

A Course Based Project Report on

ONLINE VOTING SYSTEM

SUBMITTED TO

Department of CSE

in partial fulfilment of the requirements for the completion of course
DATA STRUCTURES LABORATORY

BACHELOR OF TECHNOLOGY

IN

COMPUTER SCIENCE ENGINEERING

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Engineering for Women (UGC-Autonomous)

DEPARTMENT OF CSE

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BVRIT HYDERABAD College of
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CERTIFICATE

This is to certify that the Project titled “Online Voting System using Data Structures” is a bonafide record of the work done by Cherukuri Taruni Rao(22WH1A0504), Nannapaneni Shreha (22WH1A0518), D.Snehitha(22WH1A0532), Palla Sindhu(22WH1A0549), Katragadda Ananya(22WH1A0551), B.N.Nandini (23WH5A0504) in partial fulfillment of the requirements for the award of Bachelor of Technology in Computer Science and Engineering ,BVRITH during the academic year of 2023-2024.

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DECLARATION

We, Cherukuri Taruni Rao (22WH1A0504) , Nannapaneni Shreha (22WH1A0518), D. Snehitha (22WH1A0532), Palla Sindhu (22WH1A0549), Katragadda Ananya (22WH1A0551), B. N. Nandini (23WH5A0504) hereby declare that the Course Project Report entitled “Online Voting System using Data Structures”, done by us under the guidance of Dr. V. Surya Narayana Reddy is submitted in partial fulfillment of the requirements for the award of Bachelor of Technology degree in Computer Science and Engineering.

DATE :

PLACE :

SIGNATURE OF CANDIDATE

- 1)
- 2)
- 3)
- 4)
- 5)
- 6)

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With immense pleasure, we record our deep sense of gratitude to our beloved Principal, Dr. K. V. N. Sunitha, for permitting us to carry out this project.

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We take immense pleasure to express our deep sense of gratitude to our beloved Guide, Dr. V. Surya Narayana Reddy, Assistant Professor in CSE, BVRITH for his valuable suggestions and rare insights, for constant source of encouragement and inspiration throughout my project work.

We express our thanks to all those who contributed for the successful completion of our project work.

ABSTRACT

The provide C code is for an online voting system with basic functionalities like user voting, administration, displaying vote counts, determining winners and input handling. It Includes- a Login Prompt for voting, accessing the admin panel, or viewing the winner, Validation of user credentials using Aadhar id, name and Birthdates, Tracking of candidate votes, A password-protected admin panel to view votes, determination of winners based on votes, error handling for invalid inputs and login attempts, prevention of multiple voting by checking registered voter credentials, console-based user interaction and system operations. Enhancements could focus on input validation, security, memory management and user interface design.

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INTRODUCTION

1.1 PROBLEM DEFINITION

Design and implement an online voting system in C that allows registered voters to cast their votes for predefined candidates. The system should provide functionalities for user authentication, candidate selection, vote counting, administration, and winner determination.

1.2 OBJECTIVE

The main objectives of the "Online Voting System" project are as follows:

- **User Authentication:** Verify the identity of registered voters using their Aadhar ID, name, and birth date to ensure the integrity of the voting process.
- **Administration:** Provide authorized administrators with access to view the current vote counts for each candidate through a password-protected admin panel.
- **Security:** Implement basic security measures such as password protection for the admin panel to ensure system integrity and prevent unauthorized access.
- **User Interaction:** Interact with users through a console-based interface, presenting prompts, messages, and options for voting and administration.

SOURCE CODE

```
#include <stdio.h>
#include <stdlib.h>
#include <string.h>
#include <windows.h>
typedef struct voter_information
{
    char aadhar[20];
    char name[50];
    char birth_date[15];
    char gender;
    struct voter_information *next;
} node;

node *head;
node *space,*start=NULL;
node *search(char x[],char y[],char z[],node *,int *);
node *voter_insert(node *);
node *main_logs(node *);
void admin();
void winner();
void exi();
void voting();
void not_again();
void stop();
void show();
void gender_count();

int count=0,R=3,vote=0;
int vote1=0,vote2=0,vote3=0,vote4=0,vote5=0;
int female_count = 0;
int male_count=0;

int main()
{
    while(1){
        system("cls");
        printf("\n\n\n");
```

```

        printf("\t      ***** WELCOME TO THE ONLINE VOTING PORTAL
*****      \n\n");

        printf("\t
*****\n\n\n");
        printf("\t      *****Please Enter One(1) for logging vote main
Logs*****\n\n\n");
        int BB;

        scanf("%d",&BB);
        if(BB==1)
        {
            start= main_logs(start);
        }

    }
    return 0;
}

node *main_logs(node *start)
{
    system("cls");
    printf("\n\n\n");
    printf("\t\t\t1. FOR VOTE ENTRY  \n");
    Sleep(300);
    printf("\t\t\t2. FOR ADMIN PANEL  \n");
    Sleep(300);
    printf("\t\t\t3. FOR WINNER      \n");
    printf("\t IF YOUR CREDENTIALS MATCHES WITH THOSE IN THE VOTER LIST
THEN ONLY YOU CAN GIVE YOUR VOTE OTHERWISE YOU CAN NOT  \n\n\n");
    Sleep(500);
    printf("\t *****So Plz Enter*****\n\n\n");
    int T;
    scanf("%d",&T);
    if(T==1)
    {
        start= voter_insert(start);
    }
    if(T==2)
    {

```

```

        admin();
    }
    if(T==3)
    {
        winner();
    }
    if(T!=1 || T!=2 || T!=3)
    {
        main_logs(start);
    }
    return start;
}

```

```

node *voter_insert(node *start)

```

```

{
    int UNIVERSAL=0;
    int *z;
    z = &UNIVERSAL;
    node *temp;
    node *prev = head;
    char name[50],birth_date[15],aadhar[20];
    system("cls");
    printf("\n\n\n\n");
    if(R==0){
        exit(0);
    }
    else{
        printf("\t IF AADHAR ID, YOUR NAME AND YOUR DATE OF BIRTH
MATCHES THEN YOU CAN GIVE YOUR VOTE OTHERWISE NOT\n\n");
        Sleep(300);
        printf("\t\t ID YOU DO WRONG %d TIMES, THE PORTAL
WILL BE CLOSED
AUTOMATICALLY\n\n\n",R);
        Sleep(300);
        printf("\t\tPlease \n");
        Sleep(300);
        printf("\t\tEnter your AADHAR ID number ");
        gets(aadhar);
        gets(aadhar);
    }
}

```

```

printf("\t\t\tEnter Your NAME  ");
gets(name);
printf("\t\t\tEnter Your BIRTH DATE  in dd-mm-yyyy format  ");
gets(birth_date);

temp=(node *)malloc(sizeof(node));
strcpy(temp->aadhar,aadhar);
strcpy(temp->name,name);
strcpy(temp->birth_date,birth_date);

while(temp!=NULL)
{
    if((strcmp(temp->aadhar,"10001")==0&& strcmp(temp-
>name,"Vigna Reddy")==0 &&strcmp(temp->birth_date,"22-02-2004")==0) ||
        (strcmp(temp->aadhar,"10002")==0&& strcmp(temp->name,"Taruni
Rao")==0 &&strcmp(temp->birth_date,"22-08-2004")==0)||
        (strcmp(temp->aadhar,"10003")==0&& strcmp(temp-
>name,"Chaitanya Vikas")==0 &&strcmp(temp->birth_date,"22-11-
1999")==0)||
        (strcmp(temp->aadhar,"10004")==0&& strcmp(temp-
>name,"Sindhu Palla")==0 &&strcmp(temp->birth_date,"14-04-2004")==0)||
        (strcmp(temp->aadhar,"10005")==0&& strcmp(temp-
>name,"Priyanka Rebba")==0 &&strcmp(temp->birth_date,"22-07-
2004")==0)||
        (strcmp(temp->aadhar,"10006")==0&& strcmp(temp-
>name,"Vaishnav Deeti")==0 &&strcmp(temp->birth_date,"26-10-
2004")==0)||
        (strcmp(temp->aadhar,"10007")==0&& strcmp(temp-
>name,"Tarun")==0 &&strcmp(temp->birth_date,"20-01-2002")==0)||
        (strcmp(temp->aadhar,"10008")==0&& strcmp(temp-
>name,"NTR")==0 &&strcmp(temp->birth_date,"20-05-1983")==0)||
        (strcmp(temp->aadhar,"10009")==0&& strcmp(temp-
>name,"Vamsi")==0 &&strcmp(temp->birth_date,"01-01-2004")==0)||
        (strcmp(temp->aadhar,"10010")==0&& strcmp(temp-
>name,"Shreha")==0 &&strcmp(temp->birth_date,"15-04-2004")==0))
    {
        R=3;
        start=search(temp->aadhar,temp->name,temp-
>birth_date,start,&UNIVERSAL);
    }
}

```

```

        if(UNIVERSAL==0)
        {
            voting();
        }

        else
        {
            not_again();
        }
    }
    else
    {
        R--;
        if(R==0)
        {
            stop();
            break;
        }
        printf("\n\n\n\n");
        printf("\tYour AADHAR ID or NAME or DATE OF BIRTH is wrong\n\n");
        Sleep(300);
        printf("\t\t\tPlz Re-Enter\n\n");
        Sleep(300);
        system("pause");
        start= main_logs(start);
    }
    temp=temp->next;
}
}
return start;
}

```

```

void voting()
{
    system("cls");
    printf("\n\n\n\n");
    printf("\t\t * * * * * LIST OF CANDIDATES * * * * * \n\n\n");
    Sleep(300);
    printf("\t\t\tNAME & THEIR RESPECTIVE SYMBOL\n\n");
}

```

```

Sleep(300);
printf("\t\t\t 1.Mamata Banerjee      1.Fish\n");
Sleep(300);
printf("\t\t\t 2.Deepa Dasmunsi      2.Boat\n");
Sleep(300);
printf("\t\t\t 3.Protima Rajak      3.Motorcycle\n");
Sleep(300);
printf("\t\t\t 4.Joydeb Halder      4.Broomstick\n");
Sleep(300);
printf("\t\t\t 5.Kartik Chandra Ghosh      5.Wheel\n\n\n");
int B,j;
printf("\t\t\t Plzz, \n");
printf("\t\t\t Enter Your Choice \n");
for(j=1;j<=1;j++)
{
    scanf("%d",&B);

    if(B==1)
    {
        vote1++;
        printf("\n\n\t\t\t\t\tYOU HAVE SUCCESSFULLY GIVEN YOUR VOTE TO
MAMTA BANERJEE\n");
        break;

    }
    if(B==2)
    {
        vote2++;
        printf("\n\n\t\t\t\t\tYOU HAVE SUCCESSFULLY GIVEN YOUR VOTE TO
DEEPA DASMUNSI\n");
        break;

    }
    if(B==3)
    {
        vote3++;
        printf("\n\n\t\t\t\t\tYOU HAVE SUCCESSFULLY GIVEN YOUR VOTE TO
PROTIMA RAJAK\n");
        break;
    }
}

```

```

    }
    if(B==4)
    {
        vote4++;
        printf("\n\n\t\t\tYOU HAVE SUCCESSFULLY GIVEN YOUR VOTE TO
JOYDEB HALDER\n");
        break;
    }
    if(B==5)
    {
        vote5++;
        printf("\n\n\t\t\tYOU HAVE SUCCESSFULLY GIVEN YOUR VOTE TO
KARTIK CHANDRA GHOSH\n");
        break;
    }
    if(B!=1 || B!=2 || B!=3 || B!=4 || B!=5)
    {
        printf("\n\t\t***** INVALID CHOICE
ENTERED*****\t\t\n");
        printf("\n\t\t\tENTER AGAIN\t\t\t\n");
    }

}

printf("\n\n*****THANK
YOU*****\n\n");
getch();
main_logs(start);

}

```

```

void admin()
{
    int B;
    printf("\n\n\n\n");
    printf("\t\t\t\tEnter Your Password To Unlock The Admin Panel\n\n");
    scanf("%d",&B);
    if(B==1234)
    {

```

```

        show();

    }
    else
    {
        printf("Wrong Password\n");
    }
}

void show()
{
    int G;
    system("cls");

    printf("\n\n\n\n");
    printf("\t\t\tPresent Vote Count :\n\n");
    Sleep(500);
    printf("\t\t\t Mamata Banerjee is on   %d Votes\n",vote1);
    Sleep(500);
    printf("\t\t\t Deepa Dasmunsi is on   %d Votes\n",vote2);
    Sleep(500);
    printf("\t\t\t Protima Rajak is on   %d Votes\n",vote3);
    Sleep(500);
    printf("\t\t\t Joydeb Halder is on   %d Votes\n",vote4);
    Sleep(500);
    printf("\t\t\t Kartik Chandra Ghosh is on   %d Votes\n\n\n\n",vote5);
    Sleep(500);
    printf("\n");

    printf("\t\t\tEnter Any Key For Main Logs");
    getch();
    main_logs(start);

}

void winner()
{
    system("cls");
    printf("\n\n\n\n\n");
    if(vote2<=vote1 && vote3<= vote1 && vote4<=vote1 && vote5<=vote1)

```



```

    printf("\t\t\tThe present Winner is Mamata Banerjee and she has got %d
votes\n\n\n\n",vote1);

    if(vote1<=vote2 && vote3<=vote2 && vote4<=vote2 && vote5<=vote2)
    printf("\t\t\tThe present Winner is Deepa Dasmunsi and she has got %d
votes\n\n\n\n",vote2);

    if(vote1<=vote3 && vote2<=vote3 && vote4<=vote3 && vote5<=vote3)
    printf("\t\t\tThe present Winner is Protima Rajak and she has got %d
votes\n\n\n\n",vote3);

    if(vote1<=vote4 && vote2<=vote4 && vote3<=vote4 && vote5<=vote4)
    printf("\t\t\tThe present Winner is Joydeb Halder and he has got %d
votes\n\n\n\n",vote4);

    if(vote1<=vote5 && vote2<=vote5 && vote3<=vote5 && vote4<=vote5)
    printf("\t\t\tThe present Winner is Kartik Chandra Ghosh and he has got %d
votes\n\n\n\n",vote5);

    printf("\t\t\tEnter Any Key for Main Log\n\n");
    getch();
    main_logs(start);

}

void stop()
{
    system("cls");

    printf("\n\n\n\n");
    printf("\t\t\t(:-SORRY YOU ENTERED WRONG CREDENTIALS FOR THREE(3)
TIMES IN A ROW -:) \n\n\n");
    Sleep(500);
    printf("\t\t\tPlz try again After A few Moment\n\n\n");
    Sleep(500);
    printf("\t\t\t* * *Thank You* * * \n\n\n");
    Sleep(500);
    printf("press any key");
    getch();
}

```

```

}

void not_again()
{
    int A;
    system("cls");
    printf("\n\n\n\n");
    printf("\t\t\t ***YOU HAVE GIVEN YOUR VOTE SUCCESSFULLY***
\n\n\n");
    Sleep(300);
    printf("\t\t\t ***YOU CANNOT GIVE YOUR VOTE MORE THAN ONCE***
\n\n\n");
    Sleep(300);
    printf("\t\t\t If You want to see present winner Enter One(1) or Enter Any
Other Key for Main Logs\n\n");
    Sleep(300);
    scanf("%d",&A);
    if(A==1)
    {
        winner();
    }
    else
    {
        main_logs(start);
    }
}

void exi()
{
    system("cls");

    printf("\n\n\n\n\n");
    Sleep(500);
    printf("\t\t\t ***YOU ARE NOW EXITING THE PORTAL*** \n\n\n");
    Sleep(1000);
    printf("\t\t\t * * *Thank You For Using This ONLINE PLATFORM For VOTING*
* * \n\n\n");
    Sleep(1000);
    exit(0);
}

```

```
}
```

```
node *search(char x[],char y[],char z[],node *start,int *Y)
```

```
{
```

```
    *Y=0;
```

```
    node *t,*space;
```

```
    if(start==NULL)
```

```
    {
```

```
        space=(node*)malloc(sizeof(node));
```

```
        strcpy(space->aadhar,x);
```

```
        strcpy(space->name,y);
```

```
        strcpy(space->birth_date,z);
```

```
        start=space;
```

```
        space->next=NULL;
```

```
    }
```

```
    else
```

```
    {
```

```
        t=start;
```

```
        while(t!=NULL)
```

```
        {
```

```
            if((strcmp(t->aadhar,x)==0&& strcmp(t->name,y)==0 &&strcmp(t->birth_date,z)==0))
```

```
            {
```

```
                *Y=1;
```

```
                break;
```

```
            }
```

```
            t=t->next;
```

```
        }
```

```
        if(*Y==0)
```

```
        {
```

```
            space=(node*)malloc(sizeof(node));
```

```
            strcpy(space->aadhar,x);
```

```
            strcpy(space->name,y);
```

```
        strcpy(space->birth_date,z);
        t=space;
        space->next=NULL;
    }
}
return start;
}
```

TEST CASES/ OUTPUT

```
C:\Users\tarun\OneDrive\Doc  X + v - □ X
1. FOR VOTE ENTRY
2. FOR ADMIN PANEL
3. FOR WINNER
IF YOUR CREDENTIALS MATCHES WITH THOSE IN THE VOTER LIST THEN ONLY YOU CAN GIVE YOUR VOTE OTHERWISE YOU CAN NOT

*****So Plz Enter*****

1|
```

```
C:\Users\tarun\OneDrive\Doc  X + v - □ X
C:\Users\tarun\OneDrive\Doc  X + v - □ X
1. FOR VOTE ENTRY
2. FOR ADMIN PANEL
3. FOR WINNER
IF YOUR CREDENTIALS MATCHES WITH THOSE IN THE VOTER LIST THEN ONLY YOU CAN GIVE YOUR VOTE OTHERWISE YOU CAN NOT

*****So Plz Enter*****

2

Enter Your Password To Unlock The Admin Panel

1234|
```

```
C:\Users\tarun\OneDrive\Doc  X + v - □ X
* * * * * LIST OF CANDIDATES * * * * *

NAME      & THEIR RESPECTIVE      SYMBOL
1.Mamata Banerjee      1.Fish
2.Deepa Dasmunsi      2.Boat
3.Protima Rajak      3.Motorcycle
4.Joydeb Halder      4.Broomstick
5.Kartik Chandra Ghosh      5.Wheel

Plzz,
Enter Your Choice

1

YOU HAVE SUCCESSFULLY GIVEN YOUR VOTE TO MAMTA BANERJEE

*****THANK YOU*****
|
```

```
C:\Users\tarun\OneDrive\Doc  X + v - □ X

1. FOR VOTE ENTRY
2. FOR ADMIN PANEL
3. FOR WINNER
IF YOUR CREDENTIALS MATCHES WITH THOSE IN THE VOTER LIST THEN ONLY YOU CAN GIVE YOUR VOTE OTHERWISE YOU CAN NOT

*****So PLz Enter*****

2

Enter Your Password To Unlock The Admin Panel

1234|
```

```
C:\Users\tarun\OneDrive\Doc  X + v - □ X

Present Vote Count :

Mamata Banerjee is on 2 Votes
Deepa Dasmunsi is on 0 Votes
Protima Rajak is on 0 Votes
Joydeb Halder is on 0 Votes
Kartik Chandra Ghosh is on 0 Votes

Enter Any Key For Main Logs|
```

```
C:\Users\tarun\OneDrive\Doc  X + v - □ X

The present Winner is Mamata Banerjee and she has got 2 votes

Enter Any Key for Main Log
|
```

CONCLUSION

The provided C code offers a basic online voting system with essential functionalities for user authentication, candidate selection, vote counting, administration, and winner determination. While functional, there are opportunities for improvement in areas such as input validation, security, memory management, user interface design, and scalability. Overall, the code provides a foundational framework that can be further developed to create a more robust and feature-rich online voting platform.

REFERENCES

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