

ASSIGNMENT - 1
PYTHON PROGRAMMING

Assignment Date	19 September 2022
Student Name	Ms. Priyadharshini P
Student Roll Number	111519205035
Maximum Marks	2 Marks

QUESTION-1:

Split this string

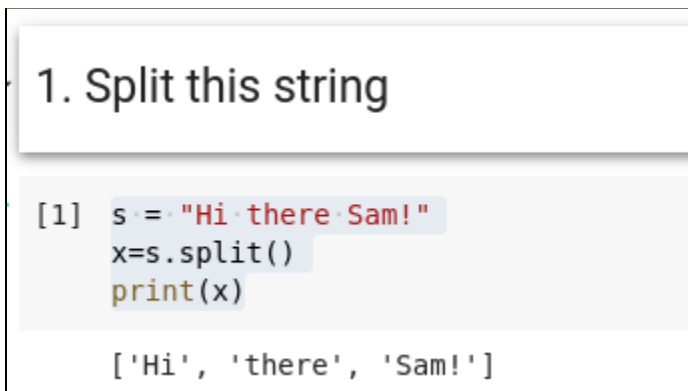
Solution:

```
s = "Hi there Sam!"
```

```
x=s.split()
```

```
print(x)
```

OUTPUT:



The screenshot shows a Jupyter Notebook interface. At the top, the title '1. Split this string' is displayed. Below the title, a code cell contains the following Python code:

```
[1] s = "Hi there Sam!"  
    x=s.split()  
    print(x)
```

 The output of the code is shown at the bottom of the cell:

```
['Hi', 'there', 'Sam!']
```

QUESTION-2:

Use .format() to print the following string.

Output should be: The diameter of Earth is 12742 kilometers.

```
planet = "Earth"
```

```
diameter = 12742
```

```
print( 'The diameter of {} is {} kilometers.'.format(planet,diameter));
```

OUTPUT:

2. Use `.format()` to print the following string.

Output should be: The diameter of Earth is 12742 kilometers.

```
[ ] planet = "Earth"
    diameter = 12742
    print( 'The diameter of {} is {} kilometers.' .format(planet,diameter));

The diameter of Earth is 12742 kilometers.
```

QUESTION - 3:

In this nest dictionary grab the word "hello"

SOLUTION:

```
d={'k1':[1,2,3,{'tricky':['oh','man','inception',{'target':[1,2,3,'hello']}]}]}
print(d['k1'][3]["tricky"][3]['target'][3])
```

OUTPUT:

3. In this nest dictionary grab the word "hello"

```
[ ] d = {'k1':[1,2,3,{'tricky':['oh','man','inception',{'target':[1,2,3,'hello']}]}]}
    print(d['k1'][3]["tricky"][3]['target'][3])

hello
```

QUESTION-4:

4.1: Create an array of 10 zeros?

```
import numpy as np
array=np.zeros(10)
print("An array of 10 zeros:")
print(array)
```

OUTPUT:

```
[ ] import numpy as np
```

4.1 Create an array of 10 zeros?

4.2 Create an array of 10 fives?

```
array=np.zeros(10)
print("An array of 10 zeros:")
print(array)
```

An array of 10 zeros:
[0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]

4.2 Create an array of 10 fives?

```
import numpy as np
array=np.ones(10)*5
print("An array of 10 fives:")
print(array)
```

OUTPUT:



```
array=np.ones(10)*5  
print("An array of 10 fives:")  
print(array)
```

```
An array of 10 fives:  
[5. 5. 5. 5. 5. 5. 5. 5. 5. 5.]
```

QUESTION - 5:

Create an array of all the even integers from 20 to 35

```
array = np.arange(20,35,2)  
print(array)
```

OUTPUT:

5. Create an array of all the even integers from 20 to 35



```
array = np.arange(20,35,2)  
print(array)
```

```
[20 22 24 26 28 30 32 34]
```

QUESTION - 6:

Create a 3x3 matrix with values ranging from 0 to 8

SOLUTION:

```
x=np.arange(0,9).reshape(3,3)  
print(x)
```

OUTPUT:

```
[ ] x = np.arange(0,9).reshape(3,3)  
print(x)
```

```
[[0 1 2]  
 [3 4 5]  
 [6 7 8]]
```

QUESTION - 7

Concatenate a and b

```
a = np.array([1, 2, 3]), b = np.array([4, 5, 6])
```

Solution:

```
a,b=np.array([1,2,3]),np.array([4,5,6])
x=np.concatenate((a,b),axis=0)
print(x)
```

OUTPUT:

```
[10] a , b = np.array([1, 2, 3]), np.array([4, 5, 6])
      x=np.concatenate((a,b),axis=0)
      print(x)

      [1 2 3 4 5 6]
```

QUESTION - 8:

Create a dataframe with 3 rows and 2 columns

```
import pandas as pd
lists=[['aaa',22],['bbb',25],['ccc',24]]
df=pd.DataFrame(lists,columns=['Name','Age'],dtype=str)
print(df)
```

OUTPUT:

8. Create a dataframe with 3 rows and 2 columns

```
[ ] import pandas as pd
    lists = [['aaa', 22], ['bbb', 25], ['ccc', 24]]
    df = pd.DataFrame(lists, columns = ['Name', 'Age'],
                      dtype = str)

    print(df)

      Name Age
0    aaa  22
1    bbb  25
2    ccc  24
```

QUESTION 9:

Generate the series of dates from 1st Jan, 2023 to 10th Feb, 2023

SOLUTION:

```
import pandas as pd
x=pd.date_range("01-01-2023","10-01-2023")
print(x)
```

OUTPUT:

9. Generate the series of dates from 1st Jan, 2023 to 10th Feb, 2023

```
[ ] import pandas as pd
x=pd.date_range("01-01-2023", "10-02-2023")
print(x)

DatetimeIndex(['2023-01-01', '2023-01-02', '2023-01-03', '2023-01-04',
               '2023-01-05', '2023-01-06', '2023-01-07', '2023-01-08',
               '2023-01-09', '2023-01-10',
               ...,
               '2023-09-23', '2023-09-24', '2023-09-25', '2023-09-26',
               '2023-09-27', '2023-09-28', '2023-09-29', '2023-09-30',
               '2023-10-01', '2023-10-02'],
              dtype='datetime64[ns]', length=275, freq='D')
```

QUESTION 10:

Create 2D list to DataFrame

```
lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]
```

SOLUTION:

```
lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]
df=pd.DataFrame(lists,columns=['SNo','Name','Age'], dtype=str)
print(df)
```

OUTPUT:

10. Create 2D list to DataFrame

```
lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]
```

```
[ ] lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]
      df = pd.DataFrame(lists, columns = ['SNo', 'Name', 'Age'],
                        dtype = str)

      print(df)
```

	SNo	Name	Age
0	1	aaa	22
1	2	bbb	25
2	3	ccc	24