

6.1.2. Factorial of a Number

Algorithm: Factorial Calculation

- **Step 1:** Start.
- **Step 2:** Read integer **n**.
- **Step 3:** Initialize **factorial** to 1.
- **Step 4:** Check if **n** is negative (**n < 0**).
 - **If Yes:** Print "Invalid Input" and go to **Step 7**.
- **Step 5: Loop** from **i = 1** to **n**:
 - Multiply **factorial** by **i** (**factorial = factorial * i**).
- **Step 6:** Print the final value of **factorial**.
- **Step 7:** End.

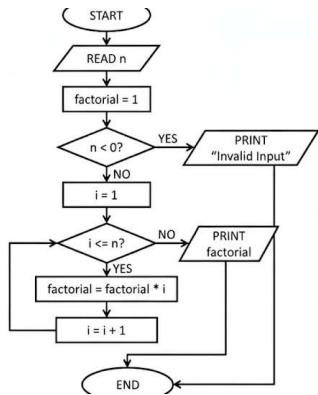
Code :

```
n = int(input())
```

```
factorial = 1
```

```
if n < 0:  
    print("Invalid Input")  
else:  
    for i in range(1, n + 1):  
        factorial *= i  
    print(factorial)
```

Flow chart:



Execution

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6.1.2. Factorial of a Number

Write a Python program to calculate the factorial of a number n using loops.

Input Format:

- A single line containing an integer n .

Output Format:

- Print the factorial of the given integer n .

factorialN...

```

1 n = int(input())
2
3 factorial = 1
4
5 if n < 0:
6     print("Invalid Input")
7 else:
8     for i in range(1, n + 1):
9         factorial *= i
10    print(factorial)
11
12

```

Average time: 0.007 s Maximum time: 0.010 s
6.75 ms 10.00 ms 2 out of 2 shown test case(s) passed
2 out of 2 hidden test case(s) passed

Test case 1 (10 ms)
Expected output: 10
Actual output: 10
3628800 3628800

Test case 2 (10 ms)

Terminal Test cases