**votingsystem.cpp**

#include <iostream>

#include <string>

#include <vector>

#include <map>

using namespace std;

// Function prototypes

void addCandidate();

void castVote();

void showResults();

// Global variables

vector<string> candidateList;

map<string, int> voteCount;

int main()

{

int choice;

cout << "Welcome to Voting System!" << endl;

do {

cout << "\nPlease choose an option:" << endl;

cout << "1. Add a candidate" << endl;

cout << "2. Cast a vote" << endl;

cout << "3. Show results" << endl;

cout << "4. Exit" << endl;

cout << "Enter your choice: ";

cin >> choice;

switch (choice)

{

case 1:

addCandidate();

break;

case 2:

castVote();

break;

case 3:

showResults();

break;

case 4:

cout << "Goodbye!" << endl;

break;

default:

cout << "Invalid choice. Please try again." << endl;

}

} while (choice != 4);

return 0;

}

void addCandidate()

{

string name;

cout << "Enter the candidate's name: ";

cin >> name;

candidateList.push\_back(name);

cout << "Candidate added." << endl;

}

void castVote()

{

int choice;

cout << "Please select a candidate to vote for:" << endl;

for (int i = 0; i < candidateList.size(); i++)

{

cout << i+1 << ". " << candidateList[i] << endl;

}

cout << "Enter your choice: ";

cin >> choice;

if (choice < 1 || choice > candidateList.size())

{

cout << "Invalid choice. Please try again." << endl;

}

else

{

string candidateName = candidateList[choice-1];

voteCount[candidateName]++;

cout << "Vote casted for " << candidateName << "." << endl;

}

}

void showResults()

{

cout << "Results:" << endl;

for (int i = 0; i < candidateList.size(); i++)

{

string candidateName = candidateList[i];

int votes = voteCount[candidateName];

cout << candidateName << ": " << votes << " vote(s)" << endl;

}

}