**10.What is Range and Recursive function in python?**

**Objective:**

* To see what is range() and recursion in python and its important uses.

**Process:**

* **Range().**

It generates sequence of numbers in a given interval.

It starts its index position as zero, unless index position is declared explicitly.

Eg.>>>range(5)

Above code produce 0,1,2,3,4

Its very useful for generating loop sequence like pattern programs, prime numbers ,etc..

* **Recursive function.**

Which function is called by itself when the program is running, that is called recursive function.

Recursion works like a loop.

**Input:**

* Sample code using range() to print floyd pattern.
* Sample code using recursion() to print factorial.

Output:

* Floyd pattern.
* Factorial using recursion.

**Source code**(Floyd pattern):

#Get input from user

n = int(input("Enter the number of rows:"))

#make first loop sequence

for i in range(n+1):

#make second loop

for j in range(i):

#printing the pattern

print("\*",end="")

print()

**Source code**(Factorial program):

#recursive function

print("Factorial using recursion\*\*\*\*\*\*")

def calc\_factorial(x):

if(x==1):

return 1

else:

return(x\*(calc\_factorial(x-1)))

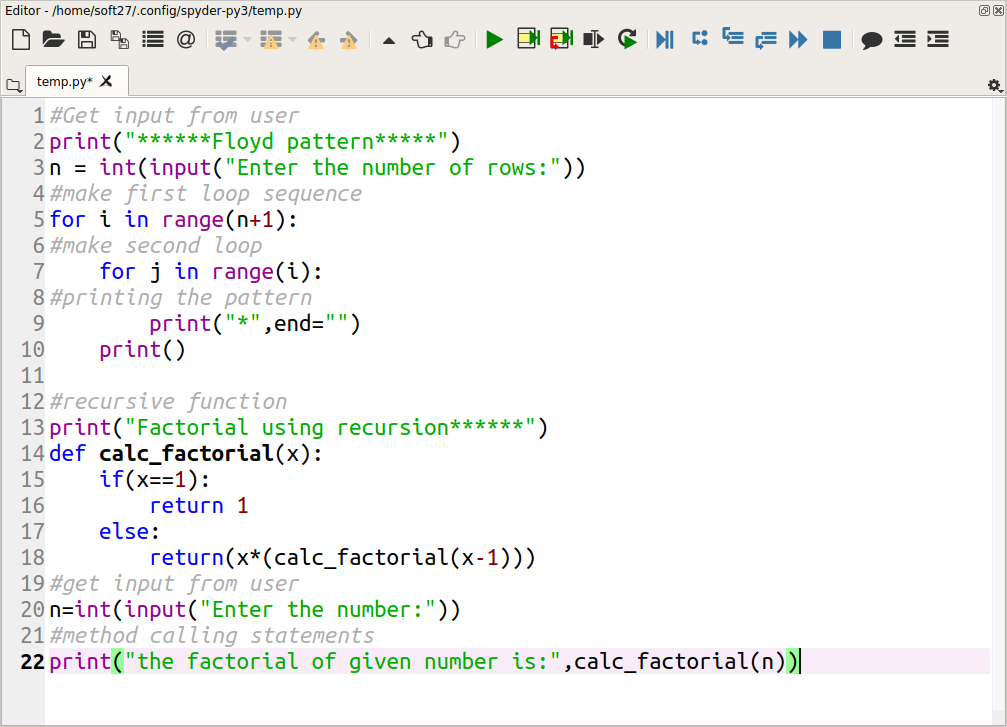
#get input from user

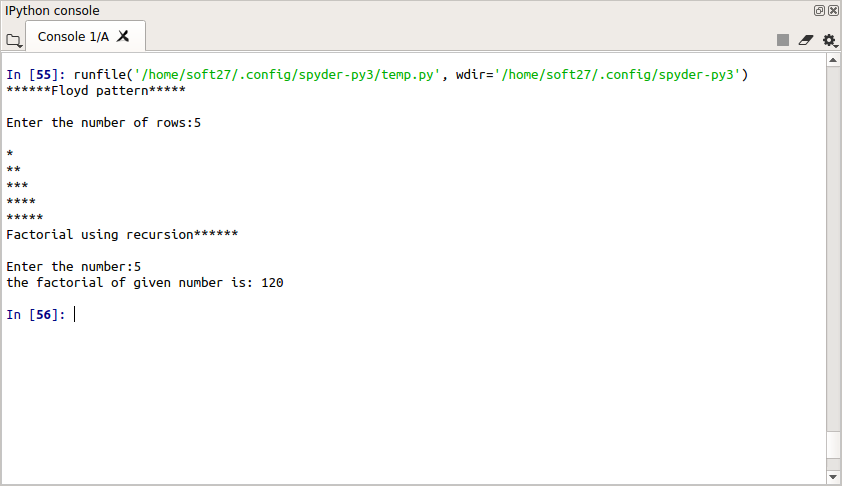
n=int(input("Enter the number:"))

#method calling statements

print("the factorial of given number is:",calc\_factorial(n))

**Screen shot:**

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