

DSA INNOVATIVE ASSIGNMENT

21BCE047
CHINTAN DETROJA

COURSE ELECTIVE MANAGEMENT SYSTEM

OVERVIEW

The program is written in C language. It involves usage of Structures, Linked Lists and Array.

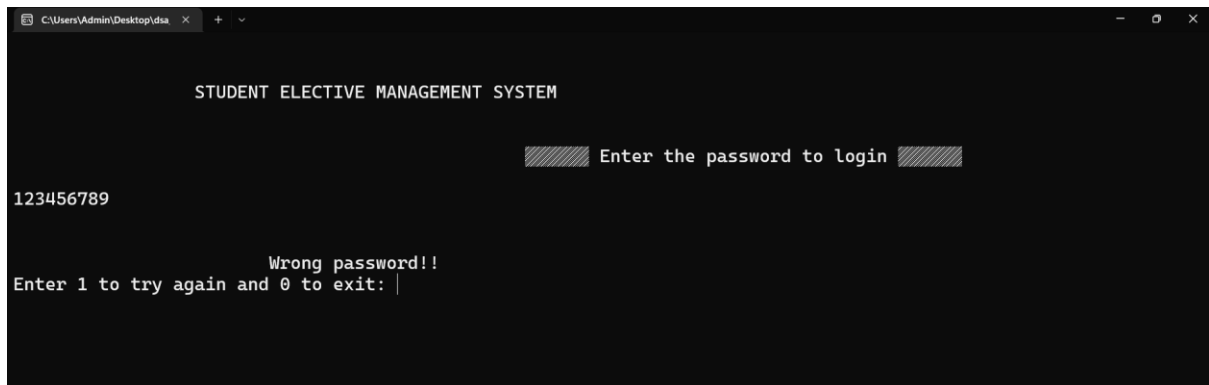
The program first takes user input that is the number of electives. A list is created which stores the name of elective and number of seats to be allotted for that particular elective. Further another list is created that stores the student details which involves student name, student roll number and the SPI of that student.

Further the list of electives is displayed and the user is asked to enter the number corresponding to the elective in order of the desired priority. After all these information is entered and stored the program then displays a menu that allows user to view the list of electives, details of student and what elective they are allotted, search student details using roll number and change student elective.

To make it interactive it is also required by the user to enter a password to start the program. Various colours are used to make the program look presentable.

OUTPUT

Asks user for the password – user entered incorrect password



```
C:\Users\Admin\Desktop\dsa x + v

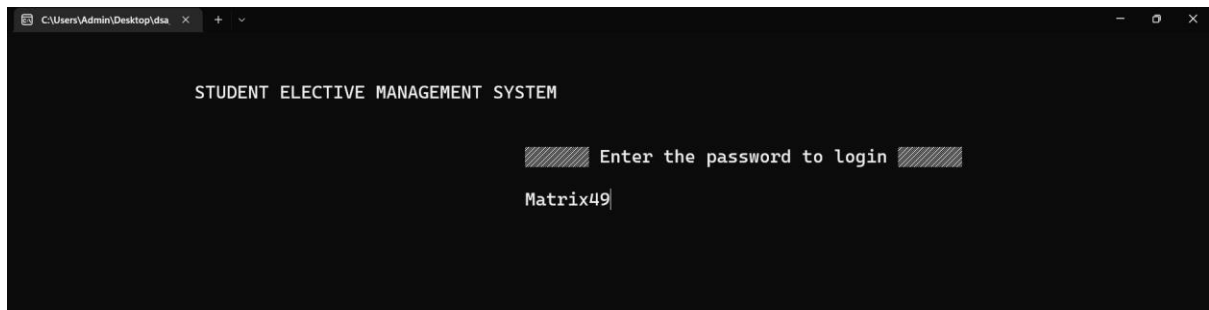
STUDENT ELECTIVE MANAGEMENT SYSTEM

Enter the password to login

123456789

Wrong password!!
Enter 1 to try again and 0 to exit: |
```

The correct password is Matrix49 (case sensitive) – user enters correct password

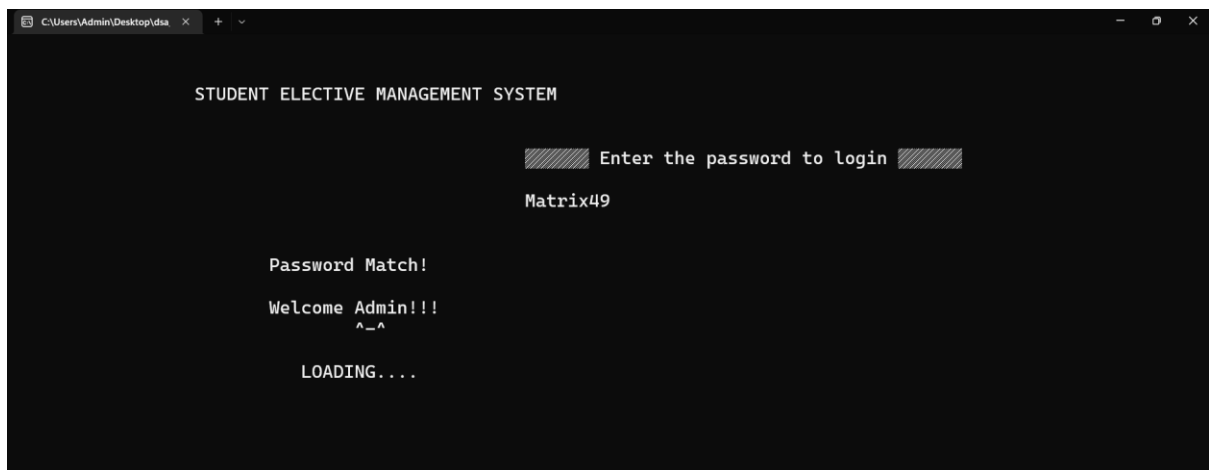


```
C:\Users\Admin\Desktop\dsa x + v

STUDENT ELECTIVE MANAGEMENT SYSTEM

Enter the password to login

Matrix49|
```



```
C:\Users\Admin\Desktop\dsa x + v

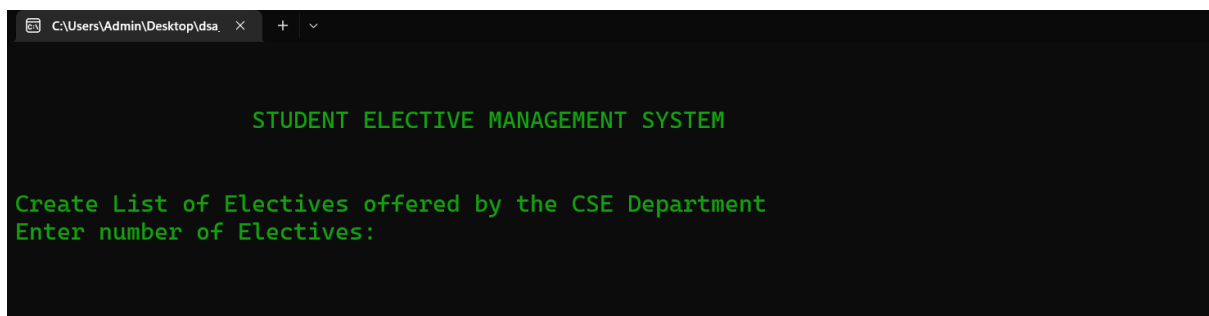
STUDENT ELECTIVE MANAGEMENT SYSTEM

Enter the password to login

Matrix49

Password Match!
Welcome Admin!!!
  ^_^
LOADING....
```

Now we enter into the main program – user will enter no. of electives

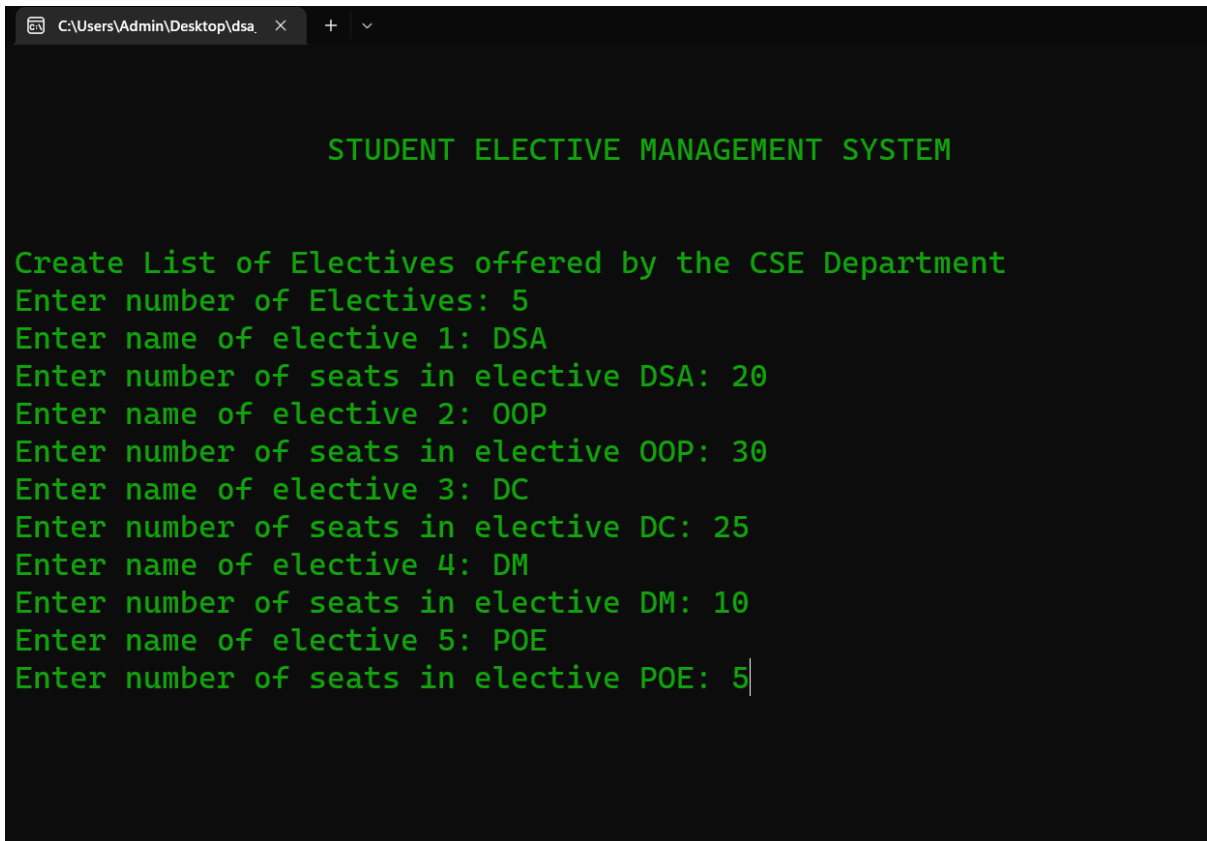


```
C:\Users\Admin\Desktop\dsa x + v

STUDENT ELECTIVE MANAGEMENT SYSTEM

Create List of Electives offered by the CSE Department
Enter number of Electives:
```

We have kept 5 electives – Now the user enters name and strength of a particular elective

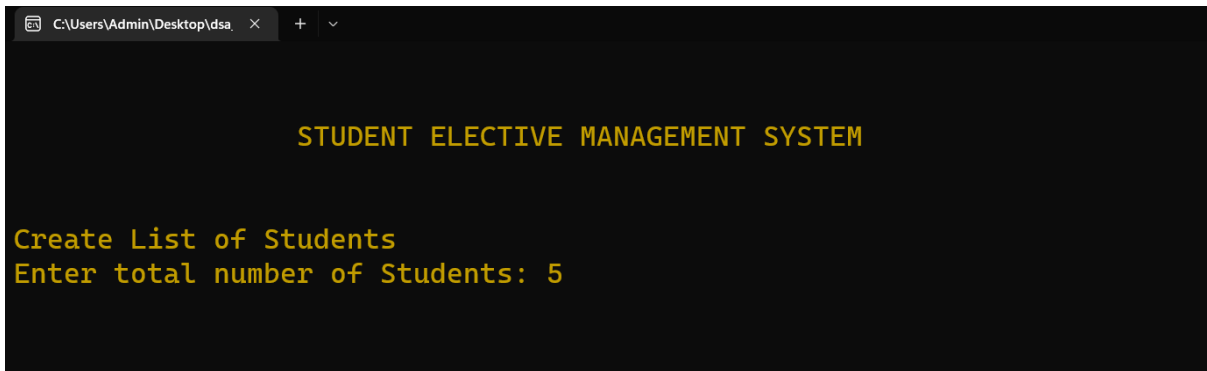


```
C:\Users\Admin\Desktop\dsa x + v

STUDENT ELECTIVE MANAGEMENT SYSTEM

Create List of Electives offered by the CSE Department
Enter number of Electives: 5
Enter name of elective 1: DSA
Enter number of seats in elective DSA: 20
Enter name of elective 2: OOP
Enter number of seats in elective OOP: 30
Enter name of elective 3: DC
Enter number of seats in elective DC: 25
Enter name of elective 4: DM
Enter number of seats in elective DM: 10
Enter name of elective 5: POE
Enter number of seats in elective POE: 5|
```

Elective data is stored – Now the user is asked for student details



```
C:\Users\Admin\Desktop\dsa x + v

STUDENT ELECTIVE MANAGEMENT SYSTEM

Create List of Students
Enter total number of Students: 5
```

Student details include name, roll number and SPI

```
C:\Users\Admin\Desktop\dsa x + v

STUDENT ELECTIVE MANAGEMENT SYSTEM

Create List of Students
Enter total number of Students: 5
STUDENT REGISTRATION

STUDENT 1

Name of Student:dev
Roll no. of dev:21BCE049
SPI of dev:9.4
```

After that the user sets the priority for the electives

```
C:\Users\Admin\Desktop\dsa x + v - □ x

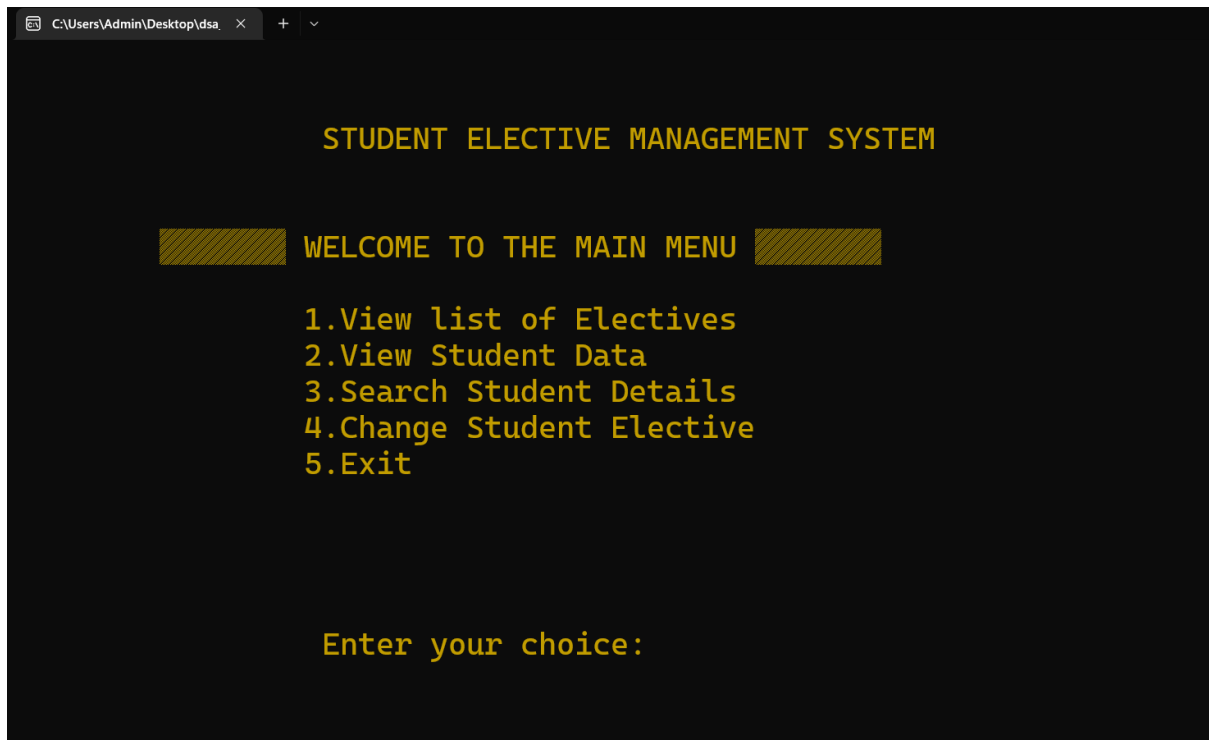
STUDENT 1, dev REGISTERED SUCCESSFULLY

ELECTIVE CHOICE FILLING

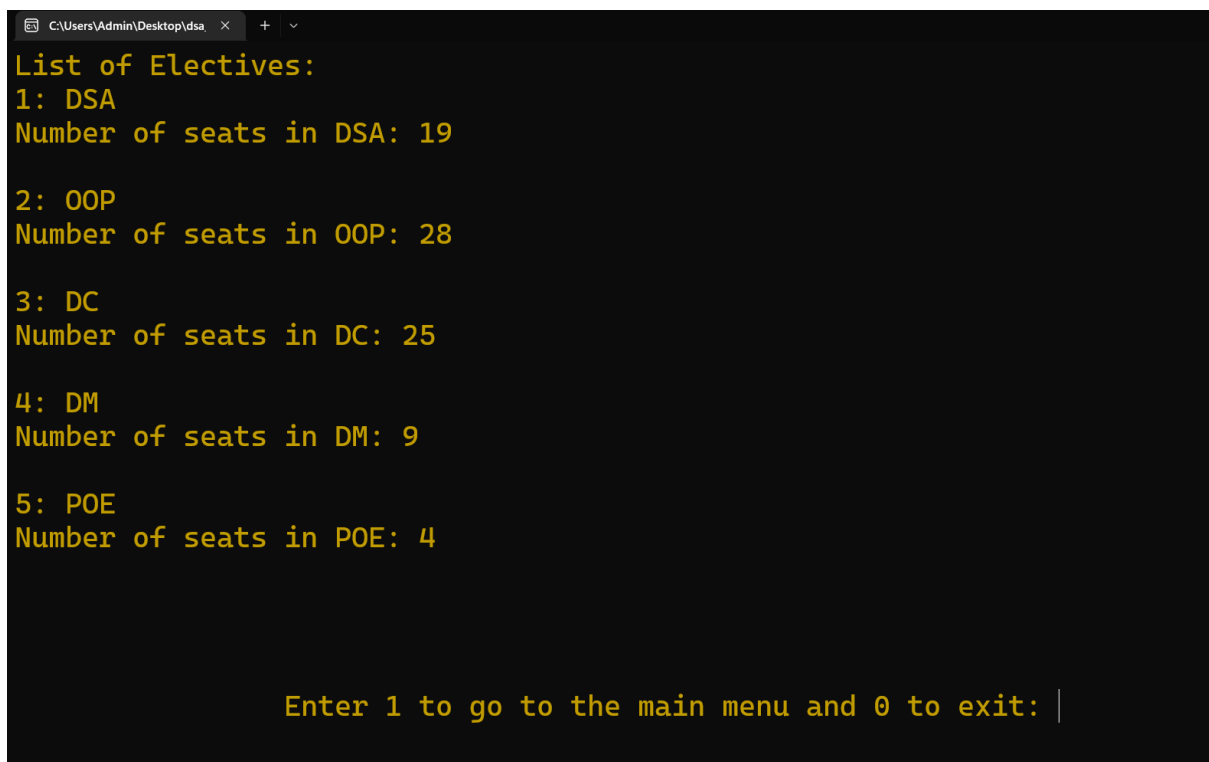
Enter Choice of Electives according to Priority:
Priority 1 means highest priority and Priority 5 means lowest
priority

List of Electives:
1: DSA
2: OOP
3: DC
4: DM
5: POE
Priority 1
Enter the Elective number: 1
Priority 2
Enter the Elective number: 2
Priority 3
Enter the Elective number: 5
Priority 4
Enter the Elective number: 4
Priority 5
Enter the Elective number: 3
```

The main menu is displayed



On entering 1 – the list of electives and no. of remaining seats is displayed



```
C:\Users\Admin\Desktop\dsa x + v
Name: dev
Roll No: 21BCE049
SPI: 9.400
Chosen Elective: DSA

-----

Name: chintan
Roll No: 21BCE047
SPI: 9.200
Chosen Elective: DM

-----
```

```
C:\Users\Admin\Desktop\dsa x + v
Name: PATEL
Roll No: 21BCE050
SPI: 9.000
Chosen Elective: OOP

-----

Name: Chintu
Roll No: 21BCE041
SPI: 6.000
Chosen Elective: OOP

-----
```

```
C:\Users\Admin\Desktop\dsa x + v
Chosen Elective: 00P

-----

Name: Aditya
Roll No: 21BCE008
SPI: 2.100
Chosen Elective: POE

-----

Enter 1 to go to the main menu and 0 to exit:
```

User can search for a particular student's details using roll number

```
C:\Users\Admin\Desktop\dsa x + v
Enter Roll No. of Student: 21BCE049

Student Record Found!!

Name: dev
Roll No: 21BCE049
SPI: 9.400
Elective: DSA

Enter 1 to go to the main menu and 0 to exit: |
```

And will obviously throw an error if student is not on the record

```
Enter Roll No. of Student: 21BCE068

Student NOT FOUND

Enter 1 to go to the main menu and 0 to exit: |
```


End of the program

A screenshot of a terminal window with a black background and white text. The window title bar shows the file path 'C:\Users\Admin\Desktop\dsa'. The text inside the terminal reads: 'Credits :: DEV BACHANI, CHINTAN DETROJA AND DEV PATEL', 'Guidance :: MALARAM SIR', and 'Closing.....' at the bottom left.

```
C:\Users\Admin\Desktop\dsa x + v

Credits :: DEV BACHANI, CHINTAN DETROJA AND DEV PATEL
Guidance :: MALARAM SIR

Closing.....
```

NEED OF SUCH PROGRAM

We are students of Nirma University, where just CSE has more than 300 seats.

Management of 300+ students can be really tiresome, but not if you have our code!

The program solves a major problem that it may help students to predict if they can get their desired elective subject or not. One may have unrealistic expectations that can't be met given their SPI. So if they have a rough idea about it, they can give first priority to the subject that they are sure to get.

THE GROUP

21BCE047 – CHINTAN DETROJA

21BCE049 – DEV BACHANI

21BCE050 – DEV PATEL

SPECIAL THANKS TO MALARAM SIR FOR GUIDANCE.