

# ASSIGNMENT 04

## TOPIC: SKILL AND JOB RECOMMENDER

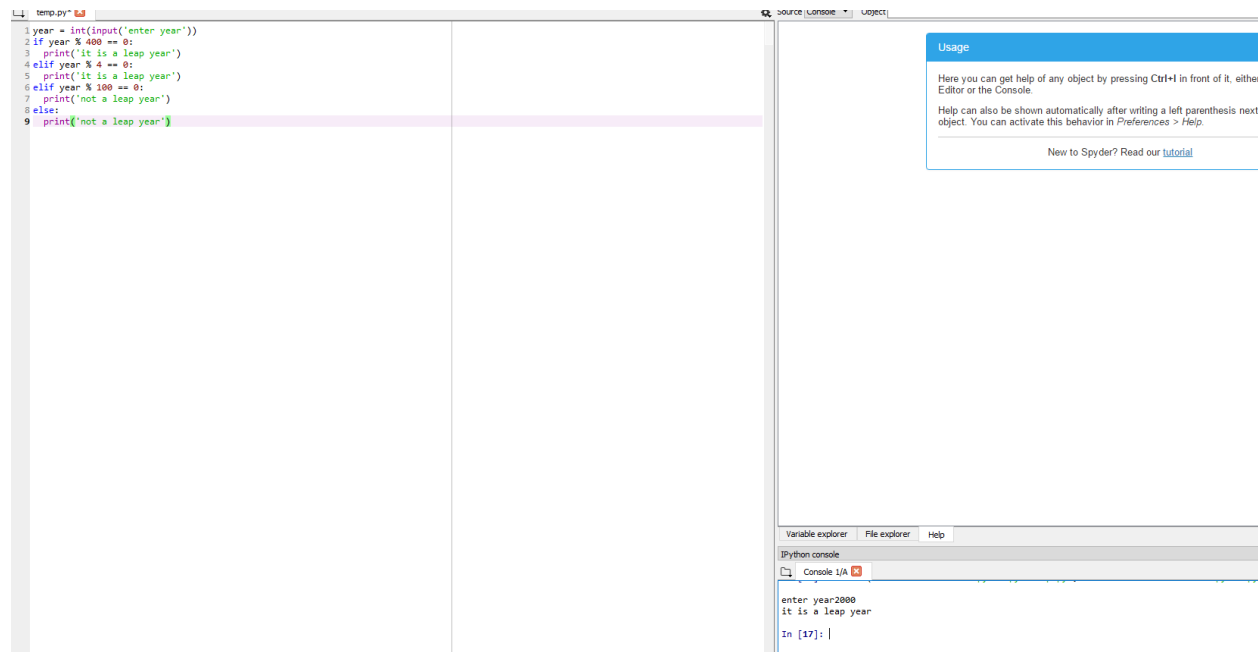
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S.SURYA KUMAR

### 1.PYTHON PROGRAMS IN SPYDER



The screenshot displays the Spyder Python IDE interface. The main editor window shows a Python script for checking leap years. The script is as follows:

```
1 year = int(input('enter year'))
2 if year % 400 == 0:
3     print('it is a leap year')
4 elif year % 4 == 0:
5     print('it is a leap year')
6 elif year % 100 == 0:
7     print('not a leap year')
8 else:
9     print('not a leap year')
```

On the right side, there is a 'Usage' panel with the following text:

Here you can get help of any object by pressing **Ctrl+I** in front of it, either Editor or the Console.

Help can also be shown automatically after writing a left parenthesis next object. You can activate this behavior in **Preferences > Help**.

New to Spyder? Read our [tutorial](#)

At the bottom right, the 'IPython console' is visible, showing the execution of the program with the input 'year:2000' and the output 'it is a leap year'.

temp.py

```
1 a = int(input('enter the first element'))
2 b = int(input('enter the second element'))
3 n = int(input('enter the number of elements '))
4 print(a,b, end=" ")
5
6 while n-2:
7     c = a + b
8     a = b
9     b = c
10    print(c, end=" ")
11    n = n-1
```

Source Console Object

Usage

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Variable explorer

File explorer

Help

Python console

Console 1/A

```
File "C:\Users\Student\Anaconda3\lib\site-packages\IPython\core\interactiveshell.py", line 3326, in run_code
exec(code_obj, self.user_global_ns, self.user_ns)

File "C:\python-input-3-329224e3ec76", line 1, in <module>
runfile('C:/Users/Student/.spyder-py3/temp.py', wdir='C:/Users/Student/.spyder-py3')

File "C:\Users\Student\Anaconda3\lib\site-packages\spyder_kernels\customize\spydercustomize.py", line 827,
execfile(filename, namespace)

File "C:\Users\Student\Anaconda3\lib\site-packages\spyder_kernels\customize\spydercustomize.py", line 110,
exec(compile(f.read(), filename, 'exec'), namespace)

File "C:/Users/Student/.spyder-py3/temp.py", line 1
def pal(num):
^
IndentationError: unexpected indent

In [4]:
In [4]: runfile('C:/Users/Student/.spyder-py3/temp.py', wdir='C:/Users/Student/.spyder-py3')
enter the first element2
enter the second element3
enter the number of elements 3
2 3 5
```

Editor - C:\Users\Student\spyder-py3\temp.py

temp.py

```
1 a = 5
2 b = 6
3 c = 7
4 s = (a + b + c) / 2
5
6 area = (s*(s-a)*(s-b)*(s-c)) ** 0.5
7 print('The area of the triangle is %.2f' %area)
```

Usage

Here you can get help of any object by pressing **Ctrl+H** in front of it, either on the Editor or the Console.

Help can also be shown automatically after writing a left parenthesis next to an object. You can activate this behavior in **Preferences > Help**.

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Variable explorer

File explorer

Help

Python console

Console 1/A

In [18]: runfile('C:/Users/Student/.spyder-py3/temp.py', wdir='C:/Users/Student/.spyder-py3')  
314.3592653589793

In [19]: runfile('C:/Users/Student/.spyder-py3/temp.py', wdir='C:/Users/Student/.spyder-py3')  
The area of the triangle is 14.70

In [20]: runfile('C:/Users/Student/.spyder-py3/temp.py', wdir='C:/Users/Student/.spyder-py3')  
The area of the triangle is 14.70

temp.py

```
1 import cmath
2
3 a = 1
4 b = 5
5 c = 6
6 d = (b**2) - (4*a*c)
7 sol1 = (-b+cmath.sqrt(d))/(2*a)
8 sol2 = (-b-cmath.sqrt(d))/(2*a)
9
10 print('The solution are {} and {}'.format(sol1,sol2))
```

Usage

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Variable explorerFile explorerHelp

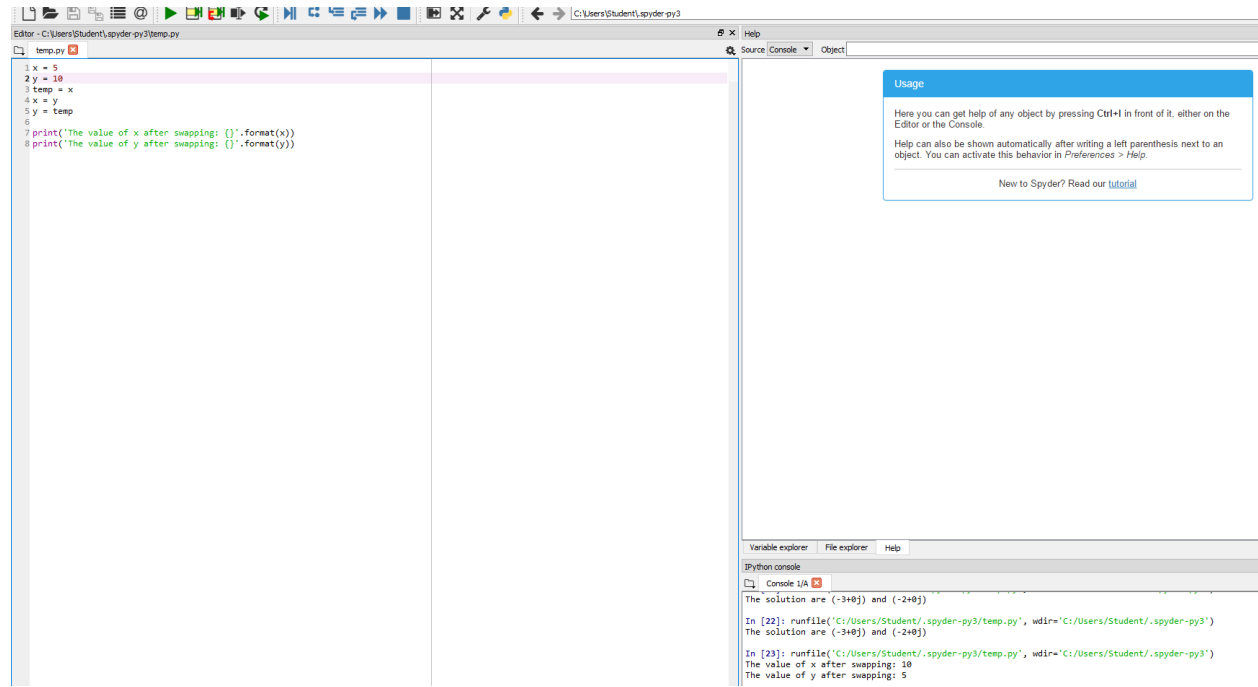
Python console

Console 1/8

```
In [20]: runfile('C:/Users/Student/.spyder-py3/temp.py', wdir='C:/Users/Student/.spyder-py3')
The area of the triangle is 14.70

In [21]: runfile('C:/Users/Student/.spyder-py3/temp.py', wdir='C:/Users/Student/.spyder-py3')
The solution are (-3+0j) and (-2+0j)

In [22]: runfile('C:/Users/Student/.spyder-py3/temp.py', wdir='C:/Users/Student/.spyder-py3')
The solution are (-3+0j) and (-2+0j)
```



temp.py

```
1 import math as R
2 Radius = float(input("Please enter the radius of the given circle: "))
3 area_of_the_circle = R.pi* Radius * Radius
4 print (" The area of the given circle is: ", area_of_the_circle)
```

Source Console Object

Usage

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[New to Spyder? Read our tutorial](#)

Variable explorer File explorer Help

Python console

Console I/A

In [23]: runfile('C:/Users/Student/.spyder-py3/temp.py', wdir='C:/Users/Student/.spyder-py3')  
The value of x after swapping: 10  
The value of y after swapping: 5  
  
In [24]: runfile('C:/Users/Student/.spyder-py3/temp.py', wdir='C:/Users/Student/.spyder-py3')  
Please enter the radius of the given circle: 20  
The area of the given circle is: 1256.6370614359173

File Edit Shell View Help

Python console

temp.py

```
1 def calculate_lcm(x, y):
2     # selecting the greater number
3     if x > y:
4         greater = x
5     else:
6         greater = y
7     while(True):
8         if((greater % x == 0) and (greater % y == 0)):
9             lcm = greater
10            break
11            greater += 1
12        return lcm
13
14 # taking input from users
15 num1 = int(input("Enter first number: "))
16 num2 = int(input("Enter second number: "))
17 # printing the result for the users
18 print("The L.C.M. of", num1,"and", num2,"is", calculate_lcm(num1, num2))
```

Usage

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New to Spyder? Read our [tutorial](#)

Variable explorer File explorer Help

Python console

Console i/A

The area of the given circle is: 1256.6370614359173  
In [25]: runfile('C:/Users/Student/.spyder-py3/temp.py', wdir='C:/Users/Student/.spyder-py3')  
Enter first number: 23  
Enter second number: 55  
The L.C.M. of 23 and 55 is 1265

Editor - C:\Users\Student\spyder-py3\temp.py

temp.py

```
1 print("Please enter the String: ", end = "")
2 string = input()
3 string_length = len(string)
4 for K in string:
5     ASCII = ord(K)
6     print(K, "\t", ASCII)
```

Usage

Here you can get help of any object by pressing **Ctrl+I** in fr  
Editor or the Console.  
Help can also be shown automatically after writing a left pa  
object. You can activate this behavior in *Preferences > Hel*  
[New to Spyder? Read our tutorial](#)

Variable explorer

File explorer

Help

Python console

Console 1/A

Printex: C:\Users\Student\spyder-py3\temp.py , Wdir = C:\Users\Student  
Please enter the String:  
khubabe  
k 107  
h 104  
u 117  
b 98  
a 97  
b 98  
e 101



C:\Users\Student\spyder-py3\temp.py

temp.py

```
def recur_fibo(n):
    if n <= 1:
        return n
    else:
        return(recur_fibo(n-1) + recur_fibo(n-2))
# take input from the user
nterms = int(input("How many terms? "))
# check if the number of terms is valid
if nterms <= 0:
    print("Plese enter a positive integer")
else:
    print("Fibonacci sequence:")
    for i in range(nterms):
        print(recur_fibo(i))
```

Usage

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[New to Spyder? Read our tutorial](#)

Variable explorer

File explorer

Help

IPython console

Console 1/A

How many terms? 3  
Fibonacci sequence:  
0  
1  
1

editor - C:\Users\Student\spyder-py3\temp.py

temp.py

```
1 def recur_factorial(n):
2     if n == 1:
3         return n
4     else:
5         return n*recur_factorial(n-1)
6 # take input from the user
7 num = int(input("Enter a number: "))
8 # check if the number is negative
9 if num < 0:
10     print("Sorry, factorial does not exist for negative numbers")
11 elif num == 0:
12     print("The factorial of 0 is 1")
13 else:
14     print("The factorial of",num,"is",recur_factorial(num))
```

Usage

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Editor or the Console.  
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object. You can activate this behavior in *Preferences > Help*.  
[New to Spyder? Read our tutorial](#)

Variable explorer

File explorer

Help

Python console

Console 1/A

In [28]: runfile("C:/Users/Student/.spyder-py3/temp.py", wdir="C:/Users/Student/.spyder")  
Enter a number: 23  
The factorial of 23 is 25852016738884976640000  
In [29]:

## 2.FLASK PROGRAMS:

```
>>> import emoji
```

```
>>> print(emoji.emojize('Python is :thumbs up:'))
```

Python is 👍

```
>>> print(emoji.emojize('Python is :thumbsup:', language='alias'))
```

Python is 🐍

```
>>> print(emoji.demojize('Python is 🐍'))
```

Python is :thumbs up:

```
>>> print(emoji.emojize("Python is fun :red_heart:"))
```

Python is fun ❤️

```
>>> print(emoji.emojize("Python is fun :red_heart:", variant="emoji_type"))
```

Python is fun ❤️ #red heart, not black heart

```
>>> print(emoji.is_emoji("🐍"))
```

True

```
>>> print(emoji.emojize('Python es :pulgar_hacia_arriba:', language='es'))
```

Python es 🍷

```
>>> print(emoji.demojize('Python es 🍷', language='es'))
```

Python es :pulgar\_hacia\_arriba:

```
>>> print(emoji.emojize("Python é :polegar_para_cima:", language='pt'))
```

Python é 🍷

```
>>> print(emoji.demojize("Python é 🍷", language='pt'))
```

Python é :polegar\_para\_cima: