

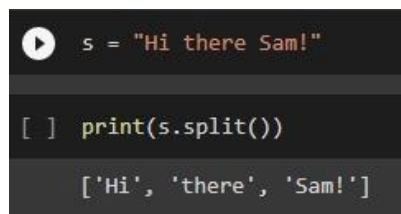
Assignment -1
Python Programming

Assignment Date	28 September 2022
Student Name	Mr. Rethessh E D
Student Roll Number	71401914082
Maximum Marks	2 Marks

Question-1: Split this string

Solution:

```
s = "Hi there Sam!"  
print(s.split())
```

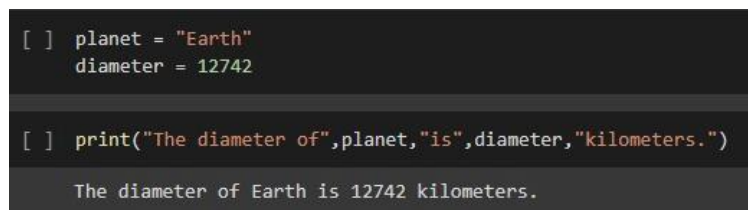


```
s = "Hi there Sam!"  
[ ] print(s.split())  
['Hi', 'there', 'Sam!']
```

Question-2: Output should be: The diameter of Earth is 12742 kilometers.

Solution:

```
planet = "Earth"  
diameter = 12742  
print("The diameter of",planet,"is",diameter,"kilometers.")
```

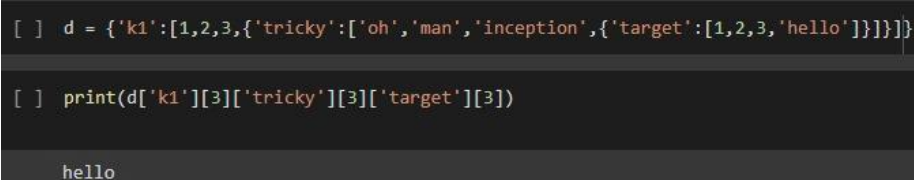


```
[ ] planet = "Earth"  
    diameter = 12742  
[ ] print("The diameter of",planet,"is",diameter,"kilometers.")  
The diameter of Earth is 12742 kilometers.
```

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']}]}]}  
[1,2,3,'hello']}]}}}  
print(d['k1'][3]['tricky'][3]['target'][3])
```



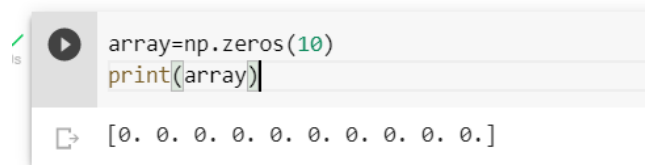
```
[ ] d = {'k1':[1,2,3,{'tricky':['oh','man','inception',{'target':[1,2,3,'hello']}]}]}  
[ ] print(d['k1'][3]['tricky'][3]['target'][3])  
hello
```

Question-4: Numpy

4.1 Create an array of 10 zeros?

Solution:

```
array=np.zeros(10)
```

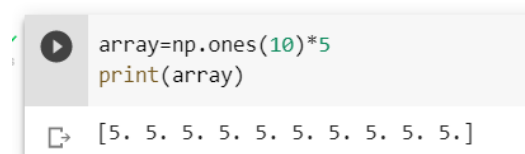
A screenshot of a Jupyter Notebook cell. The code `array=np.zeros(10)` and `print(array)` is shown. The output is `[0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]`.

```
array=np.zeros(10)
print(array)
[0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
```

4.2 Create an array of 10 fives?

Solution:

```
array=np.ones(10)*5
```

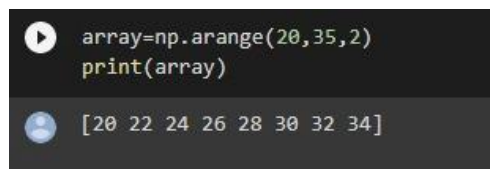
A screenshot of a Jupyter Notebook cell. The code `array=np.ones(10)*5` and `print(array)` is shown. The output is `[5. 5. 5. 5. 5. 5. 5. 5. 5. 5.]`.

```
array=np.ones(10)*5
print(array)
[5. 5. 5. 5. 5. 5. 5. 5. 5. 5.]
```

Question-5: Create an array of all the even integers from 20 to 35

Solution:

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

A screenshot of a Jupyter Notebook cell. The code `array=np.arange(20,35,2)` and `print(array)` is shown. The output is `[20 22 24 26 28 30 32 34]`.

```
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)
```

```
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:

```
np.concatenate((a, b), axis=0)
```

```
[ ] np.concatenate((a, b), axis=0)

array([1, 2, 3, 4, 5, 6])
```

Question-8: Create a dataframe with 3 rows and 2 columns

Solution:

```
data = [10,20,30,40,50,60]
A = pd.DataFrame(data, columns=['Numbers'])
print(A)
```

```
[ ] import pandas as pd

[ ] data = [10,20,30,40,50,60]
A = pd.DataFrame(data, columns=['Numbers'])
print(A)
```

	Numbers
0	10
1	20
2	30
3	40
4	50
5	60

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

Solution:

```
test_date = datetime.datetime.strptime("01-01-2023", "%d-%m-%Y")
K = 41
date_generated = pd.date_range(test_date, periods=K)
print(date_generated.strftime("%d-%m-%Y"))
```

```
import datetime
import pandas as pd

# initializing date
test_date = datetime.datetime.strptime("01-01-2023", "%d-%m-%Y")

# initializing K
K = 41

date_generated = pd.date_range(test_date, periods=K)
print(date_generated.strftime("%d-%m-%Y"))
```

Index(['01-01-2023', '02-01-2023', '03-01-2023', '04-01-2023', '05-01-2023', '06-01-2023', '07-01-2023', '08-01-2023', '09-01-2023', '10-01-2023', '11-01-2023', '12-01-2023', '13-01-2023', '14-01-2023', '15-01-2023', '16-01-2023', '17-01-2023', '18-01-2023', '19-01-2023', '20-01-2023', '21-01-2023', '22-01-2023', '23-01-2023', '24-01-2023', '25-01-2023', '26-01-2023', '27-01-2023', '28-01-2023', '29-01-2023', '30-01-2023', '31-01-2023', '01-02-2023', '02-02-2023', '03-02-2023', '04-02-2023', '05-02-2023', '06-02-2023', '07-02-2023', '08-02-2023', '09-02-2023', '10-02-2023'],
dtype='object')

Question-10: Create 2D list to DataFrame

Solution:

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

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

[ ] A = pd.DataFrame(lists, columns=['Number', 'Name', 'Age'])
print(A)
```

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