Assignment – 1

Python Programming

Assignment Date	12/09/2022
Student Name	Sabrin s
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Maximum Mark	2 Mark

1) Split this string

Solution:

```
▼ Basic Python

▼ 1. Split this string

[1]  s = "Hi there Sanjay!"

[2]  s.split()
     ['Hi', 'there', 'Sanjay!']
```

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

Solution:

```
▼ 2. Use .format() to print the following string.
   Output should be: The diameter of Earth is 12742 kilometers.

[3]  planet = "Earth"
     diameter = 12742

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

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

Solution:

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

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

[6]  d['k1'][3]['tricky'][3]['target'][3]
     'hello'
```

4) Numpy

Solution:

```
▾ Numpy

[ ] import numpy as np

▾ 4.1 Create an array of 10 zeros?
  4.2 Create an array of 10 fives?

[ ]  a = np.zeros(10)
     a

     array([0., 0., 0., 0., 0., 0., 0., 0., 0., 0.])

[ ]  b = np.ones(10)*5
     b

     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:

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

[ ]  S = np.arange(20,35,2)
     S

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

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

Solution:

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

[ ]
     z=np.arange(0,9).reshape(3,3)
     z

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

7) Concatinate a and b

Solution:

```
▾ 7. Concatinate a and b
  a = np.array([1, 2, 3]), b = np.array([4, 5, 6])

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

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

8) Create a dataframe with 3 rows and 2 columns

Solution:

8. Create a dataframe with 3 rows and 2 columns

```
[ ] import pandas as pd
```

```
[ ] d = {"name":["Mani","Peter","Vicky"],"age":[20,21,22]}
    df = pd.DataFrame(d)
    df
```

	name	age
0	Mani	20
1	Peter	21
2	Vicky	22

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

Solution:

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

```
P = pd.date_range(start='1-1-2023',end='10-2-2023')
for val in P:
    print(val)
```

```
2023-01-03 00:00:00
2023-01-04 00:00:00
2023-01-05 00:00:00
2023-01-06 00:00:00
2023-01-07 00:00:00
2023-01-08 00:00:00
2023-01-09 00:00:00
2023-01-10 00:00:00
2023-01-11 00:00:00
2023-01-12 00:00:00
2023-01-13 00:00:00
2023-01-14 00:00:00
2023-01-15 00:00:00
2023-01-16 00:00:00
2023-01-17 00:00:00
2023-01-18 00:00:00
2023-01-19 00:00:00
2023-01-20 00:00:00
2023-01-21 00:00:00
2023-01-22 00:00:00
2023-01-23 00:00:00
2023-01-24 00:00:00
```

10) Create 2D list to Dataframe

Solution:

10. Create 2D list to DataFrame

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

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

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

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