REPORT FOR MINI PROJECT – STUDENT INFORMATION

TEAM – JATIN KUMAR GUPTA (RA2111003010186)

MANAN AGARWAL (RA2111003010187)

OBJECTIVE: -

If you want to store a record of hundred student you will need to define hundred variables to store the name and similarly hundred variables for each type of data you need to enter in the record. This is where structures come in handy. In this program we will make a structure of student that will store the name of the student, the age of the student, department of the student, registration number of student and the CGPA.

PROBLEM DEFINATION: -

Taking N numbers of student's information using structures which has no data type restriction and which is able to store the name of the student, the age of the student, department of the student, registration number of student and the CGPA. And it fill also tell topper CGPA for the class.

ALGORITHM: -

STEP1: - defining a structure for students records.

```
struct Student

{
    char name[50];
    int reg_no[15];
    int age;
    char dept[50];
    float gpa;
};
```

STEP2: - Take input of how many students are there in your class .

STEP3: - loop for N number of students i. e. for (int I = 0; i< n; i++)

STEP4 : In this loop take the input using structure we define in step1 .

```
    for(i=0; i<N;i++)

    {
        printf("Enter the name of the student %d: ",i+1);
        scanf(" %s",&s[i].name);
        printf("Enter the registration number of the student
%d: ",i+1);
```

```
        scanf(" %s",&s[i].reg_no);
        printf("Enter the age of student %d:",i+1);
        scanf("%d",&s[i].age);
        printf("Enter the department of the student %d: ",i+1);
        scanf(" %s",&s[i].dept);
        printf("Enter the GPA of student %d:",i+1);
        scanf("%f",&s[i].gpa);

        printf("\n");

    }
```

STEP 4 : for finding topper CGPA we are using loop traversing it in whole structure ,

```
for(l=0;l<N;l++)
    {
        if(l==0)
        maxgpa=s[l].gpa;
        else if(maxgpa<s[l].gpa)
        {
            maxgpa=s[l].gpa;
        }
    }
```

STEP 5 : printing all the N students details in output and maximum CGPA .

```
    printf("\nThe data you enetered.\n");

    int m;
    for(m=0; m<N;m++)
    {
        printf("\nName:%s",s[m].name);
        printf("\nregistration number:%s",s[m].reg_no);
        printf("\nAge:%d",s[m].age);
        printf("\nDepartment:%s",s[m].dept);
        printf("\nGPA: %0.2f",s[m].gpa);
        printf("\n");


    }
```

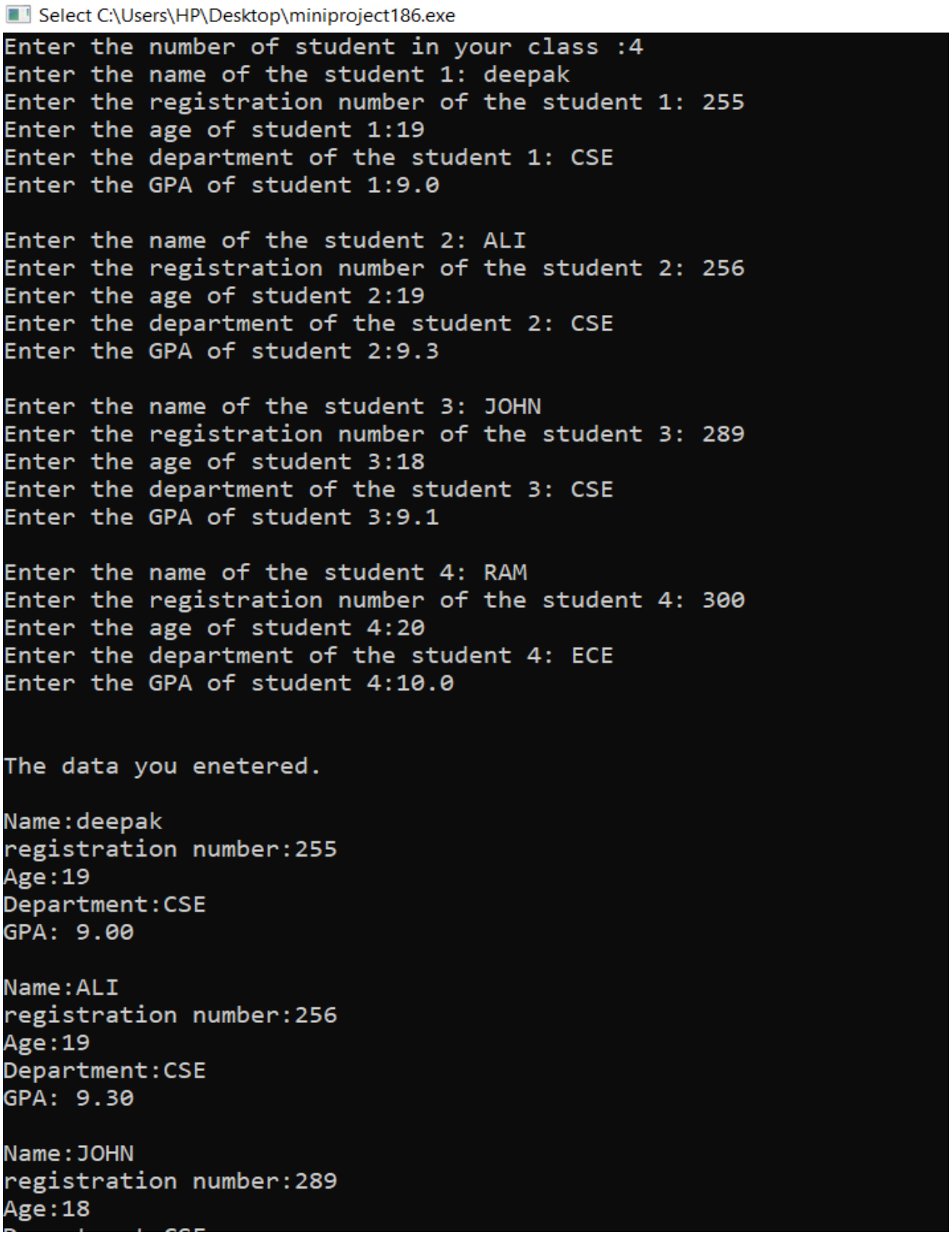
```
    printf("The Maximum GPA is:%0.2f",maxgpa);
```

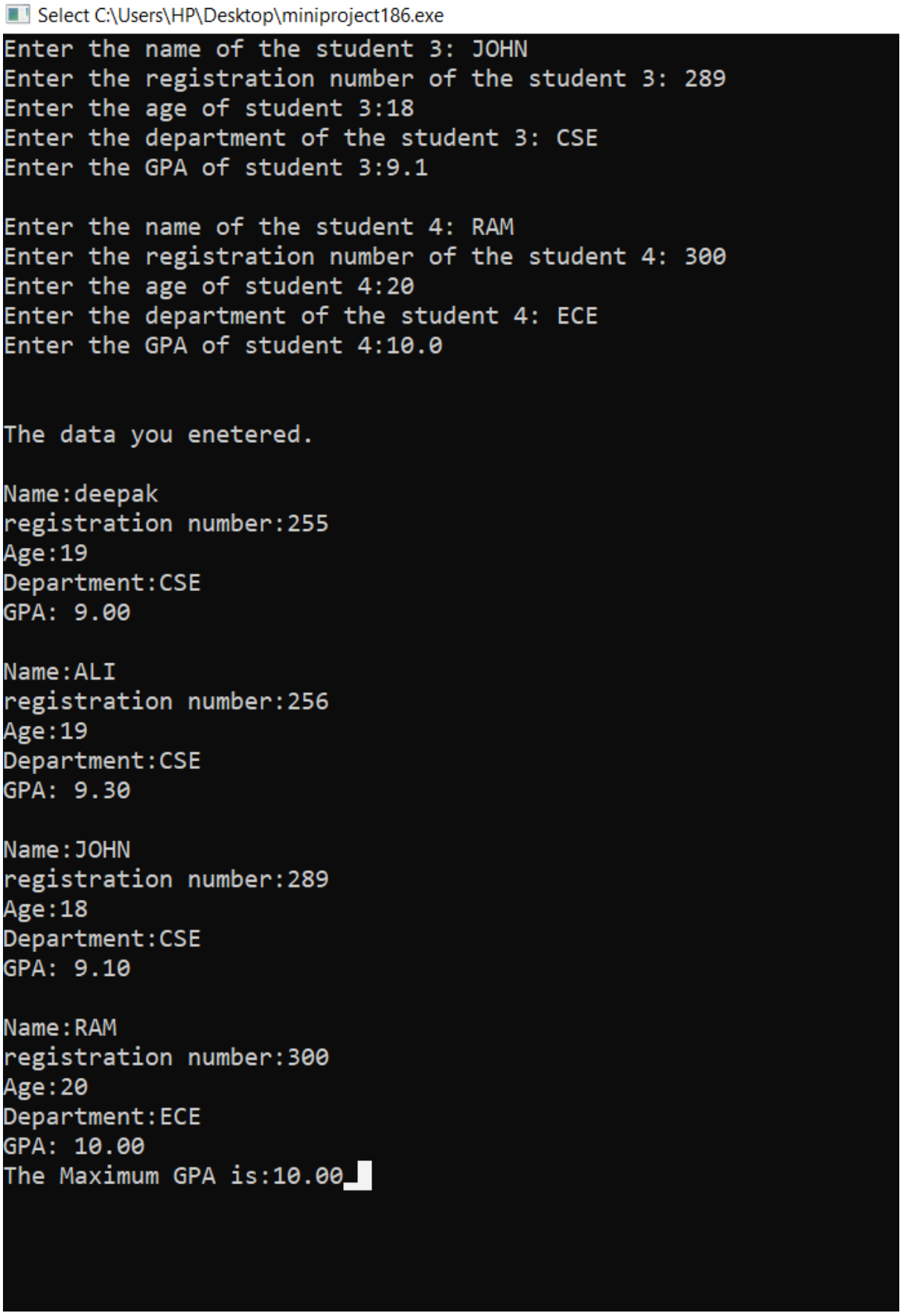
FINAL CODE WE USED :

```
#include<stdio.h>
#include<conio.h>

struct Student
{
    char name[50];
    int reg_no[15];
    int age;
    char dept[50];
    float gpa;
};

int main()
{
    int N;
    printf("Enter the number of student in your class :");
    scanf("%d" , &N);
    struct Student s[N];
    int i,j;

    for(i=0; i<N;i++)
    {
        printf("Enter the name of the student %d: ",i+1);
        scanf(" %s",&s[i].name);
        printf("Enter the registration number of the student
%d: ",i+1);
        scanf(" %s",&s[i].reg_no);
        printf("Enter the age of student %d:",i+1);
        scanf("%d",&s[i].age);
        printf("Enter the department of the student %d: ",i+1);
        scanf(" %s",&s[i].dept);
        printf("Enter the GPA of student %d:",i+1);
        scanf("%f",&s[i].gpa);

        printf("\n");
```

```
    }


    float maxgpa;
    int l;

    for(l=0;l<N;l++)
    {
        if(l==0)
        maxgpa=s[l].gpa;
        else if(maxgpa<s[l].gpa)
        {
            maxgpa=s[l].gpa;
        }
    }
    printf("\nThe data you enetered.\n");

    int m;
    for(m=0; m<N;m++)
    {
        printf("\nName:%s",s[m].name);
        printf("\nregistration number:%s",s[m].reg_no);
        printf("\nAge:%d",s[m].age);
        printf("\nDepartment:%s",s[m].dept);
        printf("\nGPA: %0.2f",s[m].gpa);
        printf("\n");


    }

    printf("The Maximum GPA is:%0.2f",maxgpa);


    getch();
    return 0 ;
}
```

OUTPUT SCREEN




Select C:\Users\HP\Desktop\miniproject186.exe
Enter the name of the student 3: JOHN
Enter the registration number of the student 3: 289
Enter the age of student 3:18
Enter the department of the student 3: CSE
Enter the GPA of student 3:9.1
Enter the name of the student 4: RAM
Enter the registration number of the student 4: 300
Enter the age of student 4:20
Enter the department of the student 4: ECE
Enter the GPA of student 4:10.0
The data you enetered.
Name:deepak
registration number:255
Age:19
Department:CSE
GPA: 9.00
Name:ALI
registration number:256
Age:19
Department:CSE
GPA: 9.30
Name:JOHN
registration number:289
Age:18
Department:CSE
GPA: 9.10
Name:RAM
registration number:300
Age:20
Department:ECE
GPA: 10.00
The Maximum GPA is:10.00

THANK YOU

MADE BY

JATIN KUMAR GUPTA(RA2111003010186)

MANAN AGARWAL (RA2111003010187)