S.No: 37	Exp. Name: ***Write a C program to find the Factorial of a given number using Recursion***	Date:2023-01-17

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Aim:

Write a program to find the `factorial` of a given number using recursion process.

At the time of execution, the program should print the message on the console as:

```
Enter an integer :
```

For example, if the user gives the **input** as:

```
Enter an integer : 6
```

then the program should **print** the result as:

```
Factorial of 6 is : 720
```

Note: Write the recursive function **factorial()** in `Program901a.c`.

Source Code:

Program901.c

```
#include <stdio.h>
#include "Program901a.c"
void main() {
   long int n;
   printf("Enter an integer : ");
   scanf("%ld", &n);
   printf("Factorial of %ld is : %ld\n", n ,factorial(n));
}
```

Program901a.c

```
long int factorial(long int n);
long int factorial(long int n)
{
   if(n==0)
   return 1;
   else
   return(n*factorial(n-1));
}
```

Execution Results - All test cases have succeeded!

Test Case - 1
User Output
Enter an integer : 5
Factorial of 5 is : 120

Test Case - 2
User Output
Enter an integer : 7
Factorial of 7 is : 5040

Test Case - 3
User Output
Enter an integer : 4
Factorial of 4 is : 24

Test Case - 4
User Output
Enter an integer : 8
Factorial of 8 is : 40320

Test Case - 5
User Output
Enter an integer : 0
Factorial of 0 is : 1

Test Case - 6
User Output
Enter an integer : 9
Factorial of 9 is : 362880

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