**Abstract**

The **Election Management System** implemented in C++ provides a streamlined, user-friendly interface to manage various phases of an election, from voter and candidate registration to vote casting and result calculation. This system supports essential election operations, ensuring the secure registration of voters and candidates, voting process management, and automatic result calculation.

Key features include:

* **Voter Registration:** Securely registers voters by storing their ID, name, and age, with validation to avoid duplicate entries.
* **Candidate Registration:** Manages candidate details like ID, name, party affiliation, and manifesto.
* **Voting System:** Ensures only registered voters can vote, allows each voter to vote only once, and tallies votes in real-time. During the voting process, the system displays a list of all candidates to the voter for selection.
* **Result Calculation:** Automatically calculates the results after voting ends, displays the votes received by each candidate, and announces the winner.

The system uses simple input/output mechanisms to engage the user interactively, making it highly intuitive and suitable for small-scale elections. The design focuses on accuracy, security, and simplicity, catering to both administrators (for election management) and voters (for casting votes). This C++ program effectively demonstrates the integration of fundamental data structures, such as lists and maps, and concepts like control flow and user authentication.