Assignment -1 Python Programming

Assignment Date	17 September 2022
Team ID	PNT2022TMID27838
Project Name	AI BASED DISCOURSE FOR BANKING INDUSTRY
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Maximum Marks	2 Marks

Question-1.

Split this string

s = "Hi there Sam!"

Solution:

s.split(' ')

```
[2] s = "Hi there Sam!"

[3] 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
print( 'The diameter of {} is {} kilometers.' .format(planet,diameter) ) ;
```

```
planet = "Earth"
diameter = 12742

print( 'The diameter of {} is {} kilometers.' .format(planet,diameter));

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:

d['k1'][3]['tricky'][3]['target'][3]

Question-4.

4.1 Create an array of 10 zeros?

Solution:

import numpy as np
array=np.zeros(10)
print("An array of 10 zeros:")
print(array)

```
✓ [11] import numpy as np
```

```
array=np.zeros(10)
print("An array of 10 zeros:")
print(array)

An array of 10 zeros:
[0. 0. 0. 0. 0. 0. 0. 0. 0.]
```

4.2 Create an array of 10 fives?

Solution:

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

```
    [11] import numpy as np

array=np.ones(10)*5
    print("An array of 10 fives:")
    print(array)

An array of 10 fives:
    [5. 5. 5. 5. 5. 5. 5. 5. 5.]
```

Question-5.

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

Solution:

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

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

Array of all the even integers from 20 to 35
[20 22 24 26 28 30 32 34]
```

Question-6.

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

Solution:

```
import numpy as np
matrix = np.arange(0, 9).reshape(3,3)
matrix
```

Question-7.

Concatenate 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])
array = np.concatenate((a, b))
array
```

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

Question-8.

Create a dataframe with 3 rows and 2 columns

```
import pandas as pd
di = {'a': [1, 'df1'],'b': [2, 'df2'],'c': [3, 'df3']}
df = pd.DataFrame(di)
df
```

Question-9.

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

Solution:

dates = pd.date_range("1/1/2023", "10/02/2023") dates

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