1) Tuple is ordered and immutable || we can do slicing in it || it can be defined using () braces

Second Solution

In [1]:

```
t=(1,2,3,4,5,6,7,8,9,3,6,2,7,2,9,3,6,9,3,7,9)
# Count method to count no of given elements
t.count(9)
```

Out[1]:

```
4
```

In [2]:

```
# Index method to find first index where the given element is found
t.index(6)
```

Out[2]:

```
5
```

In [3]:

```
# As the Tuples were not mutable, There are not as much as functions for this like Lists
```

3rd Solution

In [4]:

```
# Union is used to join two sets whereas update is just used to update elements to the first
# from second set.
```

In [5]:

```
s1={1,2,3,4,5}
s2={2,3,4,6,7}
```

In [6]:

```
#Union
s1.union(s2)
```

Out[6]:

```
{1, 2, 3, 4, 5, 6, 7}
```

In [7]:

```
s1={1,1,1,2,3,4,5}
s2={2,3,4,6,7}
```

In [8]:

```
s1.update(s2)
```

In [9]:

```
s1
```

Out[9]:

```
{1, 2, 3, 4, 5, 6, 7}
```

4th solution

In [12]:

```
# sets does not allows duplicates in them
```

In [16]:

```
List1= [1, 1, 1, 2, 1, 3, 1, 4, 2, 1, 2, 2, 2, 3, 2, 4, 3, 1, 3, 2, 3, 3, 3, 4, 4, 1, 4, 2,
```

In [17]:

```
s=set(List1)
```

In [18]:

```
s
```

Out[18]:

```
{1, 2, 3, 4}
```

5th solution

In [10]:

```
# Dictionaries are unordered data structure which can be used to store keys and their values
d={1:[1,2,3],2:[4,5,6],3:[7,8,9]}
```

In [11]:

```
d[2]
```

Out[11]:

```
[4, 5, 6]
```

6th solution

In [19]:

```
# Yes we can create a nested dictionary
```

In [20]:

```
{i:i/10 for i in range(1,11)}
```

Out[20]:

```
{1: 0.1,
 2: 0.2,
 3: 0.3,
 4: 0.4,
 5: 0.5,
 6: 0.6,
 7: 0.7,
 8: 0.8,
 9: 0.9,
 10: 1.0}
```

7th solution

In [21]:

```
# setdefault() is used to add new keys and values to the existing dictionaries
```

In [22]:

```
dict1 = {'language' : 'Python', 'course': 'Data Science Masters'}
```

In [23]:

```
dict1.setdefault("Topics",["DSA","DSM","JVA"])
```

Out[23]:

```
['DSA', 'DSM', 'JVA']
```

In [24]:

```
dict1
```

Out[24]:

```
{'language': 'Python',
 'course': 'Data Science Masters',
 'Topics': ['DSA', 'DSM', 'JVA']}
```

8th solution

In [25]:

```
# In dictionaries there are three view items , they are
```

In [26]:

```
#Keys
dict1 = {'Sport': 'Cricket' , 'Teams': ['India', 'Australia', 'England', 'South Africa', 'Sr
dict1.keys()
```

Out[26]:

```
dict_keys(['Sport', 'Teams'])
```

In [27]:

```
#Values
dict1.values()
```

Out[27]:

```
dict_values(['Cricket', ['India', 'Australia', 'England', 'South Africa', 'Sri
Lanka', 'New Zealand']])
```

In [28]:

```
#Items
dict1.items()
```

Out[28]:

```
dict_items([('Sport', 'Cricket'), ('Teams', ['India', 'Australia', 'England',
'South Africa', 'Sri Lanka', 'New Zealand'])])
```

In [ ]:

```

```