VOTING MANAGEMENT

IN C++

**Project done by**:

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ECE

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**Aim:**

To create a simple voting management program using C++ concepts.

**Objective:**

To learn and work with basic C++ concepts like macros, conditional statements, functions, various types of variable definition, loops by developing basic voting management program.

**Softwares Needed:**

* C++ Compiler Environment
* Editor – Visual Studio Code

**Program:**

#include <bits/stdc++.h>

#define CANDIDATE1 "| PARTY 1 | <RAM>   | 1 |"

#define CANDIDATE2 "| PARTY 2 | <NEELS> | 2 |"

#define CANDIDATE3 "| PARTY 3 | <VISH>  | 3 |"

#define CANDIDATE4 "| PARTY 4 | <DURGA> | 4 |"

#define CANDIDATE5 "| PARTY 5 | <KUMAR> | 5 |"

#define NOTA "|       NOTA        | 6 |"

using namespace std;

int vote1 = 0;

int vote2 = 0;

int vote3 = 0;

int vote4 = 0;

int vote5 = 0;

int nota\_vote = 0;

int choice;

void vote\_cast()

{

    cout << CANDIDATE1 << endl;

    cout << CANDIDATE2 << endl;

    cout << CANDIDATE3 << endl;

    cout << CANDIDATE4 << endl;

    cout << CANDIDATE5 << endl;

    cout << NOTA << endl;

}

void choose\_candidate()

{

    cout << "Enter your choice: " << endl;

    cin >> choice;

    switch (choice)

    {

    case 1:

        vote1++;

        break;

    case 2:

        vote2++;

        break;

    case 3:

        vote3++;

        break;

    case 4:

        vote4++;

        break;

    case 5:

        vote5++;

        break;

    case 6:

        nota\_vote++;

        break;

        cout << endl

             << "Thanks for voting" << endl;

    }

}

void vote\_count()

{

    cout << CANDIDATE1 << vote1 << endl;

    cout << CANDIDATE2 << vote2 << endl;

    cout << CANDIDATE3 << vote3 << endl;

    cout << CANDIDATE4 << vote4 << endl;

    cout << CANDIDATE5 << vote5 << endl;

    cout << NOTA << nota\_vote << endl;

}

void leading\_candidate()

{

    if (vote1 > vote2 && vote1 > vote3 && vote1 > vote4 && vote1 > vote5)

    {

        cout << CANDIDATE1 << " leading --" << endl;

    }

    else if (vote2 > vote1 && vote2 > vote3 && vote2 > vote4 && vote2 > vote5)

    {

        cout << CANDIDATE2 << " leading --" << endl;

    }

    else if (vote3 > vote1 && vote3 > vote2 && vote3 > vote4 && vote3 > vote5)

    {

        cout << CANDIDATE3 << " leading --" << endl;

    }

    else if (vote4 > vote1 && vote4 > vote2 && vote4 > vote3 && vote4 > vote5)

    {

        cout << CANDIDATE4 << " leading --" << endl;

    }

    else if (vote5 > vote1 && vote5 > vote2 && vote5 > vote3 && vote5 > vote4)

    {

        cout << CANDIDATE5 << " leading --" << endl;

    }

    else

    {

        cout << "No winning chance -- NOTA is high " << endl;

    }

}

int main()

{

    int age, i = 1, ch;

    cout << "Enter your age: " << endl;

    cin >> age;

    if (age >= 18)

    {

        cout << "You are eligible to vote " << endl;

        while (i < 20)

        {

            i++;

            cout << endl

                 << "Welcome to TamilNadu Election" << endl;

            cout << endl

                 << "Enter your choice: " << endl;

            cout << "1.Votable Candidates" << endl;

            cout << "2.Vote" << endl;

            cout << "3.Vote Count" << endl;

            cout << "4.Display Leading Candidates" << endl;

            cout << "5.Exit" << endl

                 << endl;

            cin >> ch;

            switch (ch)

            {

            case 1:

                vote\_cast();

                break;

            case 2:

                vote\_cast();

                choose\_candidate();

                break;

            case 3:

                vote\_count();

                break;

            case 4:

                leading\_candidate();

                break;

            case 5:

                break;

            }

        }

    }

    else

    {

        cout << endl

             << "You are not eligible to vote " << endl;

        cout << endl

             << "Try after " << 18 - age << " years " << endl

             << endl;

    }

    return 0;

}

**Explanations:**

* #include <bits/stdc++.h>

This is **preprocessor directive** that includes all c++ library files using include directive.

* #define CANDIDATE1 "| PARTY 1 | <RAM>   | 1 |"

This is a macro used to assign | PARTY 1| <RAM> | 1 | to CANDIDATE1 using **#define macro statement**. Similarly, 5 candidates and Nota are defined.

* using namespace std;

This uses the **standard libraries** such as cout,cin etc in the program

**Functions used:**

vote\_cast()

* Display the votable candidates using **cout** statement

choose\_candidates()

* Choose the candidate and vote them using **switch** case.

vote\_count()

* Display the number of votes polled on each candidates.

leading\_candidates()

* Display the leading candidates from the votes polled up to presently polled votes by comparing the individual votes of each candidate among themselves.

**Sample outputs**

**Output 1:**

Enter your age:

3

You are not eligible to vote

Try after 15 years

**Output 2:**

Enter your age:

23

You are eligible to vote

Welcome to TamilNadu Election

Enter your choice:

1.Votable Candidates

2.Vote

3.Vote Count

4.Display Leading Candidates

5.Exit

1

| PARTY 1 | <RAM> | 1 |

| PARTY 2 | <NEELS> | 2 |

| PARTY 3 | <VISH> | 3 |

| PARTY 4 | <DURGA> | 4 |

| PARTY 5 | <KUMAR> | 5 |

| NOTA | 6 |

Welcome to TamilNadu Election

Enter your choice:

1.Votable Candidates

2.Vote

3.Vote Count

4.Display Leading Candidates

5.Exit

2

| PARTY 1 | <RAM> | 1 |

| PARTY 2 | <NEELS> | 2 |

| PARTY 3 | <VISH> | 3 |

| PARTY 4 | <DURGA> | 4 |

| PARTY 5 | <KUMAR> | 5 |

| NOTA | 6 |

Enter your choice:

3

Welcome to TamilNadu Election

Enter your choice:

1.Votable Candidates

2.Vote

3.Vote Count

4.Display Leading Candidates

5.Exit

2

| PARTY 1 | <RAM> | 1 |

| PARTY 2 | <NEELS> | 2 |

| PARTY 3 | <VISH> | 3 |

| PARTY 4 | <DURGA> | 4 |

| PARTY 5 | <KUMAR> | 5 |

| NOTA | 6 |

Enter your choice:

4

Welcome to TamilNadu Election

Enter your choice:

1.Votable Candidates

2.Vote

3.Vote Count

4.Display Leading Candidates

5.Exit

2

| PARTY 1 | <RAM> | 1 |

| PARTY 2 | <NEELS> | 2 |

| PARTY 3 | <VISH> | 3 |

| PARTY 4 | <DURGA> | 4 |

| PARTY 5 | <KUMAR> | 5 |

| NOTA | 6 |

Enter your choice:

5

Welcome to TamilNadu Election

Enter your choice:

1.Votable Candidates

2.Vote

3.Vote Count

4.Display Leading Candidates

5.Exit

2

| PARTY 1 | <RAM> | 1 |

| PARTY 2 | <NEELS> | 2 |

| PARTY 3 | <VISH> | 3 |

| PARTY 4 | <DURGA> | 4 |

| PARTY 5 | <KUMAR> | 5 |

| NOTA | 6 |

Enter your choice:

2

Welcome to TamilNadu Election

Enter your choice:

1.Votable Candidates

2.Vote

3.Vote Count

4.Display Leading Candidates

5.Exit

2

| PARTY 1 | <RAM> | 1 |

| PARTY 2 | <NEELS> | 2 |

| PARTY 3 | <VISH> | 3 |

| PARTY 4 | <DURGA> | 4 |

| PARTY 5 | <KUMAR> | 5 |

| NOTA | 6 |

Enter your choice:

2

Welcome to TamilNadu Election

Enter your choice:

1.Votable Candidates

2.Vote

3.Vote Count

4.Display Leading Candidates

5.Exit

2

| PARTY 1 | <RAM> | 1 |

| PARTY 2 | <NEELS> | 2 |

| PARTY 3 | <VISH> | 3 |

| PARTY 4 | <DURGA> | 4 |

| PARTY 5 | <KUMAR> | 5 |

| NOTA | 6 |

Enter your choice:

1

Welcome to TamilNadu Election

Enter your choice:

1.Votable Candidates

2.Vote

3.Vote Count

4.Display Leading Candidates

5.Exit

2

| PARTY 1 | <RAM> | 1 |

| PARTY 2 | <NEELS> | 2 |

| PARTY 3 | <VISH> | 3 |

| PARTY 4 | <DURGA> | 4 |

| PARTY 5 | <KUMAR> | 5 |

| NOTA | 6 |

Enter your choice:

3

Welcome to TamilNadu Election

Enter your choice:

1.Votable Candidates

2.Vote

3.Vote Count

4.Display Leading Candidates

5.Exit

2

| PARTY 1 | <RAM> | 1 |

| PARTY 2 | <NEELS> | 2 |

| PARTY 3 | <VISH> | 3 |

| PARTY 4 | <DURGA> | 4 |

| PARTY 5 | <KUMAR> | 5 |

| NOTA | 6 |

Enter your choice:

2

Welcome to TamilNadu Election

Enter your choice:

1.Votable Candidates

2.Vote

3.Vote Count

4.Display Leading Candidates

5.Exit

3

| PARTY 1 | <RAM> | 1 |1

| PARTY 2 | <NEELS> | 2 |3

| PARTY 3 | <VISH> | 3 |2

| PARTY 4 | <DURGA> | 4 |1

| PARTY 5 | <KUMAR> | 5 |1

| NOTA | 6 |0

Welcome to TamilNadu Election

Enter your choice:

1.Votable Candidates

2.Vote

3.Vote Count

4.Display Leading Candidates

5.Exit

4

| PARTY 2 | <NEELS> | 2 | leading --

Welcome to TamilNadu Election

Enter your choice:

1.Votable Candidates

2.Vote

3.Vote Count

4.Display Leading Candidates

5.Exit

5

**Conclusion:**

Thus, the voting management in C++ using simple concepts is done successfully and understood the basic concepts in a better manner.