Assignment -1

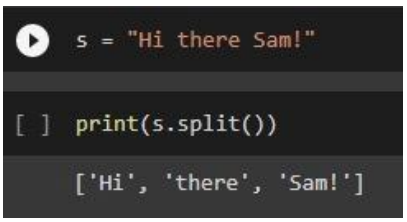
Python Programming

Assignment Date	28 September 2022
Student Name	Ms. Sujitha D
Student Roll Number	71401914104
Maximum Marks	2 Marks

Question-1: Split this string

Solution:

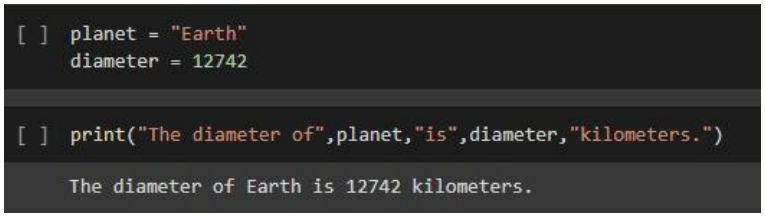
```
s = "Hi there Sam!"
print(s.split())
```



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

Solution:

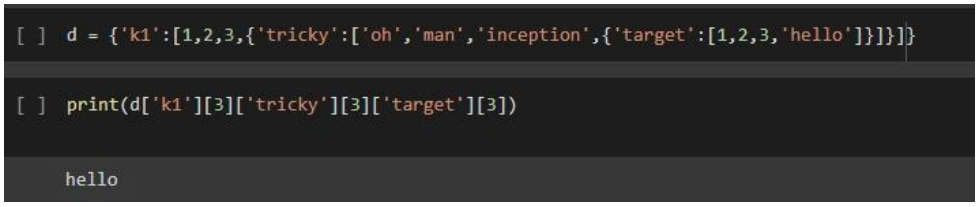
```
planet = "Earth"
diameter = 12742
print("The diameter of",planet,"is",diameter,"kilometers.")
```



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])
```

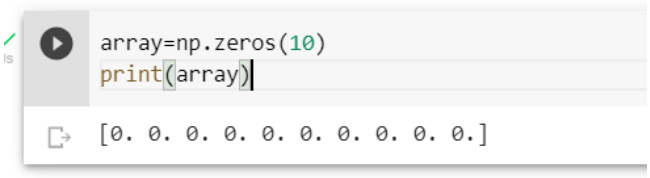


Question-4: Numpy

4.1 Create an array of 10 zeros?

Solution:

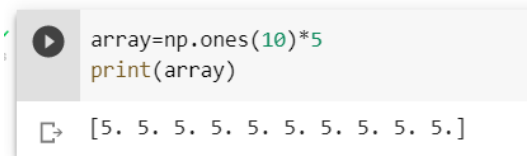
```
array=np.zeros(10)
```



4.2 Create an array of 10 fives?

Solution:

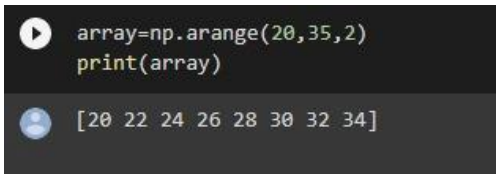
```
array=np.ones(10)*5
```



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

Solution:

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



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: Concatinate 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
```