

Aim

To write a C program to find the factorial of a given number without using recursion.

Algorithm

1. Start the program.
2. Declare variables `n` (number) and `fact` (result).
3. Input the number `n`.
4. Initialize `fact = 1`.
5. Use a loop from 1 to `n`:
 - Multiply `fact = fact * i`.
6. Print the factorial result.
7. End the program.

CODE:

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

```
int main() {
```

```
    int n, i;
```

```
    unsigned long long fact = 1; // large type to store big  
    factorials
```

```
    printf("Enter a number: ");
```

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

```
    if (n < 0) {
```

```
        printf("Factorial is not defined for negative numbers.\n");
```

```
    } else {
```

```
        for (i = 1; i <= n; i++) {
```

```
            fact *= i;
```

```
        }
```

```
        printf("Factorial of %d = %llu\n", n, fact);
```

```
    }
```

```
    return 0;
```

```
}
```

OUTPUT:

```
Output
Enter a number: 5
Factorial of 5 = 120

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

RESULT:

The program successfully executed and displayed the factorial of a given number without using recursion