

TCA2163040_G15.docx

by

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Word count: 1612

Character count: 9614

1 Project Title

E-VOTING SYSTEM

2 Problem Statement

Paper ballots are used in traditional methods of conducting student elections, which are time-consuming, labor-intensive, and prone to errors. Furthermore, such methods lack transparency and are vulnerable to tampering, rendering the election process untrustworthy. Given these obstacles, there is an urgent need to create an electronic voting system that is efficient, secure, and transparent.

A web-based electronic voting system for student elections is what the proposed project seeks to design and create. Students may easily and securely cast their ballots using the system's user-friendly interface. The data will be managed and the accuracy of the electron results will be guaranteed by the backend system. To guard against hacking and sorts of unwanted activities, the system will also have security features including encryption and authentication. The device will also increase openness by enabling authorized individuals to keep an eye on the voting process in real time.

The goal of this project is to develop a dependable, efficient, and a secure electronic voting system that will expedite the election process and boost the legitimacy of the results. Students will be able to vote remotely and securely under the proposed approach, boosting voter turnout and guaranteeing that every vote counts. Ultimately, by providing a platform for fair and transparent student elections, this initiative will help to develop digital democracy.

3 Project Description

The goal of this project is to create a web-based, secure, effective, and transparent e-voting system for student elections. Students will be able to cast their votes remotely using their choice device and an internet connection from any location. The following attributes will be present in the suggested system:

- User Authentication: Using a unique login and password, the system will authenticate voters, guaranteeing that only approved students can vote.
 - Candidate Information: The system will display information on the candidates, including their names.
-

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- Voting Interface: The system will offer a user-friendly interface that makes it simple and accurate for students to cast their ballots.
 - Real-time Monitoring: The technology will enable authorized staff to monitor the voting process in real-time, assuring accountability and transparency.
 - Data Management: The system will securely manage voting data, assuring the accuracy of the election results.
 - Security Measures: To avoid hacking and other harmful activity, the system will have security measures such as encryption and authentication.

Increased voter turnout, quicker election results, lower expenses, and greater transparency are just a few advantages of the planned e-voting system. The system will be scalable, making it possible to utilize it in elections for positions at different levels within the organization, such as class representatives, student council members, or faculty representatives. The suggested electronic voting method will, overall, strengthen digital democracy and increase the legitimacy of student elections.

3.1 Scope of Work

The objective of this project is to create and develop a student election web-based e-voting system for student elections. Students will be able to vote remotely from any location using their choice device with an internet connection. The project's scope of work will include the following:

- Collecting and recording the functional and non-functional requirements for the electronic voting system is known as requirement gathering.
 - System Design: Creating the user interface, database schema, and system architecture for the electronic voting system.
 - System Development: By utilizing current software development approaches, Django, Python.
 - User Authentication: Using a unique username and password for each student to implement user authentication.
 - Candidate Information: Information on the candidates, including their names, is displayed.
 - Voting Interface: Creating a user-friendly interface that allows students to simply and properly cast their ballots.
 - Creating a method for tracking the voting process in real time will ensure accountability and transparency.
 - Data management: Creating a safe system to manage voting information and guarantee the validity of the results.
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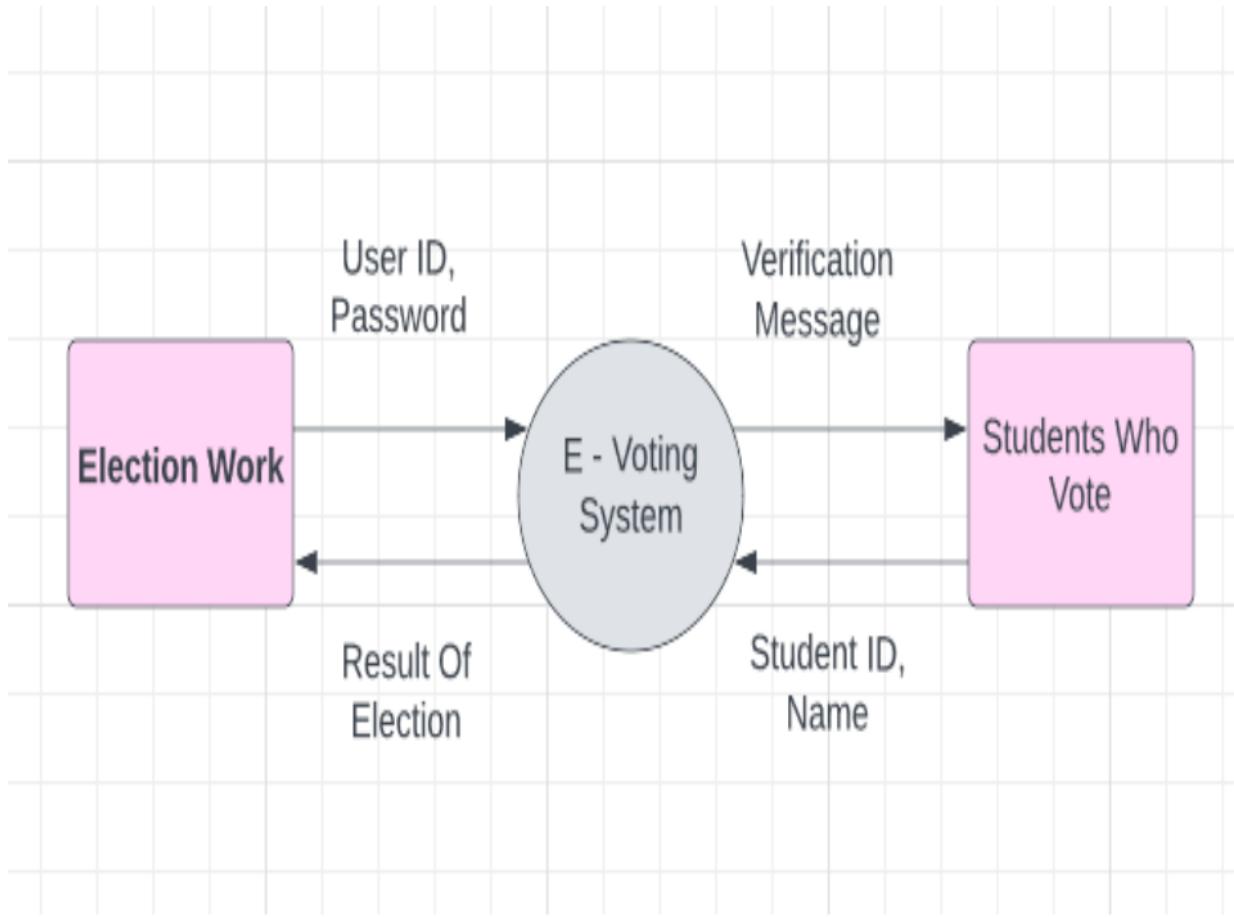
-
- Security measures: Putting security measures in place to stop hacking and other malicious acts, such as encryption and authentication.
 - Testing and Quality Assurance: Testing and guaranteeing the system's quality and dependability.

The creation of a web-based electronic voting system is the only activity covered under the project's narrow scope, which excludes any hardware installation or configuration. The suggested electronic voting method will, overall, strengthen digital democracy and increase the legitimacy of student elections.

3.2 Project Modules

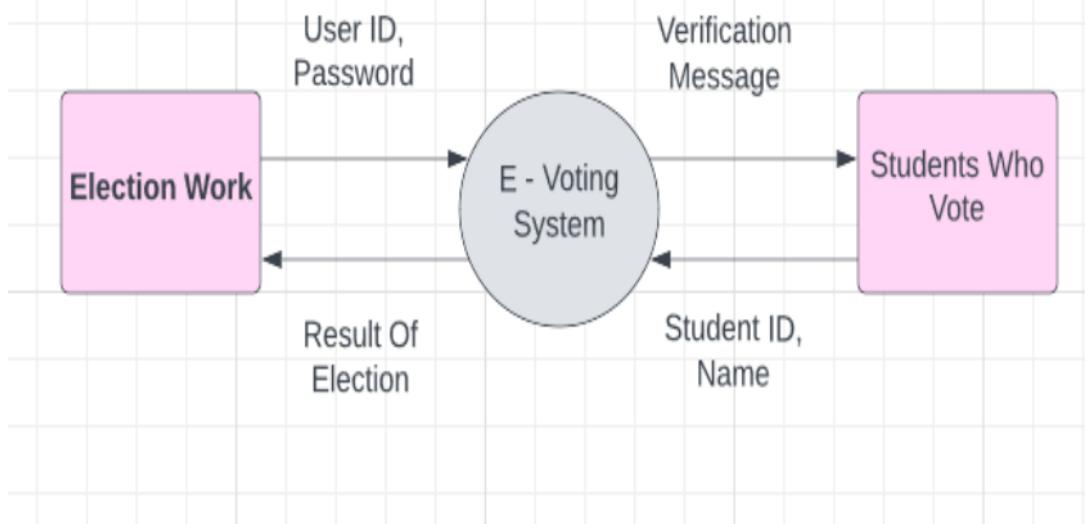
- User management module: This module will be in charge of managing user accounts, including student registration, login, and password recovery. It will also ensure that the voting mechanism is only accessible by approved pupils.
- Candidate Management Module: This module will be in charge of handling candidate profiles, such as names and other pertinent information. It will also guarantee that the system displays only authorized applicants.
- Voting Module: This module is in charge of overseeing all aspects of voting, including the casting and recording of ballots. It will make sure that students can vote efficiently and properly, and it will also offer real-time voting process monitoring.
- Results management module: The responsibility for managing the election results, which involves their calculation and display, lies within the domain of results management. It will guarantee that the findings are transparent and accurate, and it will also offer real-time results monitoring.
- Security Module: This module will be in charge of assuring e-voting system security. To avoid hacking and other malicious acts, it will incorporate security mechanisms such as encryption, authentication, and access control.
- Reports Module: This module will generate reports on the voting process and results. It will enable authorized staff access to and analysis of data, providing transparency and accountability.
- Administration Module: The administration module is in charge of controlling the whole system, including user roles, system preferences, and system upkeep. It will guarantee that the electronic voting system is efficient, dependable, and current.

3.3 Context Diagram (High Level)

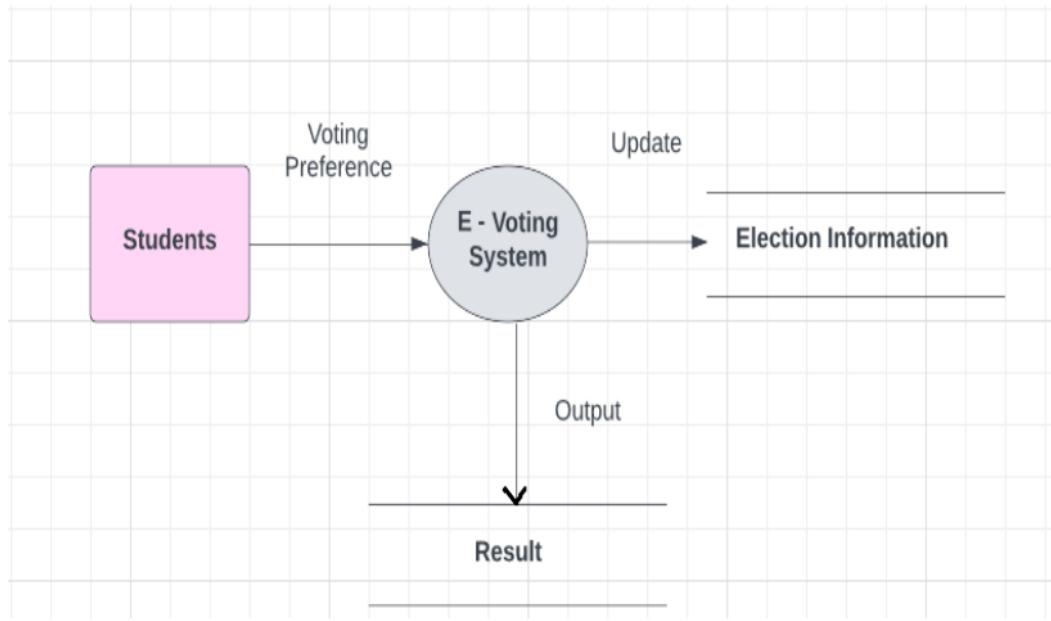


4 Implementation Methodology

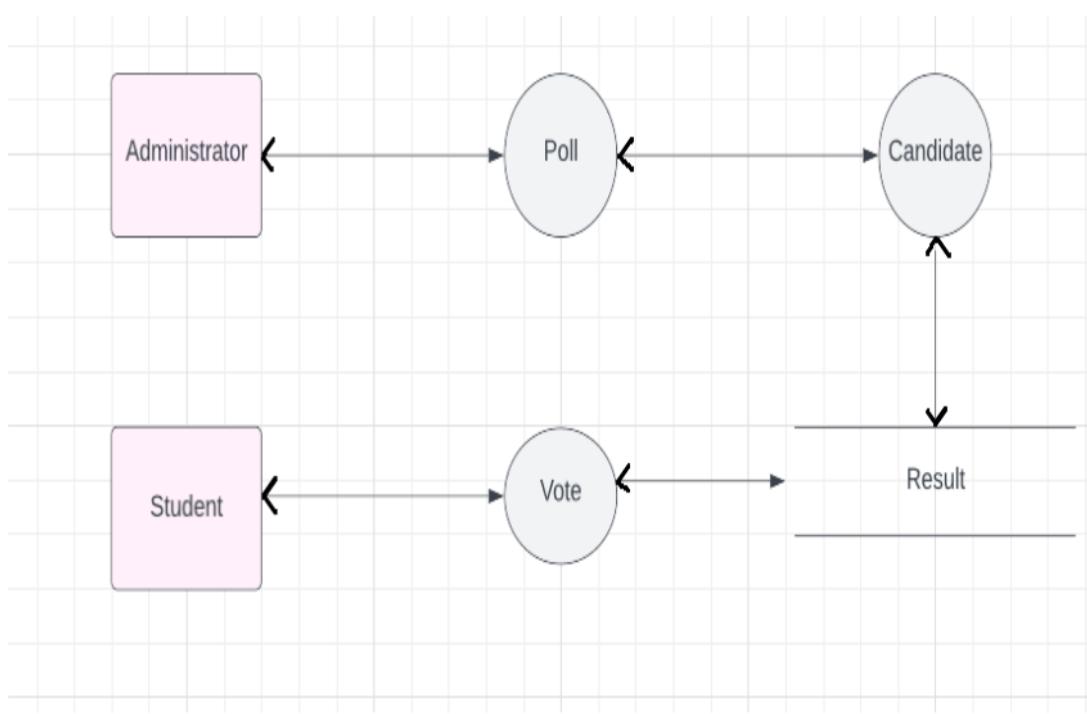
CONTEXT DIAGRAM



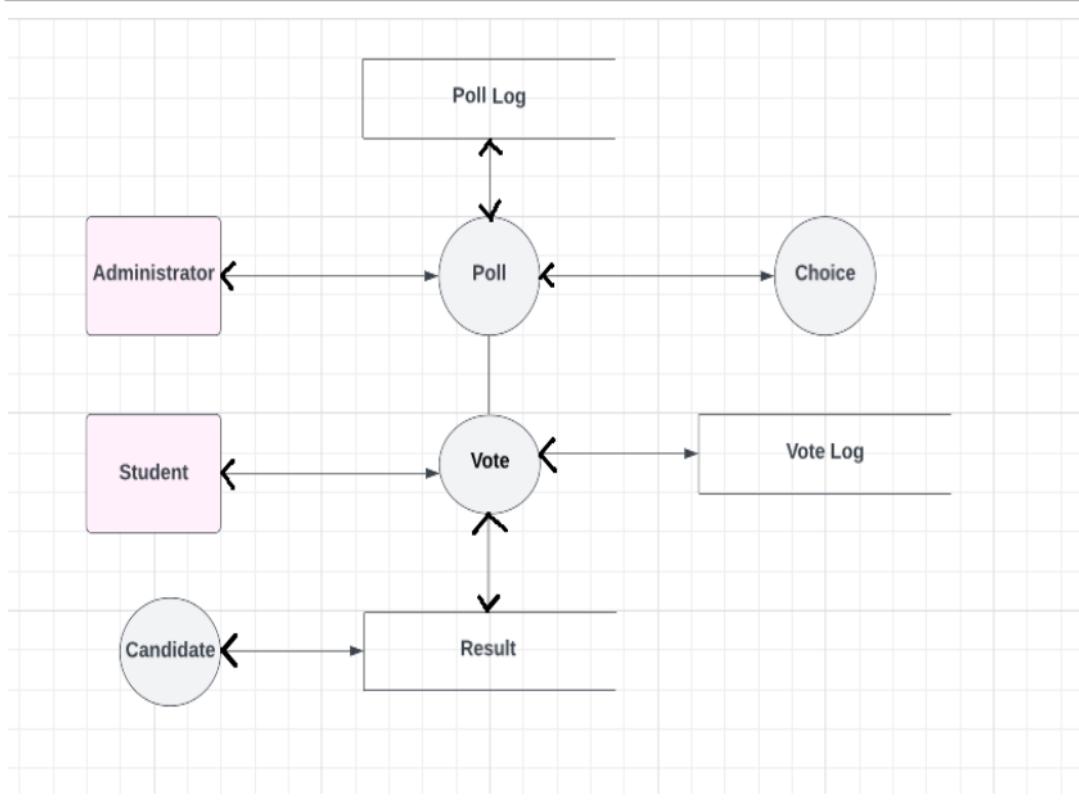
DFD-1



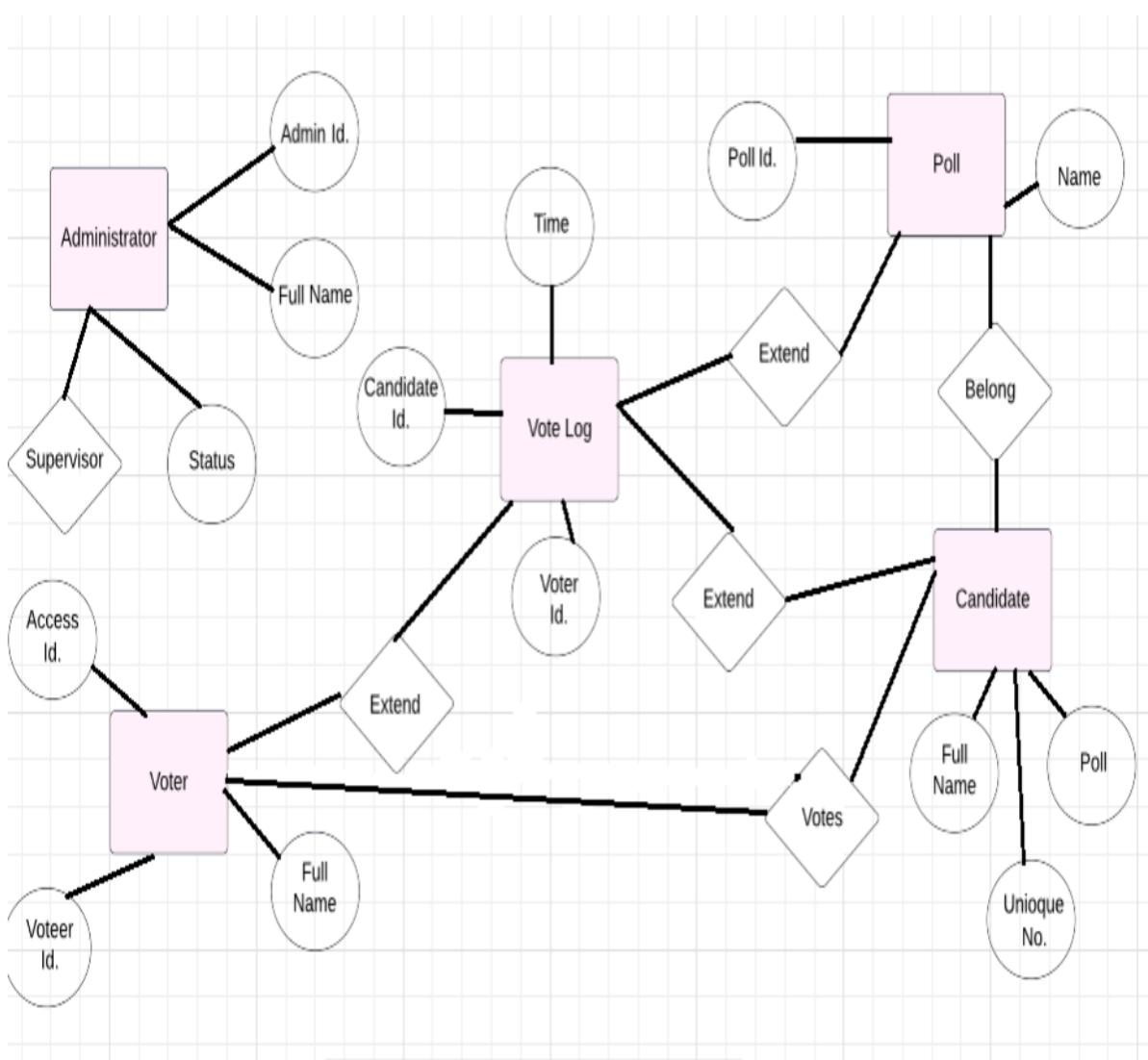
DFD-2



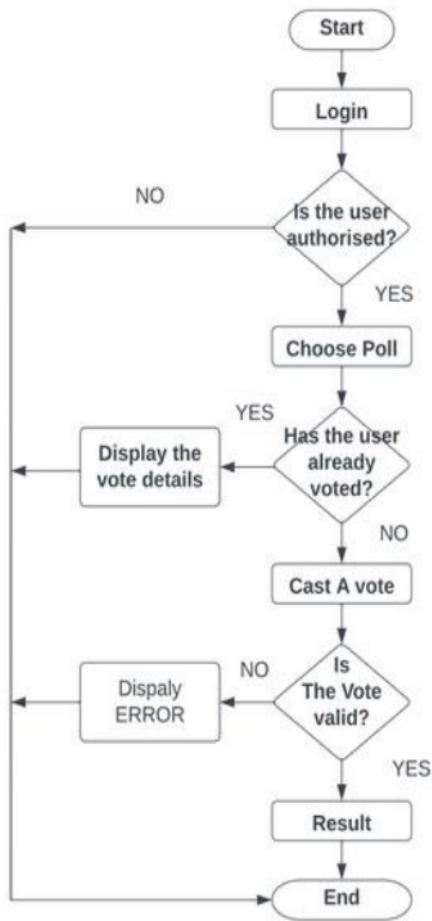
DFD-3



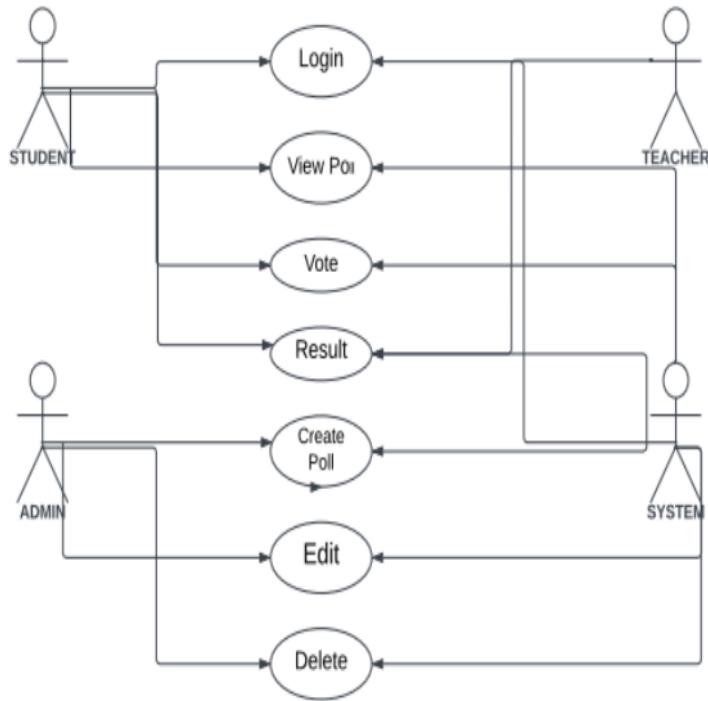
ERD DIAGRAM



FLOW CHART



USE-CASE DIAGRAM



5 Technologies to be used

HTML

JAVASCRIPT

PYTHON

DJANGO

WINDOW 10,11

VS CODE

CHROME

5.1 Tools, if any

VS CODE

6 Advantages of this Project

- Improved Accessibility: The electronic voting method will make voting more accessible and convenient for students. Students may vote from anywhere using any device with an internet connection, saving them time and effort.
- Improved Participation: Because it eliminates the need to physically attend the polling place, the e-voting method will encourage more students to vote in the elections. This will improve student participation in the election process, resulting in a more representative and democratic result.
- Improved transparency: The e-voting system will monitor the voting process and outcomes in real time, assuring openness and accountability. Students may track the progress of the election. The election authorities play a crucial role in implementing standardized procedures to safeguard the integrity of the voting process and ensure accurate vote counting.
- Efficiency Gains: Because the e-voting technology automates numerous manual procedures, it will take less time and work to execute the election. Election authorities

will have less work to do as a result, and the results will be made accessible more swiftly.

- Improved Security: To stop hacking and other nefarious acts, the electronic voting system will integrate security measures including encryption and authentication. This will secure the privacy of student voters and assure the accuracy of the election results.

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7 Assumptions, if any

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8 Future Scope and further enhancement of Project

- Mobile Application: As part of its future development, the project aims to extend its capabilities by incorporating a mobile application into the e-voting system. Students will be able to vote using their smart phones and tablets, giving them even greater freedom and convenience.
- Facial recognition: Technology for facial recognition is another improvement to the electronic voting process. By using a picture to prove their identity, students will be able to do away the laborious identification procedures.

1

9 Project Repository Location

S#	Project Artifacts	Location	Verified by Project Guide	Verified by Lab In-Charge
1.	Project Synopsis Report			
2.	Project Progress updates			
3.	Project Requirement specifications			
4.	Project Report			
5.	Test Repository			
6.	Any other document, give details			

10 Definitions, Acronyms, and Abbreviations

Abbreviation	Description
SRS	Software Requirement Specification
VS CODE	Visual studio

11 Conclusion

Finally, the e-voting system for student elections represents a substantial improvement in the election process, offering various advantages over traditional paper-based voting methods. The implementation of this technology will lead to improved accessibility, increased participation, enhanced transparency, streamlined efficiency, and heightened security in student elections.

Among the project components of the e-voting system are voter registration, candidate nomination, and vote casting. The technology may be improved further using mobile applications and facial recognition.

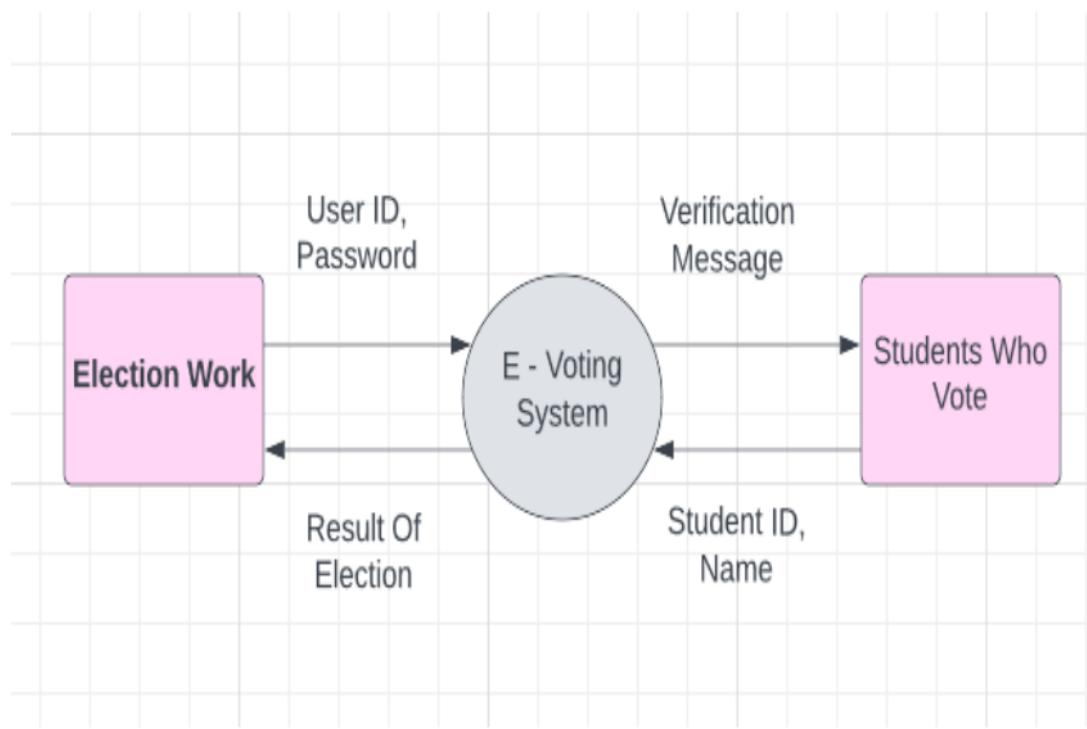
The use of an electronic voting system will guarantee that student elections are handled in a democratic, open, and reliable manner. More students will take part in the election as a result, resulting in more representative conclusion. The approach will also conserve time, money, and resources, making student elections more affordable and effective.

The e-voting system for student elections, in its entirety, makes a substantial contribution to the education sector by encouraging student engagement, democratic principles, and technological improvements.

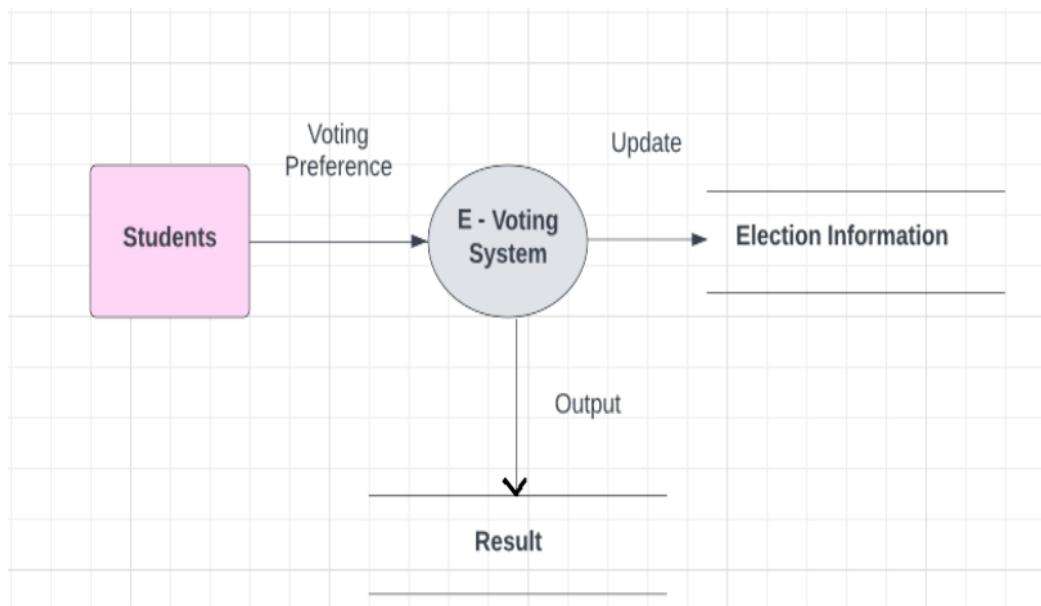
12 References

S#	Reference Details	Owner	Version	Date
1.	https://www.electionsonline.com/online-voting-system/	Election online		
2.	https://en.wikipedia.org/wiki/Electronic_voting	Wikipedia		
3.	https://jpinfotech.org/online-election-system-online-voting-system/	Jpinfotech		

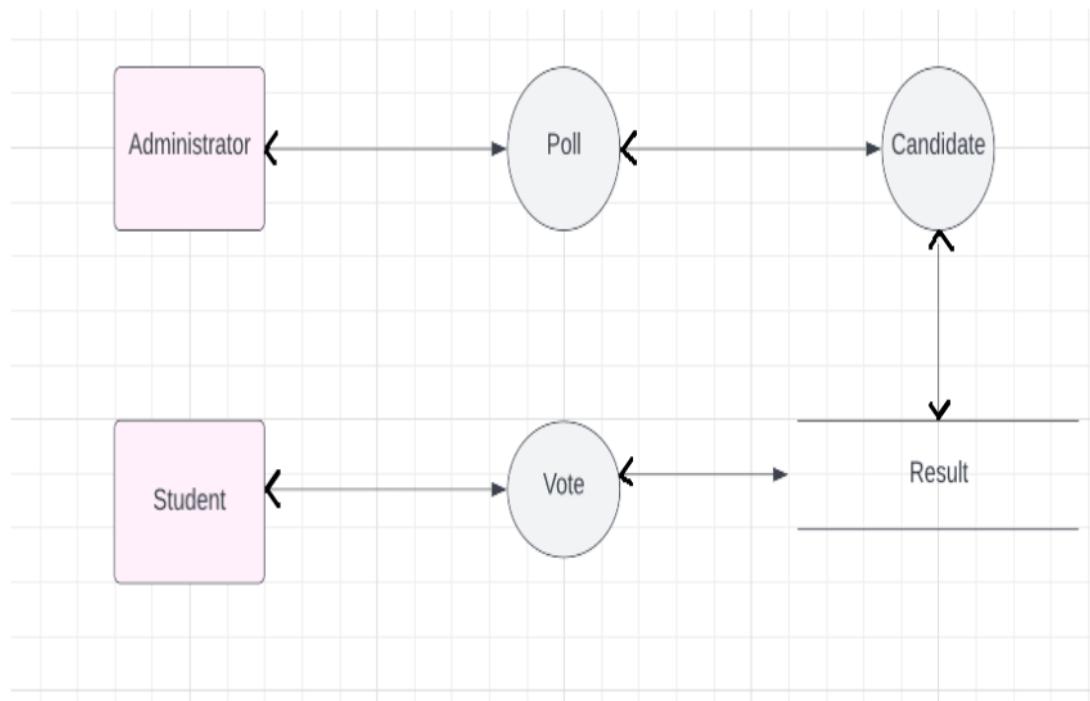
Annexure A
Data Flow Diagram (DFD)
(Mandatory)
0-LEVEL



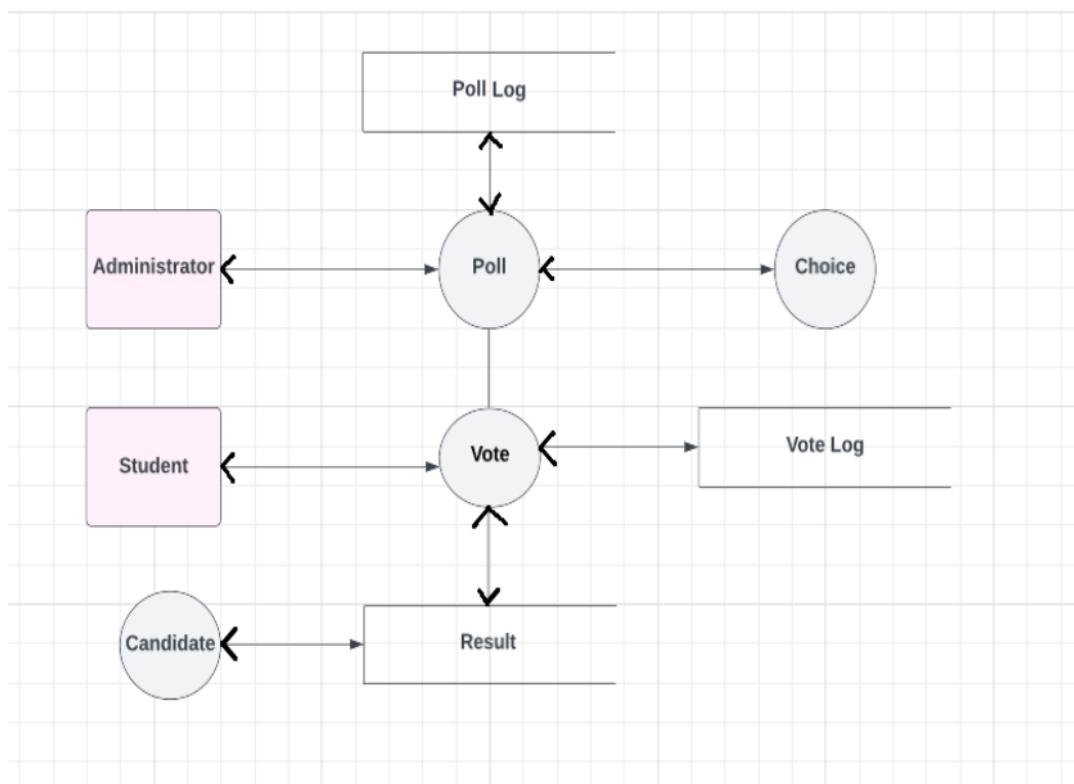
1-LEVEL



LEVEL - 2



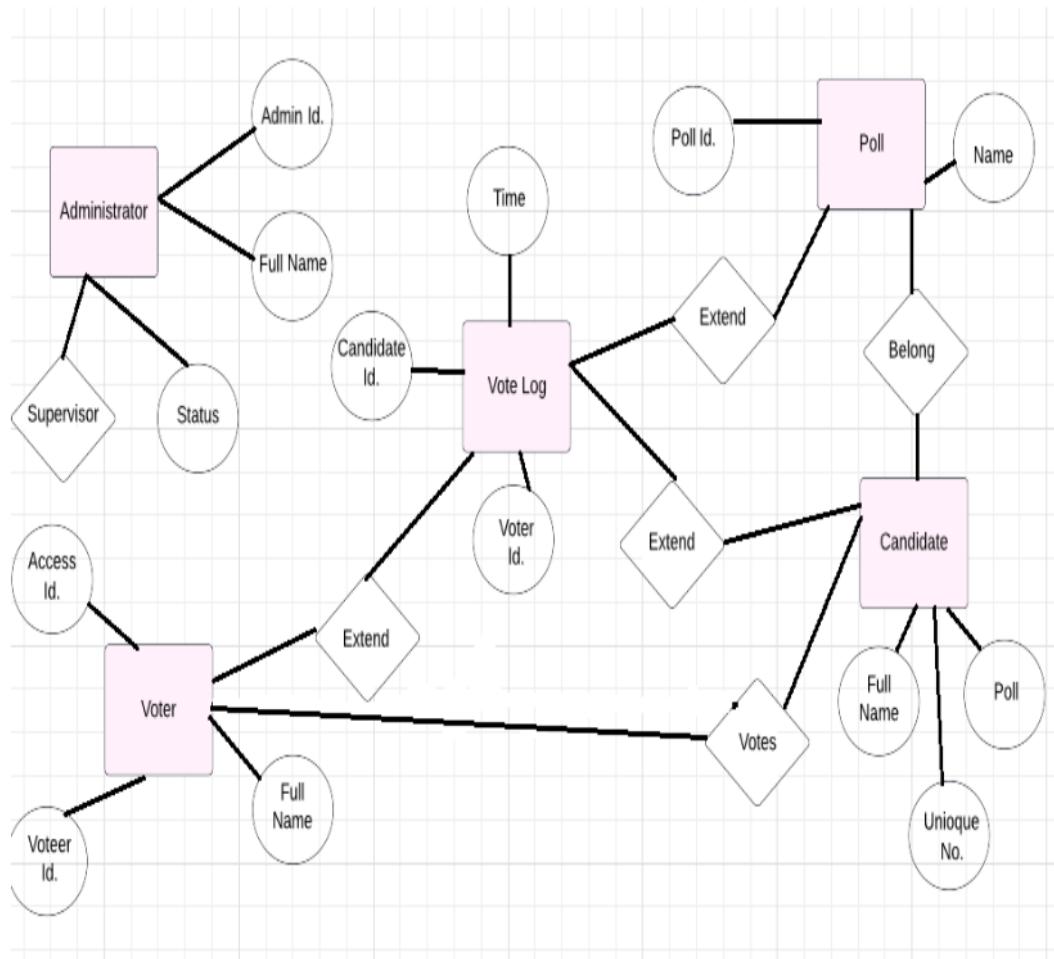
LEVEL- 3



Annexure B

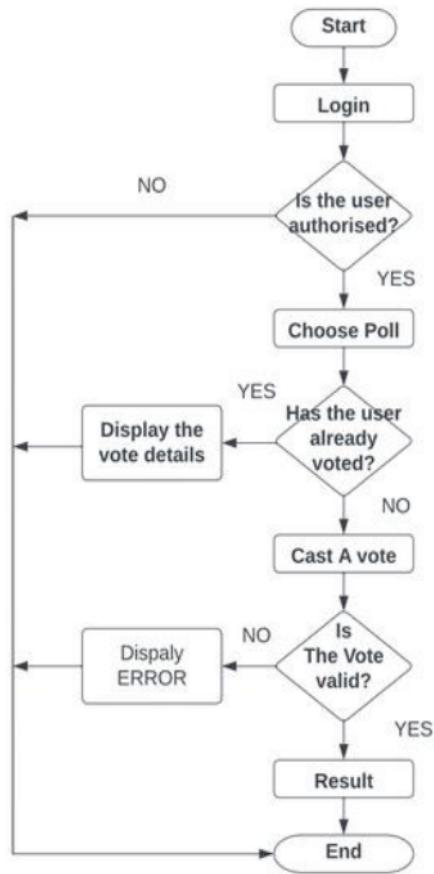
Entity-Relationship Diagram (ERD)

(Mandatory)



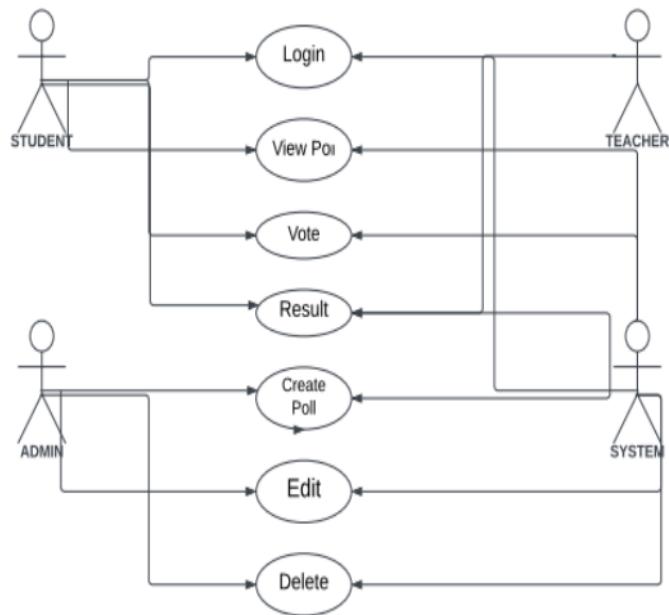
Annexure C

Flow chart



Annexure D

Use-Case Diagram (UCD)



Annexure E

Data Dictionary (DD)

(Mandatory)

Example:

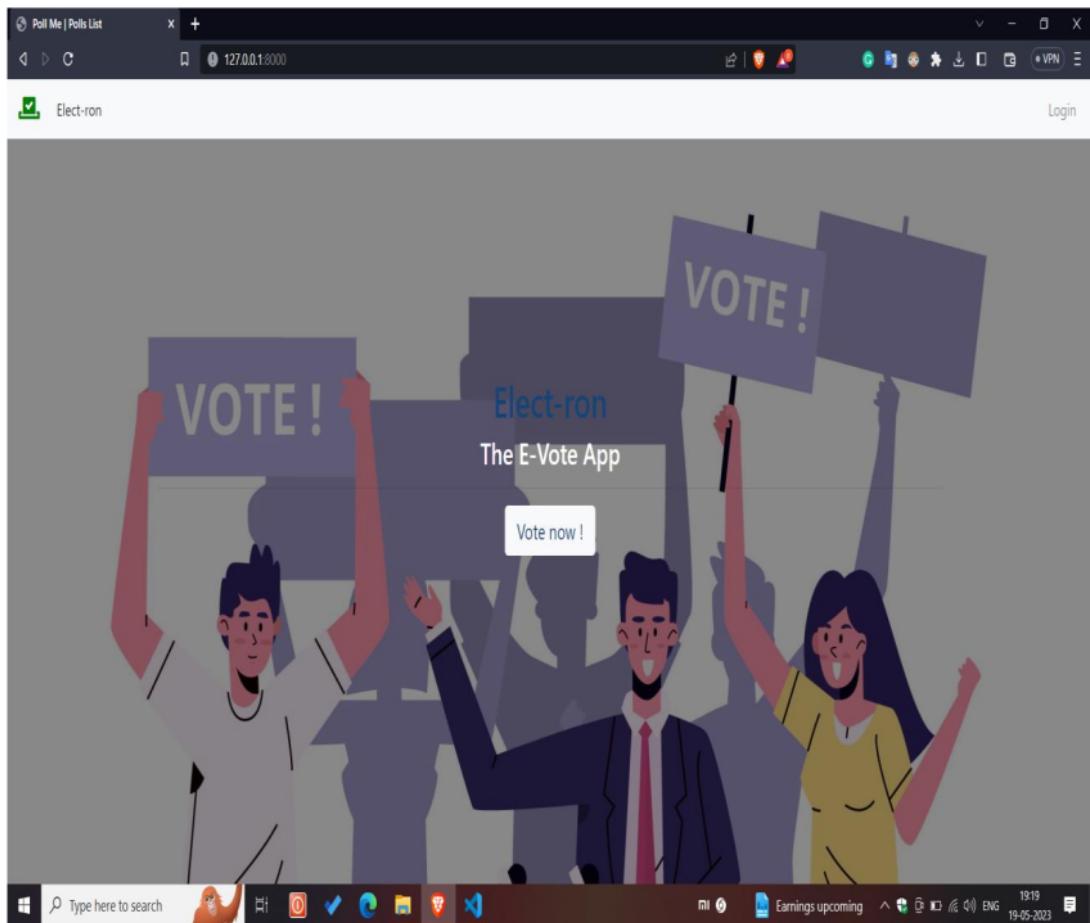
User Table (USR)

Fields	Data type	Description
USER-ID	Int	Unique number id for all users
USER-UserName	Text	Unique enrollment number
3 USER-FirstName	Text	User FirstName
USER-LastName	Text	User LastName
USER-Email Id	Text	User Email Id
USER-Password	Text	User Password

Annexure F

Screen Shots

Home Page:



Poll Me | Polls List

127.0.0.1:8000/accounts/login/?next=/polls/list/

Elect-ron

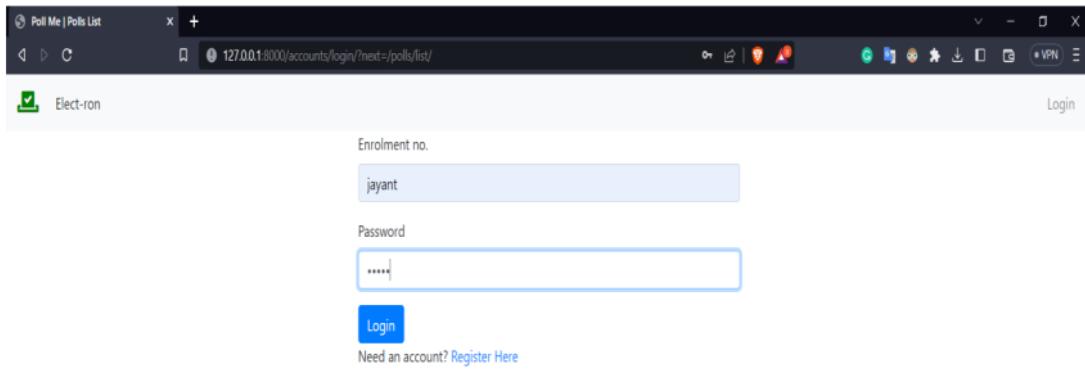
Login

Enrolment no.

Password

[Login](#)

Need an account? [Register Here](#)



Site administration | Django site 2 +

127.0.0.1:8000/admin/

Django administration

WELCOME, JAYANT. VIEW SITE / CHANGE PASSWORD / LOG OUT

Site administration

ACCOUNTS

Stores [+ Add](#) [Change](#)

AUTHENTICATION AND AUTHORIZATION

Groups [+ Add](#) [Change](#)

Users [+ Add](#) [Change](#)

POLLS

Choices [+ Add](#) [Change](#)

Polls [+ Add](#) [Change](#)

Votes [+ Add](#) [Change](#)

Recent actions

My actions

- + TCA2160000 Store
- ✗ TCA3456783 User
- ✗ TCA2002038 User
- ✗ TCA2163040 User
- ✗ TCA2163016 User
- ✗ TCA2163042 User
- ✗ TCA2163045 User
- + prime minister - rahul gandhi Choice
- + prime minister - modi Choice
- + prime minister Poll



Select store to change | Django +

127.0.0.1:8000/admin/accounts/store/

Django administration

WELCOME, JAYANT | VIEW SITE / CHANGE PASSWORD / LOG OUT

Home › Accounts › Stores

ACCOUNTS

- Stores [+ Add](#)

AUTHENTICATION AND AUTHORIZATION

- Groups [+ Add](#)
- Users [+ Add](#)

POLLS

- Choices [+ Add](#)
- Polls [+ Add](#)
- Votes [+ Add](#)

Select store to change

Action: 0 of 8 selected

STORE

TCA2160000

TCA2163045

TCA2163044

TCA2163043

TCA2163042

TCA2163041

TCA2163040

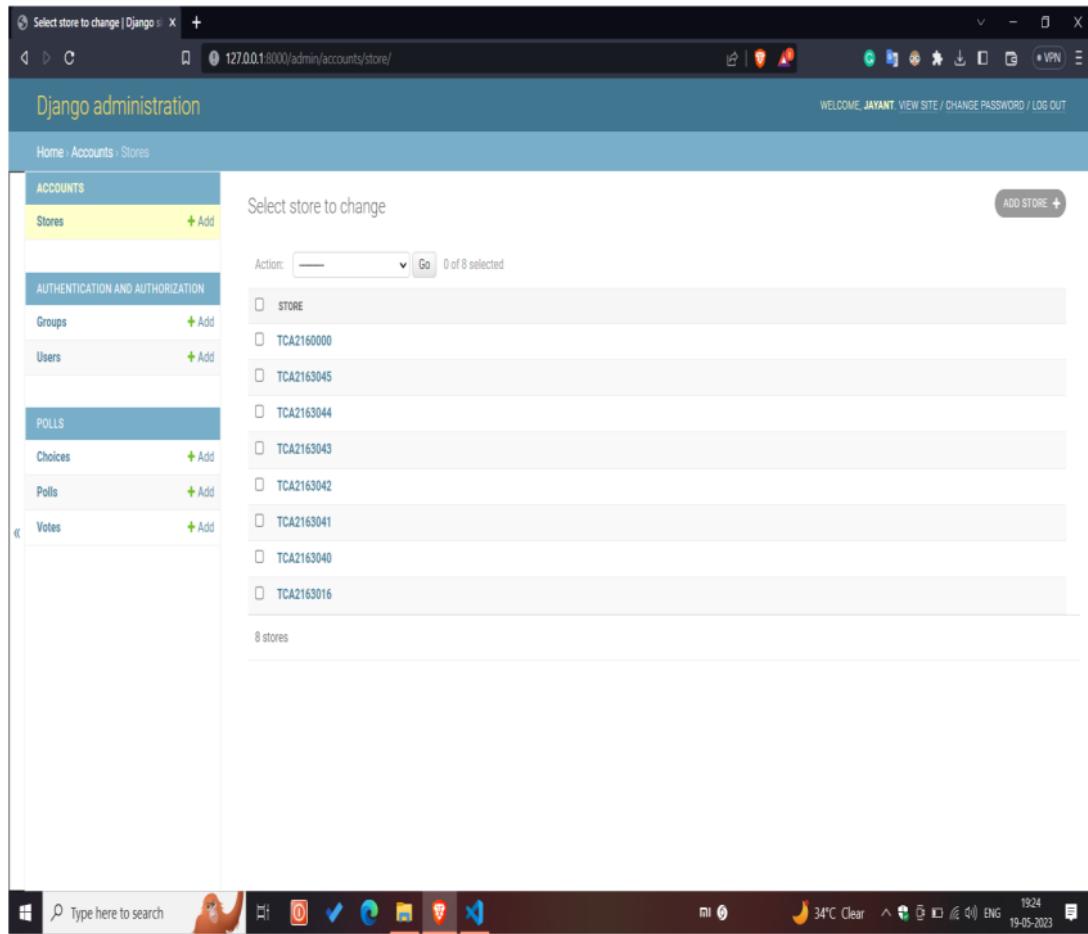
TCA2163016

8 stores

Type here to search

34°C Clear

1924 19-05-2023



Select user to change | Django site

127.0.0.1:8000/admin/auth/user/

Django administration

Home : Authentication and Authorization : Users

ACCOUNTS

- Stores [+ Add](#)

AUTHENTICATION AND AUTHORIZATION

- Groups [+ Add](#)
- Users [+ Add](#)

POLLS

- Choices [+ Add](#)
- Polls [+ Add](#)
- Votes [+ Add](#)

Select user to change

Action: — Go 0 of 6 selected

<input type="checkbox"/>	ID	USERNAME	FIRST NAME	LAST NAME	EMAIL ADDRESS	PASSWORD
<input type="checkbox"/>	14	TCA2163041	kumar	sing	sin@gmail.com	pbkdf2_sha256\$216000\$lnW4dSzOIDSH3ikasWMQCo8Mr/JN3tSwNLR3h7Cxg17vShF4lkA68=
<input type="checkbox"/>	13	TCA2160000	zero	zero	zero@gmail.com	pbkdf2_sha256\$216000\$pU1kCxTlhNc3\$xoYxLyQ3bjUoMR54jZDBGSajKeloSkdDyCNgGj0=
<input type="checkbox"/>	10	TCA2163045	love	kumar	love@gmail.com	pbkdf2_sha256\$216000\$InhMSjETTQmfZ\$yuKQGKPxbYLK2fpasuqYXTxBU4hmMVy7JyDWak7+ik=
<input type="checkbox"/>	9	TCA2163042	jay	hrjes	k@gmail.com	pbkdf2_sha256\$216000\$JtAvWKLgrVPNS\$9jOvoXS5xm/ymld/3xSdmB6EywlRbBPUZ7jyAOwP0=
<input type="checkbox"/>	8	TCA2163040	jayant	grover	jayantgrover7417@gmail.com	pbkdf2_sha256\$216000\$w5t3t2qZHJu\$Vkd6OvXPgcyQ0jz4PxLqjZuN6WgD2RppC5JjwPWnsQ=
<input type="checkbox"/>	1	jayant			jay@gmail.com	pbkdf2_sha256\$216000\$yygpQNdFsIPSNw8Qgjh8MeV3+IewLPLYormFwoV8bnzCT833ESU=

6 users

Type here to search

34°C Clear 19:31 19-05-2023

Select choice to change | Django X +

127.0.0.1:8000/admin/polls/choice/

Django administration

Home · Polls · Choices

ACCOUNTS

- Stores [+ Add](#)

AUTHENTICATION AND AUTHORIZATION

- Groups [+ Add](#)
- Users [+ Add](#)

POLLS

- Choices [+ Add](#)
- Polls [+ Add](#)
- Votes [+ Add](#)

Select choice to change

Action: — Go 0 of 2 selected

CHOICE

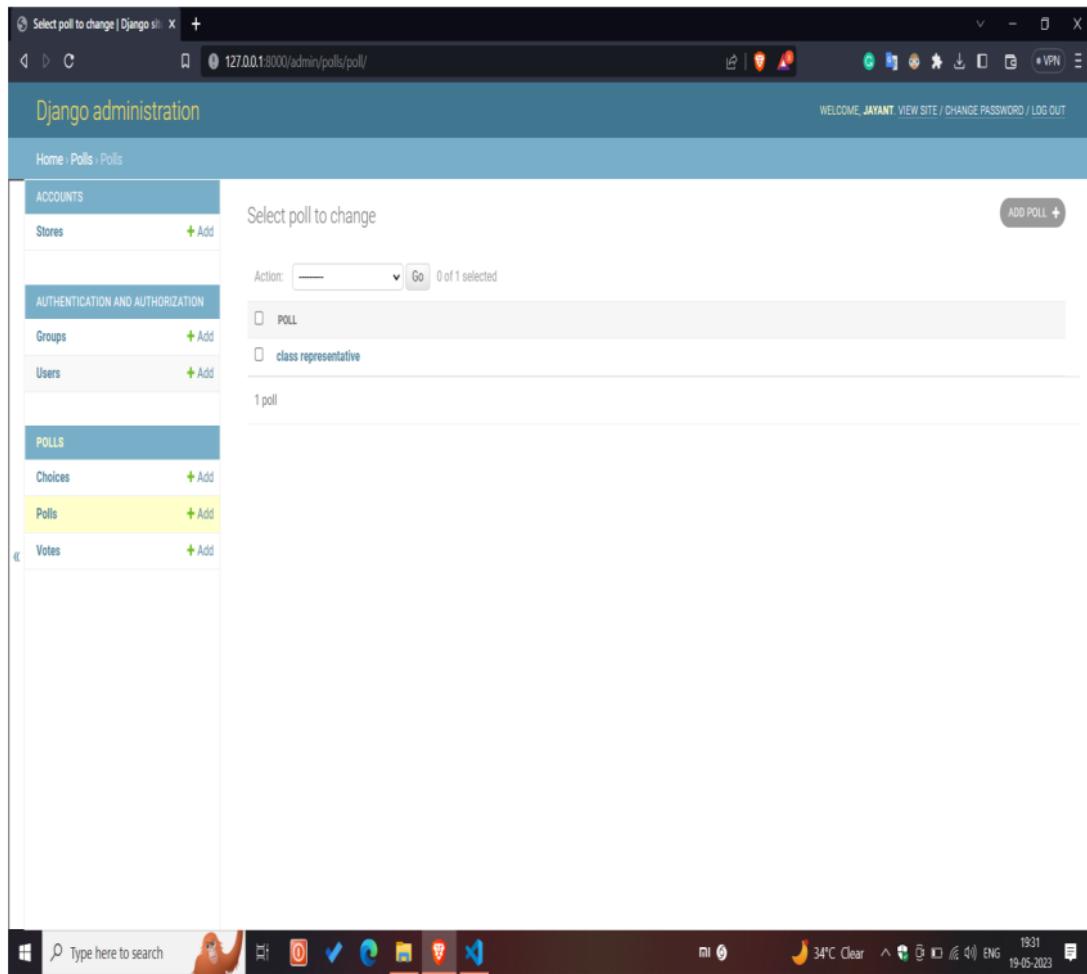
class representative - kashish

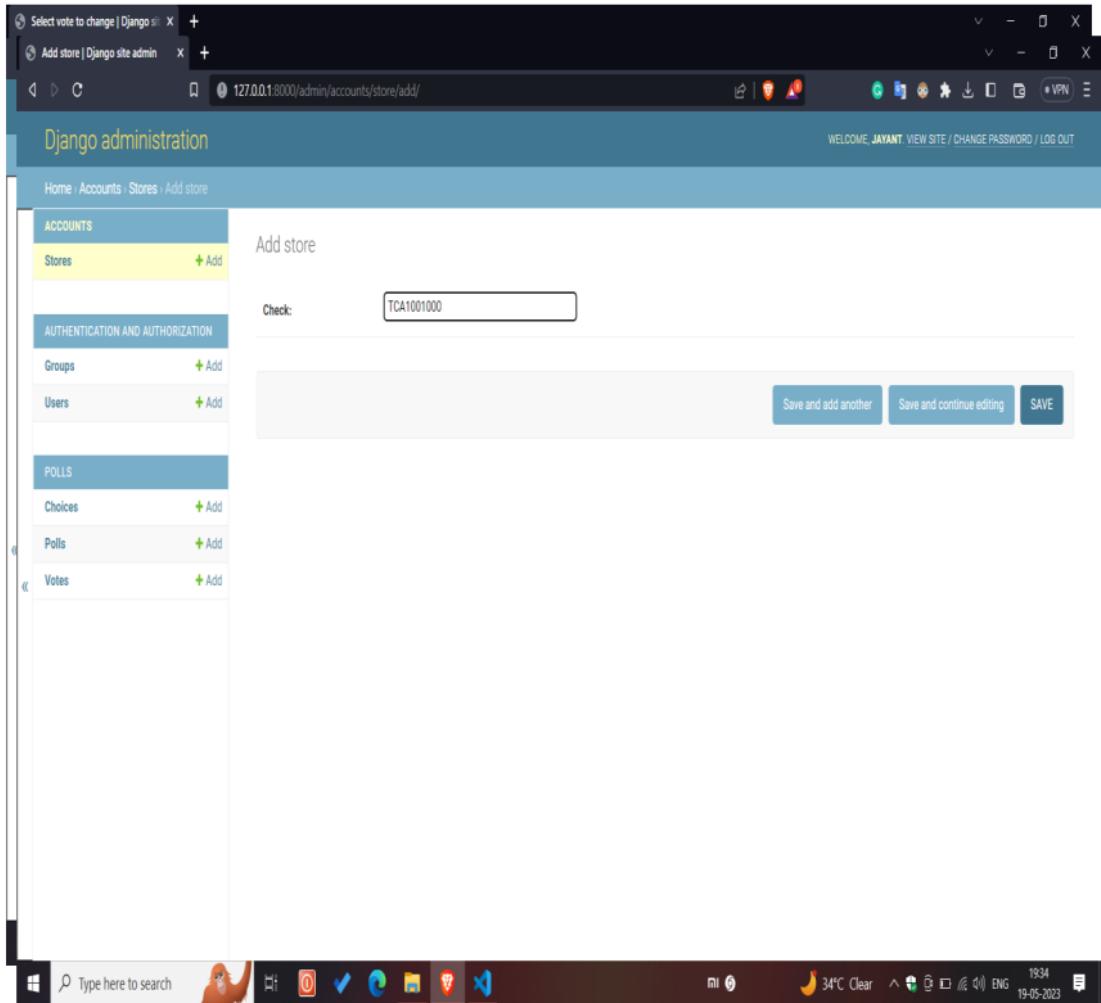
class representative - suraj

2 choices

Type here to search

34°C Clear 19:31 19-05-2023





Select store to change | Django s X +

127.0.0.1:8000/admin/accounts/store/

Django administration

Home · Accounts · Stores

ACCOUNTS

Stores [+ Add](#)

AUTHENTICATION AND AUTHORIZATION

Groups [+ Add](#)

Users [+ Add](#)

POLLS

Choices [+ Add](#)

Polls [+ Add](#)

Votes [+ Add](#)

The store "TCA1001000" was added successfully.

Select store to change

Action: 0 of 9 selected

STORE

TCA1001000

TCA2160000

TCA2163045

TCA2163044

TCA2163043

TCA2163042

TCA2163041

TCA2163040

TCA2163016

9 stores

ADD STORE +

Type here to search

34°C Clear

1934 19-05-2023

A screenshot of a Windows desktop showing the Django Admin interface. The browser window is titled 'Select store to change | Django s' and the URL is '127.0.0.1:8000/admin/accounts/store/'. The main content area shows a success message: 'The store "TCA1001000" was added successfully.' Below this, there's a list of stores with checkboxes next to them. The list includes: TCA1001000, TCA2160000, TCA2163045, TCA2163044, TCA2163043, TCA2163042, TCA2163041, TCA2163040, and TCA2163016. At the bottom left of the admin interface, there's a note '9 stores'. The taskbar at the bottom of the screen shows various pinned icons and system status like battery level, temperature (34°C), and date/time (19-05-2023). The overall theme is light blue and white.

Poll Me | Polls List

127.0.0.1:8000/accounts/register/

Elect-ron

Login

Already have an account? [Login Here](#)

Enrolment no.

First Name:

Last Name:

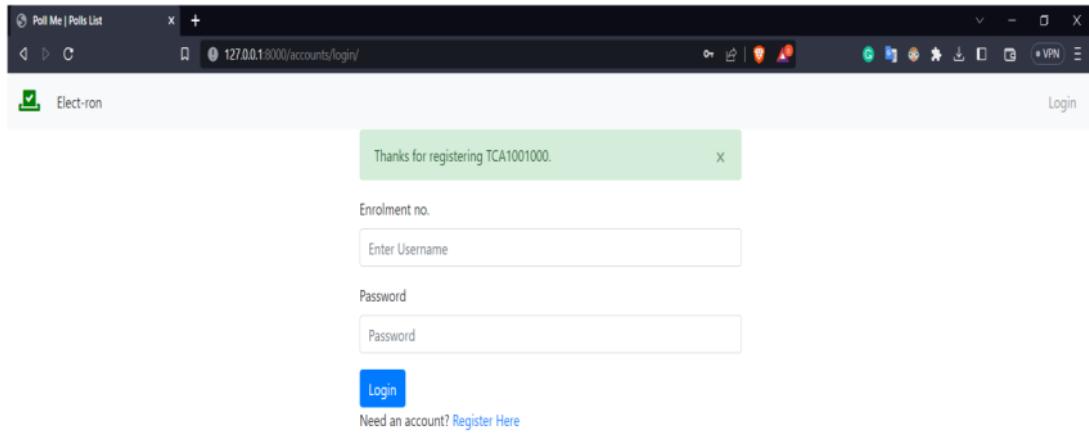
Email:

Password:

Confirm Password:

Sign Up





Poll Me | Polls List

127.0.0.1:8000/accounts/register/

Elect-ron

Login

Already have an account? [Login Here](#)

Enrolment no.

First Name:

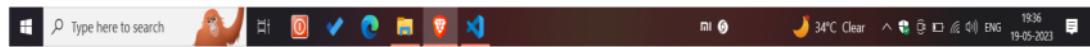
Last Name:

Email:

Password:

Confirm Password:

[Sign Up](#)



Poll Me | Polls List

127.0.0.1:8000/accounts/login/

Elect-ron

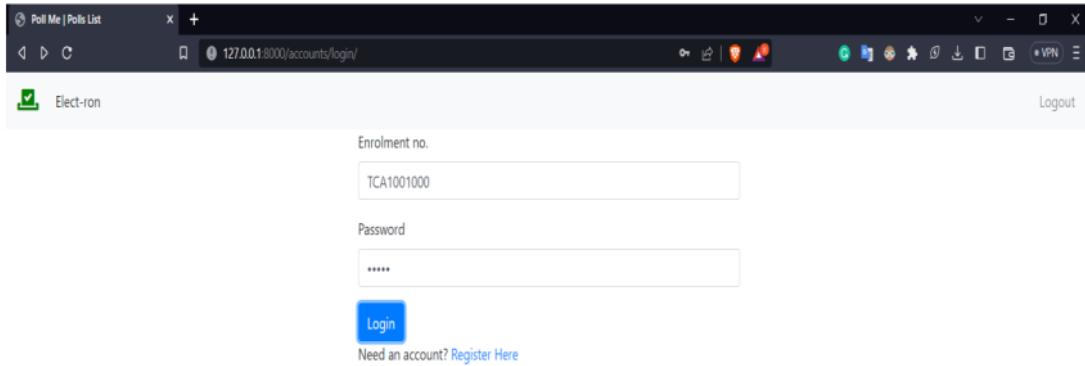
Logout

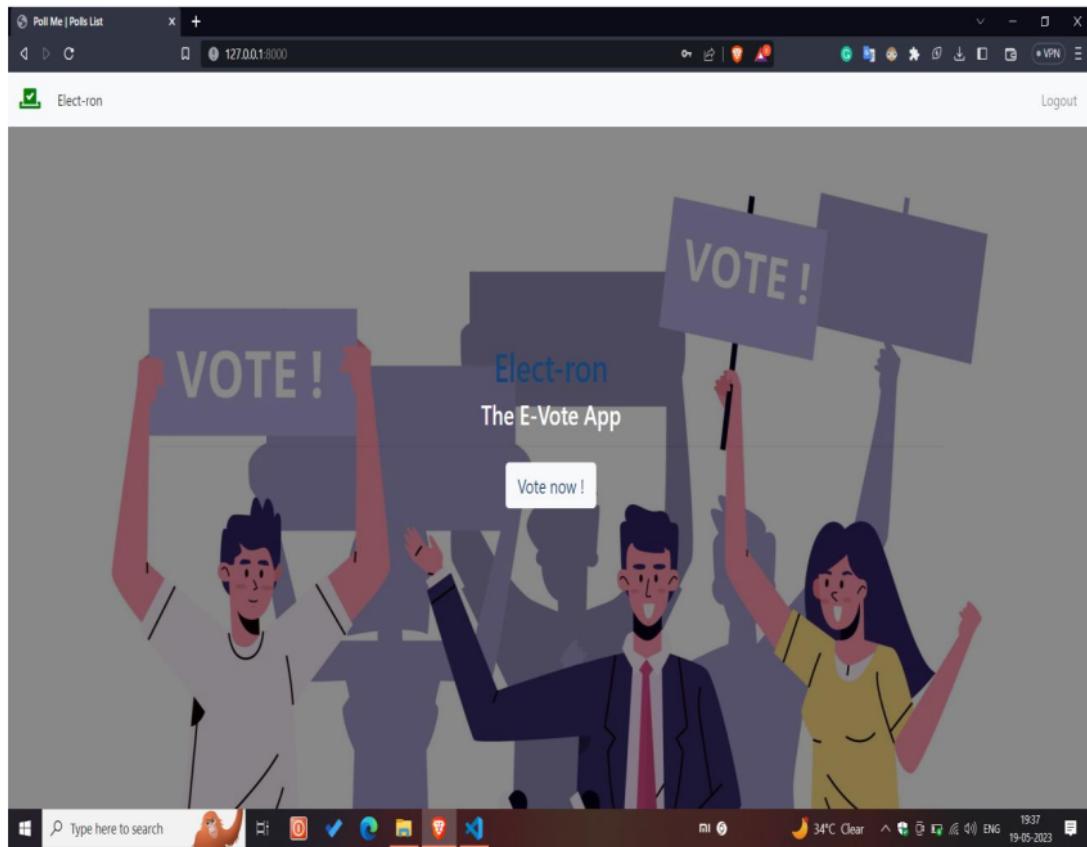
Enrolment no.

Password

Login

Need an account? [Register Here](#)





Poll Me | Polls List

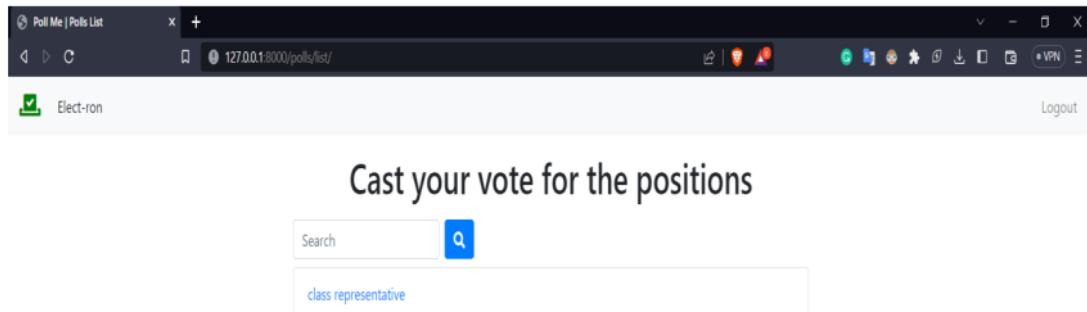
127.0.0.1:8000/polls/list/

Logout

Cast your vote for the positions

Search 

class representative





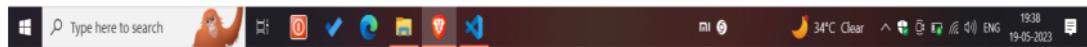
Candidate Details

class representative

suraj development

kashish defaming india

[Vote](#) [Cancel](#)



Poll Me | Polls List

127.0.0.1:8000/polls/2/

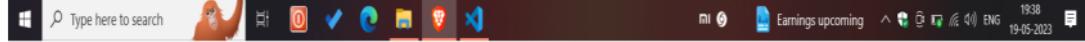
Logout

Candidate Details

class representative

<input checked="" type="radio"/>	suraj	development
<input type="radio"/>	kashish	defaming india

[Vote](#) [Cancel](#)





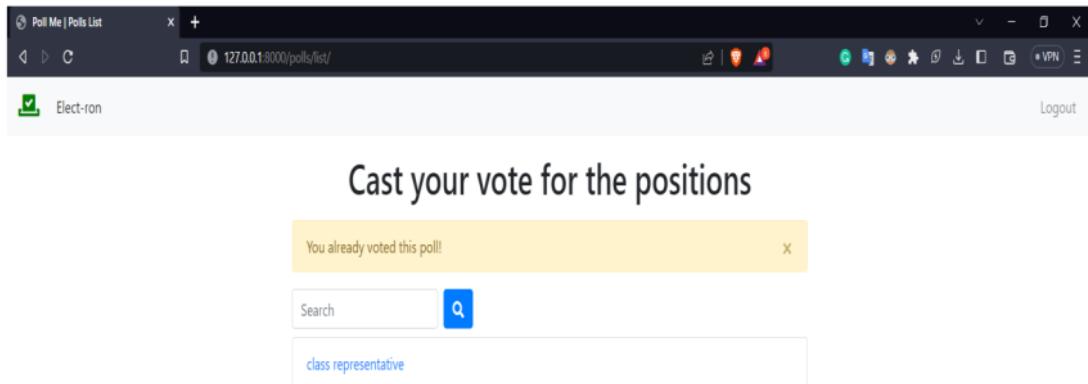
Result for: class representative

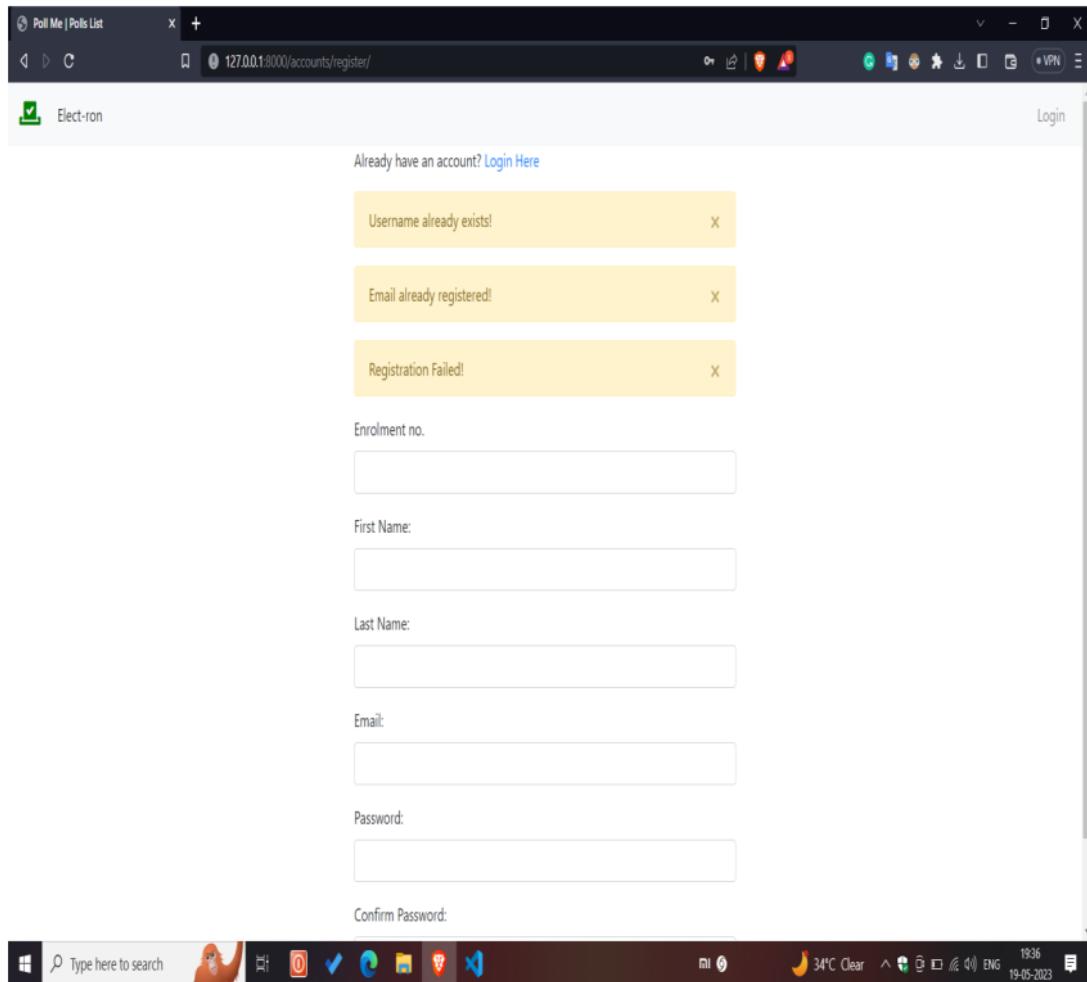
Total: 2 votes



[Back To Polls](#)







Poll Me | Polls List

127.0.0.1:8000/accounts/register/

Elect-ron

Login

Already have an account? [Login Here](#)

Enrolment no.

First Name:

Last Name:

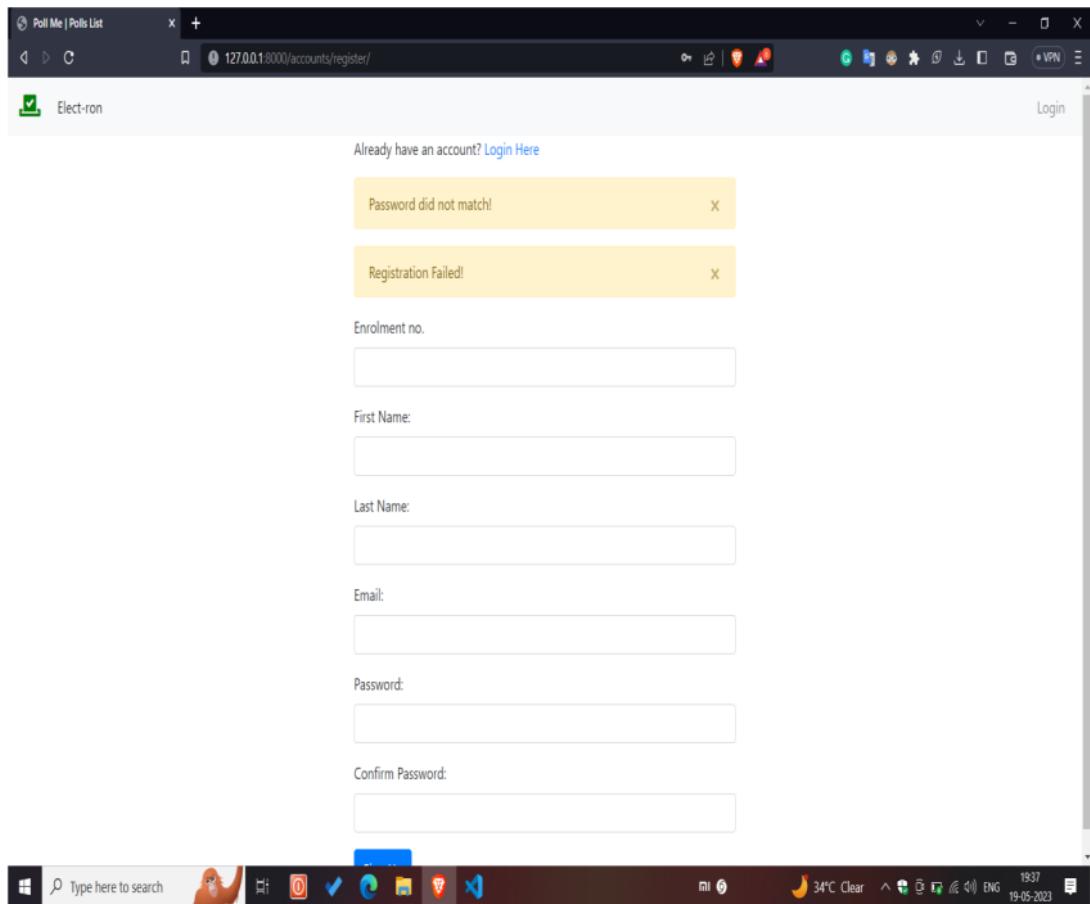
Email:

Password:

Confirm Password:

Sign Up





ORIGINALITY REPORT



PRIMARY SOURCES

- 1 Submitted to Teerthanker Mahaveer University 2%
Student Paper
- 2 www.tmu.ac.in 1%
Internet Source
- 3 Submitted to RDI Distance Learning 1%
Student Paper

Exclude quotes Off

Exclude bibliography Off

Exclude matches < 10 words