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The Suffrage-326, The People's Right to Vote

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Abstract: This paper deals with the e-voting system that facilities voter to vote from their residential places through an open source website.Online voting – or e-voting (electronic voting) – makes use of Internet in order to cast a democratic vote. To achieve this,a discussion was held on which requirements should be put on such a voting system. By using these requirements an analysis is performed on the possible design choices that have to be made, like decisions concerning transportation of data, verification of data and authentication of voters. The design primarily focuses on giving voters the possibility to verify his or her vote and to reduce the dependency. This also facilities absentee voting. Absentee voting refers to registered voters who cannot make it to the polls on Election Day because of occupation, business, studies, travel, imprisonment, illness, disability and hospitalization or resident in a long term care facility, elderly users. The main purpose of this paper is to automate the existing manual election system which uses ballot papers, EVM's, etc ink with help of computerized equipments which eliminates human interference. At the end of this paper, we concludethat the aforementioned type of voting system addresses many of the biggest problems with today's voting system and ensures high security.
Keywords: Electronic vote, Authentication, Absentee voting.

I. INTRODUCTION

The one sure way to prove being a citizen of a country is to take part in the election process held in the nation and cast your vote. Elections is not only about winning or losing but strengthening the country. So we work with election management bodies to make voting mode accessible to everyone all around the natin, to speed up election results, to enfranchise votes and to streamline logistics and operations.

A. Manual Vs Automated

Technology has changed the world to that point that one of the largest differences between the old manual voting system and the new automated election system (AES) is apparent to the voter.

Preciously, one polling precinct had approximately 200 voters. The voter that proceeds to his precinct and the board of election inspectors (BEI) /teachers will look for his/her name or look of voters and verify his/her photography ,specific signature against the voters registration record (VRR). When it is determined that he indeed is a registered voter of precinct he will be given a ballot. The voter had to write down the names of their elected candidates. Election management system, as described above, can lead to many manual errors. It is time consuming .The purpose of "THESUFFRAGE" is to develop on error free, secure, reliable and fast management system. This automated system makes use of computerized equipments to store the data for a longer period with easy accessing. It is manipulation of the same. It doesn't make use of ballots rather the voter is asked to enter his voter id, he/she is verified by an automated OTP generator. Also there are various ways through which counting process can be done rather than making use of ballots to count.

B. Idea of Suffrage-326

The scope of Suffrage is to provide the management framework to support the planning , execution, monitoring and output assessment of all the activities outlined within an electoral cycle. This project aims to increase integrity in the democratic process by offering users-entered technologies with usability. This project only focuses on the MLC elections where the voter is given the choice of opting their candidates as first preference, second reference and third preference. For all voters, poll workers and election administrators. Whether it is identify management, voter databases, precinct level scanner, results consolidation and transmission, we try to provide solutions including security and transparency measures optimizing every one of the processes that compromise an election. The main purpose of this study is to boost the turn-out of votes. For this purpose we have to view all the aspects responsible for low turn-out. Some people hesitate to vote due to weather conditions in different areas during the election, youngsters of age group 18 – 24 having no charm to cast the vote. People who are outside of their town/city don't want to come to their area for just casting the votes due to the expenses and trouble of transportation. Same situation is also for those who are on duty during the election, they don't have any interest to cast their vote during job or they don't have facility to submit their vote.

A second purpose is to make it more difficult to commit fraud and cheating during an election. In a manual system, sometimes people are registered in more than one area and can thus cast the vote multiple times. By creating an online database covering the country it will be possible to eliminate the double casting of votes. Insome areas, officials of the Election Commission themselves cast votes and after the end of election they adjust these votes from the voter's list. Hence, they manipulate the result of the election. There is clearly a need of a system that could reduce the authority of officials and could sustain the true nature of voting. It would also give people options to cast an empty vote if they don't like to give the vote to any of the candidates.

II. METHODOLOGIES

A. Storage Of Required Voter Records In The Backend Module

1) Ward details

2) Candidate details

3) Voter details

The election process in India proceeds only with the records of wards, candidates, and voters. In our project we have pre-requisitely stored all of these record details in the backend database. Basically, it is not possible for all of the voters to go and votes in one particular place, so larger areas are divided into subareas. These areas are called words. People are allocated to these words according to their residential address. In our project we have stored. Ward details in backend database such as ward_number and ward_name.

Candidate is a person, who nominates himself for the election process and is being elected by the people. We have stored candidates details such as cand_number, cand_name, cand_gendercand_nation, cand_party, cand_age in the backend.

We have stored voter details such as vot_id, vot_name, vot_nation, vot_gender, vot_aadhar, vot_age in the backend.

B. Voter Login Module

In order for a voter to get involved in the election process, he has to login. Firstly, the voter has to open the election web portal which displays the homepage regarding election etc. Ones he/she clicks the login button, he/she is directed to the login page where he is supposed to enter his votes ID. This voter ID is further verified.

The voter is allowed to choose the candidate only once. Any additional attempts to vote for the candidates are not permitted.

In order to check whether the person is a valid voter or not, OTP verification is done as follows. Once the voter ID is entered, the ID is cross-checked with the backend database. If the ID is present, an OTP is sent to the votes mobile number by Aadhaar link. Once the voter receive the OTP and he/she is supposed to re-entered the received OTP. If the sent and received OTP match, the voter is valid and is directed to the next process.

Once the voter is directed to the page where he is supposed to choose the Candidate of his choice. He is allowed to stay on this page only for a particular time, say 1 or 2 minutes. As soon as this page opens up for the voter, the time starts and it goes till the specified time and the pages closes after the time ends.

C. Admin Login Module

Admin is given access to all the databases present in the backend. In order to verify all these details, he has to login through admin login. Once he logins, he has the right to ass/remove candidates, add/remove parties, displays results etc.

After all the voters have gone through the election process and casted their vote, the admin logins and displays the result of the election process using bar graphs with the approximate number of votes each candidates has received.

Fig : Block Diagram

III. LITERATURE SURVEY

The paper[1], the authors Himanshu Agarwal and G.N.Pandey proposed aadhar id based online voting system for Indian election. The proposedmodel has a greater security in the sense that voter high security password is confirmed before the vote is accepted in the main database of Election Commission of India.

The paper [2], the author Firas I. Hazzaa, SeifedineKadr proposed, the design and development of a web-based voting system using fingerprint in order to provide a high performance with high security tothe voting system also we use web technology to make the voting system more practical. This system has provided an efficient way to cast votes, free of fraud, and make the system more trustable, economic and fast.

The paper [3], the authorPashine, ninave and kelapure proposed an android platform for online voting system. This application provide diversion of long process also provide security to the voter and its voter comfort system voter no need to go polling booth easily vote for candidate in hometown itself. And also provide the option of gesture recognition but authentication is the problem of android platform.

IV. RESULT

Formerly, the voter has tocheck in to our website wherein he is asked to login. The voter has to login using his voter ID as well as aadhar number. The voter is verified, if he is a valid voter he is directed to the next page. Else, he has to re-login.

After logging in as a valid voter, he has to go through the process of voter verification. Voter verification is done by generating a 4-digit One Time Password(OTP) to the voter's mobile. The voter is verified once he re-enters the received OTP. After verification, he is directed to the next page where he is allowed to choose his candidate. Else, he has to re-enter the OTP. During this process, the OTP is valid only for the duration of 5 minutes
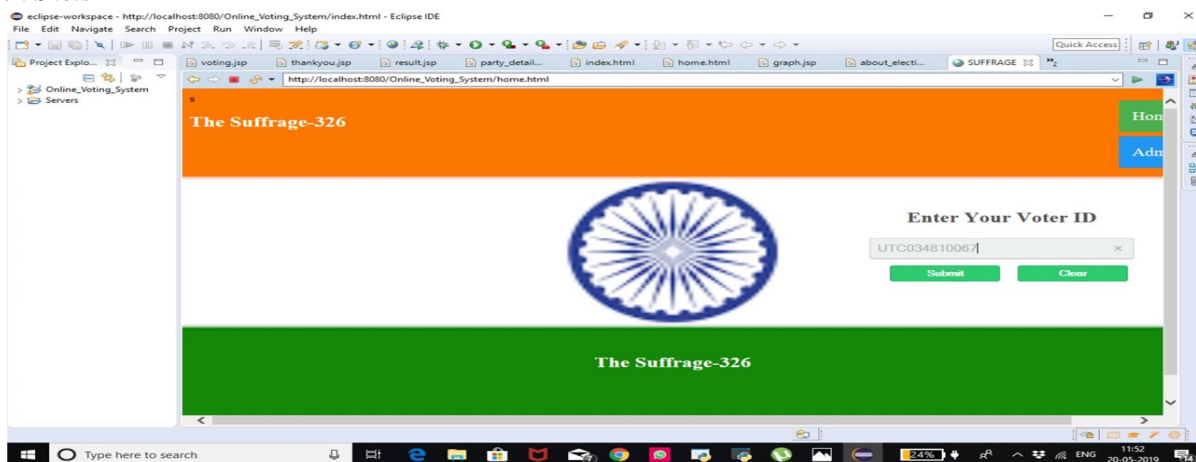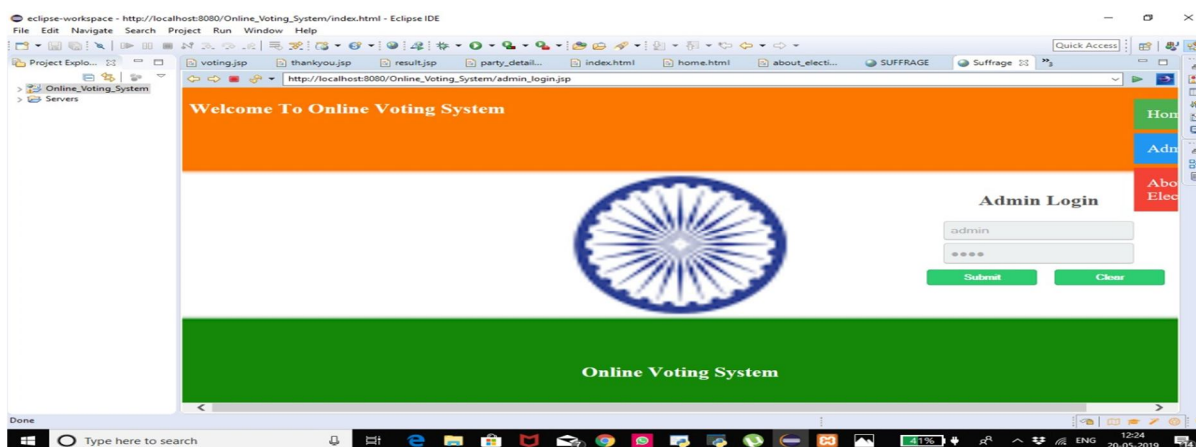
A. Screen Shots

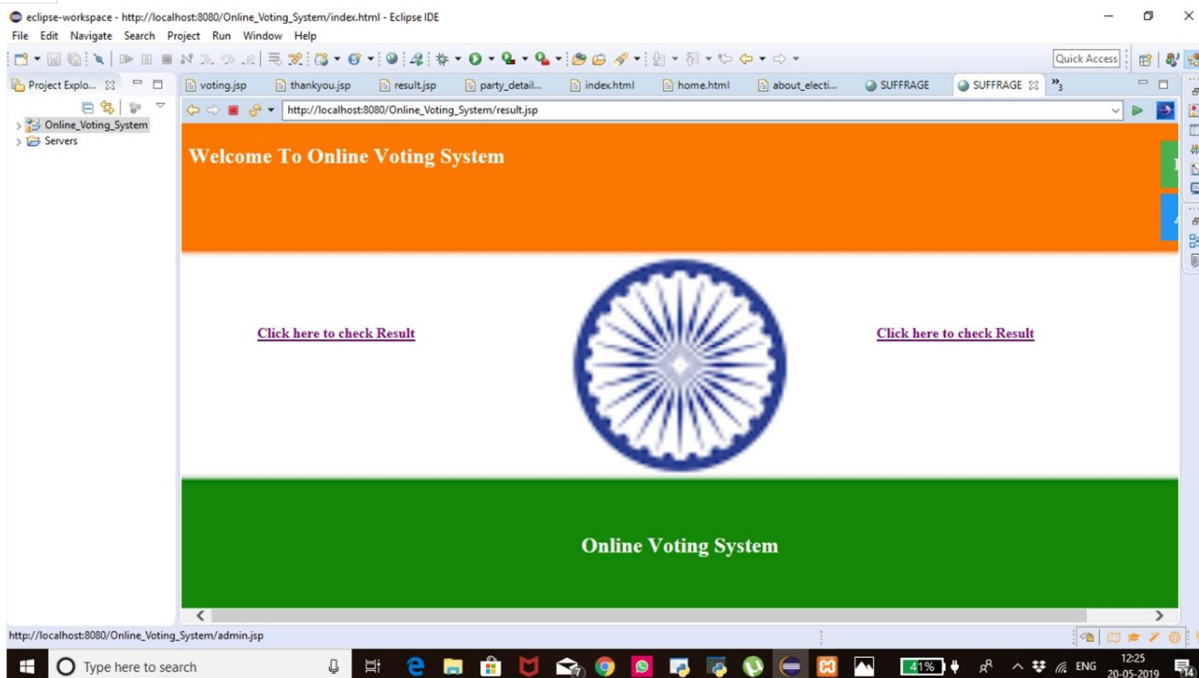Fig 1: Snapshot 1

Fig 2: Snapshot 2
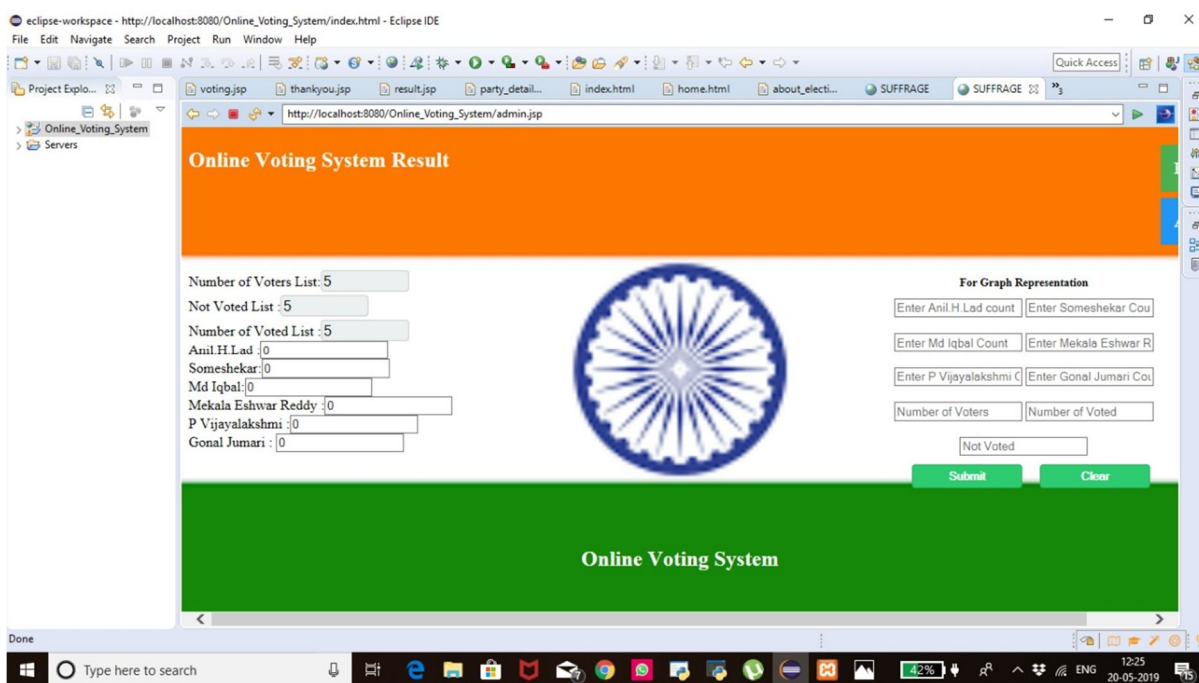
Fig 3: Snapshot 3

Fig 4: Snapshot 4

Once the voter is logged in and verified successfully, he is directed to the page where he is displayed the list of candidates who are nominated in the MLC election process. The voter has the choice of choosing the candidates according to their preferences. The time given to voter for this process of choosing candidates is only 1 minute. The page automatically closes once the session time is out. Once, he has casted his vote to the candidate of his

choice, he is done with responsibility of voting and hence receives a message to his mobile telling Thank You for casting your vote. After the entire process of election is completed within the specified time, the admin logs into the election website and displays the result of the held MLC election process.

B. Advantages

1) Voters have the opportunity to vote quickly and conveniently.
2) The system can be used independent of the platform and device, be it on a smartphone, tablet or computer.
3) People with disabilities can vote or take part in elections online without the help of a third party
4) Clear user guidance prevents formal errors such as illegible answers, missing signatures, incorrectly completed forms or invalid lists in the voting and election process.
5) Voters receive confirmation that their vote has been correctly cast and saved in the ballot box.
6) Votes can be counted quickly and precisely.
7) E-voting is secure: votes are only transmitted and saved in encrypted and anonymized form. Sophisticated algorithms prevent votes from being manipulated without being detected.

V. CONCLUSION

On implementing this paper, an user friendly and secure online voting system comes into an existence. This paper is based on online Aadhaar voting system. This is done by verifying the voter/candidate with his voter id and Aadhaar number and later on it securely keeps track of all of the votes casted by the candidates and finally the result of the election. It overcomes most of the voter has to go particular ward and cast his vote. All of this is time consuming. Implementation of this paper will have huge advantages over manual system such as time factor, reducing the paper work, quick announcement of results, flexible to cast vote from any distinct places and many more. Thus, this secure online voting system is hugely helpful in many ways and quite easier for the candidates to cast their valuable votes.

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