

Practical-1

Aim: Write a C program to find the factorial of given 2 numbers using recursion.

Program:

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

```
int fact1(int n)
{
    if(n==1)
    {
        return 1;
    }
    else
    {
        return n*fact1(n-1);
    }
}
```

```
int fact2(int m)
{
    if(m==1)
    {
        return 1;
    }
    else
    {
        return m*fact2(m-1);
    }
}
```

```
void main()
{

    int a,b;
    printf("Enter value of a: ");
```

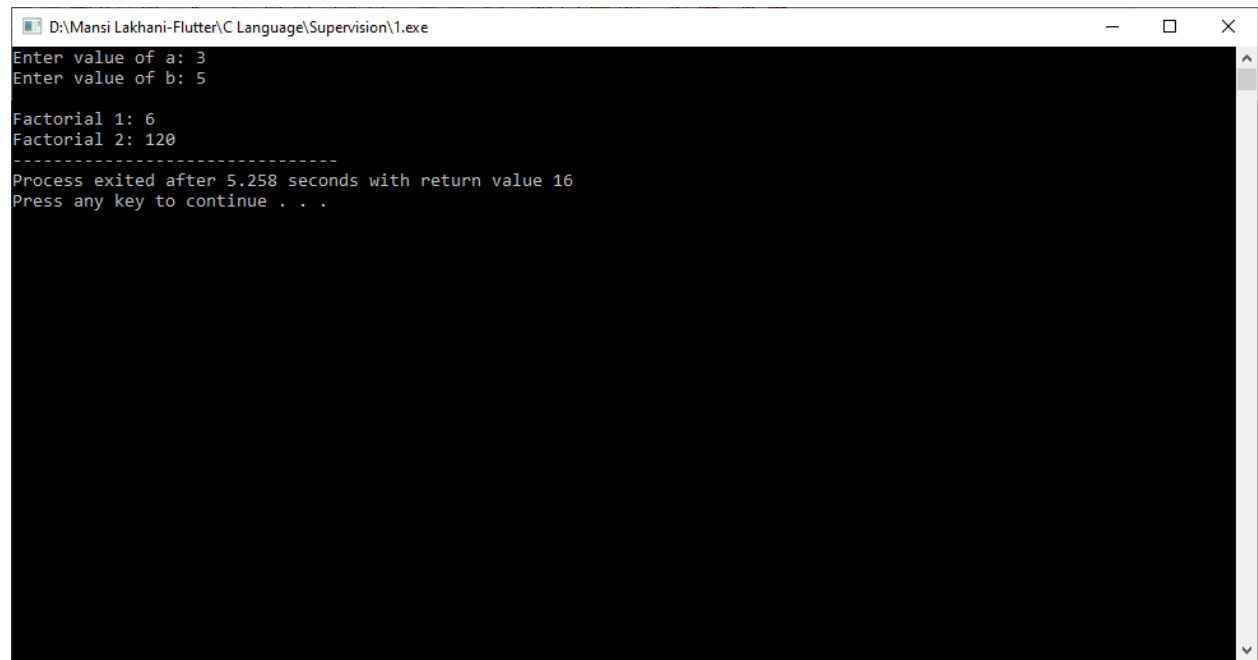
```
scanf("%d",&a);

printf("Enter value of b: ");
scanf("%d",&b);

printf("\nFactorial 1: %d\n",fact1(a));
printf ("Factorial 2: %d",fact2(b));

}
```

Output:



A screenshot of a Windows command prompt window. The title bar at the top reads "D:\Mansi Lakhani-Flutter\C Language\Supervision\1.exe" and includes standard minimize, maximize, and close buttons. The command prompt has a black background with white text. The text displayed is as follows: "Enter value of a: 3", "Enter value of b: 5", "Factorial 1: 6", "Factorial 2: 120", a line of dashes "-----", "Process exited after 5.258 seconds with return value 16", and "Press any key to continue . . .". A vertical scrollbar is visible on the right side of the window.

```
D:\Mansi Lakhani-Flutter\C Language\Supervision\1.exe
Enter value of a: 3
Enter value of b: 5
Factorial 1: 6
Factorial 2: 120
-----
Process exited after 5.258 seconds with return value 16
Press any key to continue . . .
```

Practical-2

Aim: Write a C program to find Sum of all Array Elements by passing array as an argument using User Define Function.

Program:

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

```
int Sum(int a[] ,int n)
```

```
{
```

```
    int i,sum=0;
```

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

```
    {
```

```
        sum=sum+a[i];
```

```
    }
```

```
    return sum;
```

```
}
```

```
void main()
```

```
{
```

```
    int i,n,sum=0;
```

```
    printf("Enter size of array: ");
```

```
    scanf("%d",&n);
```

```
    int a[n];
```

```
    printf("\nArray elements: \n");
```

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

```
    {
```

```
        printf("a[%d]: ",i);
```

```
        scanf("%d",&a[i]);
```

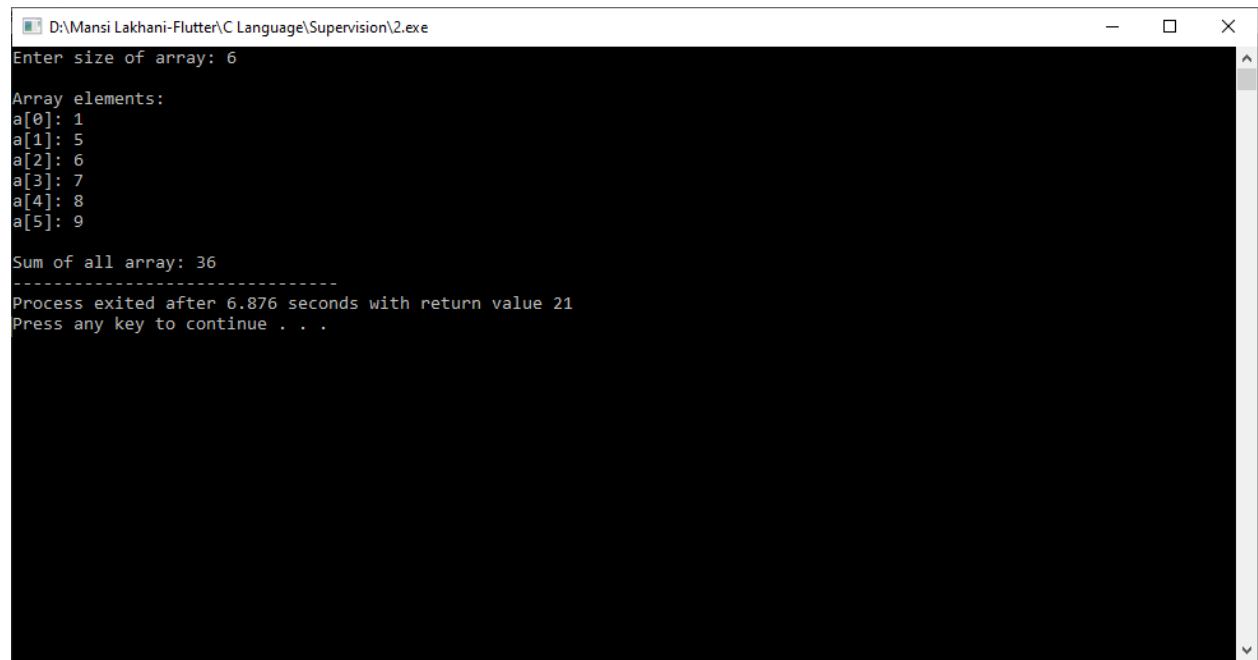
```
    }
```

```
    sum = Sum(a,n);
```

```
    printf("\nSum of all array: %d",sum);
```

```
}
```

Output:



```
D:\Mansi Lakhani-Flutter\C Language\Supervision\2.exe
Enter size of array: 6

Array elements:
a[0]: 1
a[1]: 5
a[2]: 6
a[3]: 7
a[4]: 8
a[5]: 9

Sum of all array: 36
-----
Process exited after 6.876 seconds with return value 21
Press any key to continue . . .
```

Practical-3

Aim: Write a C program to find the length of the String by passing String as an Argument using the User Define Function.

Program:

```
#include<stdio.h>

int strlenth(char a[])
{
    return strlen(a);
}

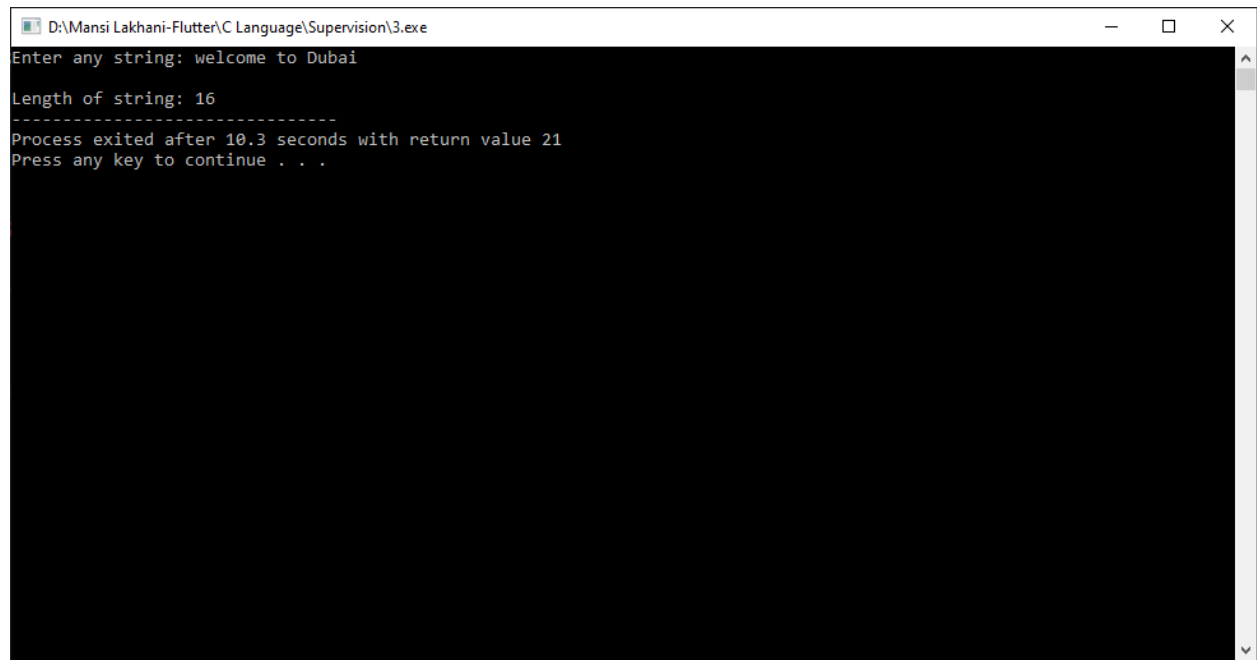
void main()
{
    char a[30];

    printf("Enter any string: ");
    gets(a);

    printf("\nLength of string: %d",strlen(a));

}
```

Output:



```
D:\Mansi Lakhani-Flutter\C Language\Supervision\3.exe
Enter any string: welcome to Dubai
Length of string: 16
-----
Process exited after 10.3 seconds with return value 21
Press any key to continue . . .
```

The image shows a Windows command prompt window with a black background and white text. The title bar at the top reads "D:\Mansi Lakhani-Flutter\C Language\Supervision\3.exe" and includes standard minimize, maximize, and close buttons. The command prompt shows the user entering the string "welcome to Dubai". The program then outputs "Length of string: 16", followed by a separator line of dashes. It then reports "Process exited after 10.3 seconds with return value 21" and prompts the user to "Press any key to continue . . .". A vertical scrollbar is visible on the right side of the window.

Practical-4

Aim: Create a user defined function to find simple Interest, with Principal amount, no. of years, and rate as parameters.

Program:

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

```
float SI(int p ,int r,int n)
{
    float si;
    si= (p*r*n)/100;
    return si;
}
```

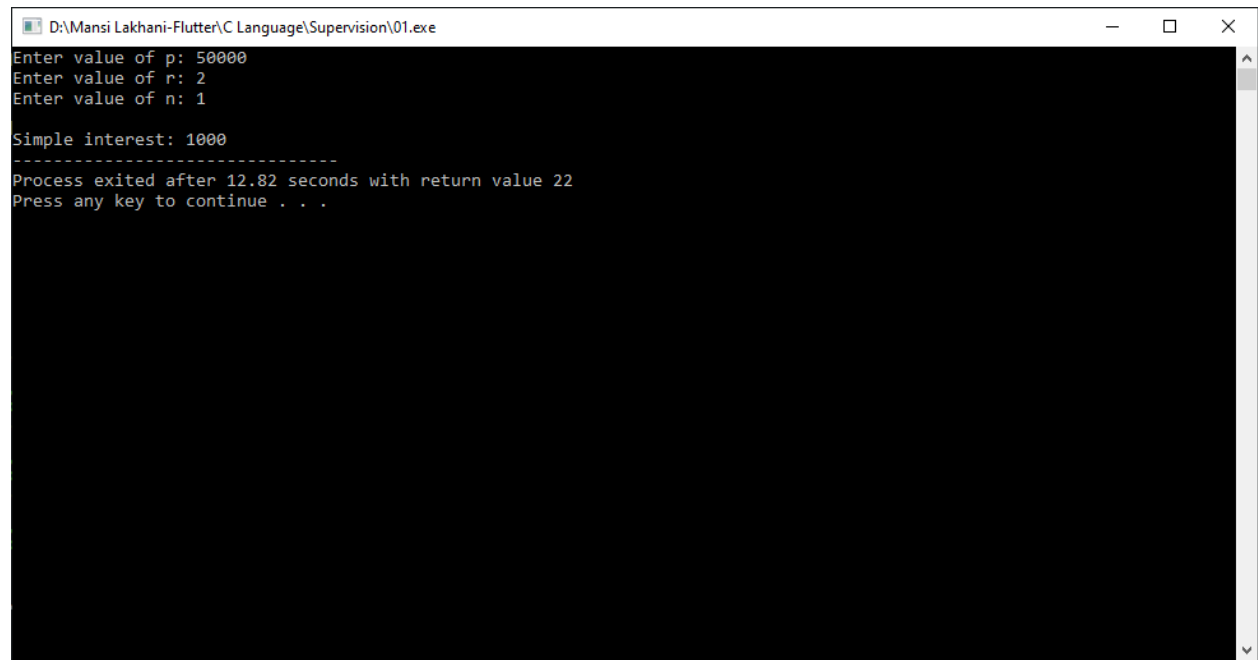
```
void main()
{
    int p,r,n,i;

    printf("Enter value of p: ");
    scanf("%d",&p);
    printf("Enter value of r: ");
    scanf("%d",&r);
    printf("Enter value of n: ");
    scanf("%d",&n);

    i=SI(p,r,n);

    printf("\nSimple interest: %d",i);
}
```


Output:



A screenshot of a Windows command prompt window. The title bar at the top reads "D:\Mansi Lakhani-Flutter\C Language\Supervision\01.exe" and includes standard minimize, maximize, and close buttons. The command prompt area has a black background with white text. The text shows the program's execution flow: it prompts for values of p, r, and n, calculates a simple interest of 1000, and then displays a message about the process exiting after 12.82 seconds with a return value of 22, followed by a "Press any key to continue" prompt.

```
D:\Mansi Lakhani-Flutter\C Language\Supervision\01.exe
Enter value of p: 50000
Enter value of r: 2
Enter value of n: 1

Simple interest: 1000
-----
Process exited after 12.82 seconds with return value 22
Press any key to continue . . .
```

Practical-5

Aim: Create user-defined nested functions that find the largest number among the given 3 numbers.

Program:

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

```
int greater(int a,int b,int c)
```

```
{
```

```
    if(a==b && b==c)
```

```
    {
```

```
        printf("All values are same.");
```

```
    }
```

```
    if(a>b)
```

```
    {
```

```
        if(b>c)
```

```
        {
```

```
            printf("\na is max");
```

```
        }
```

```
        else
```

```
        {
```

```
            printf("\nc is max");
```

```
        }
```

```
    }
```

```
    else
```

```
    {
```

```
        if(b>c)
```

```
        {
```

```
            printf("\nb is max");
```

```
        }
```

```
        else
```

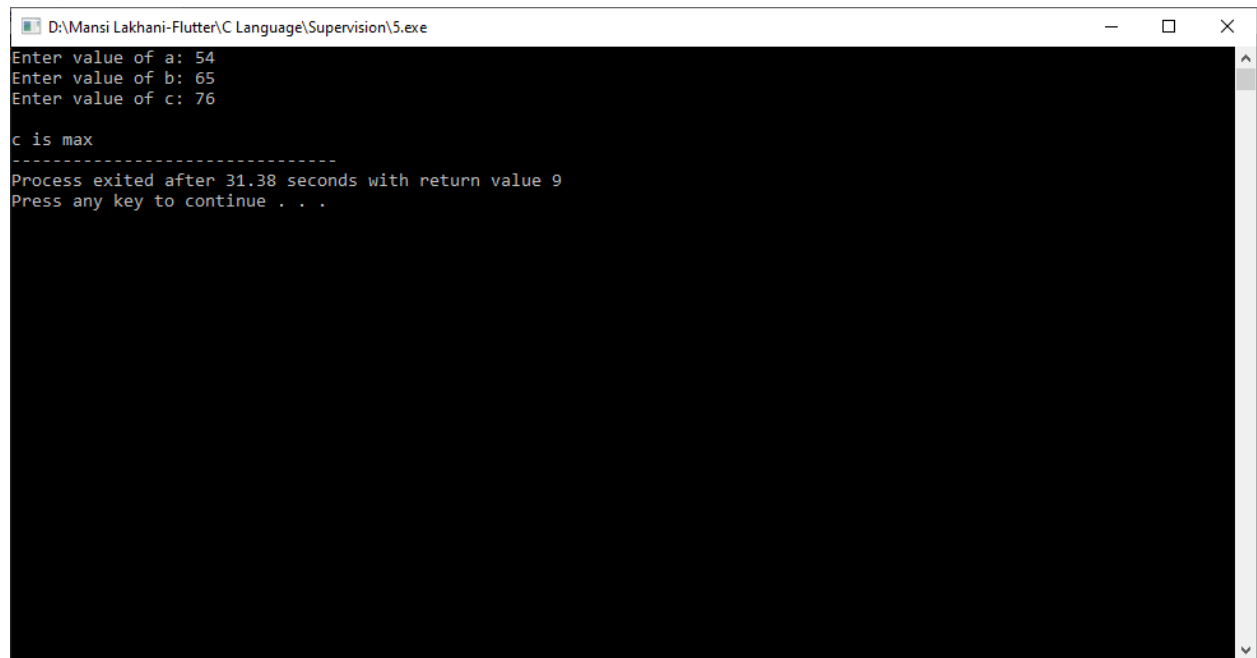
```
        {
```

```
            printf("\nc is max");
```

```
    }  
}  
}
```

```
void main()  
{  
    int a,b,c;  
    printf("Enter value of a: ");  
    scanf("%d",&a);  
    printf("Enter value of b: ");  
    scanf("%d",&b);  
    printf("Enter value of c: ");  
    scanf("%d",&c);  
  
    greater(a,b,c);  
}
```

Output:



A screenshot of a Windows command prompt window. The title bar at the top reads "D:\Mansi Lakhani-Flutter\C Language\Supervision\5.exe" and includes standard minimize, maximize, and close buttons. The command prompt area has a black background with white text. The text displayed is as follows: "Enter value of a: 54", "Enter value of b: 65", "Enter value of c: 76", "c is max", a line of dashes "-----", "Process exited after 31.38 seconds with return value 9", and "Press any key to continue . . .". A vertical scrollbar is visible on the right side of the window.

```
D:\Mansi Lakhani-Flutter\C Language\Supervision\5.exe
Enter value of a: 54
Enter value of b: 65
Enter value of c: 76

c is max
-----
Process exited after 31.38 seconds with return value 9
Press any key to continue . . .
```