Assignment – 1

Python Programming

Assignment Date	08 September 2022
Student Name	Mr. G. Rajasekar
Student Roll Number	142219106073
Maximum Marks	2 Marks

TASKS:

1. Split the String

```
In [2]: s = "Hi there Sam!"

In [3]: print(s.split())
['Hi', 'there', 'Sam!']
```

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

```
In [4]: planet = "Earth"
        diameter = 12742

In [7]: print(f"The diameter of Earth is {diameter} kilometers.")
The diameter of Earth is 12742 kilometers.
```

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

```
In [8]: d = {'k1':[1,2,3,{'tricky':['oh','man','inception',{'target':[1,2,3,'hello']}]}]}

In [9]: print(d['k1'][3]['tricky'][3]['target'][3])
hello
```

4. Numpy
   Import numpy library

```
In [10]: import numpy as np
```

4.1 Create an array of 10 Zeros.

```
In [11]: zeros=np.zeros(10)
```

4.2 Create an array of 10 fives.

```
In [15]: fives=np.full(10,5)
         print(zeros,fives)
```

```
[0. 0. 0. 0. 0. 0. 0. 0. 0. 0.] [5 5 5 5 5 5 5 5 5 5]
```

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

```
In [16]: arr=[i for i in range(20,35+1) if i%2==0]
         arr
```

```
Out[16]: [20, 22, 24, 26, 28, 30, 32, 34]
```

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

```
In [20]: array=np.arange(0,9).reshape((3,3))
         array
```

```
Out[20]: array([[0, 1, 2],
                [3, 4, 5],
                [6, 7, 8]])
```

7. Concatenate A and B

```
In [27]: a = np.array([1, 2, 3])
         b = np.array([4, 5, 6])
         c=np.concatenate((a,b))
         c
```

```
Out[27]: array([1, 2, 3, 4, 5, 6])
```

8. Create a data frame with 3 rows and 2 Columns

Import PANDAS

```
In [28]: import pandas as pd
```

In [34]:
```
d={'name':['raj','jhon','joe'],'age':[21,26,28]}
df=pd.DataFrame.from_dict(d)
df
```

Out[34]:

	name	age
0	raj	21
1	jhon	26
2	joe	28

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

In [35]:
```
date=pd.date_range("01-01-2023","10-02-2023",freq="D")
```

```
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')
```

10. Create a 2D List to DataFrame

In [36]:
```
lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]
```

In [38]:
```
df=pd.DataFrame(lists,columns=["C1","C2","C3"])
df
```

Out[38]:

	C1	C2	C3
0	1	aaa	22
1	2	bbb	25
2	3	ccc	24