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Online Voting System : A Review

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Abstract—the project "Online Voting system" aims at making the voting process easy in cooperative societies. Presently voting is performed using EVM and the counting is done manually, hence it consumes a lot of time. There can be possibility of invalid votes. All these make election a tedious task. In this proposed system voting and counting is done with the help of computer. It saves time, avoid error in counting and there will be no invalid votes. It makes the election process easy.

Keywords- online voting ,Adhar_id, voter, candidate ,EVM.

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I. INTRODUCTION

Voting system is very easy and important in our daily life .It is use for electing one best candidate for handling, guide and to lead our nation. By using online voting system voter can vote from anywhere, anytime, from any device easily. The voter must be the citizen of India and it is mandatory that the age of voter should be above 18.

Online voting system is an online voting website. This system use cell-phones for voting which are secured and beneficial for performing voting and calculating the votes .This system is aadhar id based system .Online voting system is to increases the Voting Percentage, to make Voter easy to Vote from anywhere, to avoid time Wastage, and thing like Booth Capturing. [2]

This system is mainly used for providing easy and user friendly voting system and give instant result .This system reduce the paper work. And also avoid to voter to vote more than once to their choose one. To get excellence providing voting security, and to create value for organization. Provide secure voting system and maintains all the requirement of the voting process such as Confidentiality, integrity.

Confidentiality: Allows only authorized user to access the private and voter data.

Integrity: Doing the right thing in Reliable way, truthfulness.

There is a database which maintained all the names of Voters with complete information is stored. The online voting system help multiuser environment. It is online system, which is helpful for user .By using online system user does not need to go voting booth user can do vote by sitting at home or from anywhere. This system provide all features of online voting system to each party which helps to counting purpose. This system decrease the time and cost of voting process.

Modules we have devised the following modules according to the requirements of the organization.[3]

- Administrator Module: The Administrator perform the function of voter and candidate authorization. All task perform under this module.
- User Module Administrator has the whole authorityof the organization .He is the one who maintains all the aspects of voters and candidates.Hisfunctionalities include insertion, updation, and deletion of both the voter and the candidate. He is responsible for allowing persons to vote.
- User Application: In this module user will apply for Voting.
- Candidate Application: The person will apply for become as voting candidate.[4]

II. SYSTEM SPECIFICATION

The online voting system requires following specification:
1) Software requirements:
   i. Web browser.
2) Frontend technologies:
   i. HTML5, CSS3, Javascript.
3) Backend language:
   i. JSP
   ii. My SQL.

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III. LITERATURE SURVE

A. Electronic Voting Machine:-

The problem of ballot paper is overcome by present existing system called ELECTRONIC VOTING MACHINE (EVM). EVM is running manually. The Voter has to Visit to Booths to Vote a Candidate so there is wastage of Time. The *Electronic Voting System* 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. But in nowadays, latest news are happen with respect to voting specially related to EVM. Latest news is from U.P. doing corruption in between voting this news is most popular and mainly disturb the whole system. Also many stories, jokes and so many hot news spread on social networking media.[6]

B. History of Electronic Voting Machine:-

In 1980, M. B. Haneefa invented the first Indian voting machine, gazetted "Electronically operated vote counting machine" (Gazette: 191/Mas/80, 15 October 1980). His original design (using Integrated Circuits) was exhibited to the public in Government Exhibitions held in six cities across Tamil Nadu. The EVMs were commissioned in 1989 by Election Commission of India in collaboration with Electronics Corporation of India Limited. The Industrial designers of the EVMs were faculty members at the Industrial Design Centre. IIT Bombay.[6]

C. Limitations: -

A candidate can know how many people from a polling station voted for him. This is a significant issue particularly if lop-sided votes for/against a candidate are cast in individual polling stations and the winning candidate might show favouritism or hold grudge on specific areas. The Election Commission of India has stated that the manufacturers of the EVMs have developed a Totalizer unit which can connect several balloting units and would display only the overall results from an Assembly or a Lok Sabha constituency instead of votes from individual polling stations.

The control units do not electronically transmit their results back to the Election Commission, even though a simple and unconditionally secure protocol for doing this exists. The Indian EVMs are purposely designed as stand-alone units to prevent any intrusion during electronic transmission of results. Instead, the EVMs are collected in counting booths and tallied on the assigned counting day(s) in the presence of polling agents of the candidates.[1]

D. Advantages of EVM:-

1. In most of the advanced version of electronic voting machines, there are no external communication paths which make it difficult for the hackers to hack the machine and tamper the count numbers.

2. In a largely populous country where millions of people come out to cast their votes, the electronic voting machine works as a wonder. In a paper ballot, it takes a huge amount of time for everyone to cast votes.

3. Electronic voting machines are easier to carry and transport from one place to another without any hassle. One single machine can record several votes captured through that machine.

E. Disadvantages of EVM:-

1. With recent elections in the United States, many software programmers have claimed that the electronic voting machines are vulnerable to malicious programming and if it gets affected then any hacker can hack the machine and can tamper the vote counts easily.

2. Electronic voting machines can be tampered during its manufacturing and in such cases, it does not even require any hacker or malware to manipulate the actual voting.

3. Most of the electronic voting machines used in the country do not have any mechanism by which the voter can verify their identity before casting the vote due to which fake voters can cast numerous fake votes.

4. Fake display units could be installed in the electronic voting machines which would show manipulated numbers but originally fake votes could be generated from the back end.

5. It takes the time to count votes that were captured using paper ballot but people fully trust the process as high technology are also vulnerable to hackers attack.

6. The electronic voting machines which were used during the elections are susceptible to damage which will result in loss of data. [5]

IV. ANALYSIS PROBLEM ON ONLINE VOTING SYSTEM

EVM is an abbreviation for Electronics voting Machine. It is of two parts first is Ballot Unit and second is control unit. Ballot unit is situated in voting section. Balloting unit and control unit are connected by 5 meter cable. To operate this machine there is one central government author. By using ballot unit voter can enter the vote in front name and symbol of her/his choice.

EVM is suffering from the problems like hacking of machine, tempering the vote counts, fake display units,

time consuming, and losing of data. These are the major drawbacks in the EVM.

As you know the current affairs of the voting mistake in EVM in Utter Pradesh, the leader of one of the Party claims to the election board about the bad voting. The main disadvantage of EVM is it is a very time consuming and slow process. It requires huge man power, much tight security. It taking that much resources then also the EVM get hack, leader purchases the votes by providing money to the voters. Because of this bad voting is done and our nation never get the proper leader.Another most important drawback of EVM is the voting is done manually there are so many chances of mistake in counting of votes.

For overcoming this types problems we proposed this online voting system. In this online voting system the voting will be done online. It will make the election efficient, easy, less costly and more effective. It will reduces the man power, increases security. If we use this system then leader cannot purchase the voters, because he/she will not know who is doing the vote to whose party, at which time and at which place. In this system the voter can cast his/her vote from any device. The device may be anything like mobile, tablets, laptops or traditional computers. And the result will be show at the same day.

V.   APPLICATION OF ONLINE VOTING SYSTEM

- Online voting system is overcome the problem of existing system called EVM. This system is used in several type of such as government type of voting.
- Also this system is used in private sector voting like class monitor choose in school and other any kind of election.
- The system can be used anytime and from anywhere by the Voters. No one can cast votes on behalf of others and multiple times.
- Result should be display within few hours by using this system.
- The system can be used anytime and from anywhere by the Voters. No one can cast votes on behalf of others and multiple times.
- Unique Identification of voter through Aadhar number/Voter-ID.
- Extremely secure system with one time password.
- Improves voting with friendly Android Interface.
- This voting system is doesn't accept fraud voting.
- Public transparency by administrator (publication of voter id key etc.)
- To solve technical trouble like interruption of access.
- Possibility of configuration for different voting model by policy and greater performance.

VI.   PROPOSED WORK

In this proposed system voting and counting is done with the help of computer. It saves time, avoid error in counting and there will be no invalid votes. It makes the election process easy. This system includes the database tables like admin table, voter table, candidate table, result table, etc. This system includes the four sections are 1)

Admin section, 2) User section, 3) Voter application, 4) Candidate application.

The Proposed System is aadhar id based application that enhances our country with a better voting system to ensure 100 percent voting. Since the existing voting system is not having high security this project will overcome this major drawback.

This online voting system generates the list of all the people in the state above 18 years from the aadhar card database since it is made mandatory for unique voting in our country. From the aadhar id this system identifies the valid users for voting. This system allows voting to only those people whose ages are a more than 18 years. Hence by using this way no one will be left out without getting their right to vote which mostly fails in the existingsystem. Therefore 100% voting will be achieved. During the time of voting the work of voter is only to enter the aadhar id i.e aadhar card number. [1]

By using this number he/she can submit his/her vote. Instead of using the existing voting machine like Ballot paper and EVM we supply a new system which is capable of tracking the aadhar card details of the voters. It will automatically shows the successful voting message to the voter and will not allow the particular voter for second time voting. So the people can submit their vote without wasting the time with the latest technology and higher faster system than the existing system.

The major improvement quality in this proposed system is the high security level which is not available in the existing system. The security is maintained by making a voter to submit his/her vote only once. If any person tries for the second time he/she will not be able to vote since singularity feature is included in this system. And also when each voter is submitting his/her vote the count will be updated at the same time in the admin database through the server. Hence by using this method it is very difficult to cheat and submitting any kind of bad vote.[2]

This proposed system will ensure 100% voting in the whole country with high security voting system as like as the developed countries.The figure 1 shows the working of the online voting system. This is a UML diagram of proposed system.
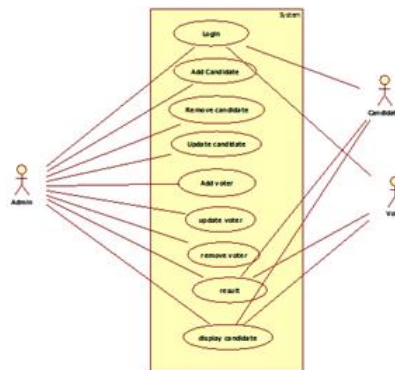

Figure1: UML diagram of online voting system.

Figure 1 shows that the admin has the all authorities like admin can login in the system, it can add the candidates, it can remove the candidates, it can updates the details of the candidate, it can add the voters, it can update the details of voters, it can remove the voters from the database and it has a permission to display the specific candidate to the voters. It will show the result of whole voting in the form of numbers and percentages. Candidate can only make the login for voting purpose, candidate can see the other candidates and candidate can watch the result. But candidate cannot make the operations like add, remove and update in the system. And voter has also the some authorities like, voter can login into the system for the voting purpose, voter can watch the candidates and voter can watch the result. But voter cannot perform the operations like add, remove and update.

The proposed system protocol has four main approaches: The voter, administrator section, voter application and candidate application. The voter which can be found at home, in a working station, in a special polling station or any other device have the function of performing the Authentication and voting. The administrator performs the function of voter and candidate registration, authorization and validation of voter, database and counting and the result. In application for voter section voter has only to fill up the form, this form will be verify by the admin section. In application for candidate section the person who interested to become the candidate of voting can be apply by filling the form and this will approved by the admin section.[1]

People who wish to cast their vote through online may also use this system since we are implementing this idea as an online system.

VII.   CONCLUSION

With less voting percentage a country will struggle to develop as choosing a right leader for the nation is very important. Currently our country lacks in the 100% of voting. This is mainly due to the failure of the security level in the existing voting system. This online application tends to make our country into a developed country by increasing the percentage of vote by developing a high security voting system. Let's create the smart voting system rather than existing slow voting system.

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