

20DCS103
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CE143: COMPUTER CONCEPTS & PROGRAMMING

20DCS103_RUSHIK RATHOD
DEPSTAR CSE - 2

Practical 1

Aim :

Write a program to define a structure called Result for students. Structure will have members like Roll number, marks for three subjects and total of three subjects.

Write a program to enter data for 5 students and display the merit list of students.

Use Array of Structures. For example, if Roll No and marks of three subjects of each student are entered through the keyboard, the output should look like the shown into the picture.

Source Code :

```
#include<stdio.h>

#include<stdlib.h>

struct Results
{
    int rollno;
    int marks[3];
    int tot;
}R[5];
void get();
void display();
int main()
{
    get();
    display();
    return 0;
}

void get()
```

```
{
    printf("\nEnter Data for 5 students...\n");
    for(int i=0; i<5 ;i++)
    {
        printf("\nEnter The roll number : ");
        scanf("%d", &R[i].rollno);
        for(int j=0;j<3;j++)
        {
            printf("\nEnter marks of subject %d : ",j+1);
            scanf("%d",&R[i].marks[j]);

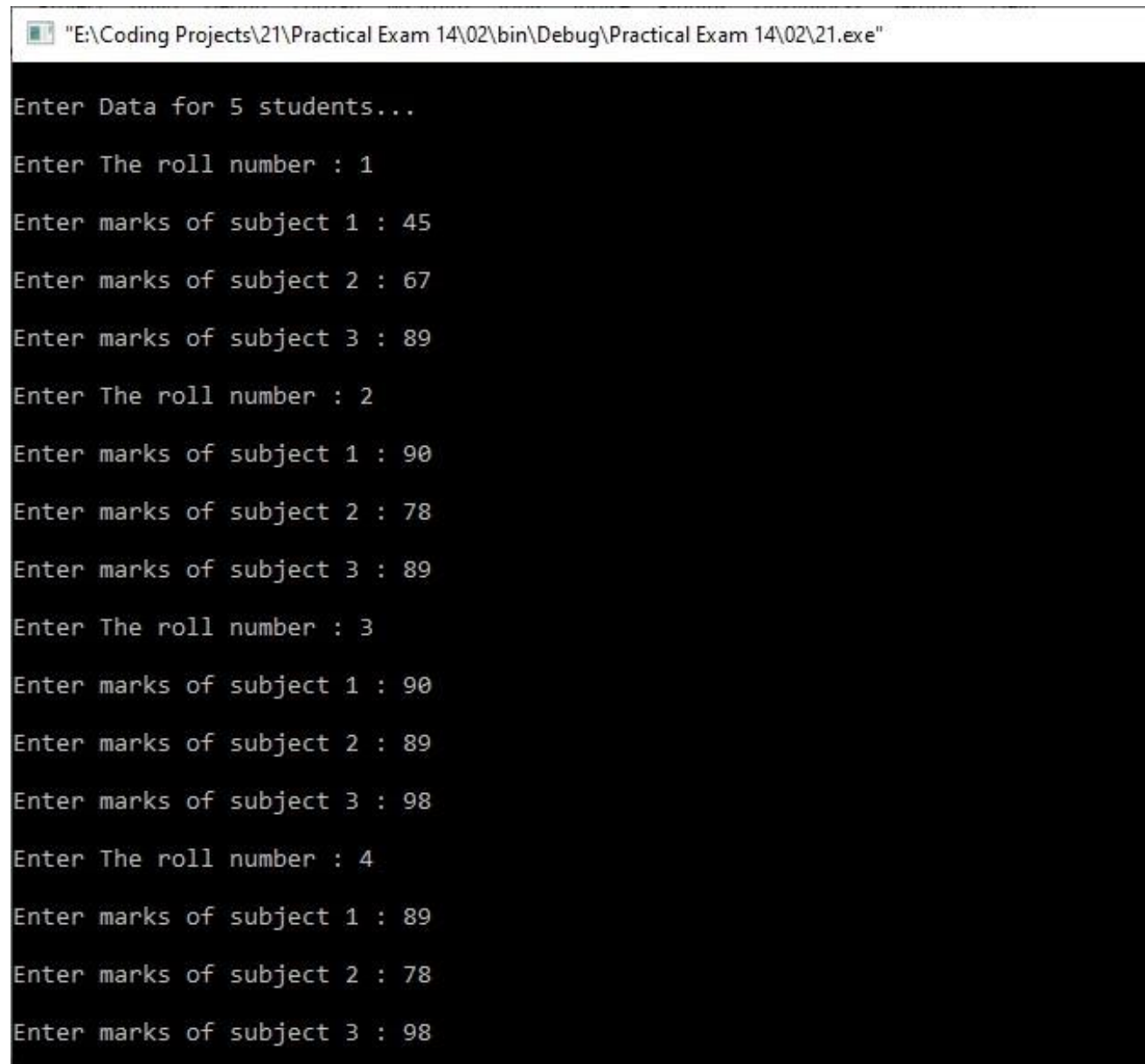
            R[i].tot+=R[i].marks[j];
        }
    }
}

void display()
{
    struct Results temp;
    int i,j;
    for(i=0;i<5;++i)
    {
        for(j=i+1;j<5;++j)
        {
            if(R[i].tot>=R[j].tot)
            {
```

```
    temp=R[i];
    R[i]=R[j];
    R[j]=temp;
}
}
}
```

```
    printf("\nMerit List -->");
printf("\nRoll_No Sub1 Sub2 Sub3 Total");
for( i=4;i>=0;i--)
{
    printf("\n");
    printf("%5d",R[i].rollno);
    for(int j=0; j<3;j++)
    {
        printf("%5d ",R[i].marks[j]);
    }
    printf("%d",R[i].tot);
}
}
```

Output :



```
"E:\Coding Projects\21\Practical Exam 14\02\bin\Debug\Practical Exam 14\02\21.exe"

Enter Data for 5 students...
Enter The roll number : 1
Enter marks of subject 1 : 45
Enter marks of subject 2 : 67
Enter marks of subject 3 : 89
Enter The roll number : 2
Enter marks of subject 1 : 90
Enter marks of subject 2 : 78
Enter marks of subject 3 : 89
Enter The roll number : 3
Enter marks of subject 1 : 90
Enter marks of subject 2 : 89
Enter marks of subject 3 : 98
Enter The roll number : 4
Enter marks of subject 1 : 89
Enter marks of subject 2 : 78
Enter marks of subject 3 : 98
```

```
"E:\Coding Projects\21\Practical Exam 14\02\bin\Debug\Practical Exam 14\02\21.exe"

Enter The roll number : 4
Enter marks of subject 1 : 89
Enter marks of subject 2 : 78
Enter marks of subject 3 : 98
Enter The roll number : 5
Enter marks of subject 1 : 89
Enter marks of subject 2 : 78
Enter marks of subject 3 : 90

Merit List -->
Roll_No Sub1 Sub2 Sub3 Total
3 90 89 98 277
4 89 78 98 265
2 90 78 89 257
5 89 78 90 257
1 45 67 89 201
Process returned 0 (0x0) execution time : 34.326 s
Press any key to continue.
```

Practical 2

Aim :

Write a program to implement user defined function to find numbers of characters, digits and space from the given string without using string.h library.

Source Code :

```
#include<stdio.h>

#include <stdlib.h>

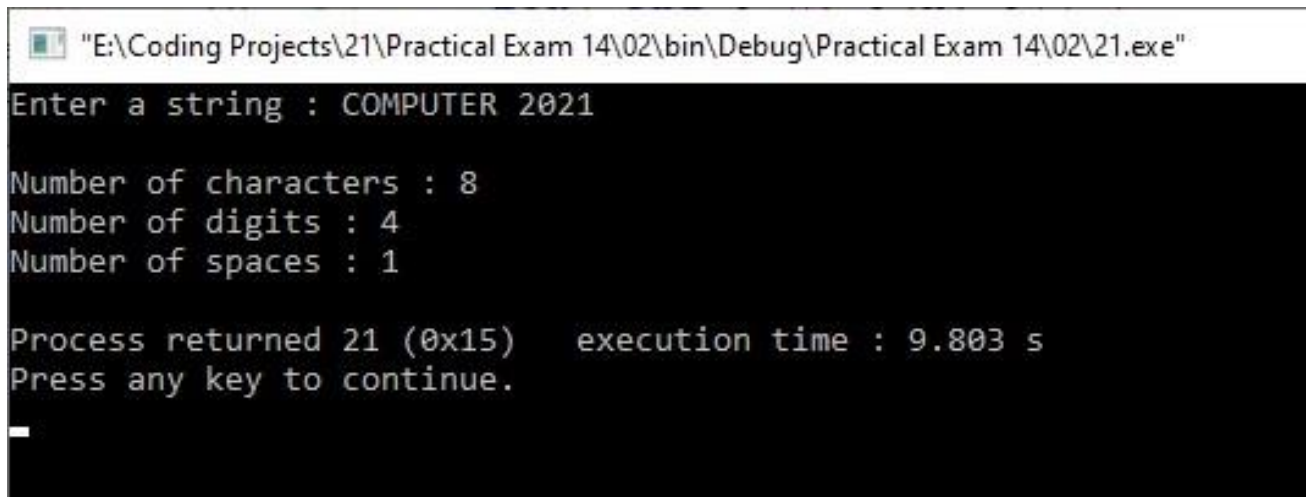
void practical_exam(char a[]);

void main()
{
    char a[30];
    printf("Enter a string : ");
    gets(a);
    practical_exam(a);
}

void practical_exam(char a[])
{
    int i, x=0, m=0, n=0, p=0;
    for( i=0;a[i]!='\0';i++ )
    {
        x++;
    }
}
```

```
    }  
    for( int i=0; i<x; i++ )  
    {  
        if((((a[i]>='a')&&(a[i]<='z'))||((a[i]>='A')&&(a[i]<='Z'))))  
        {  
            m++;  
        }  
        else if(a[i]>='0'&&a[i]<='9')  
        {  
            n++;  
        }  
        else if(a[i]==' ')  
        {  
            p++;  
        }  
    }  
    printf("Number of characters : %d\n",m);  
    printf("Number of digits : %d\n",n);  
    printf("Number of spaces : %d\n",p);  
}
```


Output :



```
"E:\Coding Projects\21\Practical Exam 14\02\bin\Debug\Practical Exam 14\02\21.exe"  
Enter a string : COMPUTER 2021  
  
Number of characters : 8  
Number of digits : 4  
Number of spaces : 1  
  
Process returned 21 (0x15)   execution time : 9.803 s  
Press any key to continue.  
_
```

Thank you :)