Assignment -1

Python Programming

Assignment Date	20 September 2022
Student Name	M. Sangeetha
Student Register number	820319106018
Maximum Marks	2 Marks

Basic Python

1. Split this string

```
s = "Hi there Sam!"
s.split()
```

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
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'][3]['tricky'][3]['target'][3]
```

Output:

'hello'

Numpy

4.1 Create an array of 10 zeros?

```
import numpy as np

a = np.zeros(10)
print(a)
```

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

4.2 Create an array of 10 fives?
import numpy **as** np

b = np.ones(10)*5
print(b)

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
import numpy **as** np

array=np.arrange(20,35,2)
print("Array of all the even intergers from 20 to 35")

Output:
[20 22 24 26 28 30 32 34]

6. Create a 3x3 matrix with values ranging from 0 to 8
import numpy **as** np

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

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

Output:

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

Pandas

8. Create a data frame with 3 rows and 2 columns

```
import pandas as pd

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

Output:

	fruits	color
0	mango	yellow
1	orange	orange
2	apple	red

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);
```

Output:

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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)
print(df)
```

Output:

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