Assignment 1 – Data Structure

Problem Statement:

You work in XYZ Corporation as a Data Analyst. Your corporation has told you to work with the structure of the data.

Tasks To Be Performed:

1. Create a list named 'myList' that has the following elements: 10, 20, 30, 'apple', True, 8.10:

- a. Now in the 'myList', append these values: 30, 40
- b. After that, reverse the elements of the 'myList' and store that in 'reversedList'

2. Create a dictionary with key values as 1, 2, 3 and the values as 'data', 'information' and 'text':

- a. After that, eliminate the 'text' value from the dictionary
- b. Add 'features' in the dictionary
- c. Fetch the 'data' element from the dictionary and display it in the output

3. Create a tuple and add these elements 1, 2, 3, apple, mango in my_tuple.
4. Create another tuple named numeric_tuple consisting of only integer values 10, 20, 30, 40, 50:

- a. Find the minimum value from the numeric_tuple
- b. Concatenate my_tuple with numeric_tuple and store the result in r1
- c. Duplicate the tuple named my_tuple 2 times and store that in 'newdupli'

5. Create 2 sets with the names set1 and set2, where set1 contains {1,2,3,4,5} and set2 contains {2,3,7,6,1} Perform the below operation:

- a. set1 union set2
- b. set1 intersection set2
- c. set1 difference set2

In [1]:
```
import numpy as np
```

In [10]:
```
myList = np.array([10, 20, 30, 'apple', True, 8.10])
myList
```

Out[10]:
```
array(['10', '20', '30', 'apple', 'True', '8.1'], dtype='<U32')
```

In [12]:
```
myList = np.append(myList,(30,40))
myList
```

Out[12]:
```
array(['10', '20', '30', 'apple', 'True', '8.1', '30', '40'], dtype='<U32')
```

In [13]:
```
reversedList = np.flip(myList)
reversedList
```

Out[13]:
```
array(['40', '30', '8.1', 'True', 'apple', '30', '20', '10'], dtype='<U32')
```

In [38]:
```
dic = {1:'data',2:'information',3:'text'}
dic
```

Out[38]:
```
{1: 'data', 2: 'information', 3: 'text'}
```

In [39]:
```
dic = {key:value for (key,value) in dic.items() if value!='text'}
dic
```

Out[39]:
```
{1: 'data', 2: 'information'}
```

In [43]:
```
dic[3] = 'features'
dic
```

Out[43]:
```
{1: 'data', 2: 'information', 3: 'features'}
```

In [45]:
```
for k,v in dic.items():
    if(v=='data'):
        print(k,v)
```

```
1 data
```

In [48]:
```
my_tuple = (1, 2, 3, 'apple', 'mango')
my_tuple
```

Out[48]:
```
(1, 2, 3, 'apple', 'mango')
```

In [49]:
```
numeric_tuple = (10, 20, 30, 40, 50)
numeric_tuple
```

Out[49]:
```
(10, 20, 30, 40, 50)
```

In [50]:
```
min(numeric_tuple)
```

Out[50]:
```
10
```

In [54]:
```
r1 = my_tuple + numeric_tuple
r1
```

Out[54]:
```
(1, 2, 3, 'apple', 'mango', 10, 20, 30, 40, 50)
```

In [56]:
```
newdupli = np.copy(my_tuple*2)
newdupli
```

Out[56]:
```
array(['1', '2', '3', 'apple', 'mango', '1', '2', '3', 'apple', 'mango'],
      dtype='<U11')
```

In [57]:
```
set1 = {1,2,3,4,5}
set2 = {2,3,7,6,1}
```

In [58]:
```
set1 | set2
```

Out[58]:
```
{1, 2, 3, 4, 5, 6, 7}
```

In [59]:
```
set1 & set2
```

Out[59]: {1, 2, 3}

In [60]:
```
set1 - set2
```

Out[60]: {4, 5}