

DSA [20ES117] COURSE PROJECT REPORT

On

"ONLINE VOTING SYSTEM"

Developed By:

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CERTIFICATE

This is to certify that the PSP course project report entitled "ONLINE VOTING SYSTEM" is a record of bonafide work carried out by the student "B. SHIVA KRISHNA" bearing roll number "2103A51390" of Computer Science and Artificial Intelligence department during the academic year 2022-23.

Supervisor

(Dr. A. Siva Krishna Reddy)

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1. ABSTRACT

Democracy has given people a powerful right- that is to <u>VOTE</u>. Voting is the fundamental basis of democracy's '*Of the people*, *for the people*, *and by the people*' slogan. Therefore, rather than enjoying it as a holiday, one must vote if he truly wants to contribute to the nation-building process and bring about a change. A Citizen should actually not need to find any reason to Vote. It must be done as a compulsive duty although there is no legal obligation to vote.

The purpose of this project is to introduce a new mini Voting System that can be used to replace current Voting Systems like Ballot Boxes and EVM's. This Simple and Mini Voting project demonstrates the real-world Voting Process. In practical, the use of Ballot boxes and EVMs consume more money. These systems require more human effort to conduct fair elections. Moreover the chances of vote altering is also very high which is not good for a democratic country.

Thus, by implementing this online Voting system we can reduce human effort ultimately saving time and money. Moreover here there will be no chance of vote manipulation and also the results get declared immediately after the voting process.

2. INTRODUCTION

An election is a chance for voters to question the elected officials and hold them accountable. If an established government is not satisfactory, the voters can outvote it and bring in a new government. Election is a way of drawing public opinion which should be a basis and guide to understanding what public officials or political leaders should do. In every democracy, the candidates must go among the voters to know the needs and expectations of their representatives. Elections are, therefore, a means to inform the elected candidate that he was elected by the electorate.



One of the major challenges that have remained in perpetual prosperity and existence in the world's largest democracy is the absence of free and fair elections, which leaves room for various ill-practices, corruption, planning, or voting rights, as well as a crisis of competitive and healthy political competition, instead of focusing on the display of brute power.

Current Voting systems like EVM and Ballot Box Voting has many Disadvantages like:

- 1. Voter Always need to go Polling Booth to Cast his Vote
- 2. Votes Altering i.e. A Single Person can Vote for multiple times to manipulate the Vote Counts.
- 3. Votes Counting becomes even more difficult when Ballot Box Voting is Used.
- 4. In order to announce results. It requires a large number of days and sometimes even weeks.

3. OBJECTIVES

➤ The main purpose of this project is to provide a simple and mini
Online Voting application that can overcome the drawbacks of existing
Voting Systems.

The project key idea is:

- 1. Here the EC(Election Commissioner) will be in charge of Admin.
- 2. The admin can login using his User ID and Password.
- 3. On successful Login he can add Candidates by his names and Parties.

 These are stored using linked list.
- 4. On the Voters Side, first they Need to register using NAME, AGE and VOTER ID. Here validation for AGE has been checked in order to not to violate Voting Rules.
- 5. Upon Successful Login voters Can see Candidates added by ADMIN .
 He can vote as he wish.
- 6. The results are automatically updated.
- 7. This Enables us to count votes quickly.

4. MODULE-WISE DESCRIPTION

I. Admin Module:

Here the admin is the Election Commission Officer (EC). He will be having is own user ID and Password so that he can login into his portal. Upon his successful login the admin can see:

- 1. <u>Voters List</u>: Here the EC can see all the voters details with which voter has registered. Also the EC can also see whether voter is voted or not. It displays 1 if voter has casted his/her vote otherwise 0.
- **2. Add Candidates:** Here the EC can add candidates using this module.

II. Voters Module:

Voters module is for Voters. Voters on going in this module they can find

<u>registration</u> option if voter has not registered, he can register here.

Also if the voter is already registered, he can directly move into <u>login</u> page.

III. Voter_register Module:

This module helps new voter to register himself to cast his vote. To register himself for voting he need to enter his Name, Age(should be greater than 18, otherwise he is not considered as Eligible Voter – as per Adult Franchise Rule) and his VoterID(provided by government).

If the voter is already registered, he cannot register himself again so that it can stops vote altering.

IV. Voterlogin Module:

Upon Successful registration the voter can login using his VoterID. Upon on successful login he can see the all candidates details along with their parties. From here the Voter can vote to his choice of candidates.

Once, voter voting is done he cannot vote again for twice thus it helps in preventing Vote Manipulation.

V. Voterslist Module:

The details of all registered can be accessed with this module. Here only the EC has authority to see voters list. In voters list the EC can all registered voters with their details and also along with whether the voter has voted or not.

VI. Addcandidates Module:

This module is to add candidates to the election. Here only the EC has right to add candidates. The EC adds candidates by entering his/her Name and party.

Now as per the Election rules only one candidate can be added from each party. Here also in order not to violate the Election rules only one candidate can be added from each party by EC.

VII. <u>Winnerslist Module:</u> Once the election is completed all the candidates details along with his/her Vote Counts is displayed and finally the winner name along with his party will be displayed.

5. KNOWLEDGE REQUIRED

- a) Formatted INPUT and OUTPUT functions
- b) Various data types of C [Primary and User-defined]
- c) Dynamic Memory allocation functions [malloc()]
- d) Structures
- e) Pointer as structure variable
- f) Circular Double Linked List
- g) Single Linked List
- h) Control statements in C [if ,if else and else if ladder]
- i) Looping statements [for loop, do while]
- j) Nesting of loops
- k) Strings and string handling functions

6. SOURCE CODE

```
// Online Voting System
#include<stdio.h>
#include<stdlib.h>
#include<string.h>
#include<conio.h>
int admin();
void voters();
void voter_register();
void voterlogin();
void voterslist();
void addcandidates();
void seecandidateslist();
void winnerslist();
struct Voters{
      char voter_id[50];
      char name[50];
      int age;
      int voted;
```

```
struct Voters *next_voter;
      struct Voters *prev_voter;
};
struct Voters *head = NULL;
struct Candidates{
      char name[50];
      char party[50];
      int Votecounts;
      struct Candidates *next_candidate;
};
struct Candidates *start = NULL;
char EC_Name[50] = "EC@SRU";
char EC_Password[50] = "SRU@123";
void main()
      int ch;
      system("cls");
      printf("\n Hello Voter");
/*
      printf("\n %s",EC_name);
```

```
printf("\n %s",EC_Password);*/
printf("\n\t\t\t*****************\t\t");
printf("\n\t\t\tWelcome to ONLINE VOTING SYSTEM\t\t");
printf("\n\t\t\tPress 1. to Goto Admin Login panel");
printf("\n\t\t\tPress 2. to Goto Voter panel");
//printf("\n\t\t\tPress 3. to See Candidates List");
//printf("\n\t\t) + the second of the Page");
printf("\n\t\t\tPress 3. to See Winners List");
printf("\n\t\tt\tPress 4. to EXIT");
printf("\n\t\t\tPlease select an Option from above => ");
while(1)
scanf("%d",&ch);
switch(ch)
     case 1:
          admin();
          break;
     case 2:
          voters();
          break;
```

```
case 3:
                  winnerslist();
                  break;
            case 4:
                  exit(0);
                  break;
            default:
                  printf("\n Invalid Choice Please select from above
options");
                  Sleep(1000);
                  main();
                  break;
int admin()
      int a_ch;
      system("cls");
      Sleep(100);
      char id[50],password[50];
      printf("\n Enter User Id = ");
```

```
scanf("%s",id);
printf("\n Enter Password = ");
scanf("%s",password);
if(strcmp(id,EC_Name)==0 && strcmp(password,EC_Password)==0)
      system("cls");
  Sleep(100);
      printf("\n\t\t\tWelcome Officer");
      printf("\n\t\t\t*****************************);
      printf("\n\t\t\tPress 1. to See Voters List");
      printf("\n\t\t\tPress 2. to add Candidates");
      printf("\n\t\t\t******************************);
      printf("\n\t\t\tPlease Select an Option =>");
      scanf("%d",&a_ch);
      switch(a_ch)
            case 1:
                  voterslist();
                  break;
            case 2:
                  addcandidates();
                  break;
```

```
case 3:
                       exit(0);
                       break;
     else
           printf("\n Invalid ID or PASSWORD");
           Sleep(1000);
           main();
     return 0;
void voters()
     int v_ch;
     system("cls");
     Sleep(100);
     printf("\n\t\t\tWELCOME TO VOTER'S PANEL");
     printf("\n\t\t\t****************************);
     printf("\n\t\t\NEW USER Press 1. to Register");
```

```
printf("\n\t\t\t\ALREADY REGISTERED Press 2. to Login");
     printf("\n\t\t\tPress 3. to Go Back");
     printf("\n\t\t\tPress 4. to Goto Voting Page");
//
      printf("\n\t\t\t*****************************);
      printf("\n\t\t\tPlease Select an Option =>");
      scanf("%d",&v_ch);
      switch(v_ch)
            case 1:
                  voter_register();
                  break;
            case 2:
                  voterlogin();
                  break;
            case 3:
                  main();
                  break;
            default:
                  printf("\n Invalid Option Choosen");
                  break;
```

```
void voter_register()
{
      struct Voters *newvoter, *temp,*ptr;
      char Voter_ID[50];
      char name[50];
      int age,voted=0;
      system("cls");
      printf("\n\t\t\tWELCOME TO REGISTRATION PAGE");
      printf("\n\t\t\t******************************);
      newvoter = (struct Voters *)malloc(sizeof(struct Voters));
      printf("\n Enter Your Name =>");
      scanf("%s",name);
      printf("\n Enter Your Age =>");
      scanf("%d",&age);
      if(age<18)
      printf("\n Sorry You are not eligible to vote as Your Age is less than
18");
      else
            printf("\n Enter Your Voter ID =>");
```

```
scanf("%s",Voter_ID);
        strcpy(newvoter->name,name);
        newvoter->age = age;
        strcpy(newvoter->voter_id,Voter_ID);
        newvoter->voted = 0;
        newvoter->next_voter = newvoter;
        newvoter->prev_voter = newvoter;
        if(head == NULL)
            head = newvoter;
            printf("\n Registered Successfully....");
        else
            temp = head;
            do
                  ptr = head;
                  do
                        if(strcmp(head->voter_id,newvoter-
>voter_id)==0 | | strcmp(ptr->voter_id,newvoter->voter_id)==0)
```

```
printf("\n Voter Is already Registered.....\n Please
Move to Login page");
                        printf("\n Press any key to Continue....");
                         getch();
                        voters();
                               else
                               ptr = ptr->next_voter;
                        }while(ptr->next_voter!=head);
                  temp = temp->next_voter;
                  }while(temp->next_voter!=head);
                  temp->next_voter = newvoter;
                  newvoter->prev_voter = temp;
                  head->prev_voter = newvoter;
                  newvoter->next_voter = head;
        printf("\n Registered Successfully.....");
      printf("\n Press any Key to Continue");
      getch();
      main();
```

```
void voterslist()
    struct Voters *temp;
    system("cls");
    if(head == NULL)
         printf("\n Voters List is Empty");
         //printf("\n Press any key to continue....");
         //getch();
         //admin();
    }
    else
         temp = head;
         printf("\n\t\t\t^{*************VOTERS\ LIST^{****************});
    printf("\n\t\t\t|NAME\t\t|AGE\t\t|VOTERID\t\t|WHETHER
VOTED\n");
```

```
printf("\t\t\t\_____
               ____\n");
        do
            printf("\t\t\t\s",temp->name);
            printf("\t\t\%d",temp->age);
            printf("\t\t%s",temp->voter_id);
            printf("\n");
            temp = temp->next_voter;
        }while(temp!=head);
    }
    printf("\n\n Press any Key to Continue.....");
    getch();
    main();
void voterlogin()
    struct Voters *temp;
```

```
struct Candidates *disp;
     int count=0,i,vch;
     char Voterid[50];
     system("cls");
     printf("\n Enter your Voter ID =>");
     scanf("%s",Voterid);
     if(head == NULL)
     printf("\n Invalid VoterID");
     else
          temp = head;
          system("cls");
          do
               if(strcmp(Voterid,temp->voter_id)==0)
     printf("\n\t\t\t) Uccessful Welcome
%s",temp->name);
                    Sleep(1000);
                    if(start == NULL)
```

```
printf("\n Currently there are no
candidates...\n Please Come back after canidates are added");
                   Sleep(3000);
                   main();
               else
               disp = start;
               printf("\n\t\t\t\t^{************}CANDIDATES
ARE*************************
   while(disp!=NULL)
               count++;
               printf("\t\t\t\s",disp->name);
               printf("\t\t\t\s",disp->party);
               printf("\t\t\t\d",disp->Votecounts);
               printf("\n");
```

```
disp = disp->next_candidate;
=======\\n");
                   disp = start;
                   for(i=1;i<=count&&disp!=NULL;i++)</pre>
                    {
                   printf("\n Press %d to Vote for %s\n",i,disp->name);
                   disp = disp->next_candidate;
                   printf("\n Please Enter your Choice =>");
                   scanf("%d",&vch);
                   disp = start;
                   for(i=1;i<=count&&disp!=NULL;i++)</pre>
                         if(vch == i)
                             if(temp->voted == 0)
                                  disp->Votecounts++;
                                  temp->voted = 1;
```

```
printf("\n Your Vote has been
Successfully Casted for %s party",disp->party);
                                     }
                                     else
                                       printf("\n You have been already
Voted. You Cannot vote for twice....");
                                     }
                             disp = disp->next_candidate;
                        }
                        printf("\n Press Any key to Go Back.... ");
                        getch();
                        main();
                  else
                         temp = temp->next_voter;
            }while(temp!=head);
```

```
printf("\n Press any Key to go back...");
     getch();
     main();
void addcandidates()
     struct Candidates *cads, *temp, *ptr;
     char C_name[50],C_party[50];
     system("cls");
     printf("\n\t\t\t Welcome %s You can add Candidates
Here", EC_Name);
     cads = (struct Candidates *)malloc(sizeof(struct Candidates));
     printf("\n Enter Candidate Name =>");
     scanf("%s",C_name);
     printf("\n Enter Candidates Party =>");
     scanf("%s",C_party);
     strcpy(cads->name,C_name);
     strcpy(cads->party,C_party);
     cads->Votecounts = 0;
     cads->next_candidate = NULL;
     if(start == NULL)
```

```
start = cads;
      else
            temp = start;
 while(temp->next_candidate!=NULL)
                  ptr = start;
                  do
                        if(strcmp(ptr->party,cads->party)==0 | | strcmp(start-
>party,cads->party)==0)
                        printf("\n Only One Candidate from %s Party is
Allowed..",ptr->party);
                        printf("\n Press any Key to Continue...");
                        getch();
                        main();
                               else
                               ptr = ptr->next_candidate;
                        }while(ptr->next_candidate!=NULL);
                  temp = temp->next_candidate;
```

```
}
                  temp->next_candidate = cads;
      }
      printf("\n Candidate Has been Added Successfully.....");
      printf("\n Press any Key to Continue...");
      getch();
      main();
}
void winnerslist()
      struct Candidates *list,*win;
      int max=0;
      system("cls");
      if(start == NULL)
      printf("\n There are no candidates. Candidates are Yet to be
Added...");
      else
            list = start;
            win = list;
            max = list->Votecounts;
```

```
printf("\n\t\t\t\t\t\t\t\t\t\t)
ARE*************************);
   while(list!=NULL)
         printf("\t\t\t\s",list->name);
         printf("\t\t\t\s",list->party);
         printf("\t\t\t\d",list->Votecounts);
         if(max<=list->Votecounts)
             max = list->Votecounts;
             win = list;
          else
             max = max;
```

```
printf("\n");
    list = list->next_candidate;

printf("\t\t\t\t=======\n");
    printf("\n\n Currently The Winner is = %s from %s party with %d votes",win->name,win->party,max);
}
Sleep(1000);
printf("\n\n Enter any Key to Continue...");
getch();
main();
}
```

7. RESULTS

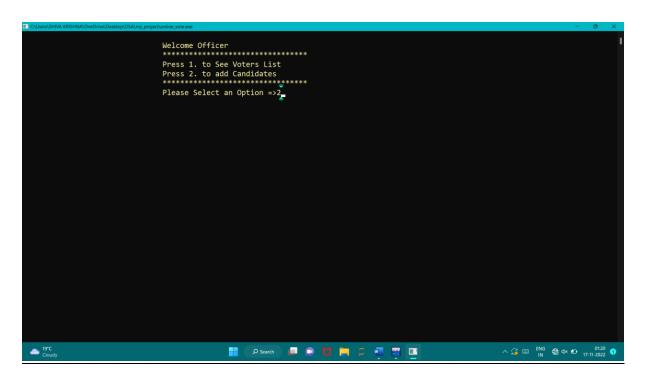
1. ADMIN PANEL

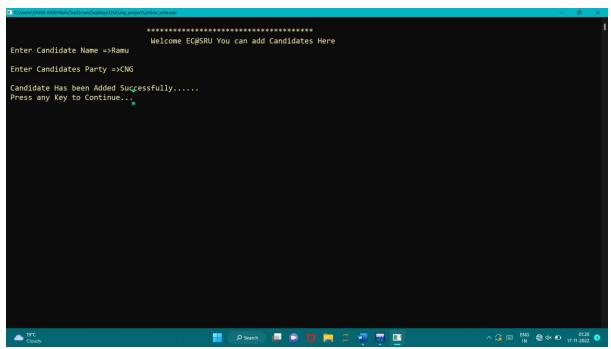
```
Enter User Id = EC@SRU

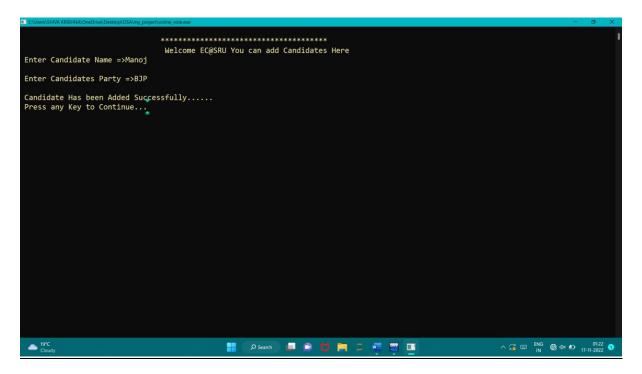
Enter Password = SRU@123

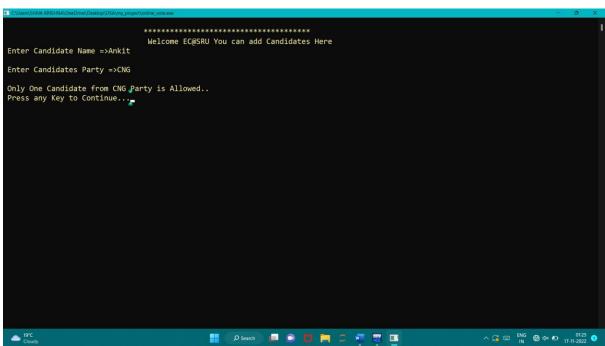
Enter Password = SRU
```

i. ADDING CANDIDATES

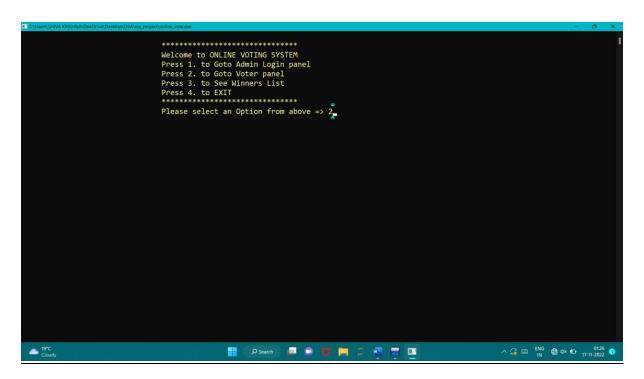




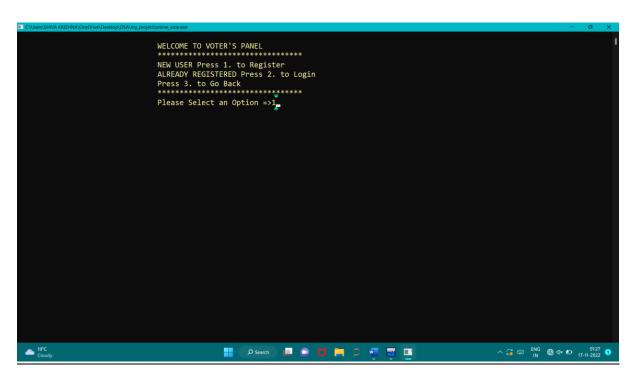


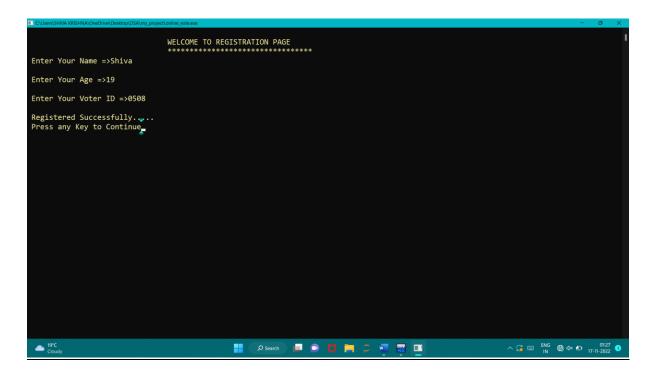


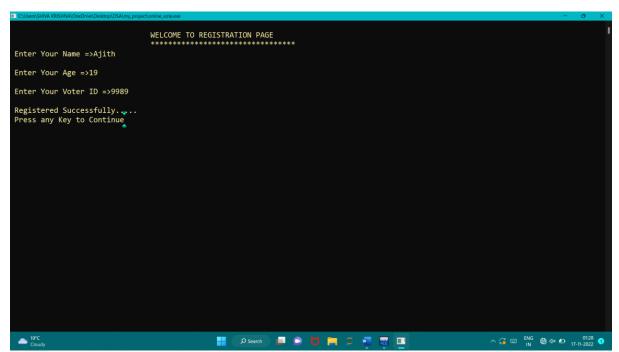
2. Voters Panel

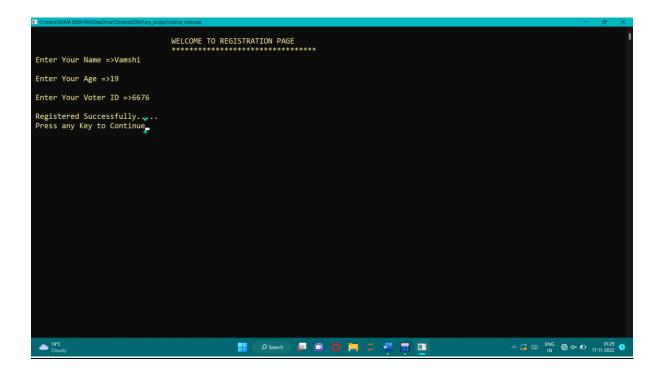


i. Voters Registration:

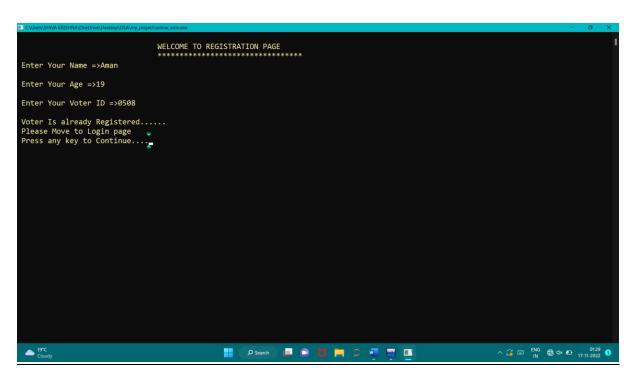




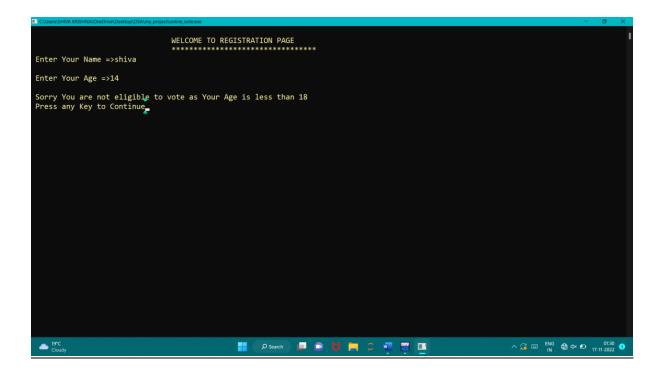




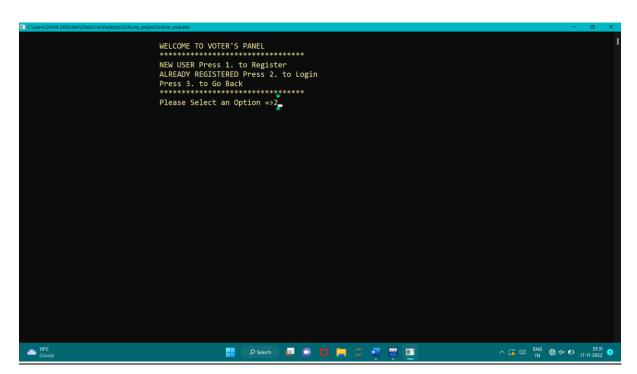
Negative Validations:

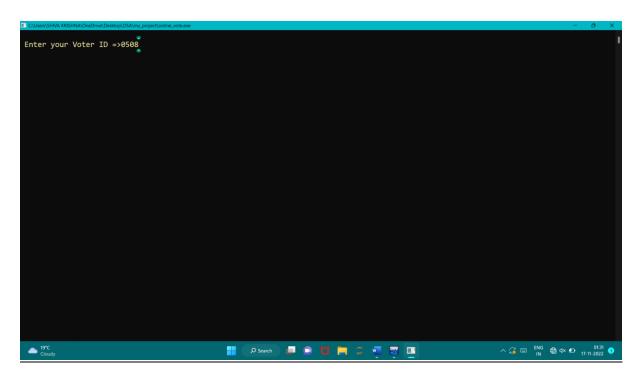


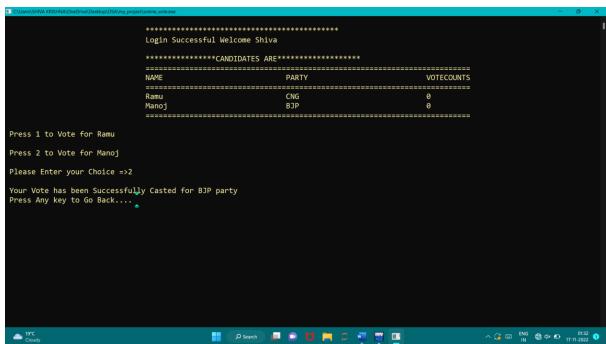
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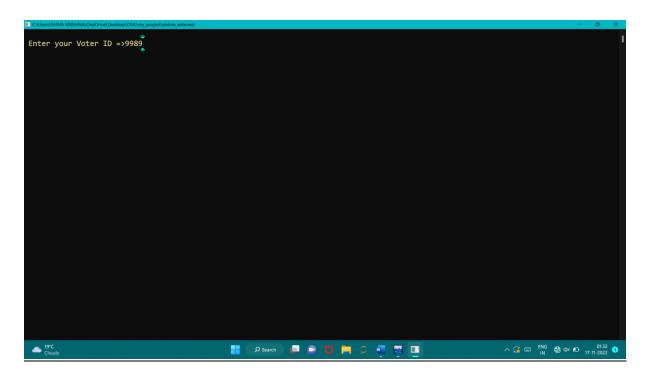


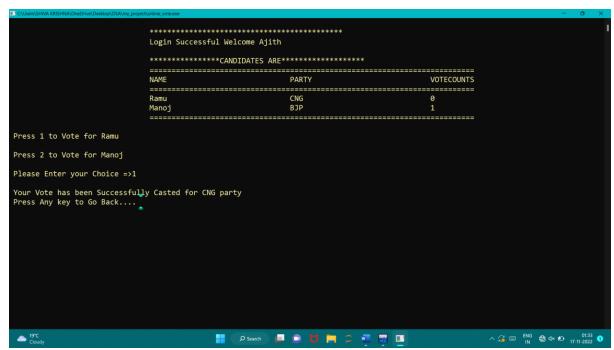
3. Voting Process

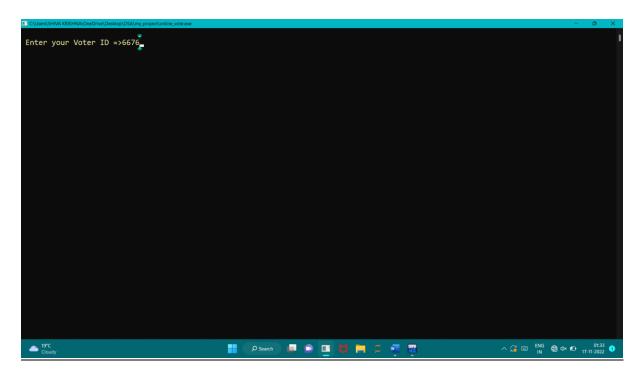


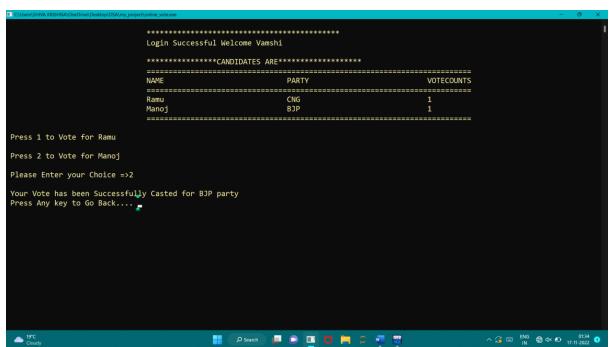




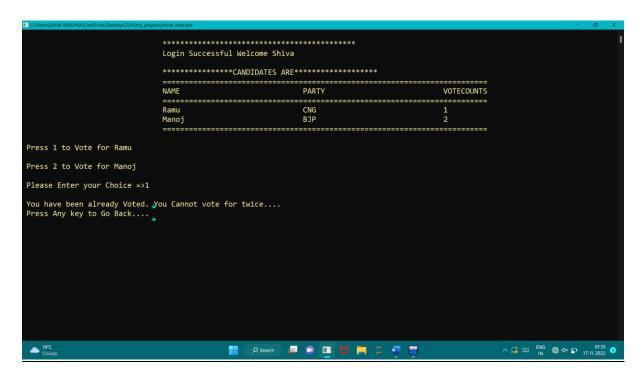




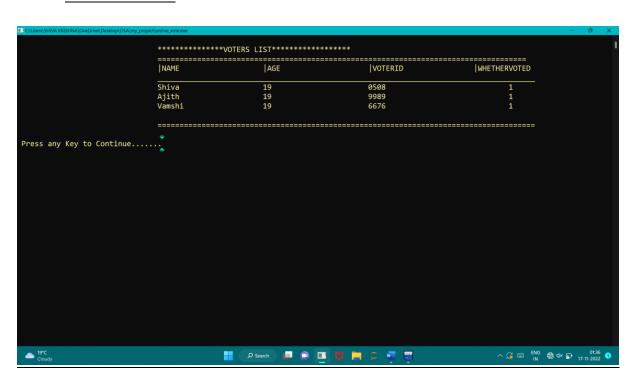




Negative Validations:



4. Winners List:



A.Y. 2022-2023

```
CANDIDATES ARE

***CANDIDATES AR
```

5. <u>Exit</u>