# REAL TIME POLLING SYSTEM

## Prof. Vinay Thamke[1], Tanmay Patil[2], Mahalakshmi Phaldesai[3], Ritesh Pokarne[4], Prachi Kumar[5], Tanushri Bhuruk[6]

*[1-6]Department of Artificial Intelligence & Data Science (AI&DS)*

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**Abstract-** In our project we wanted to in cooperate technology in polling systems. Electronic voting technologies were created in part to make voting more convenient for voters and to increase voter trust in the electoral process. concentrating on a large-scale field research of electronic voting systems employing three innovative ways to analyzing electronic voting systems voters' perceptions of the usability of a representative collection of systems—we show how voters perceive the usability of a representative set of systems. However, design changes have a significant influence on these systems. Voters' satisfaction with the voting process and the necessity of seeking assistance. This web application can be used regarding anything. With advancements in technologies, we figured it will be best to bring basic processes such as polling or voting online. This web application can be used for all type of polling for example electing class monitors or quiz questions. We used socket.io for this project and ensured multiple devices can access this webpage application.

**KEYWORDS-** *Socket.io, Express, Client, Server, Usability, Public Opinion, Voting Technology.*

## I.    INTRODUCTION

Implementing new technology throughout a complete election process is difficult because it needs years of meticulous preparation, thorough organization, and a high level of confidence in the entire system. E-voting offers a way to solve difficulties associated with traditional election processes, such as vote counting, missing stamps, and false voters. One typical reason for deploying this technology is to demonstrate to the rest of the world a country's level of internal technical advancement. In this project, the voting will be updated simultaneously on different servers. We made the use of socket.io. Socket.IO is a real-time web application library written in JavaScript. It allows bi-directional, real-time communication between web clients and servers. It consists of two parts: a browser-based client-side library and a Node.js server-side library. The APIs for both components are substantially identical. We also made use of express, which 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 brief approach of our project will be to create the server with the help of socket.io and use "user agent" function to extract some information from the browser so we can identify the person that left the vote. It identifies the users based on the IP address and operating system. This will ensure only one device is polling once. Then we will be connecting the socket.io server with the client and then server will send the needed data to the client, and this will be updating the votes/poll in real time. We will also be converting the data coming from server, that is the candidate data into chart js data as chart js data takes data in form of array.

## II.    Literature Review

[1] Rossler T.G (2011)," E-voting: A survey and Introduction This paper proposes the use of Remote Internet Voting, with the aim of enhancing the comfort of the electorate, increasing voter confidence, and the emergence of voters. In the review, the authors recommended a remote polling station to vote electronically as a forward move as it gives voters better comfort, but nevertheless, it does not trade in a secure way.

[2] Avi Rubin (2001),"Security Considerations for Remote Electronic Voting over the Internet" In this survey the security measures required them to create a web-based voting system away from focusing on two areas in which voters cast their ballots online - Arizona Democratic Primary 2000 and the University of Virginia Student Council Elections. The author affirms that the secure voting system must fully meet the four essential requirements: validation, accessibility, segregation, and integrity.

[3] "Blockchain-Based E-Voting System "Friðrik Þ. Hjálmarsson, Gunnlaugur K. Hreiðarsson School of Computer Science Reykjavik University, Iceland The paper looks at some of the most popular ones Blockchain frameworks that provide blockchain as a service. We and propose a blockchain-based electronic voting system novel that deals with all the limitations we have acquired.  Explores the technological capabilities of the distributed ledger by definition of research, namely the process of choice and application blockchain-based application which enhances security and reduces the cost of retrieval national elections.

[4] Patrick McCorry, Siamak F. Shahandashti and Feng Hao. (2017). A Smart Contract for Boardroom Voting with Maximum Voter Privacy, proposed the first implementation of a nationally distributed and self-contained online voting protocol using Blockchain, called Open Vote Network (OVN). OVN is listed as a smart Ethereum blockchain contractor.

[5] H. Agarwal and G. N. Pandey, "Online voting system for India based on AADHAAR ID, The proposed model is highly secure in the sense that the high-security password of the voter is verified before the vote is accepted on the main website of the Indian Electoral Commission. An additional feature of the model is that the voter can ensure that his or her vote has fixed the candidate/party. In this image, a person can vote outside of his or her assigned constituency or in the preferred area. In the proposed system the counting of votes will be done automatically, thus saving a lot of time.

[6] Snehal Deshmukh Electronics & Telecommunication, P.R.M.I.T.&R,Badnera" Android Based Application for E-Voting". This paper provides clarification and E-Voting requirements using the Android platform. Electronic voting refers to the voting process using an electronic device. We also explained how android phones work well and can be used for voting. The android forum is used to develop the App Voter can see the list of people who are applying at the time of voting.

### III.      Methodology/Experimental

This system is basically built on the basis of server and client model .

The libraries used are:

1) Express js-

Express is a lightweight and adaptable Node.js web application framework that offers a comprehensive set of features for developing web and mobile applications. It speeds up the development of Node-based Web applications. We can use express js to create a midway response to an HTML request, as well as define a routing table and perform actions based on the HTML and URL.

2)Socket io-

SocketIO is a JavaScript library for real-time web applications. It enables bidirectional, real-time communication between web clients and servers. Socket IO primarily employs the WebSocket protocol, with polling as a backup option, while maintaining the same interface. Although it can be used as a simple WebSocket wrapper, it has many more features, such as broadcasting to multiple sockets, storing data associated with each client, and say input output.

Project frame work

1.   Server-

In this project, we host our website with express, then initialize socket io and declare our voting values. With the help of socket io, a connection is established between the server and the client, and the graph is updated whenever the client casts a vote.
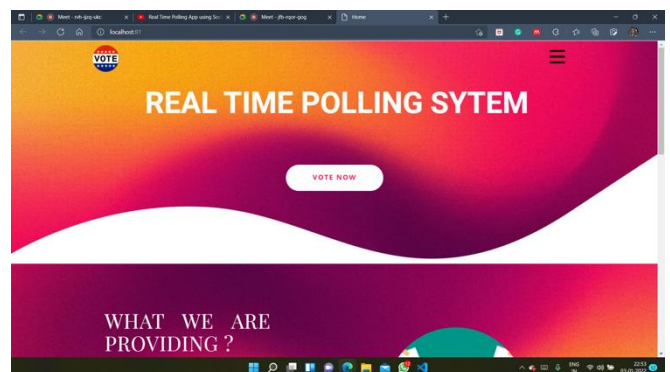
2.   Client-

We also initialize socket io for the client part, as well as buttons, charts, and then connect the server. Then we listen for the vote update and make changes in the chart.
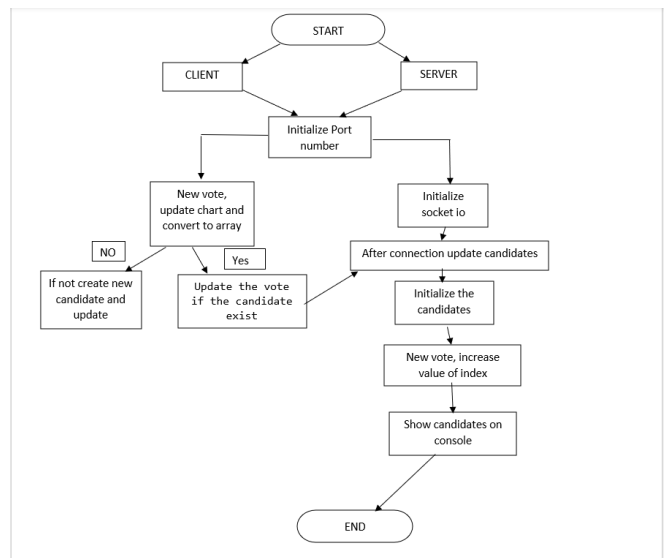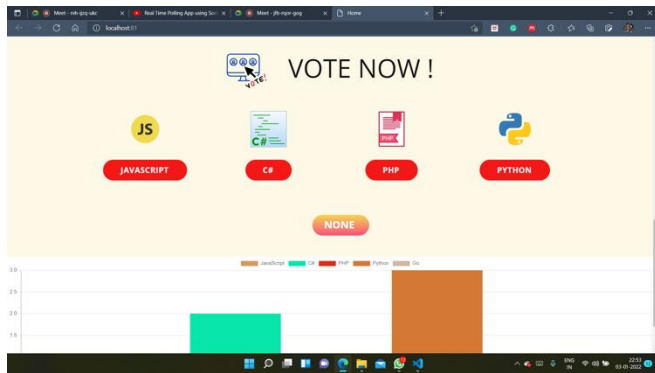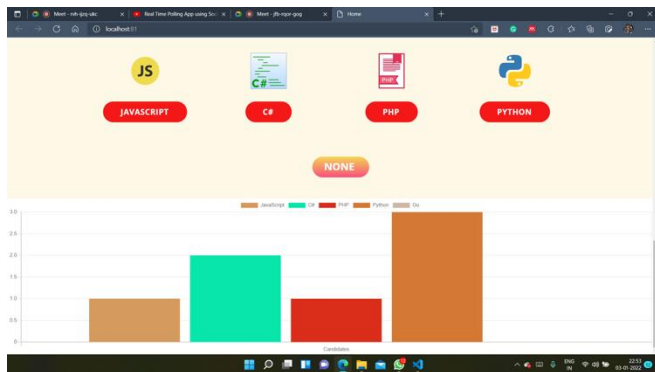


A.   Flowchart

### IV.      Results and Discussions

We have implemented the home page of the server using html and CSS where the user will be re-directed to the voting page once he/she presses on vote now.



The user will be presented with the categories which are the programming languages in this case.



The user will then be given the option to vote for the programming language they wish to. Once the user clicks on any category, the vote will be generated in the form of updating in the bar chart.

## V.    Future Scope

A variety of domains can be added to allow users to vote. There is currently no feedback on the candidate website informing users of how many votes are left. The Voting App currently only allows you to use the built-in on-screen keyboard. Allowing users to utilize the device's native keyboard would be another improvement, as they are more likely to be comfortable with it. In Future we need to also encrypt by login signup page to website

## VI.    Conclusion

We have built a project on a real time polling system which receives the opinions of users and renders the data in the charts. We have introduced socket.io in the program to provide real-time functionality when casting votes. We have also created a login page for users where new users can sign up using their credentials. Once the user logs in, he/she will be directed to a poll where they will have to choose one

option and the option with the maximum votes will have the highest value in the graph. This system is highly efficient on real-time basis as it helps to avoid the discrepancies and a user can only click once just like we do in the ballot elections.

## VII.    References

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