Assignment - 1
BASIC PYTHON

Assignment Date	12.09.2022
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Student Roll Number	2019115102
Maximum Marks	2 Marks

Question-1
Split this string
s = "Hi there Sam!"

Solution:
print(s.split())

Screenshot:

1. Split this string

```
s = "Hi there Sam!"
```

```
print(s.split())
```

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

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

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

Solution:
planet = "Earth"
diameter = 12742
ss="The diameter of {} is {} kilometers"
print(ss.format(planet,diameter))

Screenshot:

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

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

```
planet = "Earth"
diameter = 12742
```

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

```
The diameter of Earth is 12742 kilometers
```

Question-3
In this nest dictionary grab the word "hello"

Solution:

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

Screenshot:

Numpy

Question-4

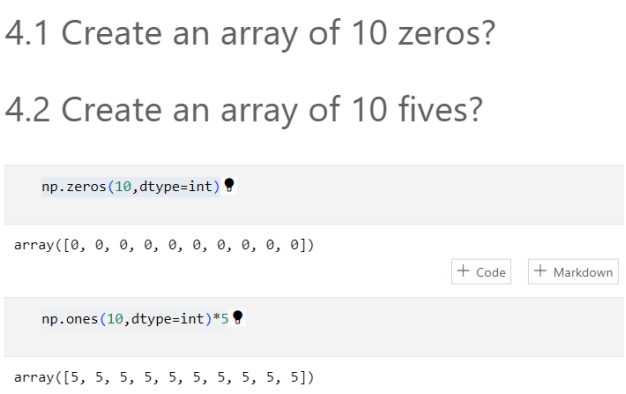
4.1 Create an array of 10 zeros?

4.2 Create an array of 10 fives?

Solution:

```
import numpy as np
np.zeros(10,dtype=int)
np.ones(10,dtype=int)*5
```

Screenshot:



Question-5

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

Solution:

```
np.arange(20,36,2)
```

Screenshot:

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

```
np.arange(20,36,2)
```

```
array([20, 22, 24, 26, 28, 30, 32, 34])
```

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

Solution:
np.arange(0, 9).reshape(3,3)

Screenshot:

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

```
np.arange(0, 9).reshape(3,3)
```

```
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])
new_array=np.concatenate((a, b))
print(new_array)

Screenshot:

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])
new_array=np.concatenate((a, b))
print(new_array)
```

```
[1 2 3 4 5 6]
```

Pandas

Question-8
Create a dataframe with 3 rows and 2 columns

Solution:

```
import pandas as pd
```

```
data = [['Riya',106], ['Arjun', 116],['Ramu',119]]
df=pd.DataFrame(data)
print(df)
```

Screenshot:

8. Create a dataframe with 3 rows and 2 columns

```
import pandas as pd
```

```
data = [['Riya',106], ['Arjun', 116],['Ramu',119]]
df=pd.DataFrame(data)
print(df)
```

```
      0    1
0   Riya  106
1  Arjun  116
2   Ramu  119
```

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

Solution:
mydates = pd.date_range('2023-01-01', '2023-02-10')
print(mydates)

Screenshot:

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

```
mydates = pd.date_range('2023-01-01', '2023-02-10')
print(mydates)
```

Python

```
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')
```

Question-10
10. Create 2D list to DataFrame

```
lists = [[1, 'aaa', 22],
         [2, 'bbb', 25],
         [3, 'ccc', 24]]
```

Solution:
lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]
df=pd.DataFrame(lists)
print(df)

Screenshot:

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)
```

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