Assignment -1

Python Programming

Assignment Date	19 September 2022
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Maximum Marks	2 Marks

Question-1:

Splitting the string

Solution:

```
Str = input("Enter a string to split: ")

Str.split()
```

Question-2:

Use format() function to print the following string.

Output: The diameter of Earth is 12742 kilometers.

Solution:

```
planet = "Earth"

diameter = 12742

print("The diameter of {} is {} kilometers.".format(planet,diameter))
```

```
In [2]: planet = "Earth"
        diameter = 12742

        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']}]}]}

print(d['k1'][3]['tricky'][3]['target'][3])
```

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

NUMPY

import numpy as np

Question-4:

Create an array of 10 zeros?

Solution:

np.zeros(10)

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

Question-5:

Create an array of 10 fives?

Solution:

np.ones(10) * 5

```
In [6]: np.ones(10) * 5
Out[6]: array([5., 5., 5., 5., 5., 5., 5., 5., 5., 5.])
```

Question-6:

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

Solution:

np.arange(20,35,2)

```
In [7]: np.arange(20,35,2)
Out[7]: array([20, 22, 24, 26, 28, 30, 32, 34])
```

Question-7:

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

Solution:

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

```
In [8]: np.arange(0,9).reshape(3,3)

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

Question-8:

Concatinate a and b.

Solution:

a = np.array([1,2,3])

b = np.array([4,5,6])

c = np.concatenate((a,b),axis = 0)

print(c)

```
In [9]: a = np.array([1,2,3])
        b = np.array([4,5,6])
        c = np.concatenate((a,b),axis = 0)
        print(c)

        [1 2 3 4 5 6]
```

PANDAS

import pandas as pd

Question-8:

Create a dataframe with 3 rows and 2 columns.

Solution:

df = pd.DataFrame({"Name":['rocky','Raj','sam'],"Age":[25,24,28]})

print(df)

```
In [3]: df = pd.DataFrame({"Name":['rocky','Raj','sam'],"Age":[25,24,28]})
        print(df)

           Name  Age
        0 rocky   25
        1   Raj   24
        2   sam   28
```

Question-9:

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

Solution:

np.arange('2023-01-01','2023-02-10',dtype='datetime64[D]')

```
In [12]: np.arange('2023-01-01','2023-02-10',dtype='datetime64[D]')

Out[12]: array(['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', '2023-01-11', '2023-01-12',
                '2023-01-13', '2023-01-14', '2023-01-15', '2023-01-16',
                '2023-01-17', '2023-01-18', '2023-01-19', '2023-01-20',
                '2023-01-21', '2023-01-22', '2023-01-23', '2023-01-24',
                '2023-01-25', '2023-01-26', '2023-01-27', '2023-01-28',
                '2023-01-29', '2023-01-30', '2023-01-31', '2023-02-01',
                '2023-02-02', '2023-02-03', '2023-02-04', '2023-02-05',
                '2023-02-06', '2023-02-07', '2023-02-08', '2023-02-09'],
               dtype='datetime64[D]')
```

Question-10:

Create 2D list to DataFrame.

Solution:

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

df = pd.DataFrame(lists)

print(df)

```
In [13]: lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]
         df = pd.DataFrame(lists)
         print(df)

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