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| **ONLINE VOTING PORTAL**  **21CSC201J – DATA STRUCTURES AND ALGORITHMS**  **Mini Project Report**  *Submitted by*  **Gauri Gupta [Reg. No.: RA2211026010359]**  **B.Tech. CSE – AIML**  **Neelansh Bhargava [Reg. No.: RA2211026010360]**  **B.Tech. CSE - AIML**  **Mrinalini Vaish [Reg. No.: RA2211026010365]**  **B.Tech. CSE – AIML**  **Himanshu Bhadani [Reg. No.: RA2211026010368]**  **B.Tech. CSE – AIML**  **SRMIST-01.jpg**  **SCHOOL OF COMPUTING**  **COLLEGE OF ENGINEERING AND TECHNOLOGY**  **SRM INSTITUTE OF SCIENCE AND TECHNOLOGY**  **(Under Section 3 of UGC Act, 1956)**  S.R.M. NAGAR, KATTANKULATHUR – 603 203  KANCHEEPURAM DISTRICT  **JULY – NOVEMBER 2023** |

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**PROBLEM STATEMENT**

The goal of this project is to create a digital platform that allows eligible voters to cast their votes and administrators to manage the election process.

To develop a secure and user-friendly online voting system for a small-scale community election. The goal of this project is to create a digital platform that allows eligible voters to cast their votes and administrators to manage the election process.

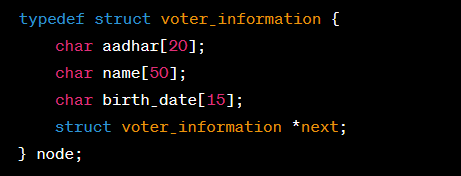
The system should ensure the integrity and confidentiality of the voting process and provide an efficient means of determining the election winner.

The code provided is for an online voting portal. It allows voters to enter their information and cast their votes for different candidates. It also has an admin panel to view the vote counts and declare a winner. The program ensures that voters can only cast their votes once and limits the number of attempts to enter correct credentials. If the user enters incorrect credentials three times, the portal is closed.

**METHODOLOGY**

In the provided code for the online voting system, linked lists are used to manage and maintain voter information. Specifically, a singly linked list is employed to store and search for voter data. Here's how linked lists are used in the code:

1. Linked List Structure: The code defines a linked list structure named voter\_information. This structure holds voter information, including the Aadhar ID, name, birth date, and a pointer to the next node in the list.



2. Head and Start Pointers: Two global pointers, head and start, are used to manage the linked list. Head points to the beginning of the linked list, and the start is used for various operations in the code.

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Description automatically generated

3. Voter Information Storage: In the voter\_insert function, user provided Aadhar ID, name, and birth date are stored in a temporary node (temp). This node is then linked to the existing list. If the voter's information matches the predefined data (hardcoded in the code), it is considered a valid voter, and the program allows them to vote.

A screen shot of a computer error

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4. Search Function: The code also includes a search function, which is used to search the linked list for a specific voter's information. It takes the Aadhar ID, name, and birth date as parameters and returns the matching voter node.



Overall, linked lists are used to maintain and search voter information, allowing the system to verify the eligibility of voters based on their provided details. If a voter's information matches the predefined data and they haven't already voted, they are allowed to cast their vote. Linked lists play a crucial role in managing and processing voter data within the online voting system.

**Structure voter\_information:**

This structure is used to store information about voters.

It has the following members:

aadhar[20]: A character array of size 20 to store the Aadhar ID of the voter.

name[50]: A character array of size 50 to store the name of the voter.

birth\_date[15]: A character array of size 15 to store the birth date of the voter.

next: A pointer to the next voter\_information structure, forming a singly linked list.

**Global Variables:**

Several global variables are used to store various information, including:

node \*head: A pointer to a voter\_information structure.

node \*space, \*start: Pointers to voter\_information structures.

int count, R, vote: Integer variables to store counts and votes.

int vote1, vote2, vote3, vote4, vote5: Integer variables to store votes for different candidates.

**Function main\_logs:**

This function is responsible for displaying the main menu options and controlling the flow of the program.

It takes a pointer to a voter\_information structure as an argument and returns a pointer to the same structure.

It uses a local integer variable T to determine the user's choice of action.

**Functions for Voting and Admin:**

The code contains several functions, such as voting(), admin(), show(), winner(), stop(), not\_again(), and exit(), which handle various aspects of the voting process, administration, and program control.

**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];**

**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();**

**int count=0,R=3,vote=0;**

**int vote1=0,vote2=0,vote3=0,vote4=0,vote5=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\n\n");**

**printf(" \t\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;**

**char name[50],birth\_date[15],aadhar[20];**

**system("cls");**

**printf("\n\n\n\n");**

**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\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\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);**

**temp->next=NULL;**

**head=temp;**

**while(temp!=NULL)**

**{**

**if((strcmp(temp->aadhar,"10001")==0&& strcmp(temp->name,"Himanshu Bhadani")==0 &&strcmp(temp->birth\_date,"04-07-2004")==0) ||**

**(strcmp(temp->aadhar,"10002")==0&& strcmp(temp->name,"Mrinalini Vaish")==0 &&strcmp(temp->birth\_date,"10-12-2004")==0)||**

**(strcmp(temp->aadhar,"10003")==0&& strcmp(temp->name,"Gauri Gupta")==0 &&strcmp(temp->birth\_date,"11-11-2004")==0)||**

**(strcmp(temp->aadhar,"10004")==0&& strcmp(temp->name,"Neelansh Bhargava")==0 &&strcmp(temp->birth\_date,"03-06-2004")==0)||**

**(strcmp(temp->aadhar,"10005")==0&& strcmp(temp->name,"Sanjeev Sitharaman")==0 &&strcmp(temp->birth\_date,"16-08-2004")==0)||**

**(strcmp(temp->aadhar,"10006")==0&& strcmp(temp->name,"Arav Goel")==0 &&strcmp(temp->birth\_date,"20-10-2000")==0)||**

**(strcmp(temp->aadhar,"10007")==0&& strcmp(temp->name,"Avinash Kumar")==0 &&strcmp(temp->birth\_date,"02-03-1999")==0)||**

**(strcmp(temp->aadhar,"10008")==0&& strcmp(temp->name,"Ravi Raj")==0 &&strcmp(temp->birth\_date,"26-12-1999")==0)||**

**(strcmp(temp->aadhar,"10009")==0&& strcmp(temp->name,"Shubham Kumar")==0 &&strcmp(temp->birth\_date,"02-01-1999")==0)||**

**(strcmp(temp->aadhar,"10010")==0&& strcmp(temp->name,"Zia Shah")==0 &&strcmp(temp->birth\_date,"03-01-1999")==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\t NAME & 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\tYOU HAVE SUCCESSFULLY GIVEN YOUR VOTE TO MAMTA BANERJEE\n");**

**break;**

**}**

**if(B==2)**

**{**

**vote2++;**

**printf("\n\n\t\t\t\tYOU HAVE SUCCESSFULLY GIVEN YOUR VOTE TO DEEPA DASMUNSI\n");**

**break;**

**}**

**if(B==3)**

**{**

**vote3++;**

**printf("\n\n\t\t\t\tYOU HAVE SUCCESSFULLY GIVEN YOUR VOTE TO PROTIMA RAJAK\n");**

**break;**

**}**

**if(B==4)**

**{**

**vote4++;**

**printf("\n\n\t\t\t\tYOU HAVE SUCCESSFULLY GIVEN YOUR VOTE TO JOYDEB HALDER\n");**

**break;**

**}**

**if(B==5)**

**{**

**vote5++;**

**printf("\n\n\t\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");**

**printf("press any key");**

**getch();**

**}**

**void admin()**

**{**

**int B;**

**printf("\n\n\n\n");**

**printf("\t\t\t\t\tEnter Your Password To Unlock The Admin Panel\n\n");**

**scanf("%d",&B);**

**if(B==3692)**

**{**

**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("\t\t\t\t\tEnter Any Key For Main Logs\n\n\t\t\t\t\t\t\tOR\n\n\t\t\t\t\tENTER THE SPECIAL PASSWORD TO CLOSING VOTING PORTAL\n ");**

**scanf("%d",&G);**

**if(G==1234)**

**exi();**

**else**

**main\_logs(start);**

**}**

**void winner()**

**{**

**system("cls");**

**printf("\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\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\t Plz 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;**

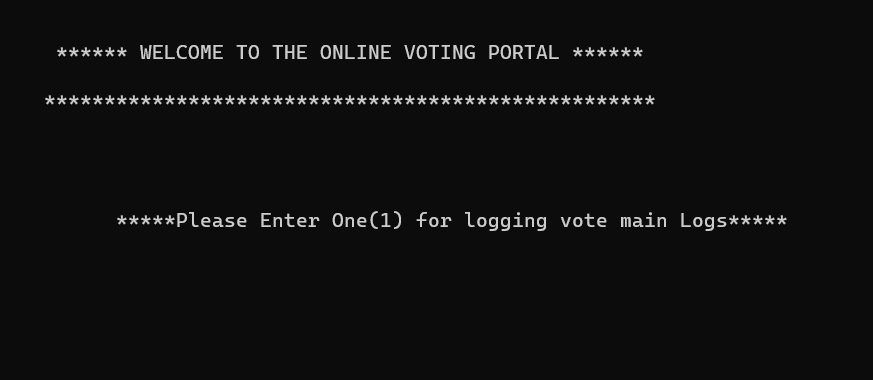
**}**

**}**

**return start;**

**}**

**OUTPUT**

****

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**CONCLUSION**

The code provides a basic implementation of an online voting portal. It allows users to cast their votes, view the current vote counts, and declare a winner. However, the code lacks proper error handling and security measures, crucial in a real-world voting system. Additionally, it lacks a database for storing voter information, which should be a part of any secure voting system. The code is a simple example but should not be used for voting purposes without significant improvements and security measures.