Assignment Date	23 September 2022
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Student Roll Number	61771921008
Maximum Marks	2 Marks

Question-1:

Split the String

s = "Hi there Sam!"

Solution:

s.split()

Basic Python

1. Split this string

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

In [ ]: s.split()

Out[4]: ['Hi', 'there', 'Sam!']
```

Question-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));

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

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

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

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

        The diameter of Earth is 12742 kilometers.
```

Question-3:

In this nest dictionary grab the word "hello"

Solution :

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

d['k1'][3]['tricky'][3]['target'][3]

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

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

```
In [ ]: d['k1'][3]['tricky'][3]['target'][3]
Out[8]: 'hello'
```

Question-4:

  Create an array of 10 zeros?

  Create an array of 10 Fives?

Solution :

import numpy as np

  a = np.zeros(10)a

tmp=np.ones(10)*5

print(tmp)

Numpy

```
In [4]: import numpy as np
```

4.1 Create an array of 10 zeros?

4.2 Create an array of 10 fives?

```
In [5]: a = np.zeros(10)
        a
Out[5]: array([0., 0., 0., 0., 0., 0., 0., 0., 0., 0.])
```

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

Question-5:

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

Solution :

print(np.arange(20,35,2))

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

```
In [6]: print(np.arange(20,35,2))
        [20 22 24 26 28 30 32 34]
```

Question-6:

Create a 3*3 matrix with values raging from 0 to 8

Solution:

c = np.arange(0,9).reshape(3,3)

c

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

```
In [ ]: c = np.arange(0,9).reshape(3,3)
        c
Out[13]: array([[0, 1, 2],
                [3, 4, 5],
                [6, 7, 8]])
```

Question-7:

Concatenate a and b

a= np.([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)

7. Concatenate a and b

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

```
In [ ]: a = np.array([1,2,3])
        b = np.array([4,5,6])
        np.concatenate((a,b),axis=0)
Out[14]: array([1, 2, 3, 4, 5, 6])
```

Pandas

Question-8:

Create a DataFrame with 3 rows and 2 columns

Solution:

import pandas as pd

d = {"fruits":["mango","orange","apple"],"color":["yellow","orange","red"]}

df = pd.DataFrame(d)

df

```
8. Create a dataframe with 3 rows and 2 columns

In [2]: import pandas as pd

In [ ]: d = {"fruits":["mango","orange","apple"],"color":["yellow","orange","red"]}
        df = pd.DataFrame(d)
        df

Out[16]:     fruits   color
         0   mango    yellow
         1   orange   orange
         2   apple    red
```

Question-9:

Generate the series of dates from 1st Jan,2023 to 10th feb,2023

Solution:

dates = pd.date_range(start='1/1/2023',end='2/10/2023')

lists = []

for i in dates:

lists.append(i.strftime('%d-%m-%y'))

print(lists)

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

In [3]: dates = pd.date_range(start='1/1/2023',end='2/10/2023')
        lists = []
        for i in dates:
          lists.append(i.strftime('%d-%m-%y'))
        print(lists)

['01-01-23', '02-01-23', '03-01-23', '04-01-23', '05-01-23', '06-01-23', '07-01-23', '08-01-23', '09-01-23', '10-01-23', '11-01
-23', '12-01-23', '13-01-23', '14-01-23', '15-01-23', '16-01-23', '17-01-23', '18-01-23', '19-01-23', '20-01-23', '21-01-23',
'22-01-23', '23-01-23', '24-01-23', '25-01-23', '26-01-23', '27-01-23', '28-01-23', '29-01-23', '30-01-23', '31-01-23', '01-02-
23', '02-02-23', '03-02-23', '04-02-23', '05-02-23', '06-02-23', '07-02-23', '08-02-23', '09-02-23', '10-02-23']
```

Question-10:

Create 2D list to DataFrame

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

Solution:

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

10. Create 2D list to DataFrame ¶

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

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

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

Out[20]:

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