Python Exercise1

Exercise Question 1: Given an input list removes the element at index 4 and add it to the 2nd position and also, at the end of the list¶

In [1]:
```
#Original list  [34, 54, 67, 89, 11, 43, 94]
#List After removing element at index 4  [34, 54, 67, 89, 43, 94]
#List after Adding element at index 2  [34, 54, 11, 67, 89, 43, 94]
#List after Adding element at last  [34, 54, 11, 67, 89, 43, 94, 11]
```

In [4]:
```
Sample_lst=[34, 54, 67, 89, 11, 43, 94]
Sample_lst.remove(11)
print("After removing element at index 4:",Sample_lst)
Sample_lst.insert(2,11)         #dont use Sample_lst[2]=11 as it replaces the
 67 by 11
print("After adding element at index 2:",Sample_lst)
Sample_lst.append(11)
print("After adding element at last index:",Sample_lst)
```

```
After removing element at index 4: [34, 54, 67, 89, 43, 94]
After adding element at index 2: [34, 54, 11, 67, 89, 43, 94]
After adding element at last index: [34, 54, 11, 67, 89, 43, 94, 11]
```

Exercise Question 2: Given a two list of equal size create a list of unique elements from both the lists into a seperate list

In [5]:
```
#First List  [2, 3, 4, 5, 6, 7, 8]
#Second List  [4, 9, 16, 25, 36, 49, 64]
#[64, 2, 3, 4, 5, 6, 7, 8, 9, 36, 16, 49, 25]
```

In [19]:
```
first_list=[2, 3, 4, 5, 6, 7, 8]
second_list=[4, 9, 16, 25, 36, 49, 64]

first_set=set(first_list)
print("First Set=",first_set)
second_set=set(second_list)
print("Second Set=",second_set)
third_set=first_set.union(second_set)
print("Third Set=",third_set)
third_list=list(third_set)
print("After converting the 3rd Set to List=",third_list)
```

```
First Set= {2, 3, 4, 5, 6, 7, 8}
Second Set= {64, 4, 36, 9, 16, 49, 25}
Third Set= {64, 2, 3, 4, 5, 6, 7, 8, 36, 9, 16, 49, 25}
After converting the 3rd Set to List= [64, 2, 3, 4, 5, 6, 7, 8, 36, 9, 16, 4
9, 25]
```

In [21]:
```
#Another Solution
first_list1=[2, 3, 4, 5, 6, 7, 8]
second_list1=[4, 9, 16, 25, 36, 49, 64]

third_list1=first_list1+second_list1   # This adds to list
print("Third List:",third_list1)

set1=set(third_list1)       # Gives unique value of List
print("After converting the List to Set=",set1)
finalList=list(set1)
print("Final List having unique elements=",finalList)
```

```
Third List: [2, 3, 4, 5, 6, 7, 8, 4, 9, 16, 25, 36, 49, 64]
After converting the List to Set= {64, 2, 3, 4, 5, 6, 7, 8, 9, 36, 16, 49, 2
5}
Final List having unique elements= [64, 2, 3, 4, 5, 6, 7, 8, 9, 36, 16, 49, 2
5]
```

Exercise Question 3: Remove duplicate from a list and create a tuple and find the minimum and maximum number (Hint: Try Functions Min() and Max())

In [38]:
```
list1 = [64, 2, 3, 4,11,2,4,6,7, 5, 6, 7, 8, 9, 36, 16, 49, 25]

help(list1.remove)
list1.remove(2)
list1.remove(4)
list1.remove(6)
list1.remove(7)
print("After removing duplicates from list:",list1)

sample_Tuple1=tuple(list1)
print("After converting List to Tuple:",sample_Tuple1)

print("Mininum value of the tuple is:",min(sample_Tuple1))

print("Maximum value of the tuple is:",max(sample_Tuple1))
```

```
Help on built-in function remove:

remove(value, /) method of builtins.list instance
    Remove first occurrence of value.

    Raises ValueError if the value is not present.

After removing duplicates from list: [64, 3, 11, 2, 4, 5, 6, 7, 8, 9, 36, 16,
49, 25]
After converting List to Tuple: (64, 3, 11, 2, 4, 5, 6, 7, 8, 9, 36, 16, 49,
25)
Mininum value of the tuple is: 2
Maximum value of the tuple is: 64
```

In [44]:
```
#Another solution
list2 = [64, 2, 3, 4,11,2,4,6,7, 5, 6, 7, 8, 9, 36, 16, 49, 25]
set2=set(list2) # removes duplicates
tuple2=tuple(set2)
print("Tuple output=",tuple2)

print("Mininum value of the tuple is:",min(tuple2))

print("Maximum value of the tuple is:",max(tuple2))
```

```
Tuple output= (64, 2, 3, 4, 5, 6, 7, 8, 9, 36, 11, 16, 49, 25)
Mininum value of the tuple is: 2
Maximum value of the tuple is: 64
```

Exercise Question 4: Display the each word in the string Count the number of words in a string and display it (Including the white spaces)

In [45]:
```
#Printing each words seperately
a = "what's up?"
print(*a)
```

```
w h a t ' s   u p ?
```

In [48]:
```
Sample_String="Welcome to Python"
print("Print each word Separately:",*Sample_String)
print("Length of the String:",len(Sample_String))
```

```
Print each word Separately: W e l c o m e   t o   P y t h o n
Length of the String: 17
```

Exercise Question 5: Write a Python program to access dictionary keys element by index. i.e. Use indexing methods to print the first key

In [54]:
```
Sample_dict={'physics': 80, 'math': 90, 'chemistry': 86}

print("Getting the 1st key element:",Sample_dict['physics'])

Sample_list=list(Sample_dict)
print(Sample_list)
print("Getting the 1st key:",Sample_list[0])
```

```
Getting the 1st key element: 80
['physics', 'math', 'chemistry']
Getting the 1st key: physics
```

In [61]:
```
#Another Solution
Sample_dict={'physics': 80, 'math': 90, 'chemistry': 86}

sample_list=list(Sample_dict.keys())
print("After converting Dictionary to List:",sample_list)
print("Getting the 1st key:",sample_list[0])
```

```
After converting Dictionary to List: ['physics', 'math', 'chemistry']
Getting the 1st key: physics
```

In [ ]:
```

```