Assignment 1

Python Programming

Assignment Date	**07 November 2022**
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Maximum Marks	**2**

1.Slip the String s =

"Hi there Sam"; s=s.split()

print(s);

['Hi', 'there', 'Sam']

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

plant = "Earth" diameter =12742 planet =

"Earth"diameter
= 12742 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" d

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

[1,2,[3,4],[5,[100,200,['hello']],23,11],1,7]a=lst[3][1][2];

print(a)

['hello']

Numpy

import numpy as np

4.1 Create an array of 10 zeros?

import numpy as np array=np.zeros(10)

print("An array of 10zero") An array of 10zero print(array) [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]

4.2 Create an array of 10 fives?

import numpy as np array = np.ones(10)*5print("An array of 10 five")An array of 10 five print(array)

[5. 5. 5. 5. 5. 5. 5. 5. 5. 5.]

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

import numpy as np array=np.arange(20,35,2) print("Array of all the even integers from 20 to 35") Array of all the even integers from 20 to 35 print(array)

[20 22 24 26 28 30 32 34]

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

import numpy as npx = np.arange(0, 9).reshape(3,3)print(x)

```
[[0  1  2]
 [3  4  5]
 [6  7  8]]
```

7. Concatinate a and b

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

import numpy as np a = np. array

([1,2,3]) b=

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

np.concatenate((a,b)) print(c)

[1 2 3 4 5 6]

Pandas import

pandas as pd

8. Create a dataframe with 3 rows and 2 columns

data = [['TOM', 20], ['NICK', 21], ['KRISH', 14], ['JACK', 18]] df=

pd.DataFrame(data, columns=['Name', 'Age']) df

	Name	Age
0	TOM	20
1	NICK	21
2	KRISH	14
3	JACK	18

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

```
import pandas as pd
dRan1 = pd.date_range(start ='1-1-2023', periods = 41)print(dRan1)
```

```
                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', '2023-01-11', '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',
                '2023-02-10'],
```

dtype='datetime64[ns]', freq='D')

10. Create 2D list to DataFrame

import pandas as pdimport numpy as np lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]

list= {'name':['aaa', 'bbb', 'ccc'], 'points':[22,25,24]} df = pd.DataFrame(list,index=['1','2','3']) df

	name	points1
aaa	22	2
bbb	25	
3ccc	24	