

**Aim:**

Write a program to find the **factorial** of a given number using **functions**.

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

Enter a number :

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

Enter a number : 5

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

Factorial of a given number 5 = 120

**Note:** Write the function **factorial()** in **Program704a.c**.

**Source Code:**

**Program704.c**

```
#include <stdio.h>
#include "Program704a.c"
void main() {
    int number;
    printf("Enter a number : ");
    scanf("%d", &number);
    printf("Factorial of a given number %d = %d\n", number, factorial(number));
}
```

**Program704a.c**

```
int factorial(int n);
int factorial(int n)
{
    int i, fact=1;
    for(i=1; i<=n; i++)
        fact=fact*i;
    return fact;
}
```

**Execution Results** - All test cases have succeeded!

Test Case - 1
User Output
Enter a number : 3
Factorial of a given number 3 = 6

Test Case - 2
User Output
Enter a number : 6
Factorial of a given number 6 = 720