ONLINE VOTING SYSTEM

21CSS101J – PROGRAMMING FOR PROBLEM SOLVING

Mini Project Report

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PROBLEM STATEMENT

Over many parts of the country the time taken to conduct elections/voting is little bit more as many people all over the country should stand in the line in their respective voting centers, also the time taking for counting the votes in ballot box by the election commission is a huge process so to avoid the time taking process the "Online Voting System" can be used.

Main Objective:

1) You can cast your vote
2) You can check the total number of votes for each candidate
3) Also, the leading candidate in the election can be seen

Drawbacks in the physical voting system:

It is a time taking process for casting the vote for voters and counting the votes in the ballot box.

Rigging can be happened in the physical voting system.

METHODOLOGY / PROCEDURE

Step 1: Verify your age i.e.; 18 above 18+. Then only you can go forward for the voting

Step 2: Select the option 1 for Casting your vote

Select 1 or 2 or 3 or 4 for voting to a candidate

Step 3: Select the option 2

for Checking the total number of votes for each candidate

Step 4: Select the option 3

For checking the leading candidate in the voting

Functions used in this code:

- The keyword *stdio.h* in C is a *header file*. The reason why we use *stdio.h* in C is that this header file imports different variables, macros, and functions to perform input and output operations. To perform input and output operations in our C program, we need to import the stdio.h header file into our program.
- Use of #define is used to define the constant or micro substitution without consuming any amount of memory
- Switch Statements: Instead of using many if. else statements, we can use switch statements
  This is how it works:
  - The switch expression is evaluated once.
  - The value of the expression is compared with the values of each case.
  - If there is a match, the associated block of code is executed.

    - The break statement breaks out of the switch block and stops the execution.
    - The default statement is optional, and specifies some code to run if there is no case match.
- All the operations are performed by calling each function using Switch case −
- While() The While loop in C is used to evaluate a test condition and iterate over the loop body until the condition returns true. The loop ends when the condition returns false. This loop is also known as pre-tested loop because it is commonly used when the number of iterations is unknown to the user ahead of the time.

Code

To implement the C code for Online Voting System:

```
#include<stdio.h>

#define CANDIDATE_COUNT

#define CANDIDATE1 "Narendra Modi"
#define CANDIDATE2 "Mamata Banerjee"
#define CANDIDATE3 "Yogi Adityanath"
#define CANDIDATE4 "Naveen Patnaik"

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

void castVote(){
int select ;
printf("Please choose your Candidate: \n");
printf("\n 1. %s",CANDIDATE1);
printf("\n 2. %s",CANDIDATE2);
printf("\n 3. %s",CANDIDATE3);
printf("\n 4. %s",CANDIDATE4);
```

```
printf("\n Give the input between (1 - 4): ");
scanf("%d",&select);

switch(select){
   case 1: votesCount1++; break;
   case 2: votesCount2++; break;
   case 3: votesCount3++; break;
   case 4: votesCount4++; break;
   default: printf("\n Error: Wrong Choice !! Please retry");
            //hold the screen
            getchar();
}
printf("\n\n Thanks for your vote \n\n");
}

void votesCount(){
printf("\n\n Voting Statics ");
printf("\n %s - %d ", CANDIDATE1, votesCount1);
printf("\n %s - %d ", CANDIDATE2, votesCount2);
printf("\n %s - %d ", CANDIDATE3, votesCount3);
printf("\n %s - %d ", CANDIDATE4, votesCount4);

}

void getLeadingCandidate(){
   printf("\n Leading Candiate in the voting \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(" !! No Wining Situation ");
}

int main()
{
int i;
int select;
int age;
printf("GREETINGS TO THE VOTER\n");
printf("PLS FILL THE GIVEN DETAILS TO VOTE---> \n");
printf("ENTER YOUR AGE \n");
scanf("%d",&age);
if(age>=18)
{
   printf("ELIGIBLE TO VOTE \n");
   printf("YOUR FUTURE IN YOUR VOTE \n");
}
else
```

```
{
   printf("SORRY YOUR NOT ELIGIBLE TO VOTE\n");
}
while(age>=18){

printf(" \n\n Welcome to Election/Voting 2023 \n");
printf("1) Cast the Vote \n");
printf("2) Total number of Votes for each candidate \n");
printf("3) leading Candidate in the voting \n");



printf("Please Select any option: \n");
scanf("%d", &select);

switch(select)
{
case 1: castVote();break;
case 2: votesCount();break;
case 3: getLeadingCandidate();break;
default: printf("\n Error: Invalid Choice");
}
}while(select!=0);

getchar();

return 0;
}
```

RESULT

```
GREETINGS TO THE VOTER
PLS FILL THE GIVEN DETAILS TO VOTE--->
ENTER YOUR AGE
```

After entering your age, you will get below output

```
GREETINGS TO THE VOTER
PLS FILL THE GIVEN DETAILS TO VOTE--->
ENTER YOUR AGE
22
ELIGIBLE TO VOTE

 YOUR FUTURE IN YOUR VOTE

 Don't sell your vote for money


 Welcome to Election/Voting 2023

 1) Cast the Vote
 2) Total number of Votes for each candidate
 3) leading Candidate in the election

 Please Select any option:
```

Now Select option 1 to vote

```
GREETINGS TO THE VOTER
PLS FILL THE GIVEN DETAILS TO VOTE--->
ENTER YOUR AGE
19
ELIGIBLE TO VOTE

 YOUR FUTURE IN YOUR VOTE


 Welcome to Election/Voting 2023
1) Cast the Vote
2) Total number of Votes for each candidate
3) leading Candidate in the voting
Please Select any option:
1
Please choose your Candidate:

 1. Narendra Modi
 2. Mamata Banerjee
 3. Yogi Adityanath
 4. Naveen Patnaik
 Give the input between (1 - 4):
```

Now choose your candidate to vote, then the below output will be display

```
Please choose your Candidate:

 1. Narendra Modi
 2. Mamata Banerjee
 3. Yogi Adityanath
 4. Naveen Patnaik
 Give the input between (1 - 4): 1
 Thanks for your vote
```

If you what to check the total number of votes for each candidate got then

select 2 and follow the given steps

```
 Welcome to Election/Voting 2023
1) Cast the Vote
2) Total number of Votes for each candidate
3) leading Candidate in the voting
Please Select any option:
2
Voting Statics
 Narendra Modi - 1
 Mamata Banerjee - 0
 Yogi Adityanath - 0
 Naveen Patnaik - 0
```

Now if you want to display who is in leading zone then

Select option 3, you will display below output

```
 Welcome to Election/Voting 2023
1) Cast the Vote
2) Total number of Votes for each candidate
3) leading Candidate in the voting
Please Select any option:
3
Leading Candiate in the voting
[Narendra Modi]
```

Like this way we can create a code and then display the required output i.e.;

TO CAST THE VOTE
TO FIND THE TOTAL NUMBER OF VOTES FOR EACH CANDIDATE
ALSO, TO FIND THE LEADING CANDIDATE IN ELECTION

CONCLUSION

The challenge of developing electronic voting systems is not only security but also protecting the secrecy of the ballot. Currently there is no known technology that can guarantee the secrecy and verifiability of a marked ballot transmitted over the internet.

Online voting presents numerous vulnerabilities and its fundamentally insecure. End-to-end verifiable election software relies on cryptography to encrypt and protect votes while allowing voters to see their vote was properly recorded, that the vote was correctly tabulated, and that the final vote count matches the cast votes. End-to-end verifiable software can be integrated into existing election systems to enhance the security of voting infrastructure. Recent open-source software packages including end-to-end verifiability systems, such as Microsoft's software development kit Election Guard, could increase security if implemented in future elections.

Online voting technology intends to speed the counting of ballots, reduce the cost of paying staff to count votes manually and can provide improved accessibility for disabled voters. Also in the long term, expenses are expected to decrease. Results can be reported and published faster. Voters save time and cost by being able to vote independently from their location. This may increase overall voter turnout. The citizen groups benefiting most from electronic elections are the ones living abroad, citizens living in rural areas far away from polling stations and the disabled with mobility impairments.

In this mini project I have exerted method for encryption and decryption of messages to present a secured and feasible online voting system. The level of our system is importantly improved by the new essence of twofold system consisting of SMS voting system and website voting system. The user validation process of our system is enhanced by adding biometric (finger print and voice), security key and one time password. This system will exclude the customary action like rigging. Consequently, the member of state or country can believe that they alone can choose their leaders.