PPS

Programming for Problem Solving

Mini Project

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Problem Statement

Write a program in C to build an e-voting system.

Analysis:

* Cast the vote
* Find vote count
* Find leading candidates
* Display the winning candidate

FDT-Function Description Table

|  |  |  |
| --- | --- | --- |
| Function Name | Return Type | Purpose |
| main | int | To take user’s inputs |
| votesCount | int | To find the number of votes each candidate has. |
| castVote | void | It helps the user to cast vote. |
| getLeadingCandidate | void | To find the leading candidate out of all. |
| getchar() | char | It is used to get single character input from the user. |
| Switch case | - | It is used to check the cases and get an output. |
| printf | - | To display the commands. |

FLOW OF THE PROGRAM

* We get the input from the user in accordance with what option he chooses.
* If he wants to caste vote, that function is activated.
* If he wants to find the vote count, that function is activated.
* If he wants to find the leading candidate, that function is activated.
* If he wants to exit from the software, that function is activated.
* Until and unless ‘0’ is entered, the program repeats itself.

Source Code

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TO BUILD AN E-VOTING SYSTEM

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#include<stdio.h>

#define CANDIDATE\_COUNT

#define CANDIDATE1 "Candidate A"

#define CANDIDATE2 "Candidate B"

#define CANDIDATE3 "Candidate C"

#define CANDIDATE4 "Candidate D"

int votesCount1=0,votesCount2=0,votesCount3=0,votesCount4=0,spoiledtvotes=0;

void castVote(){

int choice;

printf("\n\n ### Please choose your Candidate ####\n\n");

printf("\n 1. %s",CANDIDATE1);

printf("\n 2. %s",CANDIDATE2);

printf("\n 3. %s",CANDIDATE3);

printf("\n 4. %s",CANDIDATE4);

printf("\n 5. %s","None of These");

printf("\n\n Input your choice (1 - 4) : ");

scanf("%d",&choice);

switch(choice){

case 1: votesCount1++; break;

case 2: votesCount2++; break;

case 3: votesCount3++; break;

case 4: votesCount4++; break;

case 5: spoiledtvotes++; break;

default: printf("\n Error: Wrong Choice !! Please retry");

getchar();

}

printf("\n thanks for vote !!");

}

void votesCount(){

printf("\n\n ##### Voting Statics ####");

printf("\n %s - %d ", CANDIDATE1, votesCount1);

printf("\n %s - %d ", CANDIDATE1, votesCount2);

printf("\n %s - %d ", CANDIDATE1, votesCount3);

printf("\n %s - %d ", CANDIDATE1, votesCount4);

printf("\n %s - %d ", "Spoiled Votes", spoiledtvotes);

}

void getLeadingCandidate(){

printf("\n\n #### Leading Candiate ####\n\n");

if(votesCount1>votesCount2 && votesCount1>votesCount3 && votesCount1 >votesCount4)

printf("[%s]",CANDIDATE1);

else if (votesCount2>votesCount3 && votesCount2>votesCount4 && votesCount2 >votesCount1)

printf("[%s]",CANDIDATE2);

else if(votesCount3>votesCount4 && votesCount3>votesCount2 && votesCount3 >votesCount1)

printf("[%s]",CANDIDATE3);

else if(votesCount4>votesCount1 && votesCount4>votesCount2 && votesCount4 >votesCount3)

printf("[%s]",CANDIDATE4);

else

printf("----- Warning !!! No-win situation----");

}

int main()

{

int i;

int choice;

do{

printf("\n\n ###### ELECTION #####");

printf("\n\n 1. Cast the Vote");

printf("\n 2. Find Vote Count");

printf("\n 3. Find leading Candidate");

printf("\n 0. Exit");

printf("\n\n Please enter your choice : ");

scanf("%d", &choice);

switch(choice)

{

case 1: castVote();break;

case 2: votesCount();break;

case 3: getLeadingCandidate();break;

case 0: printf("Thank you"); break;

default: printf("\n Error: Invalid Choice");

}

}while(choice!=0);

getchar();

return 0;

VDT-Variable Description Table

Sample Input Output

|  |  |  |  |
| --- | --- | --- | --- |
| Variable Name | Data Type | Purpose | Scope |
| votesCount1 | int | To store the votes of first candidate | Program |
| votesCount2 | int | To store the votes of second candidate | Program |
| votesCount3 | int | To store the votes of third candidate | Program |
| votesCount4 | int | To store the votes of fourth candidate | Program |
| spoiledtvotes | int | To store the votes that are addressed to none of the candidates(NOTA) | Program |
| choice | int | To store the choice given by the user | Program |
| i | int | To store the possible key values | Program |

Sample Input Output











