Voting System Project Report

1. Introduction:

Our voting system project aims to provide an efficient and secure platform for conducting elections. The system facilitates the entire voting process, from voter registration to result generation. With a focus on user authentication, candidate registration, and accurate vote counting, our system ensures a transparent and fair election experience.

2. System Overview:

The voting system is developed using object-oriented programming principles and implemented in C++. It utilizes a command-line interface for user interaction, offering simplicity and ease of use.

3. User Authentication:

The system begins with user authentication, requiring a valid ID and password for access. Users can change their credentials to ensure security.

4. Voting Process:

4.1. Voting Period Management:

The system incorporates a defined start and end time for voting, ensuring that votes are only accepted during the specified period.

4.2. Eligibility Verification:

Before casting their votes, users' age and national identity card numbers are validated to ensure they meet the requirements.

4.3. User Information Collection:

Users are prompted to provide their personal details, including name, father's name, province, and phone number.

4.4. Seat Selection:

Users select their preferred candidates for both the member of the provincial assembly and the member of the national assembly.

4.5. Vote Validation and Recording:

The system validates the vote, ensuring it is assigned to the correct candidate. The vote is then securely recorded for later tabulation.

5. Candidate Registration:

5.1. Eligibility Criteria:

Candidates must meet the minimum age requirement to be eligible for registration.

5.2. Candidate Information Collection:

Candidates provide their personal details, including name, father's name, province, and phone number.

5.3. Error Handling:

The system performs several checks during candidate registration, such as verifying the uniqueness of the candidate's sign and ensuring the seat is within the specified range.

5.4. Candidate Deletion:

If needed, the system allows for the removal of specific candidates.

6. Results Generation:

6.1. Seat-Based Results:

The system enables users to view election results based on specific seat numbers, providing transparency and accountability.

6.2. Winner Determination:

By analyzing the votes received by each candidate, the system identifies and declares the winner for each seat.

7. Limitations and Future Improvements:

The current version of the voting system has certain limitations, such as a command-line interface and minimal graphical user interface. In the future, improvements could include a user-friendly graphical interface and integration with an online database for enhanced security and scalability.

In conclusion, our voting system project presents a robust and user-friendly solution for conducting elections. By following the user manual guidelines, voters can seamlessly participate in the voting process, and administrators can efficiently manage candidate registration and results generation. This system sets the foundation for fair and transparent elections within your organization.

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