



# ONLINE VOTING SYSTEM WITH OTP AUTHENTICATION

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**Abstract:** This paper introduces an online voting system with OTP authentication in which the election data is stored and processed. To achieve a higher level of security, one level of authentication techniques is used. level authentication is done using the One Time Password (OTP) principle. After the first level of authentication is done, a pseudo-random number is generated using the OTP principle that is used by the voter while casting the vote. These techniques provide a more secure platform thus overcoming vulnerabilities of the traditional voting system.

## 1. INTRODUCTION

Considering how far e-commerce has come there should be provision for people to vote online with good security and convenience. In it is revealed that there is raising interest for voting on social networking tools like Facebook or Twitter and through SMS. This system allows users to send their votes directly to web services, for its computation and display the results to the voters which gives some decision power to voters. Online voting increases participation in voting as people can cast their vote from any place, any time. “ONLINE VOTING SYSTEM WITH OTP AUTHENTICATION ” has been developed using ASP.Net as front end and SQL Server as back end and coding language vb.net. The project aims to develop for Society Public give their voting through online for select their desire candidate their role in the society. The proposed project is developed to automate the Complete Operations of society voting. Registration is mainly done by the system Administrator he has the power to add new Registered users based on categories and provide unique IDs and passwords and the admin can enter the candidate list with their image and complete information. The Registered user can log in to this application using user id and password and they can view the all parties symbol and candidate name and they can vote corresponding their desired candidate through the online the voting proposal will pass through the online process and the admin of the website can view the winner's list and information reports based on polling vote This system has been developed to make the system user-friendly thus reducing the manual work. The system has been developed with advanced features. The advantages of using this application are time-saving and voting percentage can be increased and high security can be implied for preventing false voting.

### **A. Online -voting technique**

In One Time Password principle produces a pseudorandom password each time the user tries to log on. This OTP will be sent to the voter's registered E-mail id. An OTP is a password that is only valid for a single login session thus improving security.

### **B. Online -voting for better security**

This system provides better security as it ensures that no voter is allowed to vote more than once. Also, the system takes care that no voter can determine for whom anyone else voted and no voter can duplicate anyone else's vote. Every voter can make sure his/her vote is cast.

## **II. LITERATURE STUDY**

### **A. Direct Recording Electronic (DRE) voting systems:**

DRE systems eliminate paper ballots from the voting process. As with traditional elections, voters go to their home precinct and prove that they are allowed to vote there, perhaps by presenting an ID card, although some states allow voters to cast votes without any identification at all. After this, the voter is typically given a PIN, a smartcard, or some other token that allows them to approach a voting terminal, enter the token, and then vote for their candidates of choice. When the voter's selection is complete, DRE systems will typically present a summary of the voter's selections, giving them a final chance to make changes. After this, the ballot is "cast" and the voter is free to leave.

### **B. Electronic vote collector (EVC) :**

In this platform, the voters deposit their votes on their personal computers, while a mobile device passes close to those machines and collects their stored votes, under the coordination of a management software working in a stationary server. It is presented as a taxonomy of online Voting systems, and the authors present requirements for the project and implementation of online Voting systems. It is described as a local e-Voting system that eliminates physical ballot-boxes, reducing costs and efforts, and consequently being less time-consuming. It is described experimentation about online Voting by cell phones, by SMS protocol.

### **C. Online Voting System with Multi Security using Biometric and Steganography:**

Highly Secure Online Voting System with Multi Security using Biometric and Steganography, the basic idea is to merge the secret key with the cover image based on a core image. The result of this process produces a stego image that looks quite similar to the cover image. The core image is a biometric measure, such as a fingerprint image. The stego image is extracted at the server side to perform the voter authentication function. It used a secret message with a 288-bit length. As the actual secret key is never embedded in the stego image, there will be no chance of predicting the secret key from it.

## **III. SYSTEM ARCHITECTURE**

- Authentication
- Add Party Details
- Add Election Details
- User Registration
- Voting Details
- Voting Result
- Report

### ***Authentication***

This module is mainly based on user/admin. The system will check the user/admin user name and password for authentication. After the verification for authorization, the user/admin can be able to precede the process. All works are done under his control.

### ***Add Party Details***

This modules admin can enter the Party details in the form admin has to fill with Party details such as name, address, DOJ, Party Symbol, posting and experience, year of experience. This entire information is stored in tables Party details.

### ***User Registration***

This module is fully based on User control User can register the User's registration form. User has to fill with User personal details such as name, address, DOJ, Voter ID, Aaddhar number, and the mobile number and mail Id. And also These User details will maintain in a separate table.

### ***Voting Details***

This module is fully based on User control this module checks the user name and password for the User for authentication. After the verification for authorization, they can be able to put voting for their desired candidate these all voting information is stored in the voting table.

### ***User Feedback***

This module is fully based on User control User can log on to the system using the user name and password provided by management, System will check the user name and password for authentication after the verification for authorization the User can be able to precede the feedback. This entire feedback information is stored in tables feedback details.

### ***Admin Result***

This module helps to admin to know the winner result. This module interacts with the database automatically calculates the total of vote details from the voting table and the result will pass through the admin of the application can view the winner's list and information efficient way.

### ***Report***

Admin can generate different reports such as Party report, and User Details report, and voting report. Report generation module is used to generate the reports through crystal report

## **3.1 Existing System**

The present system is much time-consuming. Hence that more human resource is needed and a huge amount of time is needed for it. The possibility of calculation error is more in the present system. This project is mainly carried out because it is very difficult to maintain all the voting polling information. The voting percentage can be decreased and no security can be implied for preventing false voting. The present system carries a paper-based voting system so the User has selected the desired candidate in paper format and they have to put it in polling Box so it's very difficult to count the voting list manually.

### *Disadvantages*

- ❖ Time-consuming process
- ❖ Needs of manpower
- ❖ Manual work
- ❖ Difficult to process winner list

## 3.2 Proposed System

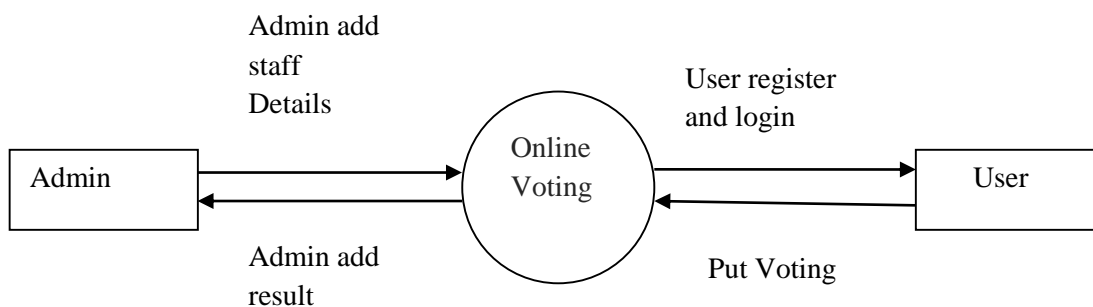
The proposed system will develop a website that generates online voting and voter vote for the eligible candidates. In this project, all the details of the candidate are stored by the administrator of the society. The end user can easily get the required specifications by using those details. So, that the system is developed to reduce the manual work involved in the voting. This proposed online voting will pass voting information through web services and the admin of the website can view the winner's list and information reports based on polling votes this helps to facilitate the speed of the process.

### *ADVANTAGES*

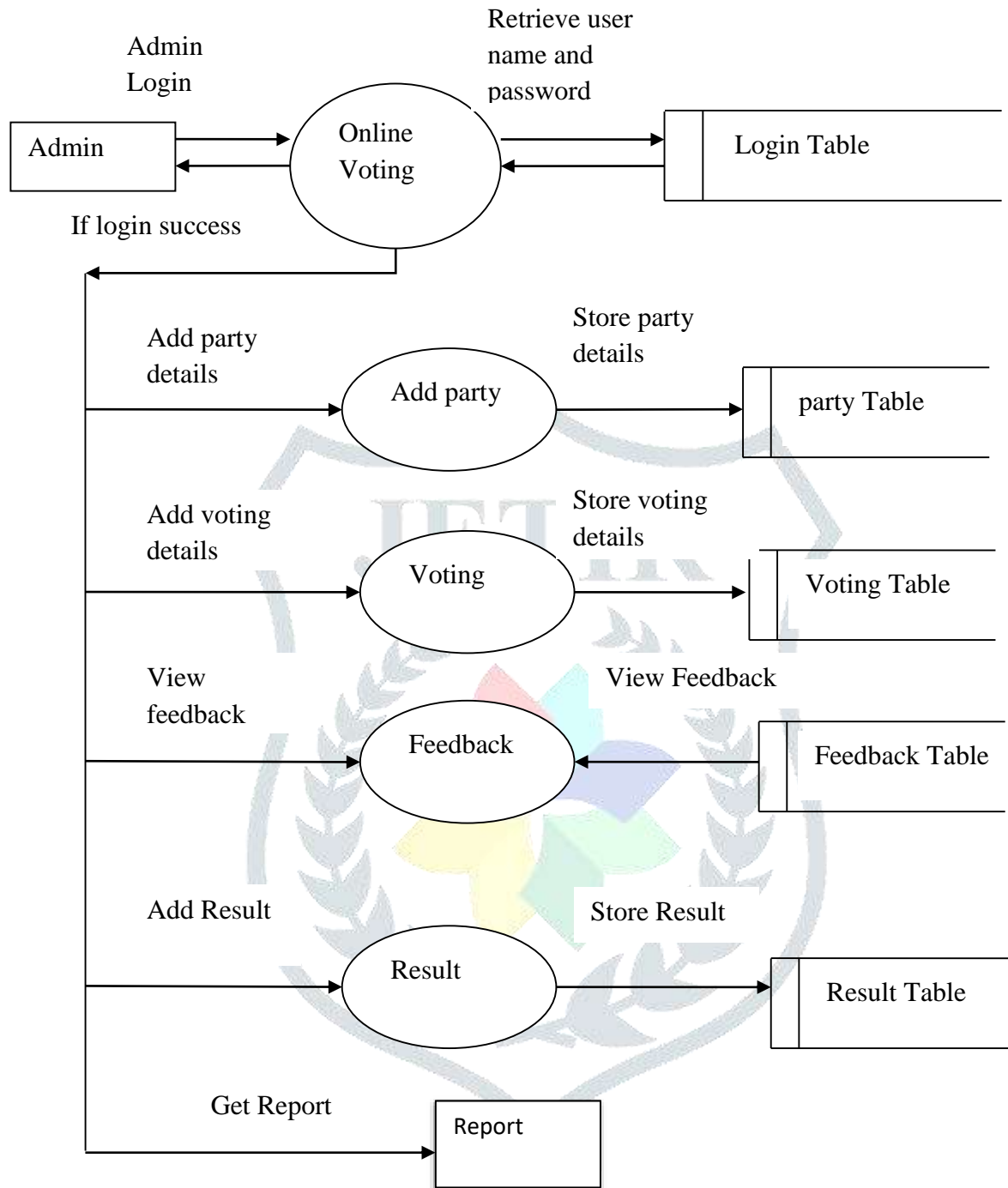
- ❖ It is faster and more accurate
- ❖ It is user friendly
- ❖ Security is maintained
- ❖ Automatically calculate winner list based on the vote count
- ❖ the voting percentage can be increased
- ❖ Preventing false voting.

### **DATA FLOW DIAGRAM**

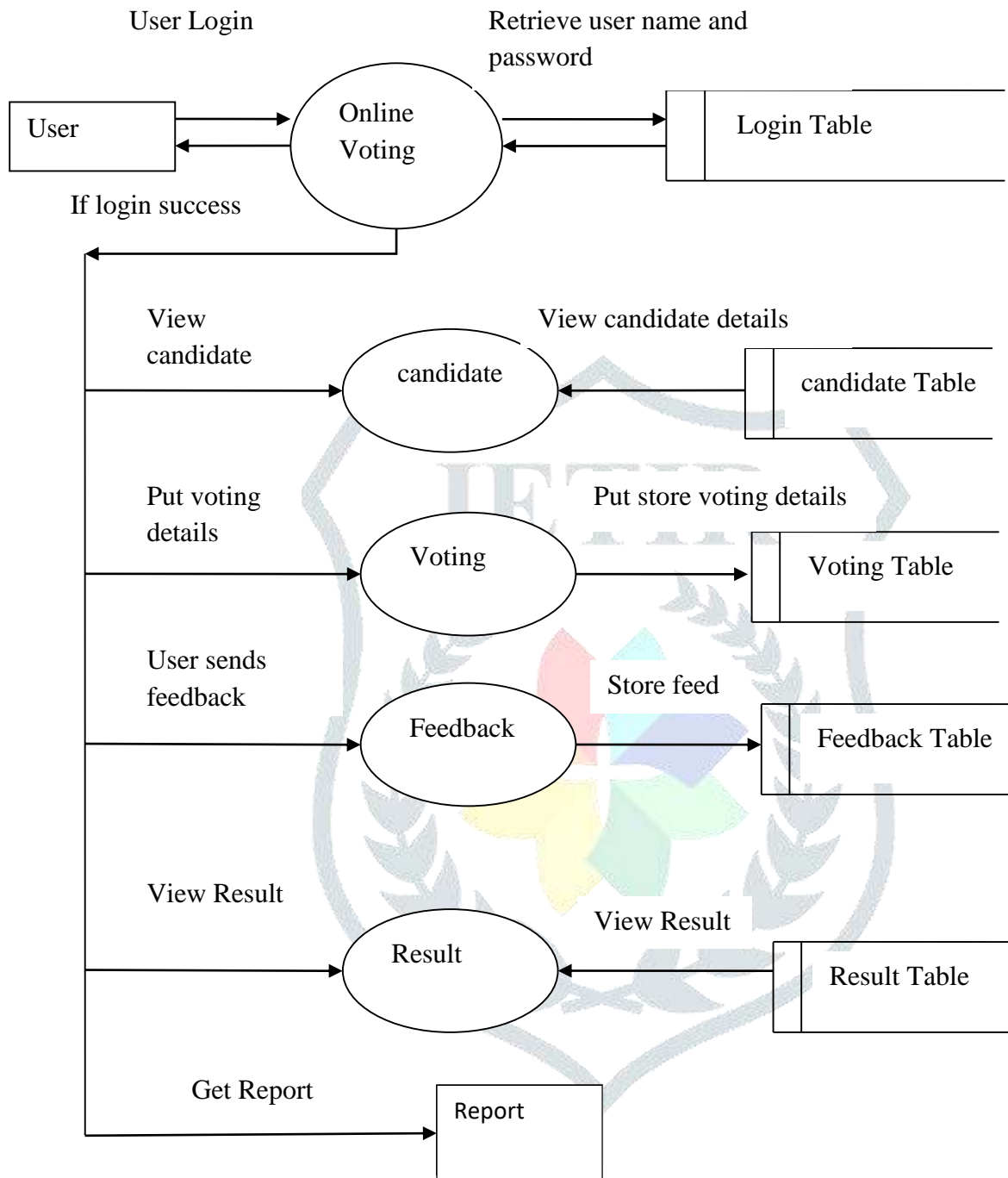
#### *Level 0*



*Level 1:*



**Level 2**



**CONCLUSION**

This Online Voting system will manage the Voter's information by which voters can log in and use their voting rights. The system will incorporate all features of the Voting system. It provides the tools for maintaining voters' votes to every party and it counts the total no. of votes of every party. There is a DATABASE that is maintained by the ELECTION COMMISSION OF INDIA in which all the names of the voter with complete information is stored.

## SCOPE OF FUTURE DEVELOPMENT

The scope of the project is that it will use the ID and password created by the user to register in the voting site, through all the details of voters are saved in the database. And it will act as the main security to the votes system. Advanced technology: It is an advanced technology used nowadays. It increases the internet knowledge of the users which is very necessary for the current generation.

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