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Project: Root the (Ballot) Box
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User Manual for the CCNY Student Elections Voting Machine

Introduction
The CCNY Student Elections Voting Machine is a secure and user-friendly platform designed to facilitate the democratic process for the City College of New York student body. This manual provides step-by-step instructions for voters and administrators to effectively utilize the voting machine.

Installation Guide
Prerequisites
Before you begin, ensure that you have the following installed on your system:
- Rust programming language (version 1.56 or higher)
- SQLite database (version 3.35 or higher)

Installation Steps
1. Extract the source code:
   - Obtain the gzipped source code file from the blackboard submitted by the Team.
   - Extract the contents of the gzipped file to a directory of your choice.
2. Install dependencies:
   a. Open a terminal or command prompt.
   b. Navigate to the extracted source code directory:
      - *cd ccny-student-elections-voting-machine*
   c. Install the required Rust dependencies by running the following command:
      - *cargo build*
3. Set up the SQLite database:
   a. The voting machine uses a SQLite database to store election data.
   b. Ensure that you have SQLite installed on your system.
   c. Open the main.rs file in a text editor.
   d. Locate the create_tables_inner() function and review the SQL statements used to create the necessary tables.
   e. Create the SQLite database file by running the following command:
      - *touch voting_machine.db*
4. Build and run the voting machine:
   a. In the terminal, run the following command to build and start the voting machine:
      - *cargo run*
   b. The voting machine will start running.
5. Access the voting machine:
   a. Access the "ccny-student-elections-voting-machine" folder extracted in the previous steps. Locate the "1Home.html" file and double-click on it to open it in your browser.
   b. You should see the main page of the CCNY Student Elections Voting Machine.

That's it! You have successfully installed the CCNY Student Elections Voting Machine on your system. You can now explore the various features and functionalities of the voting machine.

User Manual
On the home page, you'll find two sections: one for administrators and another for voters.
- Administrator:
    1. Navigate to the Administrator Registration page.
    2. Enter your full name, email, username, and password. Once you've completed this information, click "Save" to register as a new administrator or click "Login" to access the administrator main page.
    3. You will be prompted to enter your credentials to authenticate yourself. Click "Log in" to proceed.
    4. Upon successful login, you will be directed to the Administrator Dashboard.
- Voter:
    1. Navigate to the Voter page.
    2. When the election is open, you can Cast your Ballot.
    3. Enter your name and date of birth to verify your registration.
    4. Review the candidates for each office and select your preferred candidate by clicking the corresponding radio button.
    5. Click the "Cast Ballot" button to submit your votes.

From the Administrator Dashboard, you can perform the following actions:
- Creating a New Candidate
    1. Click the "Create New Candidate" button.
    2. Enter the candidate's name. From the dropdown bottom, select the office they are running for, and their political party.
    3. Click the "Save Candidate" button.
    4. Click the "New Candidate" button to add a new candidate to the system.
- Voter Registration
    1. Navigate to the Voter Registration page.
    2. Enter your full name and date of birth.
    3. Click the "Register" button to complete the registration process.
    4. Click the "New Voter" button to add a new voter to the system.
- Opening and Closing Elections
    1. Click the "Open Election" button to start the voting process.
    2. Click the "Close Election" button to prevent further voting and move on to the tallying process.
- Viewing Election Tallies
    1. Click the "Tally" button to view the current results of the election.
    2. The tally page will display the vote counts for each candidate, organized by office. The candidate with the highest vote total for each office will be highlighted as the winner.

Technical Requirements

The CCNY Student Elections Voting Machine is a web-based application that runs on the Rust programming language. To use the voting machine, you will need the following:

- A web browser (e.g., Google Chrome, Mozilla Firefox, Microsoft Edge)
- No internet connection is needed to access the voting machine website

The CCNY Student Elections Voting Machine is a secure and user-friendly platform that empowers the student body to participate in the democratic process. If you have any questions or encounter any issues while using the voting machine, please don't hesitate to contact the Project team (Group 4) for assistance.