Assignment -1

Python Programming

Assignment Date	9 September 2022
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Maximum Marks	2 Marks

BASIC PYTHON

Question-1:

Split this string

s = "Hi there Sam!"

Solution:

s.split()

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



Question-2:

Use .format() to print the following string.

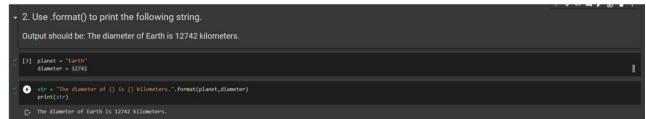
Output should be: The diameter of Earth is 12742 kilometers.

planet = "Earth" diameter = 12742

Solution:

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

The diameter of Earth is 12742 kilometers



Question-3:

```
In this nest dictionary grab the word "hello"
```

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

Solution:

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

hello

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

[5] 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:

1 Create an array of 10 zeros?

Solution:

np.zeros(10)

2 Create an array of 10 fives?

Solution:

np.ones(10)*5

Question-5:

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

Solution:

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



Question-6:

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

Solution:

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

( • np.array([[0,1,2],[3,4,5],[6,7,8]])

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

Question-7:

Concatenate a and b

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

Solution:
```

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

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

        <sup>a</sup> = np.array([1, 2, 3]) b = np.array([4, 5, 6]) np.concatenate((a,b))

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

PANDAS

Question-8:

Create a dataframe with 3 rows and 2 columns import

pandas as pd

```
Solution: data = {
        "calories": [420, 380, 390],
        "duration": [50, 40, 45]
    }

#load data into a DataFrame object:
    df = pd.DataFrame(data) print(df)
```

calories duration

0 420 50 1 380 40 2 390 45

```
Pandas
■ 8. Create a dataframe with 3 rows and 2 columns
■ import pandas as pd
■ data = {
    "num1": [1, 2, 3],
    "num2": [4, 5, 6]
    }
    df = pd.DataFrame(data)
```

Question-9:

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

Solution:

```
pd.date_range(start='1/1/2023',end='2/10/2023')
```

Question-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]] Solution:
pd.DataFrame(lists)
```

