ASSIGNMENT – 01

BASIC PYTHON

Assignment Date	12-09-2022
Student Name	VALLIAMMAI S
Student Roll Number	311519106105
Maximum Marks	2

1. Split this string

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

[2]  print(s.split())

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

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

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

```
[3]  planet = "Earth"
     diameter = 12742

[4]  print( 'The diameter of {} is {} kilometers.' .format(planet,diameter))

     The diameter of Earth is 12742 kilometers.
```

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

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

[6]  print(d['k1'][3]["tricky"][3]['target'][3])

     hello
```

Numpy

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

4.1 Create an array of 10 zeros?

4.2 Create an array of 10 fives?

```
[8]  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.]
```

```
[9]  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.]
```

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

```
[10] array=np.arange(20,35,2)
     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]
```

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

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

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

7. Concatenate a and b

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

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

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

8. Create a dataframe with 3 rows and 2 columns

```
[13] import pandas as pd
```

```
[14] data = [['tom', 10], ['nick', 15], ['juli', 14]]
     df = pd.DataFrame(data, columns=['Name', 'Age'])
     df
```

	Name	Age
0	tom	10
1	nick	15
2	juli	14

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

```
[15] per1 = pd.date_range(start ='1-1-2023',
          end ='02-10-2023')
     for val in per1:
       print(val)
```

```
2023-01-01 00:00:00
2023-01-02 00:00:00
2023-01-03 00:00:00
2023-01-04 00:00:00
2023-01-05 00:00:00
2023-01-06 00:00:00
2023-01-07 00:00:00
2023-01-08 00:00:00
2023-01-09 00:00:00
2023-01-10 00:00:00
2023-01-11 00:00:00
2023-01-12 00:00:00
2023-01-13 00:00:00
2023-01-14 00:00:00
2023-01-15 00:00:00
2023-01-16 00:00:00
2023-01-17 00:00:00
2023-01-18 00:00:00
```

```
[15]  2023-01-17 00:00:00
      2023-01-18 00:00:00
      2023-01-19 00:00:00
      2023-01-20 00:00:00
      2023-01-21 00:00:00
      2023-01-22 00:00:00
      2023-01-23 00:00:00
      2023-01-24 00:00:00
      2023-01-25 00:00:00
      2023-01-26 00:00:00
      2023-01-27 00:00:00
      2023-01-28 00:00:00
      2023-01-29 00:00:00
      2023-01-30 00:00:00
      2023-01-31 00:00:00
      2023-02-01 00:00:00
      2023-02-02 00:00:00
      2023-02-03 00:00:00
      2023-02-04 00:00:00
      2023-02-05 00:00:00
      2023-02-06 00:00:00
      2023-02-07 00:00:00
      2023-02-08 00:00:00
      2023-02-09 00:00:00
      2023-02-10 00:00:00
```

10. Create 2D list to DataFrame

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

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

```
[17] df = pd.DataFrame(lists, columns =['S.No', 'Name', 'Age'])
     print(df)
```

```
   S.No Name  Age
0     1  aaa   22
1     2  bbb   25
2     3  ccc   24
```