ASSIGNMENT 1

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Basic Python

1. Split this string

[ ]s = "Hi there Sam!"

[ ]

```
s = "Hi there Sam!"
a=s.split()
print(a[0])
print(a[1])
print(a[2])
```

OUTPUT:

```
Hi there Sam!
```

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

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

[ ]

planet = "Earth"

diameter = 12742

[ ]

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']}]}]}

[ ]

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

a=d['k1']

b=a[3]

c=b['tricky']

e=c[3]

f=e['target']

g=f[3]

print(g)

OUTPUT:

hello

Numpy

[ ]import numpy as np

4.1 Create an array of 10 zeros?

4.2 Create an array of 10 fives?

[ ] np.zeros((10))

OUTPUT:

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

[ ]np.ones(10,dtype=int)*5

OUTPUT:

array([5, 5, 5, 5, 5, 5, 5, 5, 5, 5])

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

[ ]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

[ ]a=np.arange(0,9,1)

a.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])

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

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

c=[a]+[b]

C

OUTPUT:

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

Pandas

8. Create a dataframe with 3 rows and 2 columns

[ ]import pandas as pd

[ ]d={'Name':['Vivek','Max'],'Age':['22','44'],'Salary':[30000,60000]

d

df=pd.DataFrame(d)

Df

OUTPUT:

	Name	Age	Salary
0	Vivek	22	30000
1	Max	44	60000

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

[ ]a=np.arange(1,32,1)

b=np.arange(1,11,1)

c={'day':a,'month':'jan','year':2023}

d={'day':b,'month':'feb','year':2023}

e=pd.DataFrame(c)

f=pd.DataFrame(d)

g=pd.concat([e,f])

G

OUTPUT:

	day	month	year
0	1	jan	2023
1	2	jan	2023
2	3	jan	2023
3	4	jan	2023
4	5	Jan	2023
5	6	jan	2023
6	7	jan	2023
7	8	jan	2023
8	9	jan	2023
9	10	jan	2023
10	11	jan	2023
11	12	jan	2023
12	13	jan	2023
13	14	jan	2023
14	15	jan	2023
15	16	jan	2023
16	17	jan	2023
17	18	jan	2023
18	19	jan	2023
19	20	jan	2023
20	21	jan	2023
21	22	jan	2023
22	23	jan	2023
23	24	jan	2023
24	25	jan	2023
25	26	jan	2023
26	27	jan	2023
27	28	jan	2023
28	29	jan	2023

29	30	jan	2023
30	31	jan	2023
0	1	feb	2023
1	2	feb	2023
2	3	feb	2023
3	4	feb	2023
4	5	feb	2023
5	6	feb	2023
6	7	feb	2023
7	8	feb	2023
8	9	feb	2023
9	10	feb	2023

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]]
 [ ]lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]
c=pd.DataFrame(lists)
C
```

OUTPUT:

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