Assignment -1

Python Programming

Assignment Date	12 September 2022
Student Name	S.Nagu
Student Roll Number	912419104020
Maximum Marks	2 Marks

Question-1:

Split this string

s = "Hi there Sam!"

Solution:

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

1. Split this string

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

```
[21] split=s.split()
     print(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
print("The diameter of {} is {} kilometers.".format(planet,diameter))
```

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

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

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

```
[7] 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':[1,2,3,{'tricky':['oh','man','inception',{'target':[1,2,3,'hello']}]}]}
new_d=d['k1'][3]['tricky'][3]['target'][3]
print(new_d)
```

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

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

```
[27] new_d=d['k1'][3]['tricky'][3]['target'][3]
     print(new_d)

     hello
```

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) #create an array of 10 zeros
np.ones(10)*5 #create an array of 10 five
```

Numpy

```
[28] import numpy as np
```

4.1 Create an array of 10 zeros?

4.2 Create an array of 10 fives?

```
[10] np.zeros(10)

     array([0., 0., 0., 0., 0., 0., 0., 0., 0., 0.])
```

```
[11] np.ones(10)*5

     array([5., 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)
```

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

```
[29] import numpy as np
     array=np.arange(20,35,2)
     print(array)

     [20 22 24 26 28 30 32 34]
```

Question-6:

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

Solution:

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

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

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

```
[[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:

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

7. Concatenate a and b

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

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

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

Question-8:

Create a dataframe with 3 rows and 2 columns

Solution:

```
import pandas as pd
d={"id":[4001,4002,4003],"name":["valar","ammu","sangeetha"]}
data_frame=pd.DataFrame(d)
print(data_frame)
```

Pandas

8. Create a dataframe with 3 rows and 2 columns

```
[18] import pandas as pd
```

```
[20] d={"ID":[5005,5006,5007],"NAME":["ram","sind","kayal"]}
     data_frame=pd.DataFrame(d)
     print(data_frame)
```

```
     ID   NAME
0  5005    ram
1  5006   sind
2  5007  kayal
```

Question-9:

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

Solution:

```
import pandas as pd
date_series=pd.Series(pd.date_range("2023-01-01","2023-02-10"))
print (date_series)
```

Question-10:

Create 2D list to DataFrame

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

Solution:

```
import pandas as pd
lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]
list1=zip(lists)
df=pd.DataFrame(list1)
print(df)
```