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Online Voting Management System

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Abstract: *The word "vote" means to choose from a list, to elect or to determine. The main goal of voting is to come up with leaders of the people's choice. Most Universities, MUC not an exception have problems when it comes to voting. Some of the problems involved include ridging votes during election, insecure or inaccessible polling chambers, inadequate polling materials and also inexperienced personnel. This online voting/polling system seeks to address the above issues. It should be noted that with this system in place, the users, MUC students in this case shall be given ample time during the voting. They shall also be trained on how to vote online before the election time. The voting/polling process by registered voters is very cumbersome. So many cases of missing data in the voter registration files have been reported. Even after voting, malicious clerks and officers-in-charge of a polling station end up playing with the results figures. This results in the release of wrong results leading to cases of Such cases can be solved by insisting on voters exercising that task online using online Voting system. The voters can also vote from anywhere around the globe, they don't need to travel during election time in case they are abroad.*

Key Word: *Homomorphic Encryption, Decryption, Voting, Ballot, Algorithm, Operation.*

I.INTRODUCTION

India has democratic government. As now all Indian citizen become a part of the growing digital India .They have a digital ID that is Aadhar card. Voting schemes have evolved from counting hands in early days to systems that include paper, punch card, electronic voting machine. An electronic voting system which is used nowadays provide some characteristic different from the traditional voting technique, and also it provides improved features of voting system over traditional voting system such as accuracy, convenience, flexibility, privacy, verifiability and mobility. But Electronic voting systems suffers from various drawbacks such as time consuming, consumes large volume of paper work, no direct role for the higher officials, damage of machines due to lack of attention, mass update doesn't allows users to update and edit many item simultaneously etc.These drawbacks can overcome by Online Voting System. This is a voting system by which any voter can use his/her voting rights from anywhere in the country. Voter can cast their votes from anywhere in the country without visiting to voting booths, in highly secured way. That makes voting a fearless of violence and that increases the percentage of voting.

II.LITERATURE SURVEY

The voter prepares the plaintext ballot and encrypts it so that only he himself is able to decrypt it. He also calculates so called zero-knowledge proofs to assure that the encrypted vote is in fact a valid vote. The voter then authenticates himself with the Voting Authority, who checks that the voter is eligible to vote. The voter receives the signed vote back and decrypts it. He now holds a plaintext ballot which is signed by the voting authority. This is what blind signature means: the voting authority is able to sign the plaintext contents of the vote, even if it is encrypted. The voter now encrypts the vote with the public key used for the elections. He then sends the vote through an anonymizing mix-net. This would be a network of independently operated computers, each of which will somehow shuffle the incoming votes and then send them in a different order to the next node in the mix-net. Each link in the mix-net could also include its own encryption-decryption, on top of the encryption the voter already applied to the plaintext vote traditional voting system. Some of these advantages are less cost, faster generation results, easy accessibility, accuracy, and low risk of human and mechanical errors. It is very difficult to develop online voting system which can allow security and privacy on the high level. Future development focused to design a system which can be easy to use and will provide security and privacy of votes on acceptable level by proper authentication and processing section. It is easy to use and it is less time consuming. It is very easy to debug.There are some potential weaknesses in mixnet algorithm such as how do we know that the nodes in the mix-net don't cheat. They could for example drop some votes and don't forward them. Since we know the total amount of votes cast, the voting authority would see that some votes are missing. The corrupt nodes could then also duplicate the same amount of votes to make the total match.

III.EXISTING SYSTEM

The Existing System of Election is running manually. The Voter has to Visit to Booths to Vote a Candidate so there is wastage of Time. The Voter has to manually register into the Voter List. Also Vote counting has to be done manually. All the

Information of the Voter or Candidate is to be filling in manually. Voter must be present in his/her Constituency to give his/her Vote. There are Electronic Voting Machines used which Takes More Cost. The voting system previously being used by the Government is a paper based system, in which the voter simply picks up ballots sheets from electoral officials, tick off who they would like to vote for, and then cast their votes by merely handing over the ballot sheet back to electoral official. Some of the existing systems are Paper-based voting, Direct recording electronic voting machine and Punch card.

IV.ALGORITHM USED

The **homomorphic encryption** was proposed by Cramer and it takes advantage of the characteristic properties of the homomorphic encryption to provide **verifiability to the electronic** vote schemes without contributing any information on the individual votes.

Homomorphism is an **algebraic property** particularly useful in electronic voting schemes because it allows **applying operations** on sets of **encrypted ballots** without need of **decrypting** them. Such encryption schemes are often used in **electronic voting protocols**, for example, to compute the tally without decrypting each vote and therefore guarantee the privacy of voters.

V.SCOPE

Increasing number of voters as individuals will find it easier and more convenient to vote. Less effort and less labor intensive, as the primary cost and focus primary on creating, managing, and running a secure web voting portal. The system can be used anytime and from anywhere by the Voters. No one can cast votes on behalf of others and multiple times. Saves time and reduces human intervention. The system is flexible and secured to be used. Unique Identification of voter through Aadhar number. Improves voting with friendly Interface.

VI.STEPS OF ALGORITHM

Step 1: The voter prepares a plaintext ballot and encrypts it with a homomorphic encryption algorithm. He also provides zero-knowledge proofs that the contents of the encrypted ballot are a valid ballot. He also signs the identifying himself.

Step 2: The encrypted vote, the proofs and the signature are all posted on a public, non erasable bulletin board. Therefore the verifiability of this approach seems to be well taken care of.

Step 3: After voting has closed, the voting authorities will multiply all votes with each other. Again this happens in public, and of course anyone could do the same multiplication.

Step 4: The voting authority then takes the result of the multiplication and decrypts that. Individual votes are never decrypted

Step 5: Anyone can see the result. Anyone can also verify that the result is the plaintext of the encrypted result.

VII.SYSTEM REQUIREMENTS

MYSQL DBMS- It allows combination, extraction, manipulation and organization of data in the voters' database. It is platform independent and therefore can be implemented and used across several such as Windows, Linux server and is compatible with various hardware mainframes. It is fast in performance, stable and provides business value at a low cost.

VS Code- The VS Code is an award- winning integrated development environment available for Windows, Mac, Linux, and Solaris. The VS Code project consists of an open-source IDE and an application platform that enable developers to rapidly create web, enterprise, desktop, and mobile applications using the Java platform, as well as PHP, JavaScript and Ajax, Groovy and Grails, and C/C++.

Testing- XAMP/WAMP SERVER.

VIII.RESULT AND DISCUSSION

By doing this undertaking I had the capacity to bring another framework for online national voting in favor of our nation. With incoming of innovation and Internet in our everyday life, we had the capacity to offer propelled casting a ballot framework to voters both in the nation and outside through our web based casting a ballot framework.

IX.CONCLUSION

Online Voting Systems have many advantages over the traditional voting system. Some of these advantages are less cost, faster generation results, easy accessibility, accuracy, and low risk of human and mechanical errors. It is very difficult to develop online voting system which can allow security and privacy on the high level. Future development focused to design a system which can be easy to use and will provide security and privacy of votes on acceptable level by proper authentication and processing section.. It is easy to use and it is less time consuming. It is very easy to debug.

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