Assignment 1

Assignment Date	28 September 2022
Student Name	Abirami R
Student Roll Number	811519104005
Maximum Marks	2 Marks

1. Split this string

In [16]:
```
s = "Hi there Sam!"
```

In [17]:
```
s.split()
```

Out[17]:
```
['Hi', 'there', 'Sam!']
```

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

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

In [18]:
```
planet = "Earth"
diameter = 12742
```

In [19]:
```
txt = "The diameter of {planet:} is {diameter:}"
print(txt.format(planet="Earth",diameter=12742))
```

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

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

In [20]:
```
d = {'k1':[1,2,3,{'tricky':['oh','man','inception',{'target':[1,2,3,'hello']}]}]}
```

In [21]:
```
g=d['k1'][3]
h=g['tricky'][3]
print(h['target'][3])
```

```
hello
```

Numpy

In [22]:
```
import numpy as np
```

4.1 Create an array of 10 zeros?

4.2 Create an array of 10 fives?

In [23]:
```
array=np.zeros(10)
print(array)
```

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

In [24]:
```
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 [25]:
```
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 [26]:
```
x =  np.arange(0,9).reshape(3,3)
print(x)
```

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

7. Concatenate a and b

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

In [27]:
```
import numpy as np
a=np.array([1,2,3])
b=np.array([4,5,6])
print(np.concatenate((a,b)))
```

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

Pandas

8. Create a dataframe with 3 rows and 2 columns

In [28]:
```
import pandas as pd
```

In [29]:
```
lst = [('Java', 'Python'),( 'C', 'C++'),('JavaScript', 'R')]
dframe = pd.DataFrame(lst)
print(dframe)
```

```
            0       1
0        Java  Python
1           C     C++
2  JavaScript       R
```

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

In [31]:
```
import pandas
from datetime import date
sdate = date(2023,1,1)
edate = date(2023,2,10)
print(pandas.date_range(sdate,edate))
```

```
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')
```

10. Create 2D list to DataFrame

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

In [32]:
```
import pandas as pd
lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]
```

In [34]:
```
dframe = pd.DataFrame(lists)
print(dframe)
```

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