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**Faculty of Technology, Department of Computer
Engineering**

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Subject: System Design Practice

Project Title:

“OnlineVotingSystem”

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CERTIFICATE

This is to certify System Design Practice project entitled "**OnlineVotingSystem**" is the bonafied report of work carried out by **Nihar Parmar (CE081)** and **Nilay Parmar (CE082)** of Computer Engineering, Semester VI, academic year 2019-2020, under our supervision and guidance.

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1. Abstract

In today's era everything has become online. No one has that time that they stand in a queue for voting right? So here's a solution to that. We have a created project named online voting system. This is very helpful to the users who don't have time to stand in queue and do voting.

In this system the admin adds the candidate data as well as the party data also the voters data are added by admin so the data will be verified such as voterID, Aadhar Card and other useful information.

When a user wants to vote then the user will get an OTP to their registered mobile number and the verification is done so by that way a user can vote. Once the vote event is ended the results are declared accordingly.

The online voting system is useful because the user can vote at at anytime and each and every data is verified. The vote casted will be available to users once voting is ended. All the data is handled by admin.

2. Introduction Of Project

The “Online Voting System” will allow the registered user to vote online. The whole voting process is done online and it is user-friendly web application. Once a user has voted then voting cannot be done again. The system shows the candidate to the user from the same city the user has registered.

The user can cast a vote to the candidate shown to them on screen and when user selects the candidate and clicks the vote button the user will get an otp to their registered mobile no. and then user needs to verify that otp and then the vote is casted successfully after verification.

The system is for candidates and voters. The system is handled by user and to cast a vote the user needs to register first and then voting can be done.

2.1 Tools and Technologies used:

1. Visual Studio 2015
2. MVC 5

3. Software Requirement Specification

R1. Registration and login

Input : The voter needs to provide all necessary details to admin

Output : After registration voter can login through voterID and password.

R2. Manage Voters

The admin manages the voters. The voter details can be added updated and deleted.

R2.1 : Add voters

Input : The admin adds the voter details provided by the voter.

Output : The voter details are added successfully.

R2.2 : Delete Voters

Input : The voterID is entered and the voter details are shown.

Output : The voter details are deleted successfully.

R2.3 : View Voters

Output : All the voters are shown.

R3 : Manage Candidates

The admin manages the candidates. It adds the candidate details, updates it and can also delete details.

R3.1 : Add Candidates

Input : The admin adds the candidate details provided by the candidate.

Output : The candidate details are added successfully.

R3.2 : View Candidates

Output : All the candidates are shown.

R3.3 : Add Party

Input : The admin adds the party details provided by the party members.

Output : The party details are added successfully.

R3.4 : Delete Party details

Input : The PartyID is entered and the details are shown.

Output : The party details are deleted successfully.

R3.5 : View Parties

Output : All the Parties are shown.

R4 : Voting module

Input : Voter selects candidate and then otp verification is done.

Output : The voting is done successfully.

R5 : Result module

Input : The voting is event after some time interval.

Output : The candidates with votes are shown.

3.1 Non Functional Requirements

Performance and scalability. How fast does the system return results. How much will this performance change with higher workloads.

Portability and compatibility. Which hardware, operating systems, browsers, and their versions does the software run on? Does it conflict with other applications and processes within these environments.

Reliability, availability, maintainability. How often does the system experience critical failures? and how much time is it available to users against downtimes.

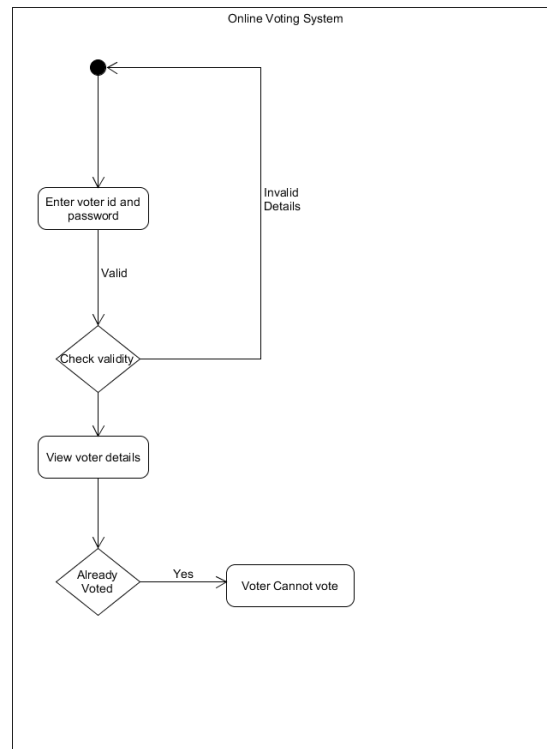
Security. How are the system and its data protected against attacks.

Localization. Does the system match local specifics.

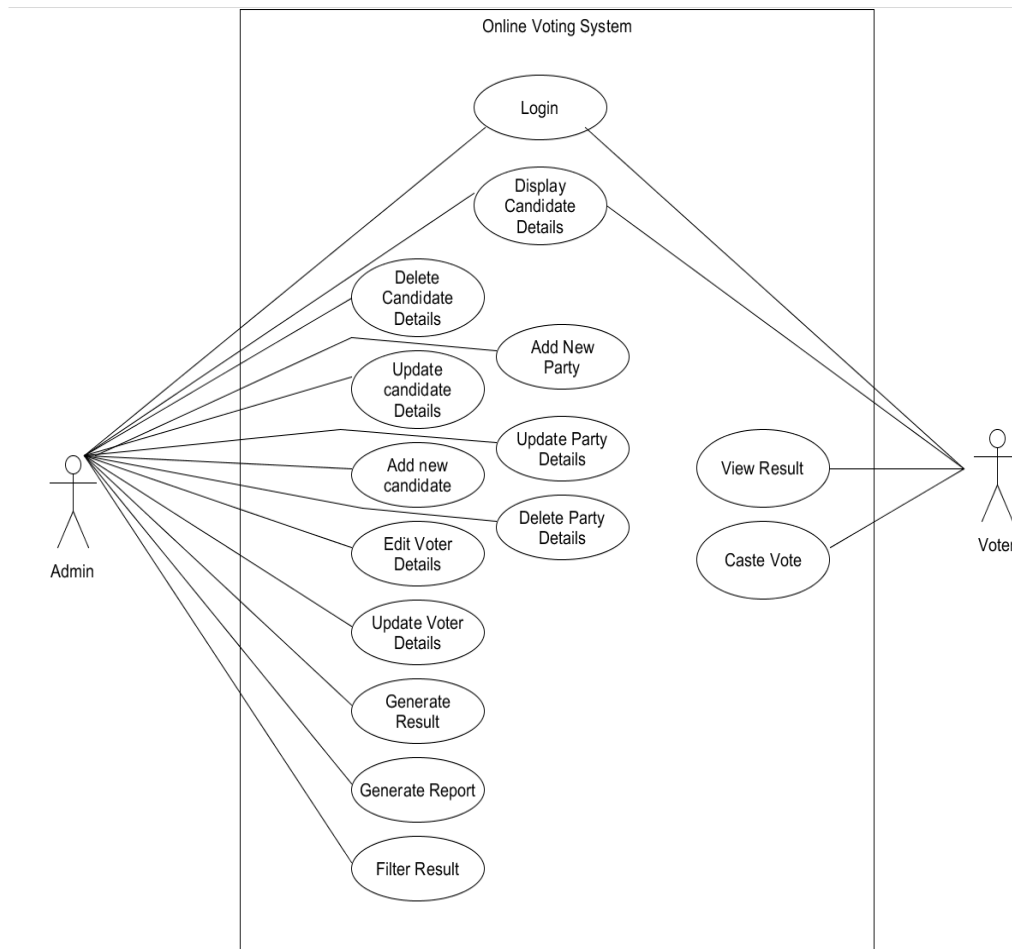
Usability. How easy is it for a user to use the system

4 Design

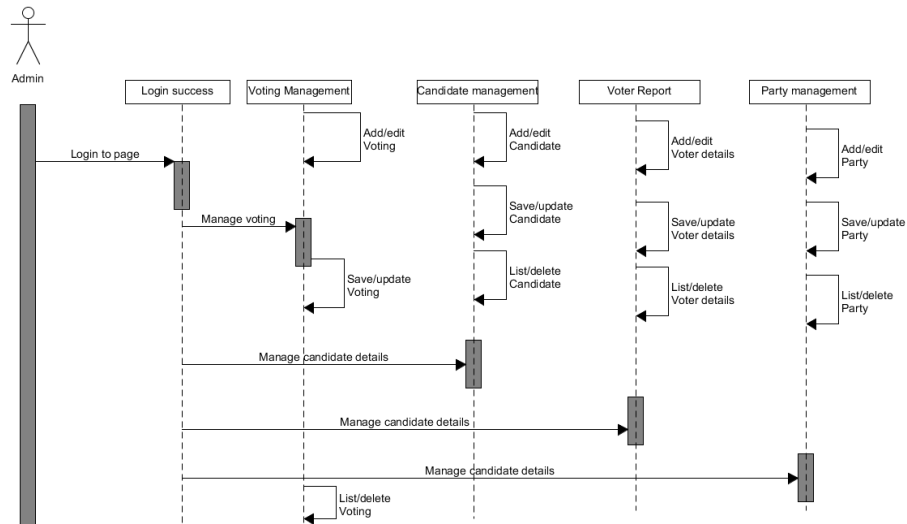
4.1 Activity Diagram



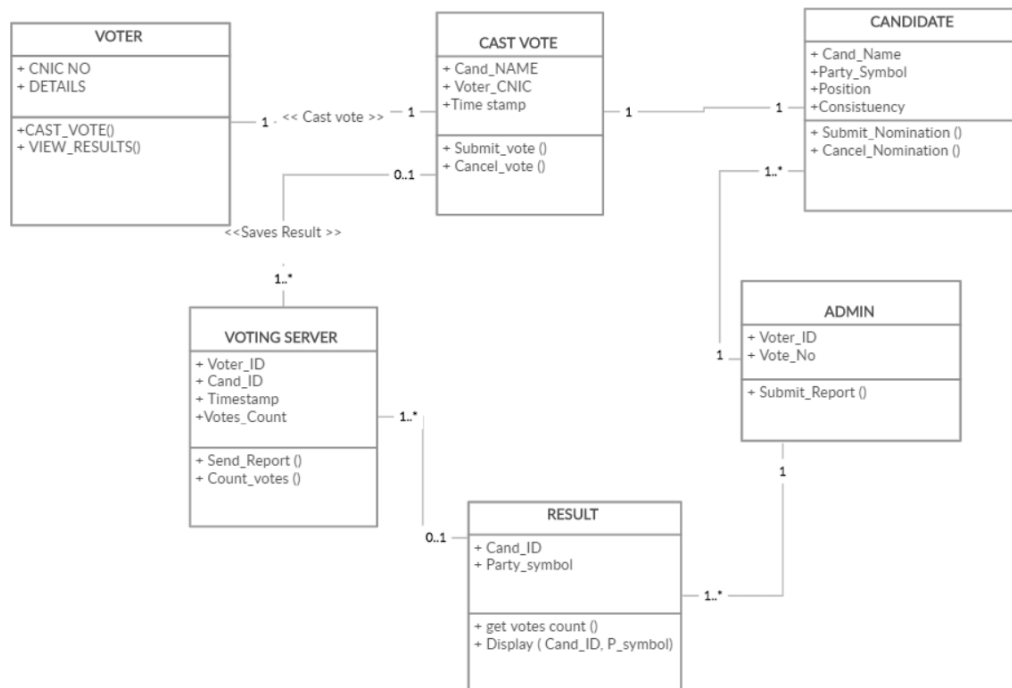
4.2 Use Case Diagram



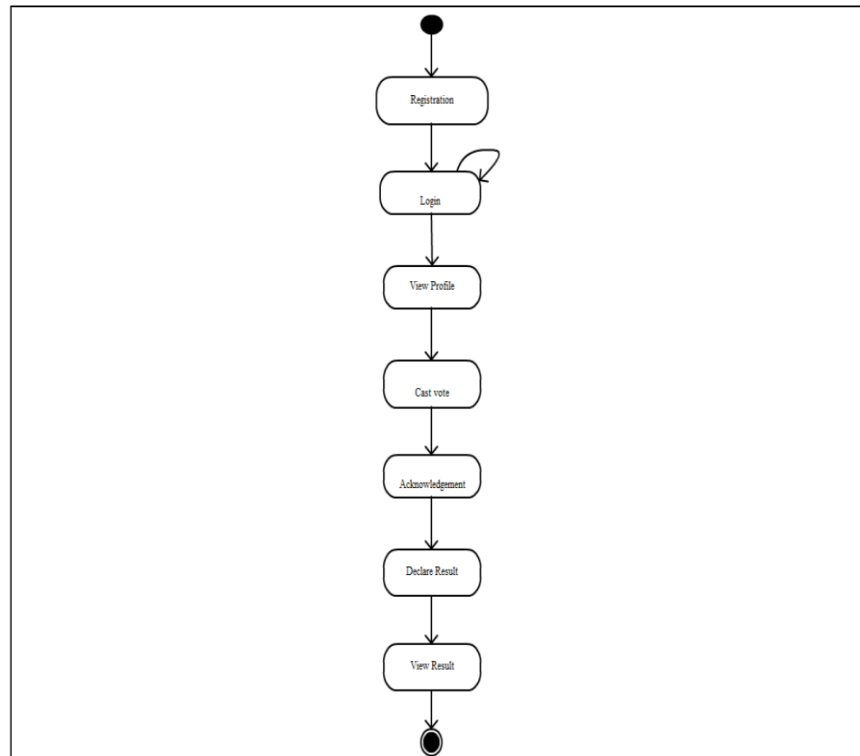
4.3 Sequence Diagram



4.4 Class Diagram



4.5 State Diagram



4.6 Data Dictionary

1. Voter

Name	Datatype	Size	Description
VoterID	Varchar	50	Primary Key

OnlineVotingSystem

AadharID	Varchar	50	
Name	Varchar	70	
Password	Varchar	70	
Email	Varchar	70	
Mobile No.	Varchar	20	
D.O.B	Date		
City	Varchar	20	
State	Varchar	20	
Image	Varchar	MAX	
Role	Varchar	MAX	
isVoted	bit		
isAllowed	bit		

2. Candidate

Name	Datatype	Size	Description
CandidateID	Varchar	50	Primary Key

Name	Varchar	MAX	
Password	Varchar	MAX	
Email	Varchar	MAX	
Mobile No.	Varchar	MAX	
D.O.B	Date		
City	Varchar	MAX	
State	Varchar	MAX	
Image	Varchar	MAX	
Position	Varchar	MAX	
Vote	Varchar	50	
AadharID	Varchar	MAX	
PartyID	Varchar	50	Foreign Key

3. Party

Name	Datatype	Size	Description
PartyID	Varchar	50	Primary Key
Motto	Varchar	MAX	
Password	Varchar	MAX	
Logo	Varchar	MAX	

5 Implementation Details

1. Admin

In this module the admin can manage the voters details, the candidate details as well as party details. The admin will start and end the voting event. The result is also declared by the admin. The voters registration is done by admin. The candidate details are shown along with votes in result module. Once the voting event is ended no voter can vote and the result is declared.

2. Voter

The voter can login through VoterID and password the password is provided by admin at the time of registration. The voter will see the candidates of the city the voter has registered. After selecting one candidate the voter will be redirected to an page where voter will get OTP in their registered phone number and the otp is entered and verified once verification is done the vote is casted successfully.

6 Testing

Login

• Username or Password Incorrect

Voter ID

Password

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The user needs to enter correct VoterID and password to login or else the system will not allow the user to login. Any unauthorized user can prevent to access system, so that security of system is maintain.

7 Screenshots

Login

Voter ID

Password

Login

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1. The VoterID and password is required to login.

[Vote](#) [Voters](#) [Result](#) [Candidates](#) [Party](#) [Admin Panel](#) [Logout](#)

[Start Voting Event](#) [End Voting](#) [Reset](#)

[search](#)

Party Name	Candidate Position	City
Bharatiya Janata Party	MLA	Rajkot
Indian National Congress	MLA	Kheda
Indian National Congress	MLA	Rajkot
Bharatiya Janata Party	MLA	Bhavnagar
Indian National Congress	MLA	Bhavnagar
Bharatiya Janata Party	MLA	Ahmedabad
Indian National Congress	MLA	Ahmedabad
Bharatiya Janata Party	MLA	Vadodara
Bharatiya Janata Party	MLA	Vadodara
Bharatiya Janata Party	MLA	Kheda

2. The list is shown on the basis of search result.

[Vote](#) [Voters](#) [Result](#) [Candidates](#) [Party](#) [Admin Panel](#) [Logout](#)

Index

Add New User





VoterId	AadharID	Name	Email		
12000	900000	Nilay	nilayparmar19@gmail.com	Details	Delete
13000	23456	Steve	steve@gmail.com	Details	Delete
14000	89898	Nihar	nihar@gmail.com	Details	Delete
ABE1234567	1234 5678 3456	Nihar Parmar	nihar@gmail.com	Details	Delete

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3. The voter list is shown to the admin and it can be managed by admin.

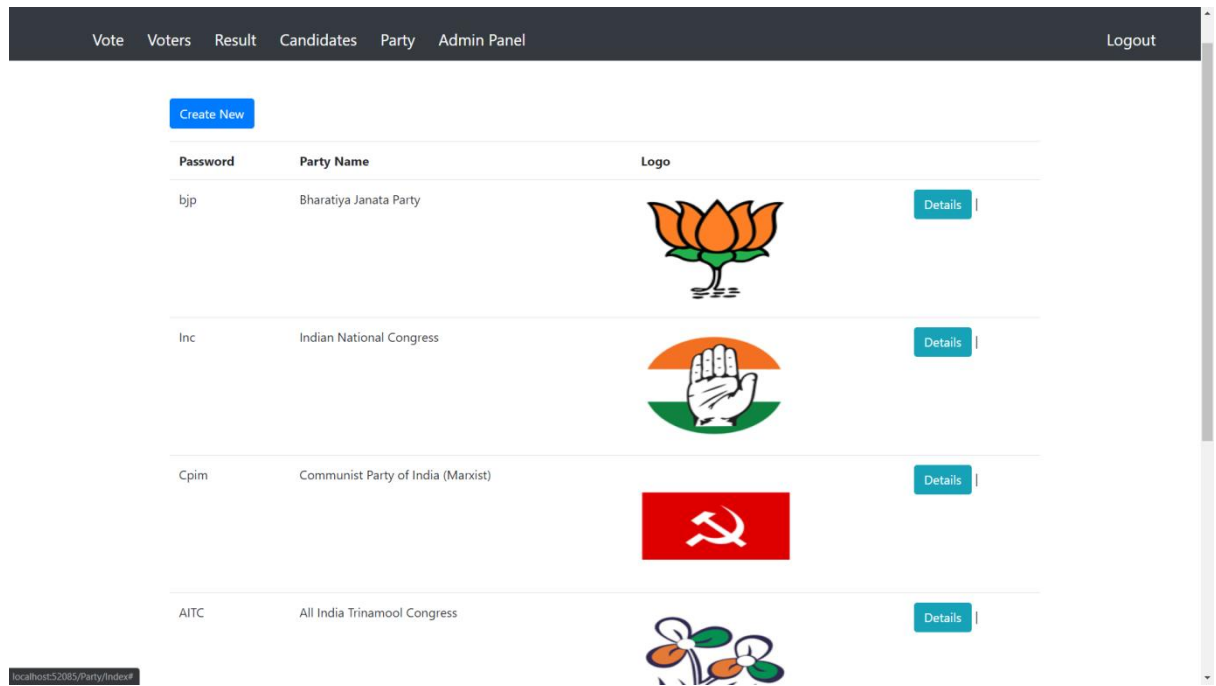
[Vote](#) [Voters](#) [Result](#) [Candidates](#) [Party](#) [Admin Panel](#) [Logout](#)

Add New Candidate

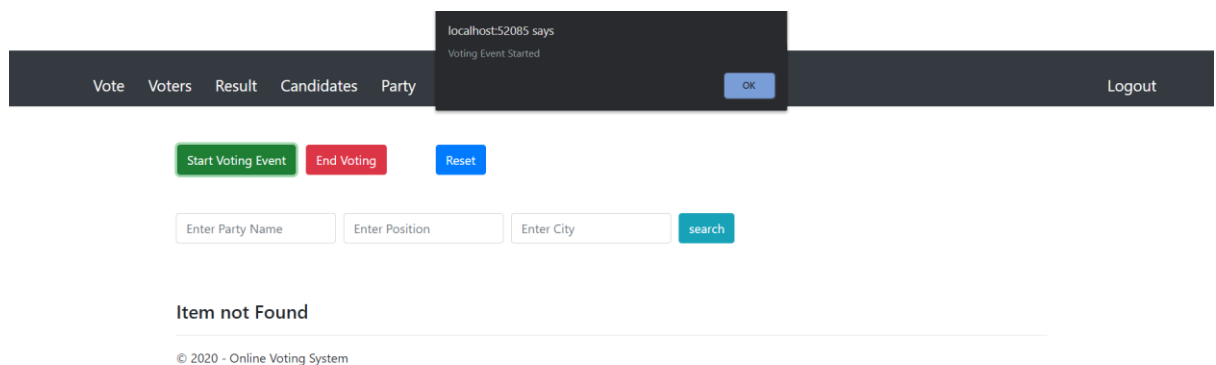
Name	Contact Number	City	Email Address	Image		
Mohanbhai Kundariya	9167123456	Rajkot	mkundariya@gmail.com		Details	Delete
Bimal Shah	9176268821	Kheda	shahbimal@gmail.com		Details	Delete
Kagathara Lalitbhai	917626751	Rajkot	klalit@gmail.com		Details	Delete
Dr. Bharatiben Shiyal	9643126511	Bhavnagar	bhartiben@gmail.com		Details	Delete

4. The candidate list is shown above with all the details.

OnlineVotingSystem





5. The list of political parties is shown above.



6. The voting event is started. Now the voter can cast vote.

Vote	Voters	Result	Logout
----------------------	------------------------	------------------------	------------------------

Candidate Name	Party Name	Image	
Mohanbhai Kundariya	Bharatiya Janata Party		Vote
Kagathara Lalitbhai	Indian National Congress		Vote

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7. The list of candidates is shown within a specific city.

Vote	Voters	Result	Logout
----------------------	------------------------	------------------------	------------------------

A One-Time password is sent to Your register Contact number...please verify it

[Send OTP](#)

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localhost:52085/Test/Index/1#





8. The OTP is sent to the voters registered contact no.

The screenshot shows the 'EnterOTP' page of the Online Voting System. At the top, a dark navigation bar contains links for 'Vote', 'Voters', and 'Result'. A dark modal box is open, displaying the message 'localhost:52085 says verification successful' with an 'OK' button. Below the modal, the 'EnterOTP' section features a text input field containing '271190' and a blue 'Verify' button. At the bottom, the copyright notice '© 2020 - Online Voting System' is visible.

9. Verification of otp is done successfully and vote is casted.

The screenshot shows the 'Candidates' page of the Online Voting System. The dark navigation bar now includes links for 'Vote', 'Voters', 'Result', 'Candidates', and 'Party', with a 'Logout' link on the far right. A dark modal box is open, displaying the message 'localhost:52085 says Voting Event Ended' with an 'OK' button. Below the modal, there are three buttons: 'Start Voting Event' (green), 'End Voting' (red), and 'Reset' (blue). Underneath these buttons are three text input fields labeled 'Enter Party Name', 'Enter Position', and 'Enter City', followed by a teal 'search' button. At the bottom, the text 'Item not Found' is displayed above the copyright notice '© 2020 - Online Voting System'.

10. The voting event is ended now.

Vote Voters Result Candidates Party Admin Panel Logout					
Name	City	Image	Position	Vote	Party
Mohanbhai Kundariya	Rajkot		MLA	1	Bharatiya Janata Party
Bimal Shah	Kheda		MLA	0	Indian National Congress
Kagathara Lalitbhai	Rajkot		MLA	0	Indian National Congress
Dr. Bharatiben Shiyal	Bhavnagar		MLA	1	Bharatiya Janata Party

11. The results are declared once voting is ended.

8 Conclusion

The Functionality implemented in the system was done after understanding all the system modules according to the requirements.

Functionalities that are successfully implemented are:-

1. Login.
2. Manage Voters.
3. Manage Candidates.
4. Manage Parties.
5. Otp verification before voting.
6. Voting.
7. Start-End Vote.
8. Result.

The project is completed successfully and the voter can cast vote successfully, for verification we have created otp verification. Before voter votes the otp is sent to the voter's registered mobile no. And once the voting event is completed the voters can view the result.

9 Limitations and Future Extensions

1. Limitations

- Internet connection is required.
- Admin handles the web application, the voter only casts the vote.
- Admin should have the basic knowledge of handling app.
- It is a desktop based web application so the voters need a desktop to use this system.
- The perfect verification of voter cannot be done by an OTP.

2. Future Extensions

- The security level can be increased and the verification of user can be done through face ID or Fingerprint scanner.
- The system will be developed in such a way that user can also access it from their Smartphone.
- The system will be designed in such a way that the system will not crash when many users vote at a time.
- The voters data can be obtained from government so data entry is not required by using voterID all the information can be obtained of the citizen.

10 Bibliography

1. <https://stackoverflow.com>
2. <https://www.c-sharpcorner.com>
3. <https://www.textlocal.in/>