Online Voting System

Abstract

The Online Voting System is a web application made specifically for voters. Once we make it available online, anyone can access it. The search engine is open to anyone who is qualified to cast a ballot. Voters can use a streamlined interface to cast their ballots from anywhere in the world. To cast a ballot, a person must first register by giving their complete information. The primary goal of this study is to offer the essential security levels for the creation of an online voting platform. The project's goals include streamlining, accelerating, and protecting the voting process. Voting fraud is not possible because to online voting technology, which replace traditional voting procedures. This concept, which is based on an online voting system, might therefore be used for conducting securely.

INTRODUCTION

Democracy is an important topic in the majority of modern societies. One of the key procedures in a democracy is the selection of representatives. Inactive citizens, fraud attempts, etc. are only a few of the various disturbances that this incredibly delicate procedure encounters. The nation of India is democratic. All Indian people have an Aadhar card, which serves as their digital ID, as they are all a part of the developing digital India. Due to the fact that it establishes each Indian's digital identity, the Aadhar card can be utilized for online voting. From early hand-counting systems to ones that employ paper, punch cards, and electronic voting machines, voting procedures have developed. Electronic voting systems are used today and have some qualities that set them apart from traditional voting techniques as well as better features, such as accuracy, convenience, flexibility, privacy, verifiability, and mobility. Electronic voting methods can have several drawbacks, though, such as the need for a lot of time and paper, the absence of a direct role for higher officials, the possibility of machine damage due to carelessness, the inability to update and edit many items at once with mass updates, etc. These issues can be solved using the online voting system. Each voter can exercise their right to vote using this voting technology from any location in the country. Without physically visiting a polling station, voters can securely cast their ballots from anywhere in the country. As a result, more people vote, and voting becomes courageous in the face of violence. By collecting your group's input in a methodical and reliable fashion, online voting tools and online election voting systems assist you in making crucial decisions. These choices are frequently made once a year, either during a gathering (like your organization's AGM) or at a specific time of the year. Or you may conduct regular surveys inside your organization. It's a smart idea to elect your leadership via an online voting method.

EXISTING SYSTEM

The current systems are not computer-based, also known as web-based systems, nor are they connected to the World Wide Web. As a result, the populace experienced several issues and developed a phobia of thievery and vote-rigging. The commission must worry about how things move from election day through result announcement day. Some of the issues with offline voting are listed below. Even now, they are handled by hand. If a voter is not physically present in their district, they are ineligible to cast a ballot. It is more expensive to employ electronic voting machines. Some of the voters' biometric information has already been registered in the system to provide confidentiality, non-traceability, and security.

Drawbacks of Existing System

Some of the problems with the present manual voting system include the following, among others:
a) Expensive and time-consuming: It takes time and money to obtain the data and insert it into the database. Printing data collection forms, setting up registration booths with employees, publicising the dates established for the registration process, and educating voters on the value of registration are just a few examples of the time and money invested in these activities.

b) Inaccurate data entry: Because people make mistakes, it is highly improbable that data will ever be entered accurately

c) Registration forms going missing after being filled out with voter information happen periodically, even when persons are of voting age and want to exercise their right to vote. Many people remain unregistered since they are frequently hard to find.

d) The method requires too much paper work, which is difficult to store because it gets heavier as the population rises.

PROPOSED SYSTEM

This online voting system, which the voter can use to log in and execute his voting rights, will be used to handle the voter's information. All of the voter's data is saved in full in a database that is kept up to date by the INDIA ELECTION COMMISSION. At the time of registration, voters must supply their full name, age, Aadhar card number, mobile number, email address, and finger prints. The information will also be checked by the administrator. When requesting to vote, the voter must enter his Aadhar ID. After the voter has been confirmed, they are free to vote for any of the listed candidates

Merits:

◊ Information is much easier to access.

◊Secure and Safe

◊Saving time

◊Utilizing a centralized database.

Block Diagram of Image Processing

The Block diagram below (Fig.1) shows the steps for processing the image and then storing it into the database. The image is taken as input and then it is pre-processed i nto pictures and then the next step is face detection and face alignment. After these s teps the features of an image are extracted and are matched with the original image after that only the image is stored into the database

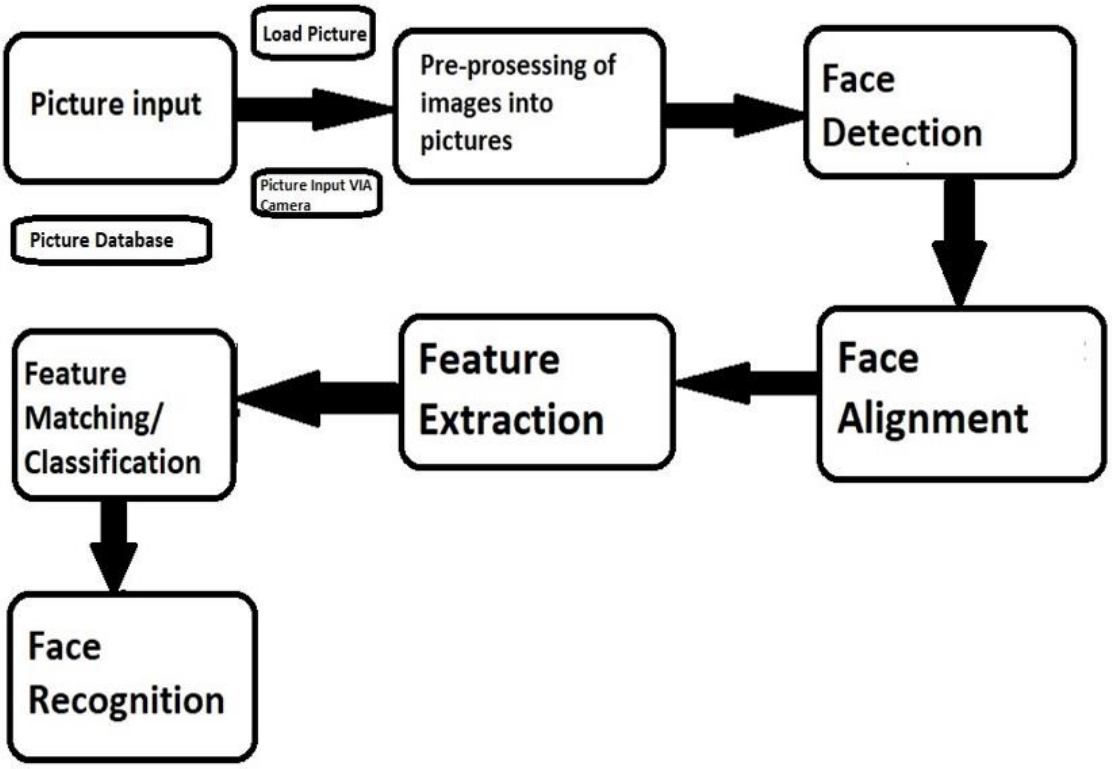


Fig.1:Block Diagram of image processing

B. Architecture

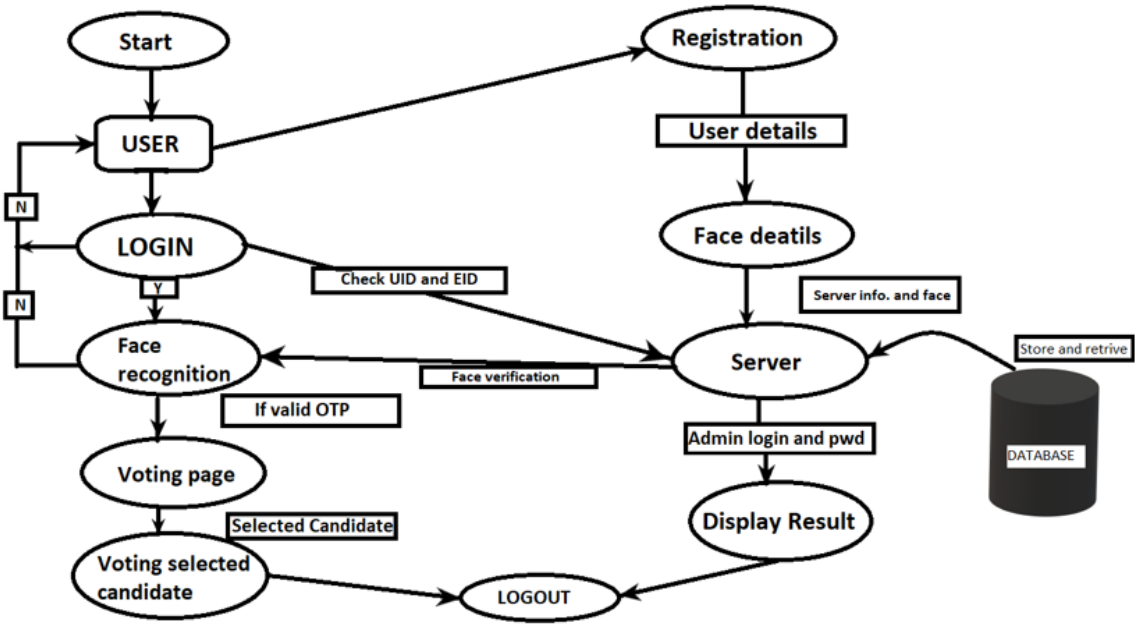


Fig.2.1 User Architecture

The Image above (Fig.2.1) shows the User Architecture. The user must be a register ed voter to vote for the elections, if he/she is a new user then he/she has to first regis ter himself/herself for voting.

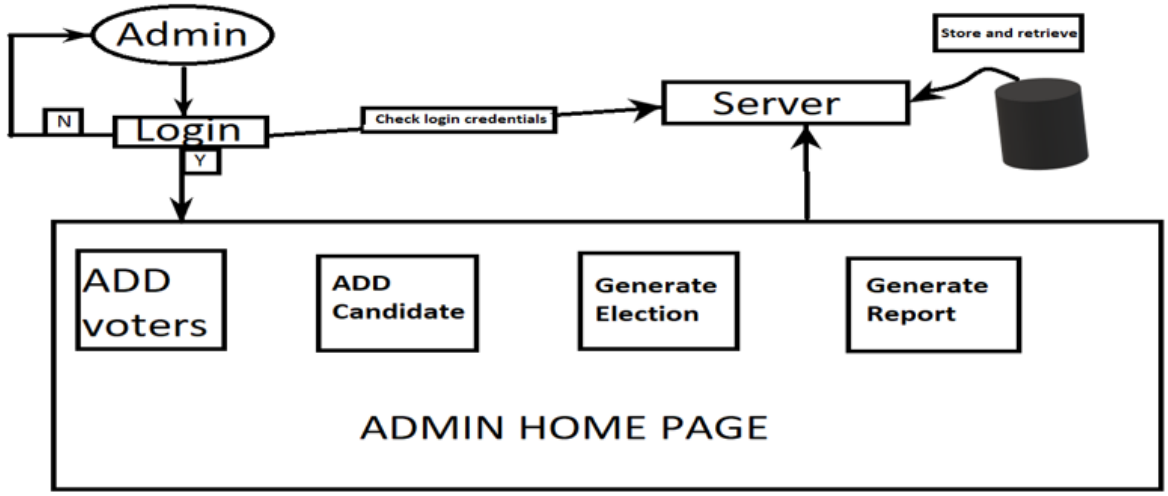


Fig.2.2 Admin architecture

Fig.2.2 shows the architecture of the admin.Admins can control polling booths, they c an also declare results when the elections are held.

Fig.3 Voter home page

The above figure (Fig.3) is the home page of the user/voter for the Digital voting syst em. Here a voter can either check the results or vote for his/her favourite candidate. T he user can also file a complaint if any.

Fig.4 Login page

The figure above(Fig.4) is the login page for the user/admin where he/she has to ent er his/her login credentials first to verify himself/herself by entering a correct passwor d.

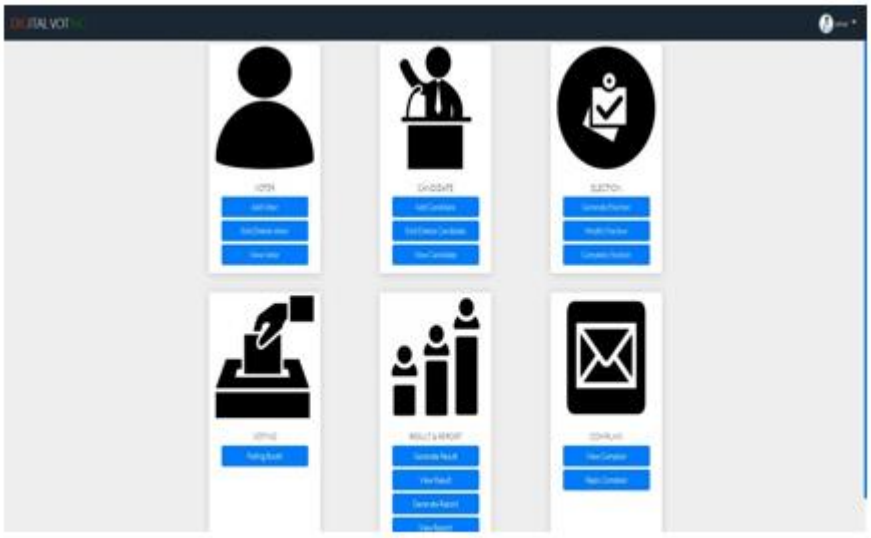


Fig.5 Admin home page

The above figure(Fig.5) is the admin home page which is controlled only by the admi n where the admin can add election details and also register new voters, the admin c an as well check the results and declare them.

C. Analysis

Fig.6 Voting poll

The figure above(fig.6) shows the voting poll from our web page that we have built. It shows the number of electors and voters.

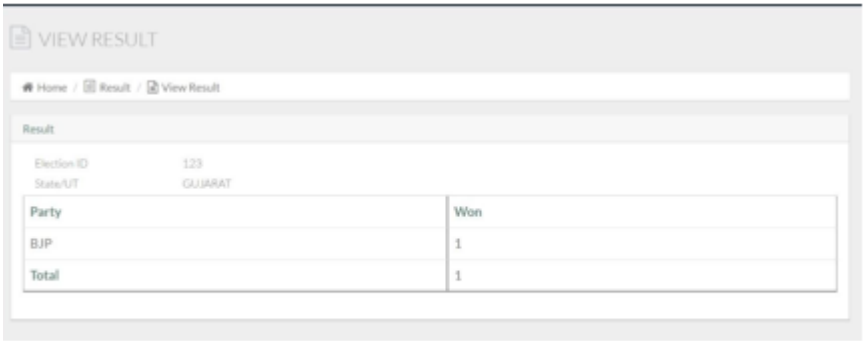


Fig.7 Result Declaration

This image(fig.7) shows results that were declared by the admin.

As we can see in the picture above, political party is BJP.

Along with that it is also showing us the unique Election Id of each voter which is **12 3** and state name i.e **Gujarat**

In our system, voters can cast their vote anytime, anywhere by selecting their politica l party symbol at a time. When elections are over, their vote will get noted and after gi ving vote their voting data will be deleted. After that, Admin can show the result in the form of a dashboard.

IMPLEMENTATION

Any project's implementation phase is a real showcase for the turning points that determine whether it will succeed or fail. The installation and operationalization of the system or system modifications in a production environment is referred to as the implementation step. After the system has been tried out and approved by the user, the phase is started. Until the system is working in production in compliance with the specified user requirements, this phase is ongoing.

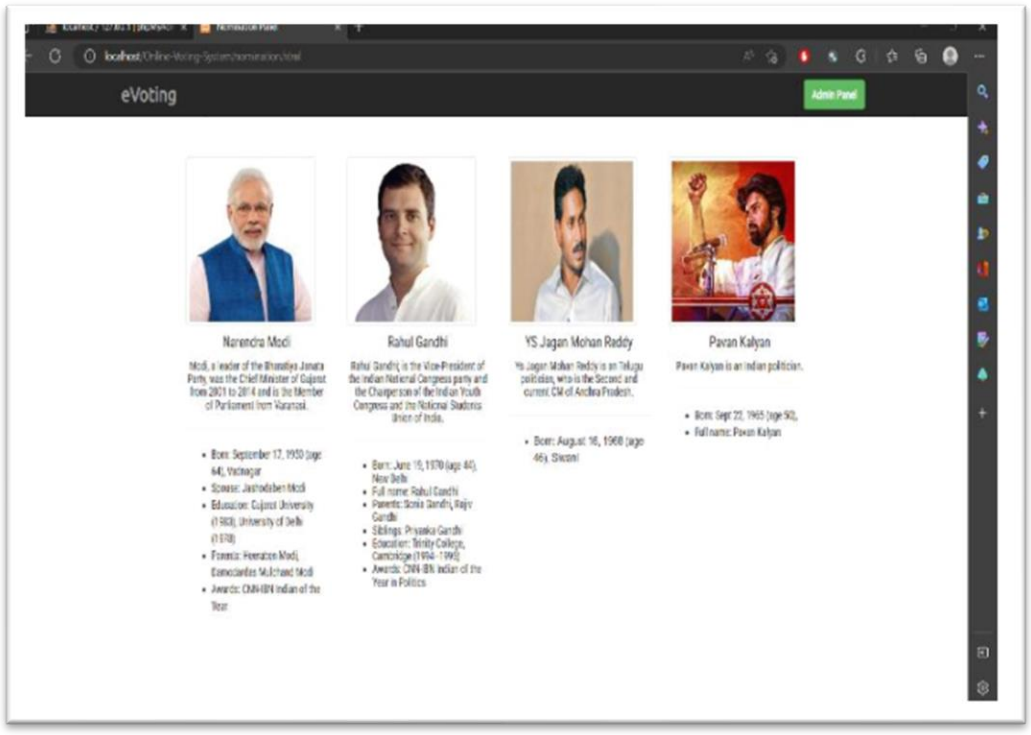
1) The user initially logs in using their username and password, if they already have an account. If not, they must register by giving the admin their full name, state, voter ID, and other information via the portal before being given permission to create a password.

2)When he logins with his credentials he will be directed to home page. He can see the features , About and can be able to give feedback.

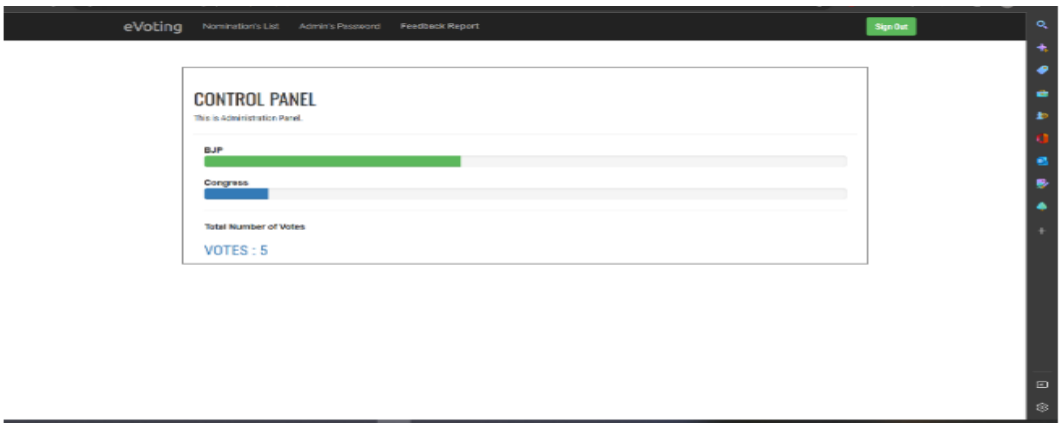
3)In the home page there “cast your vote” button where he can cast his vote of his/her choice by entering your voter id and other details.(If the voter id is invalid it shows an error

4)In this application we can also see the details of nominee's that you can vote for.

Example:



5) By authenticating himself or herself, the Admin can view the results and declare the election's outcome. A password change by the administrator is permitted for security reasons. This provides a user-friendly and visually pleasing display of the votes each contender earned. It details the percentage of votes each candidate obtained. But the results won't be known until beyond the election's deadline.



SYSTEM REQUIREMENTS

Software Requirements:

Operating System: Microsoft Windows XP

Front-End: HTML,CSS Back-End: ORACLE 10g, PHP,XAMMP

Web-Server: Apache-Tomcat 6.0.32

Platform: Visual Studio Code

Hardware Requirements:

Processor: Intel P-IV based system

RAM: Min. 512 M

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FUTURE SCOPE

It is impossible to create a system that meets every user requirement. As the system is used, user needs continue to change. Future improvements to this system could include things like: • Because it is built on object-oriented design, any additional adjustments would be simple to implement. • Using developing technology, security can be enhanced based on upcoming security concerns. • Administrator-validated module for job postings. • Future election systems could include a "Live Result Update" function.

CONCLUSION

The voting mechanism we suggest is a great deal safer and more effective than the current one. With this technique, delays in results and vote tampering can be readily avoided. The implementation of two-factor authentication, which makes voter verification simpler and more accurate, is the most significant feature of our solution. For the same reason, each time a user registers, he or she is required to enter their voter ID, making it simpler to verify both voters and candidates. The planned online method is anticipated to improve the current electoral system's transparency and dependability. By implementing the Future Enhancements listed above, the application can be enhanced even more.