ASSIGNMENT 1
Python Programming

Assignment Date	17 September 2022
Student Name	Sreshta.B
Student Roll Number	211519104156
Maximum Marks	10 Marks

Q1: Split this String

s = "Hi there Sam!"

Answer:

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

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

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

Q2: **Output should be: The diameter of Earth is 12742 kilometers.**

Answer:

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

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

    The diameter of Earth is 12742.
```

Q3: In this nest dictionary grab the word "hello"

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

Answer:

```
 d =
{'k1':[1,2,3,{'tricky':['oh','man','inception',{'target':[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
```

Q4: 4.1 Create an array of 10 zeros?

4.2 Create an array of 10 fives?

Answer:

```
import numpy as np
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.]
```

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

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

Q5:Create an array of all the even integers from 20 to 35

Answer:

```
import numpy as np
array=np.arange(20,36,2)
print("Array of all the even integers from 20 to 35")
print(array)
```

```
Array of all the even integers from 20 to 35
[20 22 24 26 28 30 32 34]
```

Q6 :Create a 3x3 matrix with values ranging from 0 to 8

Answer:

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

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

Q7:Concatinate a and b

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

Answer:

```
import numpy as np
a = np.array([1, 2, 3])
b = np.array([ 4, 5, 6])
arr = np.concatenate(( a, b))
print(arr)
```

```
[1 2 3 4 5 6]
```

Q8:Create a dataframe with 3 rows and 2 columns

Answer:

```
import pandas as pd
data = [['Apple', 100], ['Banana', 15], ['Mango', 150]]
df = pd.DataFrame(data, columns=['Fruit', 'Price'])
df
```

	Fruit	Price
0	Apple	100
1	Banana	15
2	Mango	150

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

Answer:

```
import pandas as pd
pd.date_range(start='1/1/2023', end='10/2/2023')
```

```
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')
```

Q 10:Create 2D list to DataFrame

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

Answer:

```
import pandas as pd

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

df = pd.DataFrame(lists, columns=['S.no','Alphabet', 'Numerical'])

df
```

	S.no	Alphabet	Numerical
0	1	aaa	22
1	2	bbb	25
2	3	ccc	24