

Keywords:- *Cloud Bid, Cloud Technology, Online Bidding, Online Shopping, Cloud e-Commerce, Bidding Application, Cloud Application, Real Time Bidding*

I. INTRODUCTION

Cloud bids an efficient way to enhance your shopping experience for the daily needed stuff. Using cloud technology this cloud application can be a game changer for your daily shopping. This is a cutting edge technology in the field of e-commerce. It allows you to automatically update and show the bid for the products you wish to buy. This research offers real-time scalability, efficiency, and data-driven decision-making by using cutting-edge algorithms and cloud resources. In the realm of e-commerce, "Cloud Bids" offer more cost-effectiveness, transparency, and strategic insights. It represents a major change in the way that online trade is developed, ensuring easy and trouble-free transactions for both customers and sellers. This innovation offers users from tedious tasks, embracing a digital era where users can trade using e-commerce sites and the control is quick and easy. It stands out among similar tools by focusing on simplicity and accessibility, aiming to revolutionize how people manage their e-commerce shopping and online bidding for their regular necessary stuff. It simplifies transactions and gives consumers unprecedented control and informed decision-making capabilities by providing a comprehensive view of product status in real-time. In this cloud enabled application one user can easily list the products and the automatic bid for the products will be started. No need for any manual reply to the customer who is interested in buying those products. The updated price list and the total bidding will reflect to the product dashboard and the user can bid accordingly. So, we can say that this cloud enchanted bidding marketplace is opening a new way in the era of daily e-commerce and for products bidding systems. The main goal is to provide a seamless and hassle free platform for the user in the field of e-commerce and product bidding systems.

II. LITERATURE SURVEY

Several studies have taken place in the field of e-commerce and bidding platforms that are taken in the field of cloud application and cloud technology. In the era of digitalization lots of work has been done already that shows how a cloud based e-commerce and bidding application are important in the uses of people's daily life.

In the research auction and bidding on the internet; an assessment by the author Efraim Turban [1] shows how the private and public professionals are using the daily bidding and auction activities on the internet. It shows how the competitive bidding is taking place in the auction site or in the application. The author introduces a new auction word called the electric auction that indicates the products bidding through the internet without any physical interaction. Different kinds of auction methode are also introduced in the research.

Robert Zeithammer in his paper Forward-looking bidding in online auctions [2] shows how the already available auction or bidding site or application are performing in the field of online marketplace. Basically the author focuses on the forward bidding policies. It also shows if the number of bidders for a particular product or in a particular site are increasing and decreasing, affecting the whole marketplace. He also discusses the risk factors that are related to these platforms.

The authors in the Optimal Real-Time Bidding for Display Advertising [3] paper are proposing the real time bid (RTB) strategies that focuses on the ad optimization which helps the bidder to bid according to the marketing on the ads. The optimization framework helps to boost the strategies in the real time bidding. Both the online and offline evaluation makes these strategies more effective and accurate.

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The following paper [4] discussed the quality of global markets that are available in Korea and the USA. The research tells how the quality of the marketplace actually attracts its visitors. Depending on the location and type of consumer the marketplace should be changed and optimized accordingly. The result of this paper shows that even the types of product and store are the same but because of the different people and different culture the marketplace and websites need to change.

The study from the paper AWESOME: an auction and witness enhanced SLA model for decentralized cloud marketplaces [5] define how recent cloud technology used to develop and use the application in a cost effective way. It shows how the open source devops and SLSs are actually helping to overcome the challenges that are faced by the authorities. The proposed method helps to build a decentralized cloud marketplace based on ethereum blockchain that is based on an auction model and mechanism to maintain which is flexible and economical.

III. IMPLEMENTATION

➢ *Proposed Methodology:*

The "Cloud Bids" project is to simplify the buying and selling process of daily necessity products and track their price. On this platform where the user can place his desired price and check the live status of any products. It provides individuals with a seamless and automated bid tracking solution. Leveraging the power of cloud technology, “Cloud Bids” aims to eliminate the hassles of manual messaging about product pricing to everyone and offer a user-friendly platform for capturing, monitoring, and recording the bidding status. The primary goal is to empower users with real-time access to the price bidding platform, making it easier than ever. The proposed application is basically a shopping application that includes real time bidding and the status check. OPur proposed methodology includes the following options that are related to the e-commerce shopping site. The proposed methodology focuses on the cloud environment that helps the security function as well as the performance. By making the personal environment for the customer and the seller the cloud bid application helps to build an organized way to complete your shopping experience. Because of its focus on ease of use and simplicity, consumers can effortlessly shop and manage auctions, which increases the accessibility and efficacy of personal auction management for everyday products.

Additionally, Users of Cloud Bid can also export records into an Excel file, which makes it simple to access specific data for additional analysis or archiving needs. The app makes use of graphical displays like graphs and charts to give users a visual understanding of their spending and purchasing history. With the assistance of these visual tools, users can quickly analyze and understand their financial patterns, which facilitates the making of well-informed decisions on spending control and budgeting. The comprehensive methodology of Cloud Bid includes an easy-to-use interface, a strong cloud-based infrastructure, machine learning integration, strict security protocols, and user-friendly features for data analysis. All of these elements work together to create an innovative platform that gives users the ability to manage their everyday bidding for their shopping.

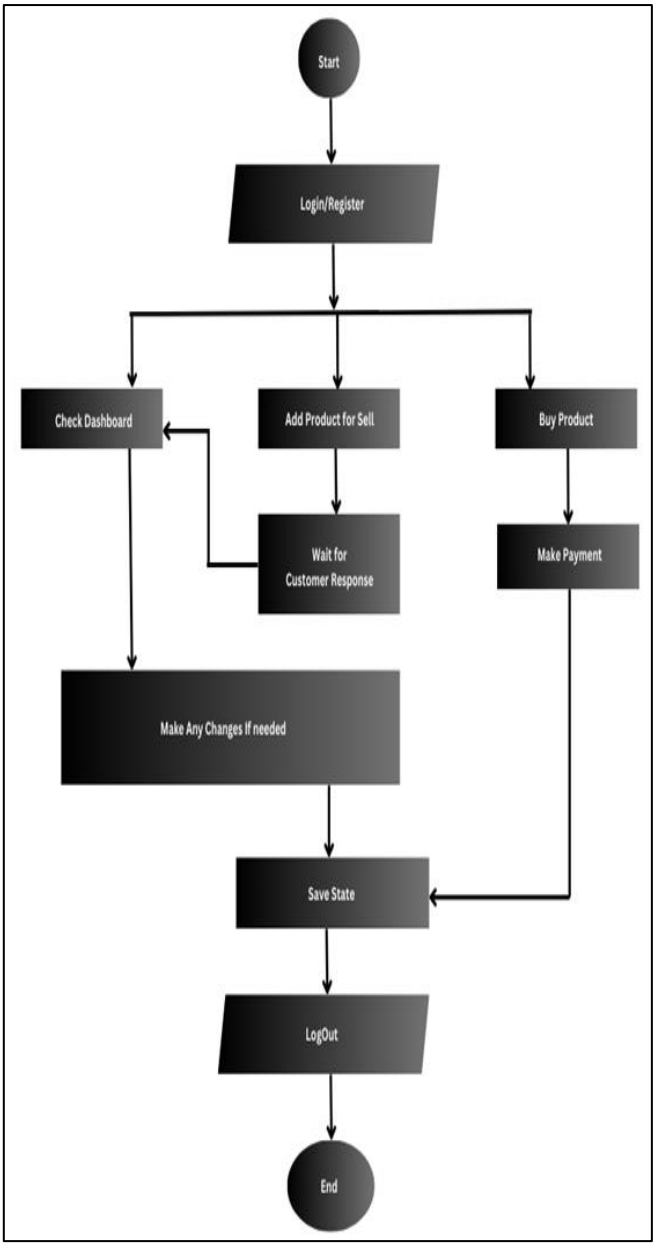

Fig 1 Working Flowchart of the Application

➢ *Application Implementation:*

An easy-to-use interface that facilitates smooth transaction capture and careful storage of crucial data is fundamental to its operation. The architecture of the application provides a better shopping experience and auction facility to the user. From the basic framework to the database it has the finest ability to provide a better experience to the user. The user can first log-in/register to the account and complete the profile on their own. Then there will be an option to see the product that are listed for sale byu another user. The user can add their own product by adding a product section. The user can check the update of their product from their dashboard.

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➢ *Design of the Application:*

The application is designed based on the user accessibility. The user interface of the application focuses on simplicity and easy to use.

Fig 2 Application Logo

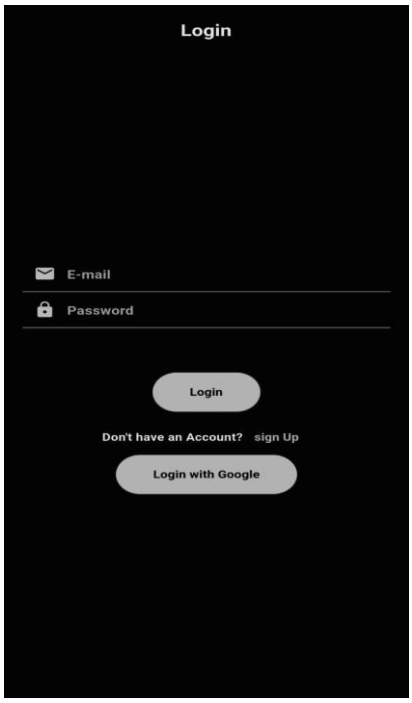

Fig 3 Login/Register Page

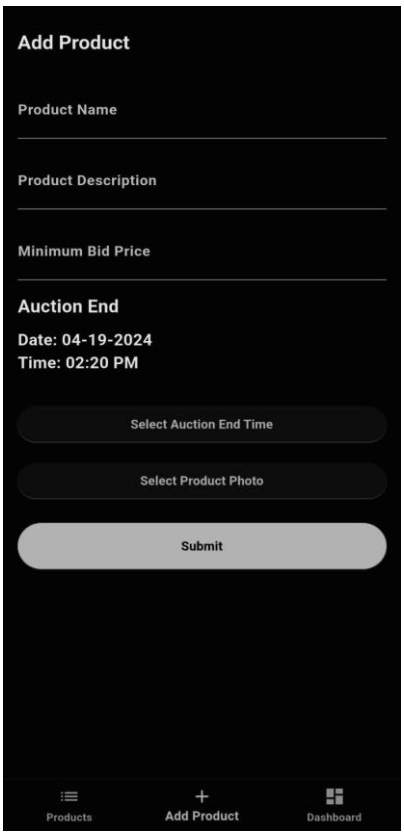

Fig 4 Product Add Section

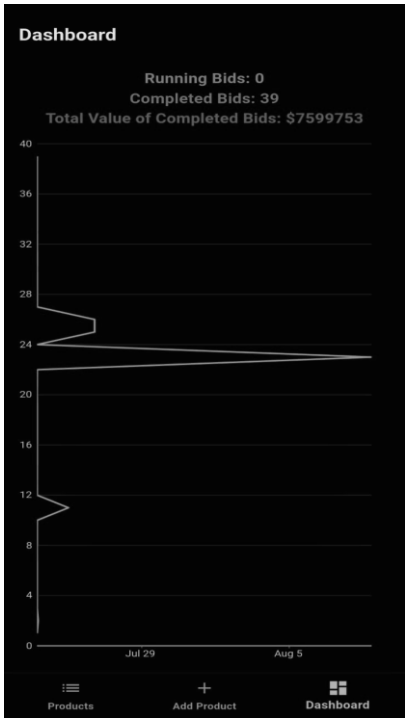

Fig 5 User Dashboard

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Fig 6 User Profile

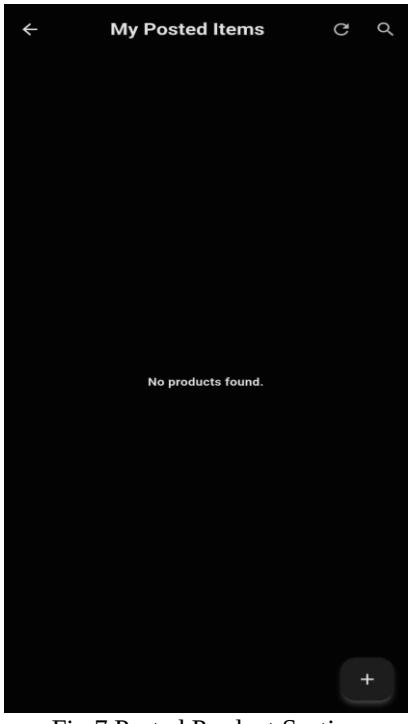

Fig 7 Posted Product Section

➢ *Technology Used:*

The main building section of this application is based on the main vision of this project that is to make the shopping and bidding process easy and seamless. By maintaining that vision this cloud based application is developed using the flutter framework so that every kind of device user can use this application hassle free.

So the platform that is used in this application is flutter. It is a cross platform application development environment which is used to develop the application that can be used in various OS systems. The flutter makes it more developer friendly for the developer. Easily cope up with developing language.

For ensuring the security of the cloud application we used google authentication in this project. Google authentication makes it more secure for the user as they have to add and confirm their payment details in the application only. Robust security measures are implemented within the app to safeguard sensitive information.

As it is a cloud based application we have used the google firebase database system which helps to maintain by the admin. The machine learning feature which is added with the database system makes it easy for the admin and the user to make some decisions at the time of auction and product selection. And for the code structure we have used dart for the main development part. Also the c++ and swift are being used to develop this application.

Cloud Bid places a high priority on protecting user data, preserving confidentiality and integrity, including encryption methods, secure login processes, and data encryption during transmission and storage.

IV. RESULT & ANALYSIS

All the existing systems that are related to the products bidding or products buying and selling are not properly open to everyone or for every product. Auction sites and applications are limited for the user and location. Because of the security reason those applications can not be open for every kind of user. But our application can perform securely for all kinds of users and fulfill their bidding and shopping experience.

Cloud bids perform perfectly in the shopping application section as well as the bidding or auction application. Its intuitive features securely help users to have a better shopping experience.

Cloud Bids aims to revolutionize the way individuals handle their product's price in the marketplace. And our development makes that totally perfect. The application can handle a large number of users at a time.

The product bidding application Flutter is an all-inclusive platform that allows users to participate in online auctions and purchases with ease. The software has an easy-to-use interface with screens for product listings, in-depth product viewing, bidding features, and a safe authentication process. The application effectively retrieves and presents product data while facilitating real-time bidding by utilizing backend integration. Customers have access to an extensive product selection, the ability to bid in auctions, a user-friendly dashboard for tracking their bidding actions, and the ability to check out for gaining bids.

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Keeping in mind the weakness of the application is the backend dependency and the complexity in the bidding logic. But without this part of the application can run properly and fulfill user needs.

V. CONCLUSION

The e-commerce application with bidding functionalities holds significant promise, offering a dynamic and engaging experience for users. Addressing weaknesses, capitalizing on opportunities, and managing threats are essential for sustained growth and competitive positioning in the online auction and e-commerce market space. Continuous iteration, performance enhancement, and user-driven feature development will be crucial for the app's success and long-term relevance in the ever-evolving digital marketplace. "Cloud Bid" is the gateway to enter the new era of product buying and selling with the real time price status checking. It will help the user to to keep an eye on the the product past and future price price and also they can put their bid on their desire products.This cloud-powered automated bid tracker transcends the challenges of our fast-paced era, offering users an efficient and user-friendly tool to monitor and record financial ups and down effortlessly. With Cloud bid, the future of product price bidding management is at your fingertips. It promises a more organized, and stress-free approach to the product bidding, buying and selling. Say hello to the new cloud based futuristic bidding platform and wave goodbye to the hassle of manual communication. Cloud Bid is here to change how we run our system for managing product bidding.

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