



## Online Voting System

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### ABSTRACT

The online voting System is a web based application which allows the people to vote during the election. The system has a centralized database to keep records of all the voters and candidates and final results. This Online voting System is based on SMS sending to voters, to confirmation of vote. This web based system is time saving with reduced workload and provides security for the data. During the election, the election commission of India has introduced a new method of polling by online voting system (OVS). The election commission will maintain this website. This is a simple, safe and secure method that takes minimum of time. The main goal of voting system (in a scenario involving the citizens of a given country) is to come up with leaders of the people's choice. The objective of the system is a replacement of the traditional system that is in existence. This smart system reduces the time for voting and also the system is reliable, and faster. In this system the voter's username and password will be sent through SMS (Short Message Service). The voter cast their vote with One Time Password (OTP) sent their mobile number. Database maintained by this system usually contains the voter's information, candidate information, and the final result of total votes. The proposed system may improve the security and reduce the time in announcing the results.

Keywords: Vote, Online Voting System, SMS, OTP

### Existing System

The voting system currently being used by the association 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. The electoral officials gather all the votes being cast into a ballot box. At the end of the elections, he electoral officials converge and count the votes cast for each candidate and determine the winner of each election category. The existing manual voting system consumes more time for vote casting. Voter has to wait for vote polling station to vote for a right candidate. The election officers has to be check the voter, this voter can vote in this booth then check voter ID present in voters list of booth those are information will be present then the voter can vote in that booth. The voter had to stand in the queue to cast his vote. All the work is done in paper ballot so it is very hard to locate a particular candidate, some voters cast their votes for all candidates. To overcome of all these problems we have to implement a web application, which is helpful for Voting from anywhere.

### Proposed System

The proposed system is a web based application for voting via online which makes use of SMS to send user name and password to the voters. The online voting system will manages the voter's details, candidate details. The main feature of the project includes voter's information and candidate information, voter can login and use his/her voting rights. The system can manage the information data very efficiently. The proposed system is more reliable, faster, accurate and easy to handle compared to existing manual system. It helps to computerize everything and reducing the errors as compare to manual voting system. The flowchart for the proposed system is shown in figure 1.

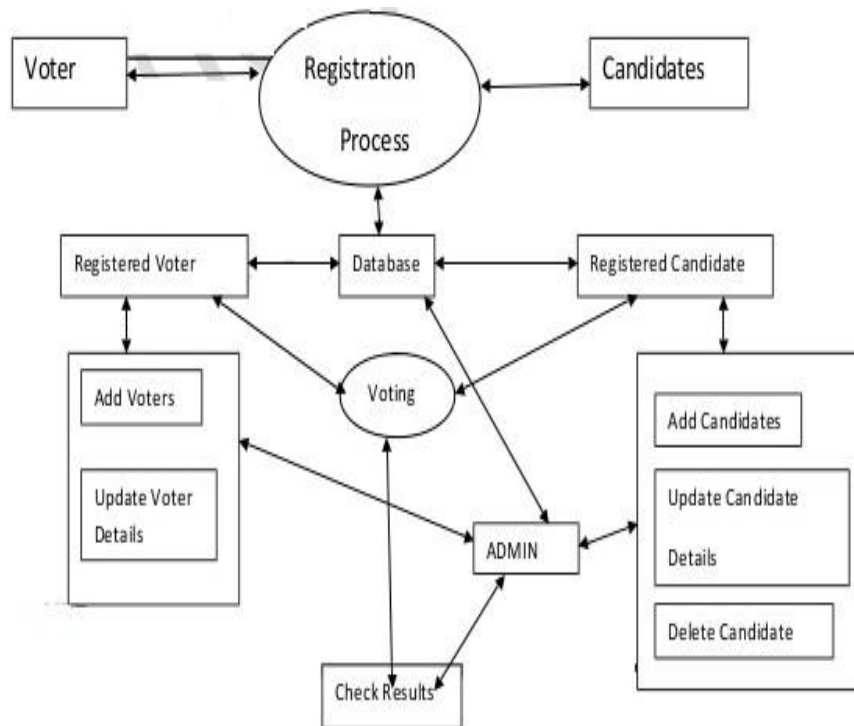


Figure 1. Flow chart of a proposed online voting system

The proposed system consists of 3 main modules, which are listed below.

*i. Administrative module*

Online voting is a voting system by which any voter can use his/her voting rights from anywhere in India. Online voting for association contains:

- Voter's information in database.
- Voter's Names with ID.
- Voter's vote in a database.
- Calculation of total number of votes

The various operational works that are done in the system are:

- Recording information of the Voter in Voter database.
- Checking of information filled by voter.
- Discard the false information.

*ii. Nominee Candidate module*

The Nominee details will be updated by the admin for the post of board of director and manager. The candidate will submit their own details and the admin maintain all of background details of the particular nominee and uploaded their information in correct procedure. In order to, the user or voter can view the nominee details.

*iii. User/Voter module*

The user after their registration only can login for voting. The user will view nominee details with their image before they can vote. After knowing the nominee details the user can login for voting. They should vote for board of director and the manager in the association. The count will take for each voting. After voting the particular person/user cannot logon to vote again.

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## Types of Testing

**System Testing:** Software testing is a critical element of software quality assurance and represents the ultimate review of specification, design, and coding. The user tests the developed system and changes are made according to their needs. The testing phase involves the testing developed system using various kinds of data. Testing is vital to the success of the system. System testing makes a logical assumption that if all the parts of the system are correct, the goal will be successfully achieved. The candidate system is subject to a variety of tests such as recover, security and usability tests. A series of testing is performed for the proposed system before the system is ready for the user acceptance testing. Implementation ends with formal tests. The test data are very crucial to this process. They must be realistic and cover extreme conditions are well. Ideally, vary alternative path through the program should be exercised at least once beyond the test data. The system test must involve all the elements that compose the system including program validation checking, files, and forms and triggers procedures.

**Component testing:** Testing of individual program components i.e. the each module is tested. Component or unit testing is the process of testing individual components in isolation. It is a defect testing process.

### Testing Strategies

Following are few of the testing strategies used for the testing purpose:

- Unit testing.
- Validation testing.
- Output testing.
- User acceptance testing.

#### i. Unit Testing

Unit testing focuses effort on the smallest unit of software design of the module. This is also known as 'Module Testing'. The module of FSA system is tested separately. This testing was carried out during programming stage itself in this testing each module is found to be working satisfactorily with regards to the expected output from the module.

#### ii. Validating Testing

At the culmination of integration testing, software is completely assembled as a package, interfacing errors have been uncovered and corrected and final series of software test begins. Validation testing can be defined in many ways, but a simple definition is that validation succeeds when the software function in a manner that can be reasonably expected by the customer.

After validation test has been conducted, one of the two possible conditions exists, the functions are performance characteristics confirm to specification and are accepted or a deviation from specification is uncovered and deficiency list is created. Proposed system under consideration has been tested using validation testing and found to be working satisfactorily.

#### iii. Output Testing

After performing the validation testing the next test is output testing of the proposed system since no system could be useful if it does not produce the required output in the specified format. Asking the user about the format required by them tests the outputs generated or displayed by the system under consideration. Here, the output format is considered in two ways. One on-screen and other is printed format. The output format on the screen is found to be correct as the format was designed in the system phase according to the user's needs. Hence, output testing does not result in any correction in the system.

#### iv. User Acceptance Testing

User acceptance of a system is the key factory for the success of any system. The system under consideration is tested for user acceptance by constantly keeping in touch with the perspective system. Users at time of developing can make changes wherever required.

Taking various kinds of test data does the above tests. Preparation of the test data places a vital role in system testing. After preparing the test data the system under study is tested using the same. While testing the system by using the test, errors are uncovered. They are then corrected and noted down for future use. The admin login page and dashboard developed for the online voting systems are shown in figures 2 and 3, respectively.

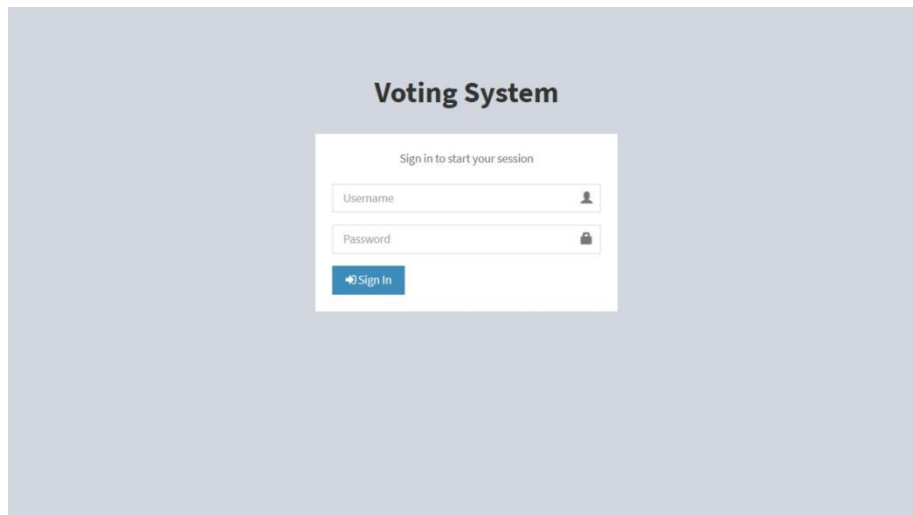


Figure.2: Admin login page

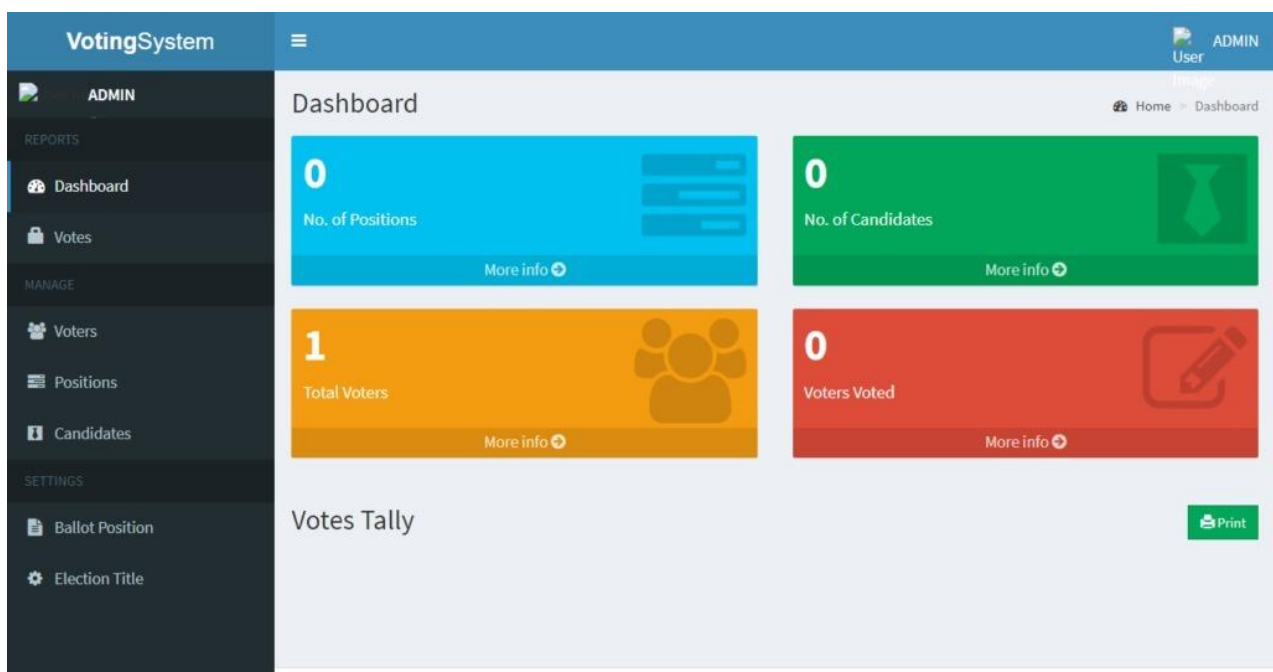


Figure.3: Dashboard

## CONCLUSION

This online Voting system will manage the Voter's information by which voter can login and use his voting rights. The system will incorporate all features of voting system. It provides the tools for maintaining voter's vote to every party and it count total number of votes for the every party. The proposed online voting system reduces the cost and time of the current voting process. It is very easy to use and it is very less time consuming. It is very easy to debug. The proposed voting system helps the voter to cast their vote easily, and can be implemented to the entire India.

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