Assignment -1

Python Programming

Assignment Date	8 September 2022
Student Name	Renuka G
Student Roll Number	211419104220
Maximum Marks	2 Marks

1. Split this string

In [1]:
```
s = "Hi there Sam!"
```

In [2]:
```
s.split()
```

Out[2]:
```
['Hi', 'there', 'Sam!']
```

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

In [3]:
```
planet = "Earth"
diameter = 12742
```

In [4]:
```
print("The diameter of {} is {} kilometers.".format(planet, diameter))
```

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

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

In [5]:
```
d = {'k1':[1,2,3,{'tricky':['oh','man','inception',{'target':[1,2,3,'hello']}]}]}
```

In [6]:
```
print (d['k1'][3]['tricky'][3]['target'][3])
```

```
hello
```

Numpy

In [7]:
```
import numpy as np
```

4.1 Create an array of 10 zeros?

4.2 Create an array of 10 fives?

In [10]:
```
array = np. zeros (10)
print(array)
```

```
[0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
```

In [11]:
```
array=np.ones(10)*5
print(array)
```

```
[5. 5. 5. 5. 5. 5. 5. 5. 5. 5.]
```

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

In [12]:
```
array=np.arange(20,35,2)
print(array)
```

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

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

In [13]:
```
array = np.arange(0,9).reshape(3,3)
print(array)
```

```
[[0 1 2]
 [3 4 5]
 [6 7 8]]
```

7. Concatinate a and b

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

In [25]:
```
a = np.array([1, 2, 3])
b = np.array([4, 5, 6])
arr=np.concatenate((a,b), axis=None)
print(arr)
```

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

Pandas

8. Create a dataframe with 3 rows and 2 columns

In [23]:
```
import pandas as pd
```

In [26]:
```
s=[[1,2],[3,4],[5,6]]
df = pd.DataFrame(s,columns=['First column', 'Second column'])
print(df)
```

```
   First column  Second column
0             1              2
1             3              4
2             5              6
```

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

In [27]:
```
first2023 = pd.date_range(start='2023-01-01', end='2023-10-02', freq='MS')
list2023 = []
for i in first2023:
  list2023.append(i.strftime('%Y-%m-%d'))
list2023
```

Out[27]:
```
['2023-01-01',
 '2023-02-01',
 '2023-03-01',
 '2023-04-01',
 '2023-05-01',
 '2023-06-01',
 '2023-07-01',
 '2023-08-01',
 '2023-09-01',
 '2023-10-01']
```

10. Create 2D list to DataFrame

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

In [28]:
```
lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]
```

In [29]:
```
df = pd.DataFrame(lists,columns=['First column', 'Second column', 'Third column'])
print(df)
```

```
   First column Second column  Third column
0             1           aaa            22
1             2           bbb            25
2             3           ccc            24
```