Experiment 5: Factorial using Recursion

Aim:

To find the factorial of a given number using recursion.

Algorithm:

1. Start.
2. Define recursive function fact(n).
   - If n==0 return 1.
   - Else return n*fact(n-1).
3. Read n.
4. Print fact(n).
5. Stop.

Code:

```
#include <stdio.h>

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

int main() {
    int n;
    printf("Enter a number: ");
    scanf("%d", &n);
    printf("Factorial of %d = %lld\n", n, fact(n));
    return 0;
```

}

Sample Output:

```
Enter the positive value: 5
Factorial of 5 = 120


=== Code Execution Successful ===
```

Result:

The program successfully computes factorial using recursion.