

# ***ElectIt: A new indigenous way for online voting process.***

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## **ABSTRACT**

In traditional elections, a voter usually goes to the voting stations. After direct person-person verification with some IDs, the voter is allowed to vote. The voter is then given a ballot which allows a single vote. Once the ballot is used, it cannot be used again. However, this ballot must also be anonymous. The ballot must identify the voter as being permitted to vote, as it is the old technique it consumes a lot of time as well as energy. The current methods were the attacker can interact directly with the voting process to disrupt it. There is a greater chance of getting caught as there will be physical evidence in the traditional polling. the ballot box can be easily manipulated by the attacker. The Online voting system (OVS) also known as e-voting is a term encompassing several different types of voting embracing both electronic means of counting votes. Online voting is an electronic way of choosing leaders via a web driven application. The advantage of online voting over the common "queue method" is that the voters have the choice of voting at their own free time and there is reduced congestion. It also minimizes on errors of vote counting.

This system is geared towards increasing the voting percentage in India; cases of false votes shall be reduced. With the "ONLINE VOTING SYSTEM", a voter can use his/her voting right online without any difficulty. He/She has to register as a voter first before being authorized to vote. The registration should be done prior to the voting date to enable data update in the database. However, not just anybody can vote. For one to participate in the elections, he/she must have the requirements. For instance, he/she must be a registered citizen i.e. must be 18 and above years old. As already stated,

the project 'Elect IT ' provides means for fast and convenient voting and

Access to this system is limited only to registered voters. People are getting more used to work with computers to do all sorts of things, they allow people to vote far from where they usually live.

***Keywords: online voting, python, Django, face recognition, elections***

## **INTRODUCTION**

This Online Voting system called as ElectIt will manage the Voter's information by which voter can login and use his voting rights. There is a DATABASE which is maintained by the Admin in which complete data of voter with complete information is stored. At first any new voter has to register i.e. on the Internet through web application by providing web services. At the time of registration voter will be asked for this Full name, age, aadhar card no, mobile no. email id and verified the details by administrator. Also ElectIt web application will help the voter for the voting purpose. At the time of voting, voter will be asked to enter his id or name. Voter has provision to select SMS option to request for OTP or by facial recognition .Also one time password (OTP) will be generated and sent to the phone number of the voter or mail will be sent to the voter's email id. Then voter will be authenticated, and he can give vote from one of the candidate from the list, Admin

can update or cancel candidate list from the database.

This system is geared towards increasing the voting percentage in India since it has been noted that with the old voting method the Queue System. The ElectIt shall reduce the time spend making long queues at the polling stations during voting. It shall also enable the voters to vote from any part of the globe as explained since this is an online web application available on the internet.

Cases of vote miscounts shall also be solved since at the backend of this system resides a well-developed database server that can provide the correct data once it's correctly queried.

### LITERATURE SURVEY

This software is being developed for everyone with a simple and self-explanatory GUI. This is software that can be used by people to vote in an election. All the user must do is login and click on his favorable candidates to register his vote. While online voting system has been an active area of research in recent years, the use of insecure Internet, well documented cases of incorrect implementations reported recently. These challenges are to be resolved so that public should cast their vote in secure and convenient way. Proposed online voting system is a voting system by which any Voter can use his/her voting rights from anywhere in country. Online voting system contains:

- a) Voter's information in database.
- b) Voter's Names with ID and password.
- c) Voter's vote in a database.
- d) Calculation of total number of votes.

Various operational works proposed in the system are: Recording information of the Voter in database.

Checking of information filled by voter. Discard the false information.

Each information is sent to election commission.

### PROBLEM STATEMENT

The problems of the existing manual system of voting include among others the following:

- Expensive and Time consuming.
- Too much paper work.
- Errors during data entry.
- Loss of registration forms.
- Short time provided to view the voter register.
- Waiting for a long queue.
- Fraud voting possible.
- Voting machine may fail during the election.
- Voting machine maliciously or erroneously switches the vote.
- The counting process may take long time and cannot be announced at the same day of voting.
- Lack of Transparency.



Figure 1 :Paperwork



Figure 2 :Queue



Figure 3 :EVM

## METHODOLOGY IMPLEMENTED

### 1. Python

Python is an interpreted, object-oriented, high-level programming language with dynamic semantics. Its high-level built in data structures, combined with dynamic typing and dynamic binding, make it very attractive for Rapid Application Development.

### 2. AUTHENTICATION

#### 2.1 Register

This is the register page, where the voter, candidate can register themselves. They all have to enter basic information best of their known. All the information registered in the website are saved in the respective database. The Admin has authority to accept eligible user and suitable candidate, otherwise he/she has right to reject their registration.

#### 2.2 Face Recognition

The face is the most flexible biometric authentication modality. It can be used in different contexts and settings. There's no need for sensors. Liveness detection systems will look for indicators of a non-live image such as inconsistent features between foreground and background. They may ask the user to blink or move. With technology now able to capture, analyze and compare data about the distance between forehead and chin, or the contour of our eye sockets, we take the application of facial recognition very personally.

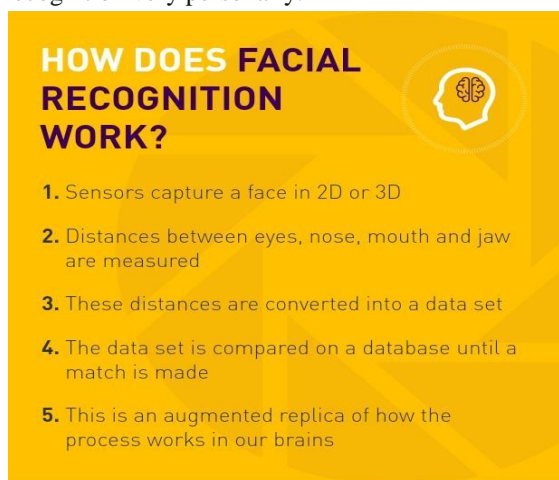


Figure 4:Face Recognition

### 3. DATABASE

#### 3.1 PostgreSQL

PostgreSQL, also known as Postgres, is a free and open-source relational database management system emphasizing extensibility and technical standards compliance. It is designed to handle a range of workloads, from single machines to data warehouses or Web services with many concurrent users.

#### 3.2 ORM

Object-relational mapping in computer science is a programming technique for converting data between incompatible type systems using object-oriented programming languages. This creates, in effect, a "virtual object database" that can be used from within the programming language.

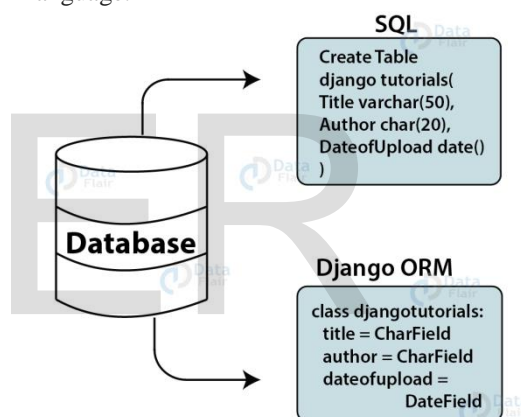


Figure 5 :ORM

## DIAGRAMS

### 1. Use Case Diagram

A Use case diagram in the Unified Modelling Language (UML) is a type of behavioural diagram defined by and created from a Use-case analysis. Its purpose is to present a graphical overview of the functionality provided by a system in terms of actors.

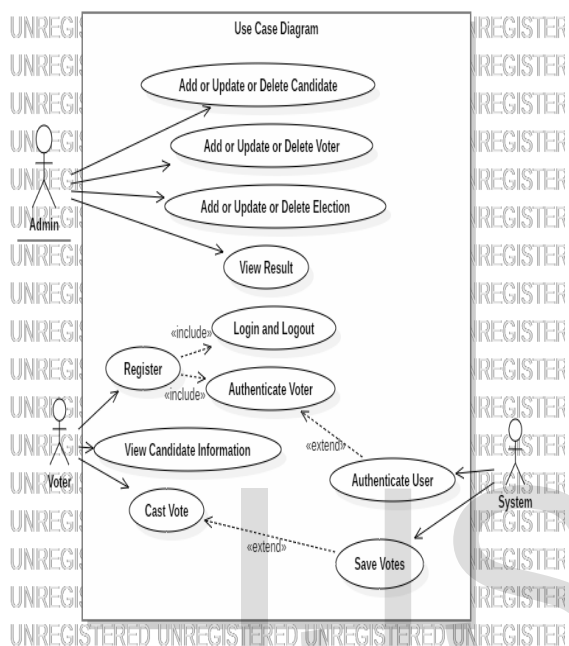


Figure 6: Use Case Diagram

As we can see here that this is a process of confirmation hence the main role is taken by the admin. Admin will be the one who will be getting access or approval over many conditions including the following things.

The very firstly condition will be that the admin will add update or delete the Candidate/ Voter and the Election..

The admin have also have facility to check the results.

The voter will eligible to register, login, vote and view the result.

### 2. Activity Diagram

Activity diagram is another important diagram in UML to describe the dynamic aspects of the system. Activity diagram is basically a flowchart to represent the flow from one activity to another activity.

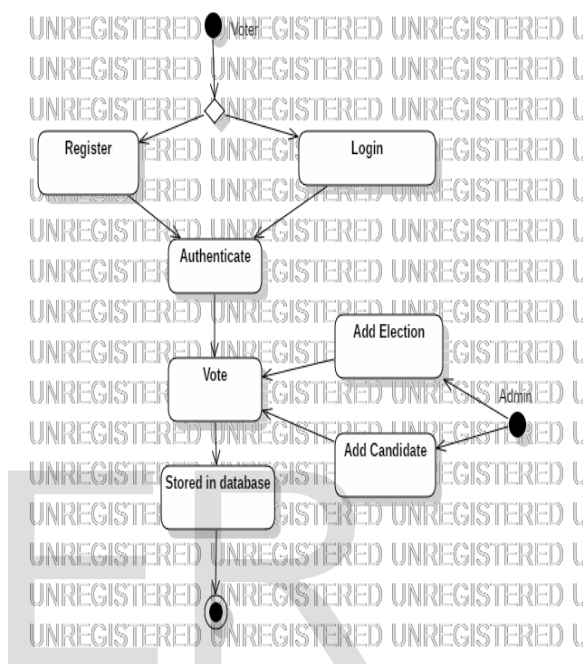
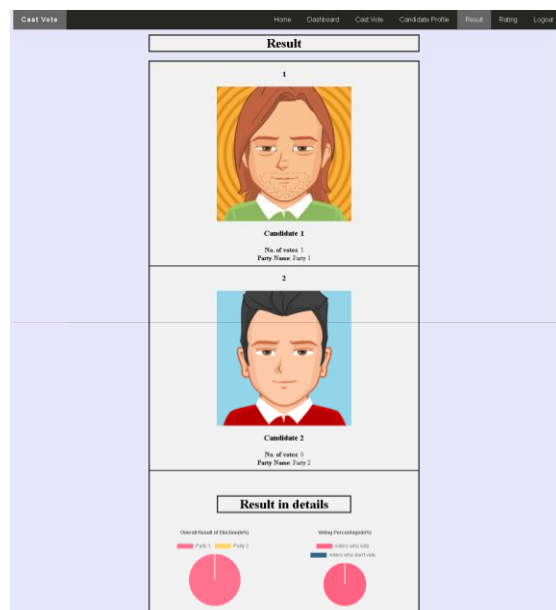
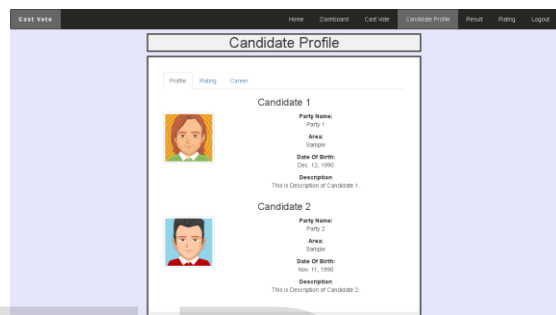
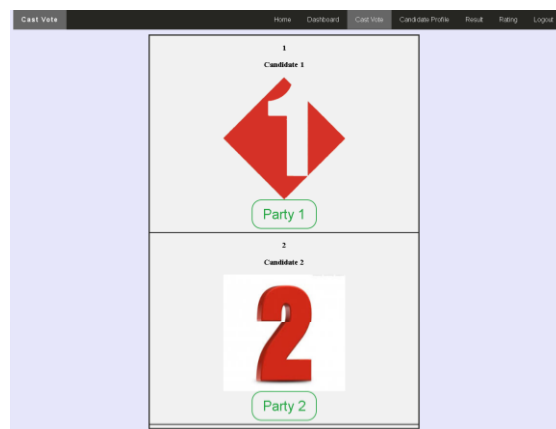
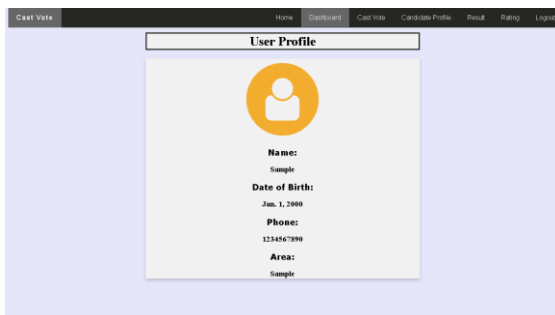
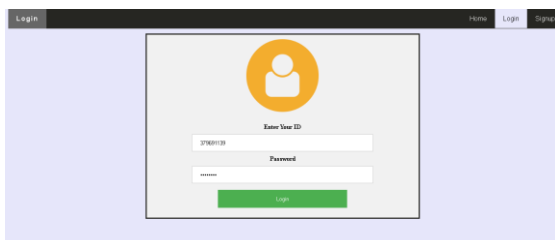
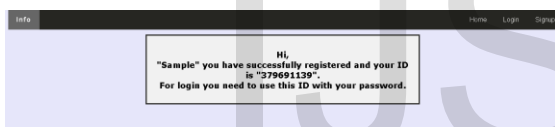
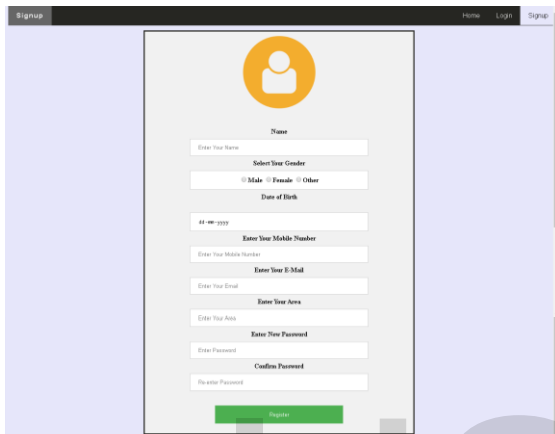
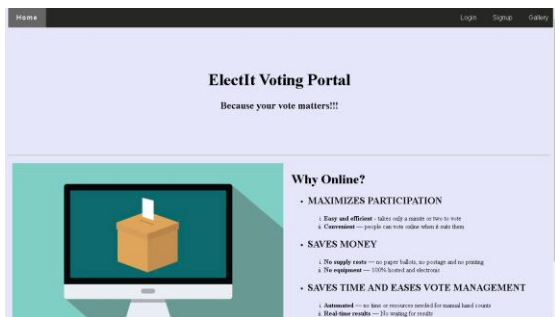


Figure 7: Activity diagram

The activity can be described as an operation of the system. The control flow is drawn from one operation to another. This flow can be sequential, branched, or concurrent. Activity diagrams deal with all type of flow control by using different elements such as fork, join, etc.

Activity diagram tells us about the activities performed while doing this project the very first step after reckoning of the system is that it will check two conditions the very first condition is it will take 2 features of the one is reference note and second is initializing.

# SCREENSHOTS



## CONCLUSION

This system enables a voter to cast his/her vote through internet without going to voting booth and additionally registering himself/herself for voting in advance, proxy vote or double voting is not possible, fast to access, highly secure, easy to maintain all information of voting, highly efficient and flexible. Hence, by this voting percentage will increase drastically. The using of online voting has the capability to reduce or remove unwanted human errors. In addition to its reliability, online voting can handle multiple modalities, and provide better scalability for large elections. Online voting is also an excellent mechanism that does not require geographical proximity of the voters.

## FUTURE SCOPE

- Less effort and less labour intensive, as the primary cost and focus primary on creating, managing, and running a secure web voting application.
- Increasing number of voters as individuals will find it easier and more convenient to vote, especially those abroad.
- The scope of the application in future is way better than we think because most of the people are capable of using internet as well as Smartphone.

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