

**Assignment - 1**  
**Python Programming**

PID Number	PNT2022TMID13322
Assignment Date	19 September 2022
Student Name	Puviyasree M
Maximum Marks	2 Marks

**Question 1:**

**Split the String**

**Basic Python**

**1. Split this string**

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

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

**Question 2:**

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

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

The diameter of Earth is 12742 kilometers.
```

**Question 3:**

**In this nest dictionary grab the word “hello”**

```
[4]: 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:**

**Create an array of 10 zeros?**

**Create an array of 10 fives?**

```
In [6]: vin=np.zeros(10)
         print(vin)

[0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]

In [7]: y=np.ones(10)*5
         print(y)

[5. 5. 5. 5. 5. 5. 5. 5. 5. 5.]
```

### Question 5:

Create an array of all even integers from 20 to 35

```
In [8]: evn=np.arange(20,35,2)
        print("Array of even integers from 25 to 35")
        print(evn)
```

```
Array of even integers from 25 to 35
[20 22 24 26 28 30 32 34]
```

### Question 6:

Create a 3X3 matrix with the values ranging from 0 to 8

```
In [9]: mat=np.arange(0,9).reshape((3,3))
        print(mat)
```

```
[[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])**

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

```
Out[10]: array([[1, 2, 3],
               [4, 5, 6]])
```

### Question 8:

Create a data frame with 3 rows and 2 columns

```
In [11]: import pandas as pd
```

```
In [13]: df=pd.DataFrame()
         print(df)
```

```
Empty DataFrame
Columns: []
Index: []
```

### Question 9:

Generates the series of dates starts from 1<sup>st</sup> JAN 2023, to 10<sup>th</sup> FEB 2023

```
In [18]: import datetime
         tes=datetime.datetime.strptime("01-1-2023","%d-%m-%Y")
         z=datetime.datetime.strptime("10-2-2023","%d-%m-%Y")
         dag=pd.date_range(tes,z)
         print(dag.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 data frame

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

```
In [21]: lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]  
vi=pd.DataFrame(lists,columns=['s.no','letter','num'])  
print(vi)
```

	s.no	letter	num
0	1	aaa	22
1	2	bbb	25
2	3	ccc	24