SIT384 Cyber security analytics

Pass Task 2.2P: Recursion Factorial

Task description:

The factorial of a nonnegative integer n, written n! (pronounced " n factorial "), is the product of n* (n – 1)* (n – 2)* … * 1 . And

1! = 1

0! = 1

Recursive definition of the factorial function n! = n * (n – 1)! Example:

5! = 5 * 4 * 3 * 2 * 1

5! = 5 * (4 * 3 * 2 * 1)

5! = 5 * (4!)

Define a function which accepts a passed argument and calculates its factorial. A program accepts user's input and calls the function. (Please use **recursive** function call in the function definition.)

(Sample output as shown in the following figure is for demonstration purposes only.)

```
In [20]: runfile('C:/tmp/units/2020/SIT384-2020-1/portfolio/week2/
Task2.2P.py', wdir='C:/tmp/units/2020/SIT384-2020-1/portfolio/week2')
Please input a nonnegative integer? -2
Please enter a nonnegative integer

Please input a nonnegative integer? 0
Factorial of  0 :
1
In [21]: runfile('C:/tmp/units/2020/SIT384-2020-1/portfolio/week2/
Task2.2P.py', wdir='C:/tmp/units/2020/SIT384-2020-1/portfolio/week2')
Please input a nonnegative integer? 5
Factorial of  5 :
120
```

Submission:

Submit the following files to OnTrack:

1. Your program source code (e.g. task2-2.py)
2. A screen shot of your program running

Check the following things before submitting:

1. Add proper comments to your code