Open Voting System

Description

The online voting system is for anyone who wants to have a successful process of voting to make voting fast and easy and time saving by using this system. The aim of the Online voting scheme is to provide a system that is accurate, fast , and secure.

Also the system has many advantages, such as: saving time, counting ballots will be much faster, more accurate, and the chance of a fake vote is less than having an instance result and much more.

For who

Anyone who want to have a professional voting system

For the Government

For companies

Physical need

Computer

voting machine(optional)

Voting card (optional)

Levels

The system has three levels: Admin, Voter, and Candidate.

Each of them have their own functionality and a different point of view.

Voter

The voter can do the following :

- Registration
- Login and logout
- Profile and Password
- Give vote once

Admin

The admin has the right to manage the candidates, and not the voters, profiles and passwords, after the election deadline is completed can see the result.

- Unable to see who voted which candidate
- Unable to see voters passwords
- Admin should register the Candidates

Candidate

- Login and logout
- Profile and Password
- Won't be able to vote
- Won't be able to sign up
- Unable to see who voted him/her
- Can withdraw without need of Admin approval

How admin use the system

Example: admin manages the data by only viewing the data and sets time duration for voting (deadline)

Can add candidates and remove candidates before voting starts.

How Candidate use the system

Example : Candidates don't have a lot of privileges. Candidates can withdraw himself-herself anytime.

How user use the system

Example : user must vote in the specified time with their email and password or national ID and password

Sign up requirement

For user

To sign up, the user must provide the following informations:

- Full Name
- National ID
- Password
- Email
- Mobile Number

For admin

- Full Name
- National ID
- Access level
- Password
- Email
- Mobile Number

Admins should be verified by the owner of the system.

For Candidate

- Full Name
- National ID
- Password

- Email
- Mobile Number
- In which part he is (group)

Sign Up Roles

voter

For Signing up , the user must enter their information and good to go.

admin

Admin can't make an account, it's a hidden portal only the owner of the system can add admin.

candidate

Only the admin and owner of the system can add Candidate.

Sign in

For Signing in , the user must enter their National ID, and password,

The password should be encrypted so even if the system is hacked no one can get the passwords

The Tools and Programming Languages

Programming Language :

Java

Tools:

IntelliJ

GitHub

trello

Major Requirements

- **Mobility :** The voter should not be restricted to cast his ballot at a single poll-site at his home precinct, He shall be able to vote from any poll-site within the nation.

- **Convenience :** The system shall allow the voters to cast their votes quickly, in one session, and should not require many special skills.

- **Flexibility :** The system shall be flexible in that it allows a variety of ballot question formats including open-ended questions (e.g. Write-in candidates and survey questions).

- **Accuracy :** The system shall record and count all the votes and shall do so correctly.

- **Eligibility :** Only authorized voters, who are registered, should be able to vote.

- **Uniqueness** : No voter should be able to vote more than once.

- **Voter Confirmation :** The voter shall be able to confirm clearly how his vote is being cast, and shall be given a chance to modify his vote before he commits it.

- **No Over-voting :** The voter shall be prevented from choosing more than one candidate / answer.

Security Requirements

- **Voter Authenticity :** Ensure that the voter must identify himself (with respect to the registration database) to be entitled to vote.

- **Voter Anonymity :** Ensure that votes must not be associated with voter identity.

- **Data Integrity :** Ensure that each vote is recorded as intended and cannot be tampered with in any manner, once recorded (i.e., votes should not be modified, forged or deleted without detection).

- **Secrecy / Privacy :** No one should be able to determine how any individual voted.

- **Simplicity :** The system shall be designed to be extremely simple, as complexity is the enemy of security.

- Operator Authentication and Control: Ensure that those operating and administering the system are authenticated and have strictly controlled functional access on the system.