ASSIGNMENT - 1

Assignment Date	14 September 2022
Student Name	Ms.Nandhini.R
Student Roll Number	2019504552
Maximum Marks	2 Marks

1) Split this string:

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

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

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

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

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

Output : `The diameter of Earth is 12742 kilometers`

3) **In this nest dictionary grab the word "hello"**

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

Solution: `d['k1'][3]['tricky'][3]['target'][3]`

4) Create an array of 10 zeros? and Create an array of 10 fives?

Solution :
```
np.zeros(10)
```
array([0., 0., 0., 0., 0., 0., 0., 0., 0., 0.])

```
5*np.ones(10)
array([5., 5., 5., 5., 5., 5., 5., 5., 5., 5.])
```

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

Solution : `np.arange(20,35,2)`

Output : `array([20, 22, 24, 26, 28, 30, 32, 34])`

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

Solution : `np.arange(0,9).reshape(3,3)`

Output :
```
array([[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])

Solution:
```
a=np.array([1,2,3])
b=np.array([4,5,6])
np.concatenate((a,b),axis=0)
#print(c)
```

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

8) Create a dataframe with 3 rows and 2 columns

Solution :
```
data={
 "Numbers":[1,2,3],
 "Letters":['a','b','c']
}
  pd.DataFrame(data)
```

Output :

	Numbers	Letters
0	1	a
1	2	b
2	3	c

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

Solution : `pd.date_range(start='1/1/2023',end='10/2/2023')`

Output :

```
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 2D list to DataFrame

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

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

`pd.DataFrame(lists)`

	0	1	2
0	1	aaa	22
1	2	bbb	25
2	3	ccc	24