DAYANANDA SAGAR UNIVERSITY

A MINI PROJECT REPORT

ON

"ONLINE VOTING SYSTEM"

SUBMITTED TO THE V th SEMESTER

DATABASE MANAGEMENT SYSTEM LABORATORY-2019

BACHELOR OF TECHNOLOGY

IN

COMPUTER SCIENCE & ENGINEERING

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V Semester, 2019

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CERTIFICATE

This is to certify that Mr./Ms. _____ bearing USN _____ has satisfactorily completed his/her Minor Project as prescribed by the University for the _____ semester B.Tech. programme in Computer Science & Engineering during the year _____ at the School of Engineering, Dayananda Sagar University, Bangalore.

Date: Signature of faculty in-charge

Max. Marks Marks Obtained

Chairman

Department of Computer Science & Engineering

DECLARATION

We hereby declare that the work presented in this mini project entitled- "**ONLINE VOTING SYSTEM**", has been carried out by us and it has not been submitted for the award of any degree, diploma or the mini project of any other college or university.

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14ACKNOWLEDGEMENT

The satisfaction that accompanies the successful completion of task would be incomplete without the mention of the people who made it possible and whose constant guidance and encouragement crown all the efforts with success.We are especially thankful to our Chairman ,Dr. M K Banga, for providing necessary departmental facilities, moral support and encouragement.We are very much thankful to , for providing help and suggestions in completion of this mini project successfully. We have received a great deal of guidance and co-operation from our friends and we wish to thank all that have directly or indirectly helped us in the successful completion of this project work.

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TABLE OF CONTENTS

ABSTRACT

The word “vote” means to choose from a list, to elect or to determine. The main goal of voting (in a scenario involving the citizens of a given country) is to come up with leaders of the people’s choice.

Most countries, Like India have problems when it comes to voting. Some of the problems involved include ridging votes during election, insecure or inaccessible polling stations, inadequate polling materials and also inexperienced personnel.

This online voting/polling system seeks to address the above issues. It should be noted that with this system in place, the users, citizens in this case shall be given ample time during the voting period. They shall also be trained on how to vote online before the election time.

INTRODUCTION

1 General Overview

" ONLINE VOTING SYSTEM" is an online voting technique. In this system people who have citizenship of India and whose age is above 18 years of age and any sex can give his\her vote online without going to any physical polling station.

There is a database which is maintained in which all the names of voters with complete information is stored.

In "ONLINE VOTING SYSTEM" a voter can use his\her voting right online without any difficulty. He\She has to be registered first for him/her to vote. Registration is mainly done by the system administrator for security reasons. The system Administrator registers the voters on a special site of the system visited by him only by simply filling a registration form to register voter. Citizens seeking registration are expected to contact the system administrator to submit their details. After the validity of them being citizens of India has been confirmed by the system administrator by comparing their details submitted with those in existing databases such as those as the Registrar of Persons, the citizen is then registered as a voter.
After registration, the voter is assigned a secret Voter ID with which he/she can use to log into the system and enjoy services provided by the system such as voting. If invalid/wrong details are submitted, then the citizen is not registered to vote.

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. Electronic voting technology can include punched cards, optical scan voting systems and specialized voting kiosks (including self contained direct-recording electronic voting systems or DRE). It can also involve transmission of ballots and votes via telephones, private computer networks, or the internet.

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. The individual votes are submitted in a database which can be queried to find out who of the aspirants for a given post has the highest number of votes.

This system is geared towards increasing the voting percentage in Kenya since it has been noted that with the old voting method {the Queue System}, the voter turnout has been a wanting case. With system in place also, if high security is applied, 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 'Online Voting' provides means for fast and convenient voting and access to this system is limited only to registered voters.

I.2 Applications

The main purposes of OVS include:

- Provision of improved voting services to the voters through fast, timely and convenient voting.
- Reduction of the costs incurred by the Kenyan Electoral Commission during voting time in paying the very many clerks employed for the sake of the success of the manual system.
- Check to ensure that the members who are registered are the only ones to vote. Cases of “Dead People” voting are also minimized.
- Online voting system (OVS) will require being very precise or cost cutting to produce an effective election management system.

Therefore crucial points that this (OVS) emphasizes on are listed below.

i. Require less number of staff during the election.

ii. This system is a lot easier to independently moderate the elections and subsequently reinforce its transparency and fairness.

iii. Less capital, less effort, and less labor intensive, as the primary cost and effort will focus primarily on creating, managing, and running a secure online portal.

iv. Increased number of voters as individual will find it easier and more convenient to vote, especially those abroad.

I.3 Overview of Rest of the Report

Under the next section we are going to discuss the problem statement and objective of this project. Further, in section 4 we are going to jump straight into the details of the project and how it manages the database, which includes models, tables, etc. Next section 5 explains the software requirements to run this application, followed by the results and conclusion.

I. PROBLEM STATEMENT

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

1. Expensive and Time consuming: The process of collecting data and entering this data into the database takes too much time and is expensive to conduct, for example, time and money is spent in printing data capture forms, in preparing registration stations together with human resources, and there after advertising the days set for registration process including sensitizing voters on the need for registration, as well as time spent on entering this data to the database.

2. Too much paper work: The process involves too much paper work and paper storage which is difficult as papers become bulky with the population size.

3. Errors during data entry: Errors are part of all human beings; it is very unlikely for humans to be 100 percent efficient in data entry.

4. Loss of registration forms: Some times, registration forms get lost after being filled in with voters' details, in most cases these are difficult to follow-up and therefore many remain unregistered even though they are voting age nationals and interested in exercising their right to vote.

5. Short time provided to view the voter register: This is a very big problem since not all people have free time during the given short period of time to check and update the voter register.

6. Above all, a number of voters end up being locked out from voting.

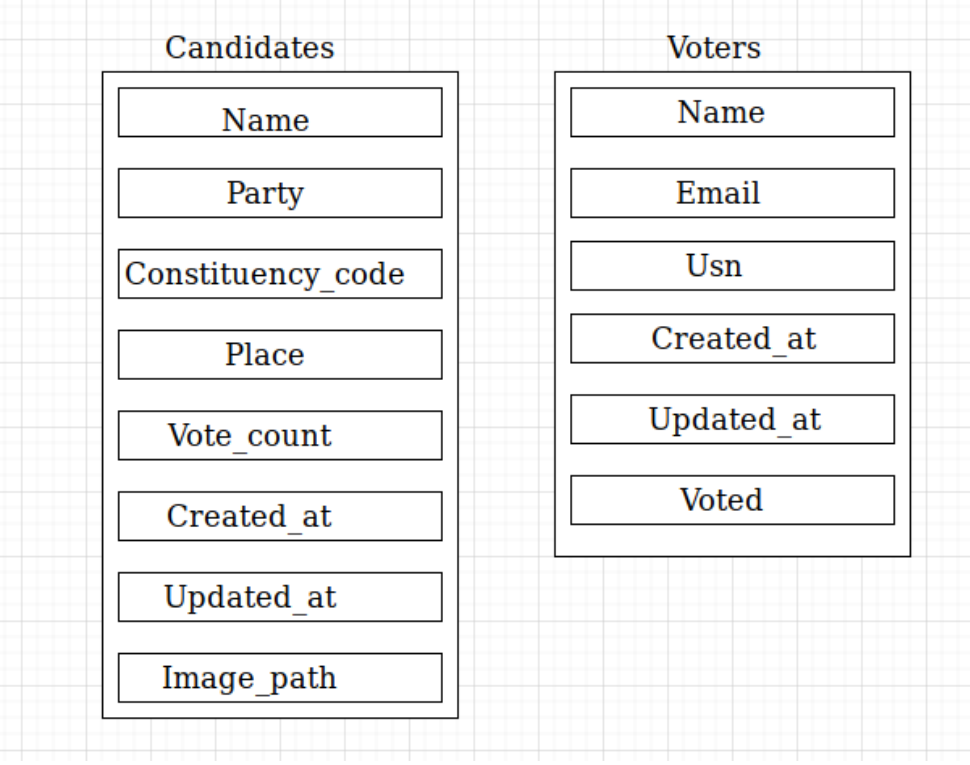
II. OBJECTIVE

The specific objectives of the project include:

1. Reviewing the existing/current voting process or approach in India.
2. Coming up with an automated voting system in India.
3. Implementing a an automated/online voting system.
4. Validating the system to ensure that only legible voters are allowed to vote.

METHODOLOGY

IV.1 E-R Diagrams



IV.2 Relational Schema

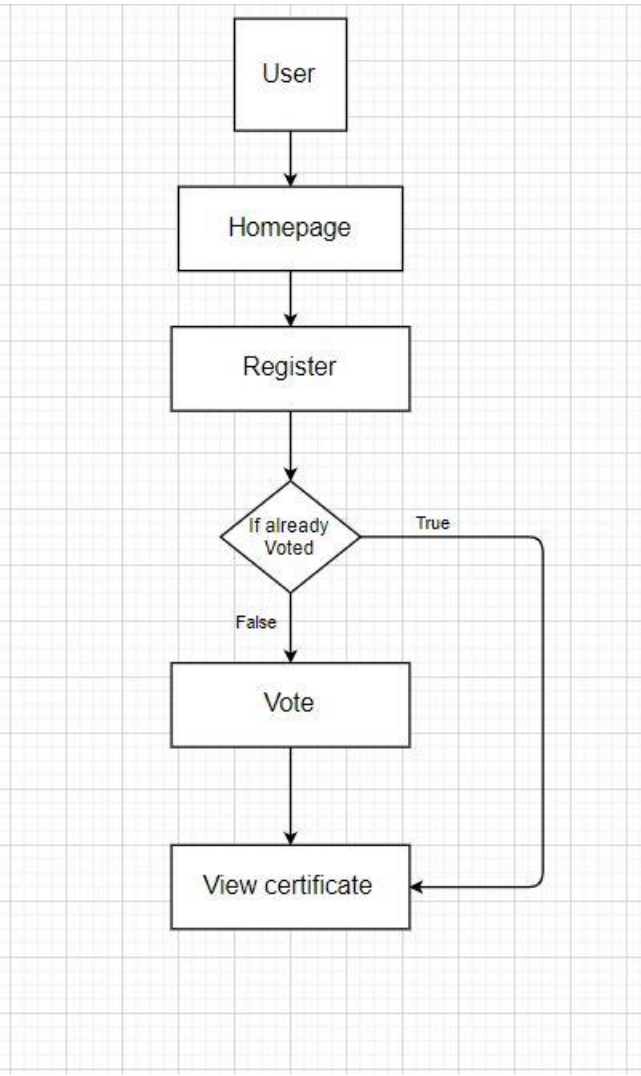
Candidates

ID	Name	Constituency_code	Party	Place	Vote_count	Created_at	Updated_at	Image_path

Voters

ID	Name	Email	Usn	Created_at	Updated_at	Voted

IV.3 Block Diagram



IV.4 Module Wise Description

Adding Candidates: Using postgresql Admin, site administrators should be able to add, update, and remove the candidates.

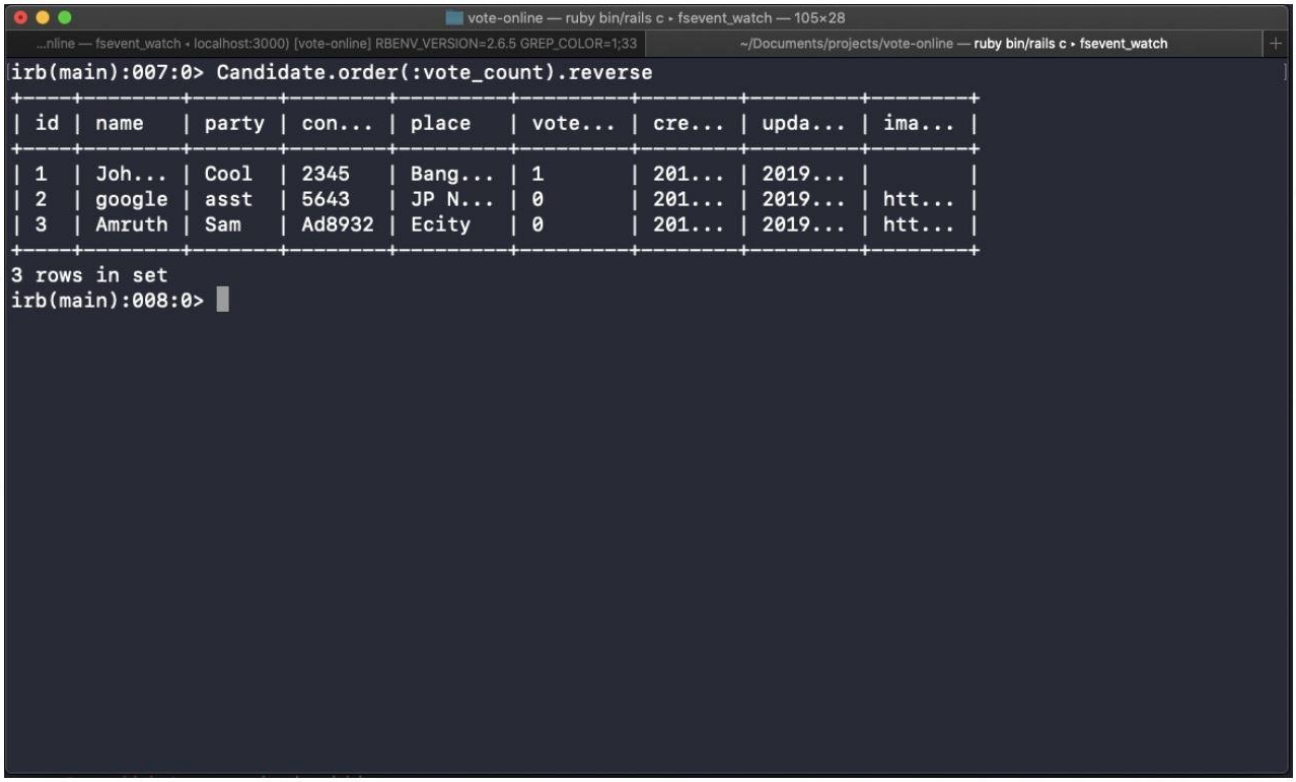
Registration: The first stage of the process of the voting involves the registration part which that registers the user as a valid Person to vote. It asks for the important features that can uniquely identify each person through his Aadhaar number (USN in this case).

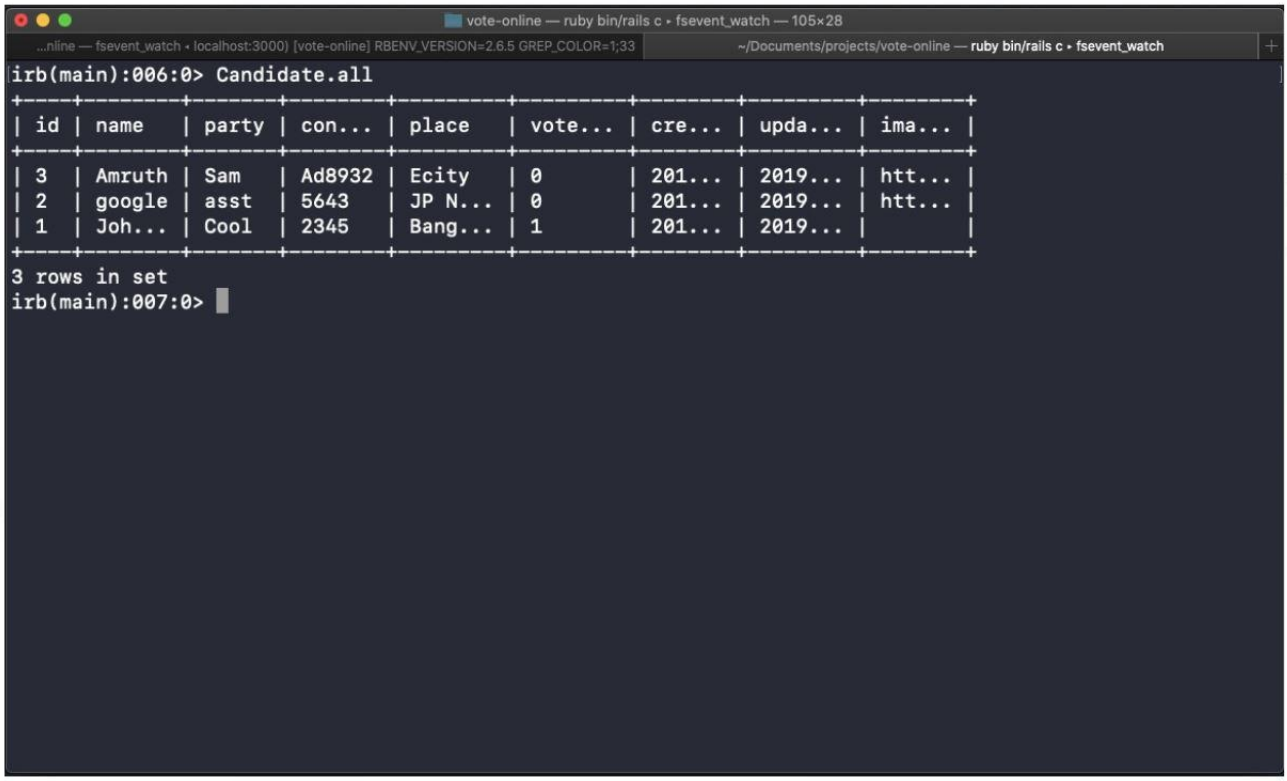
Voting module: This facility authorizes the registered user to vote for the Candidate whom he believes is the best.

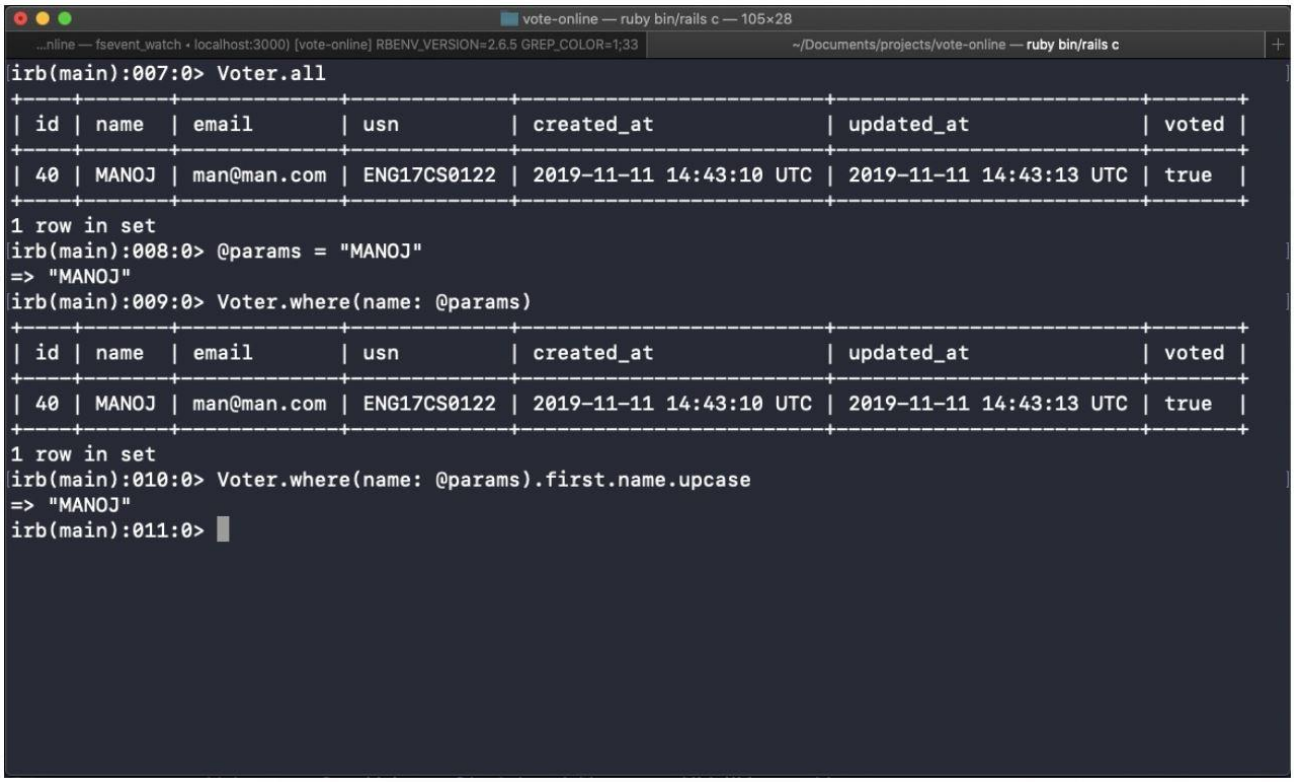
Appreciation: After voting, the voter is given a certificate as a sign of appreciation.

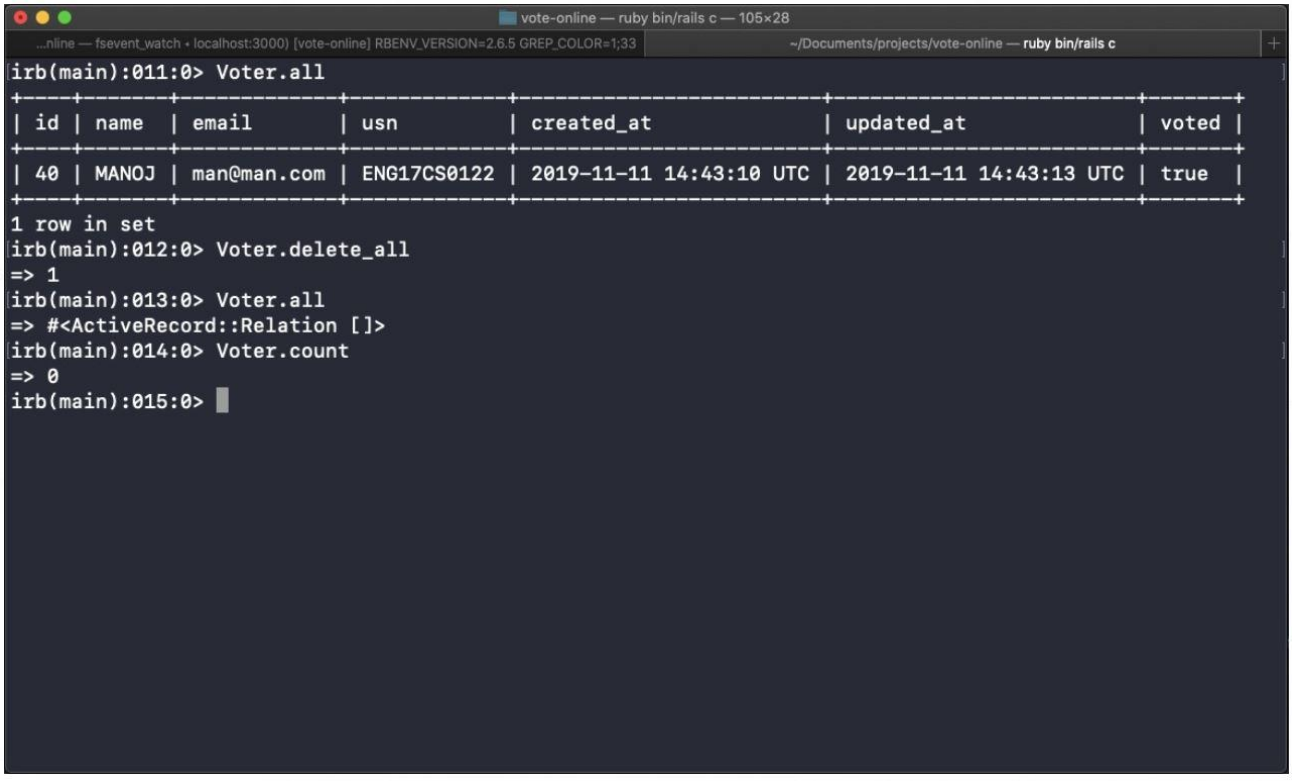
Logout : Voters should then be able to Vote and log out of your website.

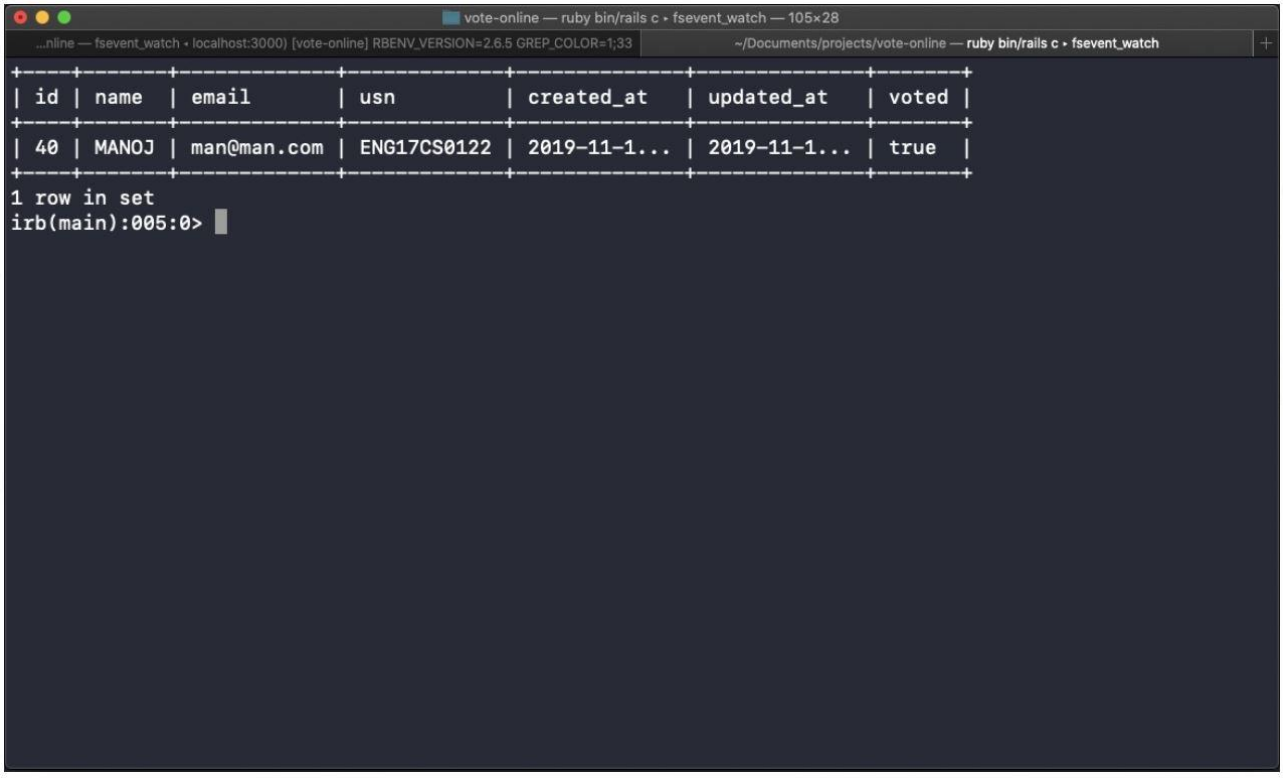
IV.5 Queries


vote-online — ruby bin/rails c ▸ fsevent_watch — 105×28
...nline — fsevent_watch ◂ localhost:3000) [vote-online] RBENV_VERSION=2.6.5 GREP_COLOR=1;33
~/Documents/projects/vote-online — ruby bin/rails c ▸ fsevent_watch
irb(main):007:0> Candidate.order(:vote_count).reverse
id	name	party	con...	place	vote...	cre...	upda...	ima...
1	Joh...	Cool	2345	Bang...	1	201...	2019...	
2	google	asst	5643	JP N...	0	201...	2019...	htt...
3	Amruth	Sam	Ad8932	Ecity	0	201...	2019...	htt...
3 rows in set
irb(main):008:0>


vote-online — ruby bin/rails c ▸ fsevent_watch — 105×28
...nline — fsevent_watch ◂ localhost:3000) [vote-online] RBENV_VERSION=2.6.5 GREP_COLOR=1;33
~/Documents/projects/vote-online — ruby bin/rails c ▸ fsevent_watch
irb(main):006:0> Candidate.all
id	name	party	con...	place	vote...	cre...	upda...	ima...
3	Amruth	Sam	Ad8932	Ecity	0	201...	2019...	htt...
2	google	asst	5643	JP N...	0	201...	2019...	htt...
1	Joh...	Cool	2345	Bang...	1	201...	2019...	
3 rows in set
irb(main):007:0>


vote-online — ruby bin/rails c — 105×28
...nline — fsevent_watch • localhost:3000) [vote-online] RBENV_VERSION=2.6.5 GREP_COLOR=1;33
~/Documents/projects/vote-online — ruby bin/rails c
irb(main):007:0> Voter.all
| id | name | email | usn | created_at | updated_at | voted |
| 40 | MANOJ | man@man.com | ENG17CS0122 | 2019-11-11 14:43:10 UTC | 2019-11-11 14:43:13 UTC | true |
1 row in set
irb(main):008:0> @params = "MANOJ"
=> "MANOJ"
irb(main):009:0> Voter.where(name: @params)
| id | name | email | usn | created_at | updated_at | voted |
| 40 | MANOJ | man@man.com | ENG17CS0122 | 2019-11-11 14:43:10 UTC | 2019-11-11 14:43:13 UTC | true |
1 row in set
irb(main):010:0> Voter.where(name: @params).first.name.upcase
=> "MANOJ"
irb(main):011:0>


vote-online — ruby bin/rails c — 105×28
...nline — fsevent_watch • localhost:3000) [vote-online] RBENV_VERSION=2.6.5 GREP_COLOR=1;33
~/Documents/projects/vote-online — ruby bin/rails c
irb(main):011:0> Voter.all
| id | name | email | usn | created_at | updated_at | voted |
| 40 | MANOJ | man@man.com | ENG17CS0122 | 2019-11-11 14:43:10 UTC | 2019-11-11 14:43:13 UTC | true |
1 row in set
irb(main):012:0> Voter.delete_all
=> 1
irb(main):013:0> Voter.all
=> #<ActiveRecord::Relation []>
irb(main):014:0> Voter.count
=> 0
irb(main):015:0>



III. SOFTWARE REQUIREMENTS

The following requirements are necessary to Set up the Project:

1. Windows 10 OS, 2 GB RAM, 256 GB HDD.
2. Python 3.7 or above.
3. PostGreSQL 11.6
4. Ruby on Rails

Project can be Accessed through the Website :

www.voteonlinenow.herokuapp.com

IV. RESULTS

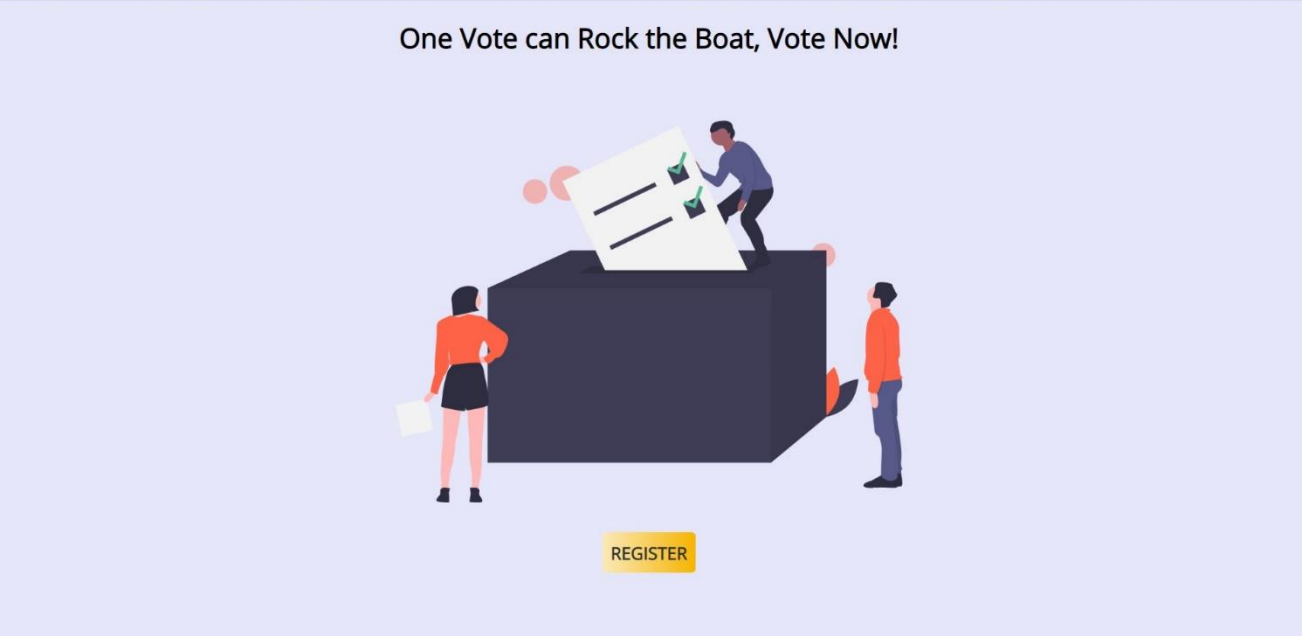


Figure 6.1. Home Page

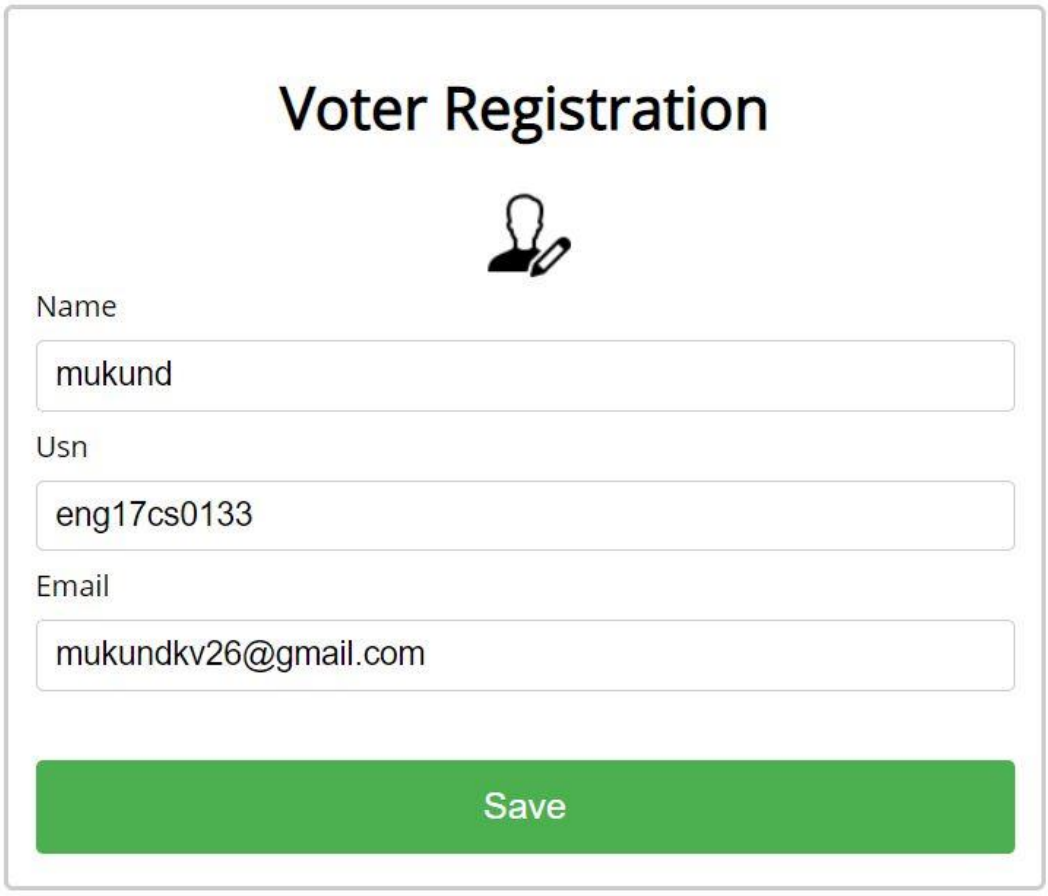


Figure 6.2. Register User/Candidate Page

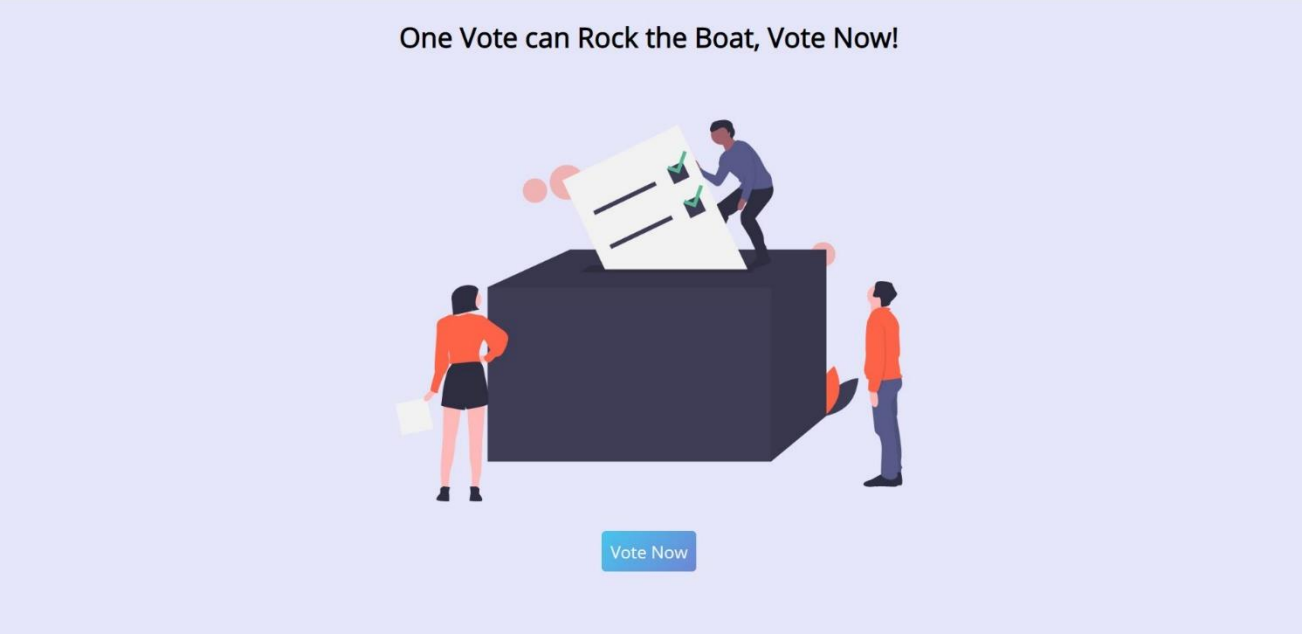


Figure 6.3. Menu Page

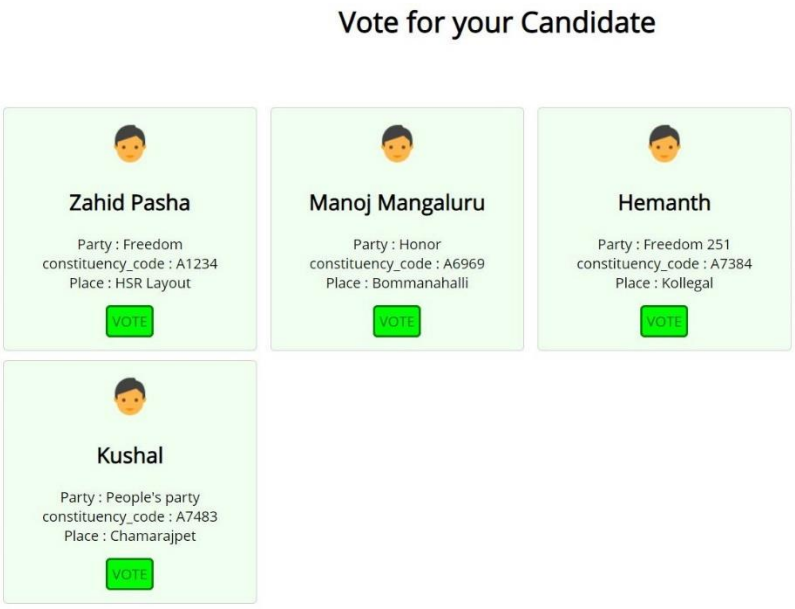


Figure 6.4. Candidates Voting Page

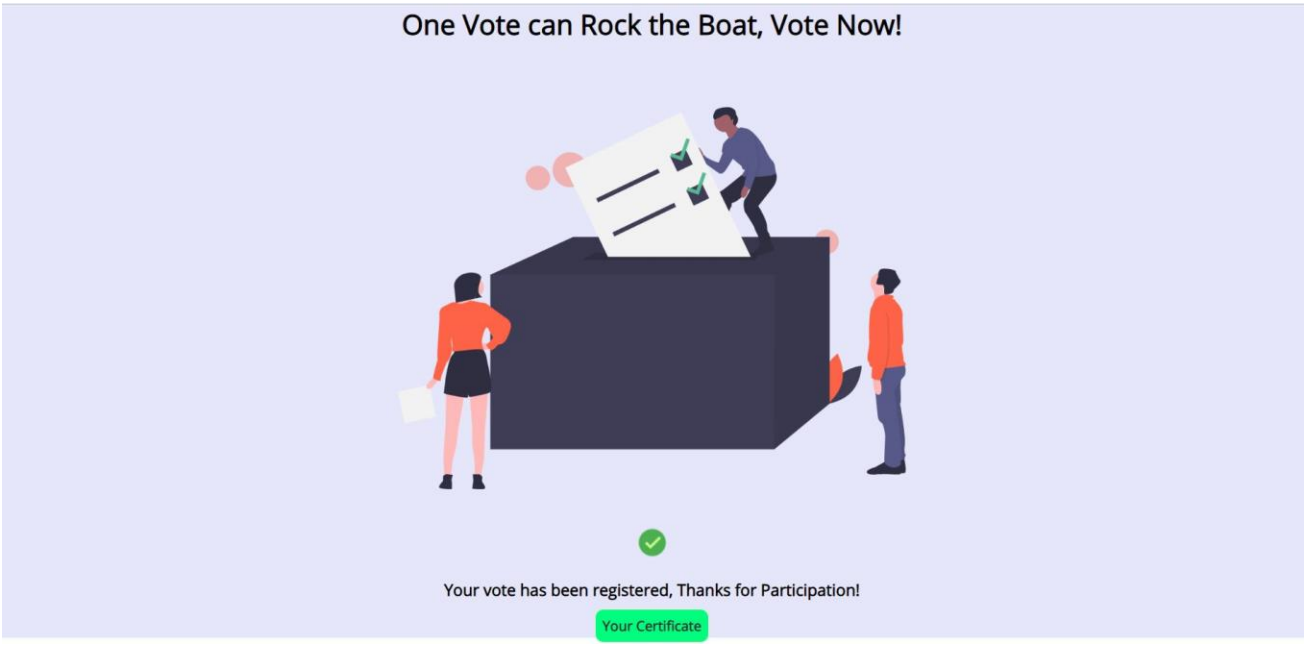


Figure 6.5. Voted Confirmation Page (User/Candidate)

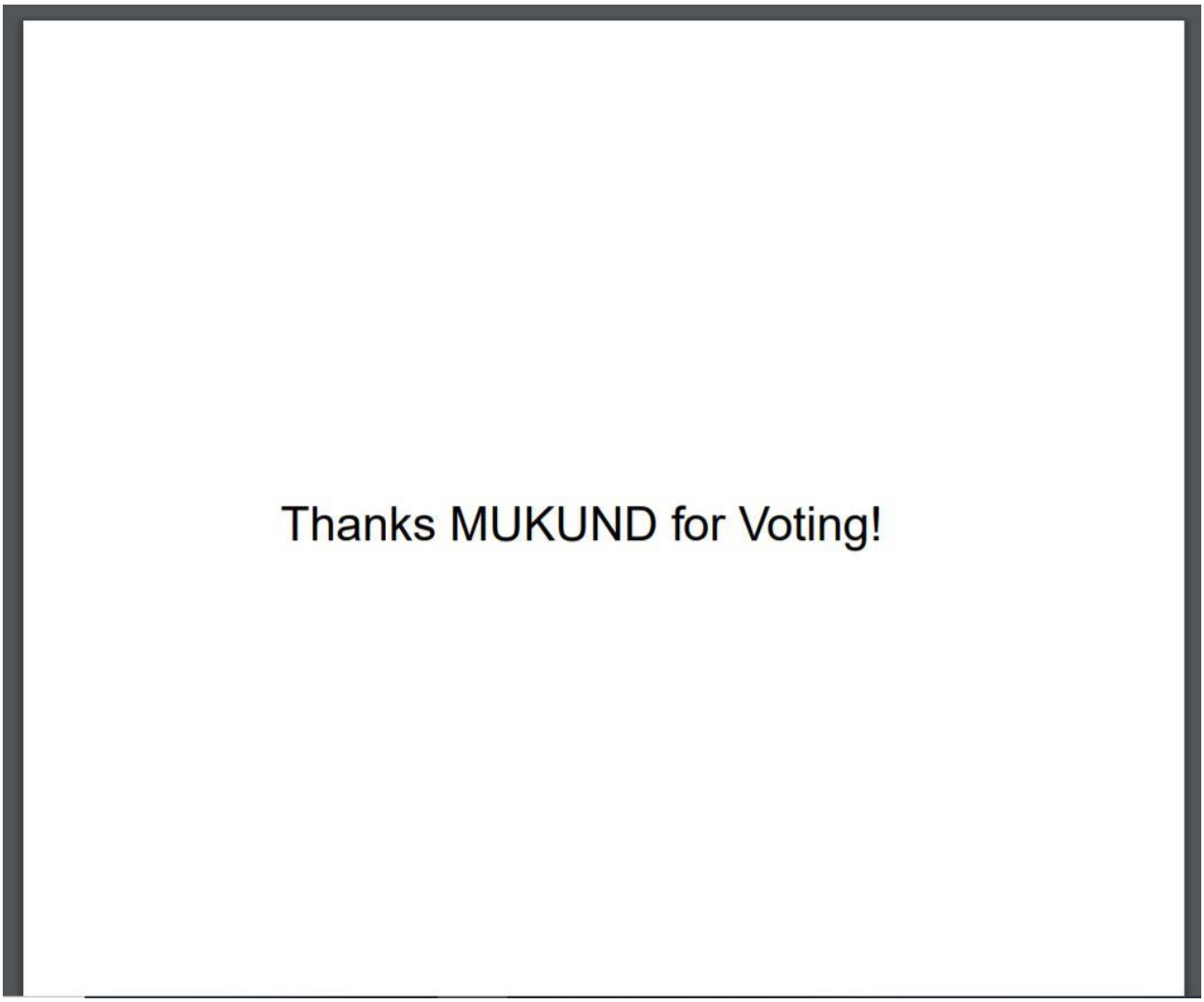


Figure 6.6. Voter certification

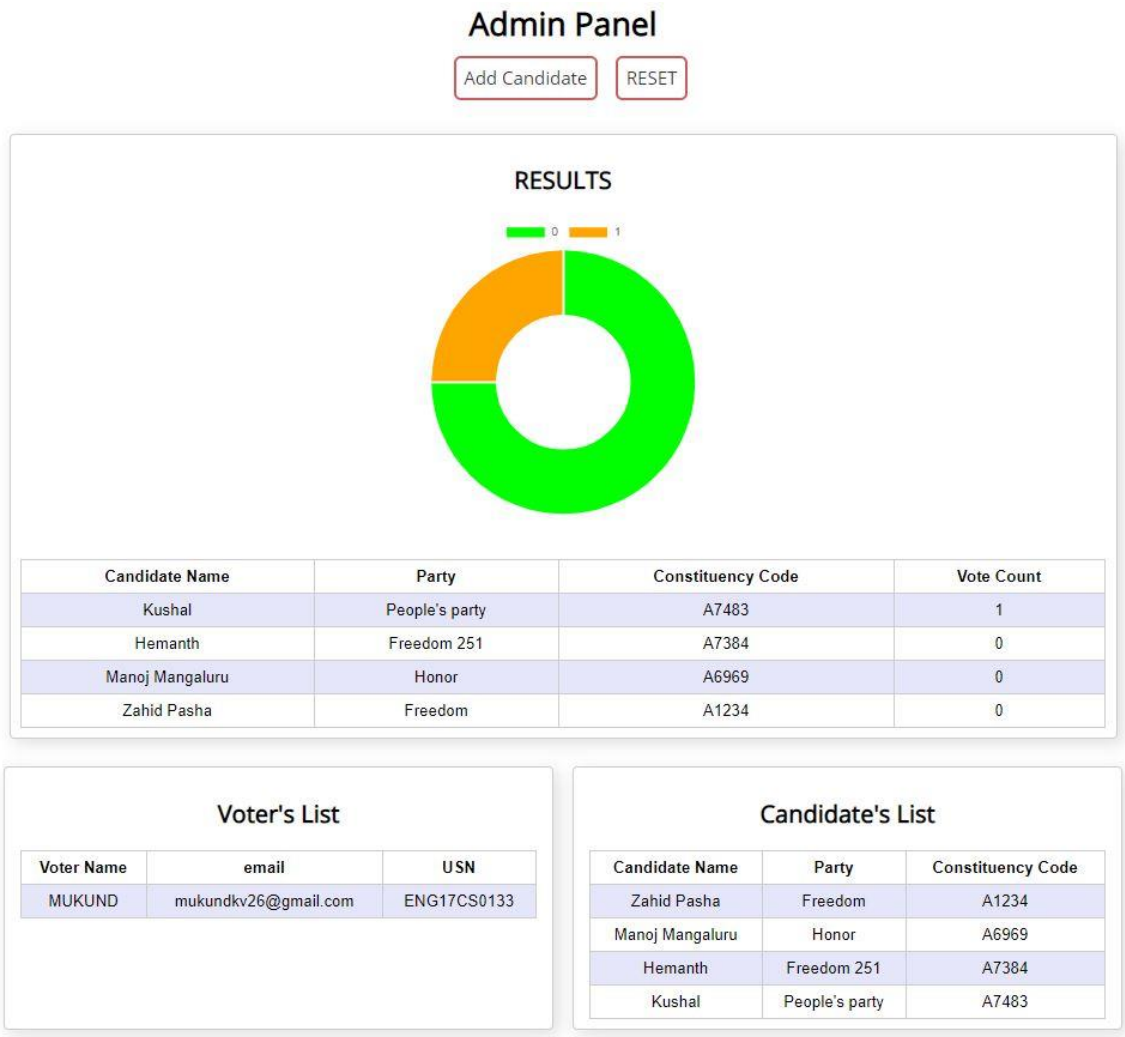


Figure 6.7. Admin Page

V. CONCLUSION

Online voting system is developed by using ROR(Ruby on Rails) with PostgreSQL as a backend database to computerize the process for check in and out system.

This project covers only the basic required to sum up, developing a information system on “online voting system” for was a matter of essence.

VI. REFERENCES

- www.onlinevoting.com
- www.google.com
- https://guides.rubyonrails.org
- https://www.postgresql.org/