

```
In [1]: print("LIST ")
list_1 = [12, 87, 65, 655, 90, 83]
list_2 = [12.09, 87.65, 65.07, 655.12, 90.24, 83.76]
list_3 = ["A", "B", "C", "D", "E", "F"]
list_4 = ["Sharmin", "Anaya", "Yumna", "Ridha"]
list_5 = [True, False, True, False]
list_6 = ["Sharmin", 40, True, 1.09]

print("LIST OR INTEGER\t\t\t=", list_1)
print("LIST OR FLOAT\t\t\t=", list_2)
print("LIST OR CHARACTER\t\t\t=", list_3)
print("LIST OR STRING\t\t\t=", list_4)
print("LIST OR BOOLEAN\t\t\t=", list_5)
print("LIST OR DIFFIERENT DATATYPE\t=", list_6)
```

```
LIST
LIST OR INTEGER           = [12, 87, 65, 655, 90, 83]
LIST OR FLOAT             = [12.09, 87.65, 65.07, 655.12, 90.24, 83.76]
LIST OR CHARACTER         = ['A', 'B', 'C', 'D', 'E', 'F']
LIST OR STRING            = ['Sharmin', 'Anaya', 'Yumna', 'Ridha']
LIST OR BOOLEAN           = [True, False, True, False]
LIST OR DIFFIERENT DATATYPE = ['Sharmin', 40, True, 1.09]
```

```
In [2]: print("LIST - USING CONSTRUCTOR, LENGTH, TYPE")

list_1 = list(("SHARMIN", "ANAYA", "TULI", "RIDHA"))
list_2 = ["SHARMIN", "ANAYA", "TULI", "RIDHA"]

print("LIST1 USING CONSTRUCTOR\t=", list_1)
print("LIST2 USING [] BRACKET\t=", list_2)
print("LENGTH OF LIST1\t\t\t=", len(list_1))
print("TYPE OF LIST1\t\t\t=", type(list_1))
```

```
LIST - USING CONSTRUCTOR, LENGTH, TYPE
LIST1 USING CONSTRUCTOR = ['SHARMIN', 'ANAYA', 'TULI', 'RIDHA']
LIST2 USING [] BRACKET  = ['SHARMIN', 'ANAYA', 'TULI', 'RIDHA']
LENGTH OF LIST1         = 4
TYPE OF LIST1           = <class 'list'>
```

```
In [3]: print("LIST - INDIVIDUALLY ACCESSING LIST ELEMENT ")
list_1 = ["Sharmin", "Anaya", "Yumna", "Ridha"]

print("LIST OR STRING\t\t=", list_1)
print("FIRST ELEMENT OF LIST\t=",list_1[0])
print("SECOND ELEMENT OF LIST\t=",list_1[1])
print("THIRD ELEMENT OF LIST\t=",list_1[2])
print("FOURTH ELEMENT OF LIST\t=",list_1[3])
#CAN GIVE OUT OF RANGE NUMBER IF WE GIVE VALUE OUT OF RANGE
```

```
LIST - INDIVIDUALLY ACCESSING LIST ELEMENT
LIST OR STRING      = ['Sharmin', 'Anaya', 'Yumna', 'Ridha']
FIRST ELEMENT OF LIST = Sharmin
SECOND ELEMENT OF LIST = Anaya
THIRD ELEMENT OF LIST = Yumna
FOURTH ELEMENT OF LIST = Ridha
```

```
In [4]: print("LIST - ACCESSING ELEMENT USING INDEX (SINGLE/RANGE)")

list_1 = ["MANGO", "APPLE", "BANANA", "WATERMELON", "PAPAYA", "MANGO", "LITCHI"]
print("LIST OR STRING\t\t\t=", list_1)

#INDEXING POSTIVE +NEGATIVE
print("(list_1[0]) ELEMENT OF LIST\t=", list_1[0])
print("(list_1[1]) ELEMENT OF LIST\t=", list_1[1])
print("(list_1[2]) ELEMENT OF LIST\t=", list_1[2])
print("(list_1[3]) ELEMENT OF LIST\t=", list_1[3])
print("(list_1[-1]) ELEMENT OF LIST\t=", list_1[-1])
print("(list_1[-3]) ELEMENT OF LIST\t=", list_1[-3])
print("(list_1[1:4]) ELEMENT OF LIST\t=", list_1[1:4])
print("(list_1[4:1]) ELEMENT OF LIST\t=", list_1[4:1])
print("(list_1[:5]) ELEMENT OF LIST\t=", list_1[:5])
print("(list_1[3:]) ELEMENT OF LIST\t=", list_1[3:])
print("(list_1[-5:-2]) ELEMENT OF LIST\t=", list_1[-5:-2])
print("(list_1[-1:-3]) ELEMENT OF LIST\t=", list_1[-1:-3])
print("(list_1[:]) ELEMENT OF LIST\t=", list_1[:])
```

```
LIST - ACCESSING ELEMENT USING INDEX (SINGLE/RANGE)
LIST OR STRING                = ['MANGO', 'APPLE', 'BANANA', 'WATERMELON',
'PAPAYA', 'MANGO', 'LITCHI']
(list_1[0]) ELEMENT OF LIST    = MANGO
(list_1[1]) ELEMENT OF LIST    = APPLE
(list_1[2]) ELEMENT OF LIST    = BANANA
(list_1[3]) ELEMENT OF LIST    = WATERMELON
(list_1[-1]) ELEMENT OF LIST   = LITCHI
(list_1[-3]) ELEMENT OF LIST   = PAPAYA
(list_1[1:4]) ELEMENT OF LIST  = ['APPLE', 'BANANA', 'WATERMELON']
(list_1[4:1]) ELEMENT OF LIST  = []
(list_1[:5]) ELEMENT OF LIST   = ['MANGO', 'APPLE', 'BANANA', 'WATERMELON',
'PAPAYA']
(list_1[3:]) ELEMENT OF LIST   = ['WATERMELON', 'PAPAYA', 'MANGO', 'LITCHI']
(list_1[-5:-2]) ELEMENT OF LIST = ['BANANA', 'WATERMELON', 'PAPAYA']
(list_1[-1:-3]) ELEMENT OF LIST = []
(list_1[:]) ELEMENT OF LIST    = ['MANGO', 'APPLE', 'BANANA', 'WATERMELON',
'PAPAYA', 'MANGO', 'LITCHI']
```

```

In [5]: print("LIST - CHECKING ELEMENT'S EXISTENCE")

list_1 = ["MANGO", "APPLE", "BANANA", "WATERMELON", "PAPAYA", "MANGO", "LITCHI"]
print("LIST OR FRUITS\t=", list_1)

if "PINEAPPLE" in list_1:
    print("\n\"PINEAPPLE\" is exist in list.")
else:
    print("\n\"PINEAPPLE\" is not exist in list.")

#IF IN
varA = "LITCHI"
if varA in list_1:
    print("\n\"", varA, "\"is exist in list.")
else:
    print("\n\"", varA, "\"is not exist in list.")

if "PINEAPPLE" not in list_1:
    print("\n\"PINEAPPLE\" is not exist in list.")
else:
    print("\n\"PINEAPPLE\" is exist in list.")

#IF NOT IN
varB = "LITCHI"
if varB not in list_1:
    print("\n\"", varB, "\"is not exist in list.")
else:
    print("\n\"", varB, "\"is exist in list.")

```

LIST - CHECKING ELEMENT'S EXISTENCE

LIST OR FRUITS = ['MANGO', 'APPLE', 'BANANA', 'WATERMELON', 'PAPAYA', 'MANGO', 'LITCHI']

"PINEAPPLE" is not exist in list.

" LITCHI "is exist in list.

"PINEAPPLE" is not exist in list.

" LITCHI "is exist in list.

```
In [6]: print("LIST - CHANGING ELEMENT")#all change the actual list

list_1 = ["MANGO", "APPLE", "BANANA", "WATERMELON", "PAPAYA", "MANGO", "LITCHI"]
print("LIST OF FRUITS BEFORE CHANGING\t=", list_1)

list_1[2] = "BERRY"#CHANGING SINGLE FRUIT
list_1[4] = "JACKFRUIT"
print("LIST OF FRUITS AFTER CHANGING\t=", list_1)

list_1[1:4] = ["STRAWBERRY", "POMEGRANET", "NASHPATI"]#REPLACING 3 FRUITS WITH .
print("LIST OF FRUITS AFTER CHANGING\t=", list_1)

list_1[5:6] = ["KIWI", "AVACADO", "APPLE"]#REPLACING LESS FRUITS WITH MORE FRUIT
print("LIST OF FRUITS AFTER CHANGING\t=", list_1)

list_1[2:6] = ["BLACKBERRY"]#REPLACING MORE FRUITS WITH LESS FRUITS
print("LIST OF FRUITS AFTER CHANGING\t=", list_1)
```

LIST - CHANGING ELEMENT

```
LIST OF FRUITS BEFORE CHANGING = ['MANGO', 'APPLE', 'BANANA', 'WATERMELON',
 'PAPAYA', 'MANGO', 'LITCHI']
LIST OF FRUITS AFTER CHANGING   = ['MANGO', 'APPLE', 'BERRY', 'WATERMELON',
 'JACKFRUIT', 'MANGO', 'LITCHI']
LIST OF FRUITS AFTER CHANGING   = ['MANGO', 'STRAWBERRY', 'POMEGRANET', 'NASH
PATI', 'JACKFRUIT', 'MANGO', 'LITCHI']
LIST OF FRUITS AFTER CHANGING   = ['MANGO', 'STRAWBERRY', 'POMEGRANET', 'NASH
PATI', 'JACKFRUIT', 'KIWI', 'AVACADO', 'APPLE', 'LITCHI']
LIST OF FRUITS AFTER CHANGING   = ['MANGO', 'STRAWBERRY', 'BLACKBERRY', 'AVAC
ADO', 'APPLE', 'LITCHI']
```

```
In [7]: print("LIST - ADDING ELEMENT (INSERT & APPEND)")#all effect change the actual

list_1 = ["MANGO", "APPLE", "BANANA", "WATERMELON", "PAPAYA", "LITCHI"]
print("LIST OF FRUITS BEFORE ADDING\t=", list_1)

list_1.insert(3, "GUAVA")# add fruit at specific position
print("LIST OF FRUITS AFTER ADDING\t=", list_1)

list_1.append("KIWI")# add fruit at last position
print("LIST OF FRUITS AFTER ADDING\t=", list_1)
```

LIST - ADDING ELEMENT (INSERT & APPEND)

```
LIST OF FRUITS BEFORE ADDING   = ['MANGO', 'APPLE', 'BANANA', 'WATERMELON',
 'PAPAYA', 'LITCHI']
LIST OF FRUITS AFTER ADDING     = ['MANGO', 'APPLE', 'BANANA', 'GUAVA', 'WATE
RMELON', 'PAPAYA', 'LITCHI']
LIST OF FRUITS AFTER ADDING     = ['MANGO', 'APPLE', 'BANANA', 'GUAVA', 'WATE
RMELON', 'PAPAYA', 'LITCHI', 'KIWI']
```

In [8]: `print("LIST - JOIN/ADD LIST WITH ANOTHER LIST/TUPLE ")`*#all change the actual L*

```
list_1 = ["MANGO", "APPLE", "BANANA", "WATERMELON", "PAPAYA", "LITCHI"]
list_2 = ["KIWI", "POMEGRANATE", "STRAWBERRY"]
tuple_1 = ("GUAVA", "PINEAPPLE", "AVACADO")
```

```
print("LIST 1 FRUITS\t=", list_1)
print("LIST 2 FRUITS\t=", list_2)
print("TUPLE 1 FRUITS\t=", tuple_1)
```

```
list_1.extend(list_2)
print("LIST1 FRUITS AFTER EXTENDING LIST2 =", list_1)
```

```
list_2.extend(list_1)
print("LIST2 FRUITS AFTER EXTENDING LIST1 =", list_2)
```

```
list_1.extend(tuple_1)#LIST CAN EXTEND TUPLE BUT TUPLE CAN NOT EXTEND
print("LIST1 FRUITS AFTER EXTENDING TUPLE 1 =", list_1)
```

#we can join list using + sign

```
list_3 = ["ROSE", "BELA", "LILY", "MARIGOLD"]
list_4 = ["JASMINE", "TUBEROSE", "HIBISCUS"]
```

```
list_5 = list_3 + list_4
print("LIST5 AFTER JOINING\t\t=", list_5)
```

#we can join list using append

```
list_6 = ["ROSE", "BELA", "LILY", "MARIGOLD"]
list_7 = ["JASMINE", "TUBEROSE", "HIBISCUS"]
```

```
for item in list_7:
    list_6.append(item)
print("LIST6 AFTER JOINING\t\t=", list_6)
```

LIST - JOIN/ADD LIST WITH ANOTHER LIST/TUPLE

LIST 1 FRUITS = ['MANGO', 'APPLE', 'BANANA', 'WATERMELON', 'PAPAYA', 'LITCHI']

LIST 2 FRUITS = ['KIWI', 'POMEGRANATE', 'STRAWBERRY']

TUPLE 1 FRUITS = ('GUAVA', 'PINEAPPLE', 'AVACADO')

LIST1 FRUITS AFTER EXTENDING LIST2 = ['MANGO', 'APPLE', 'BANANA', 'WATERMELON', 'PAPAYA', 'LITCHI', 'KIWI', 'POMEGRANATE', 'STRAWBERRY']

LIST2 FRUITS AFTER EXTENDING LIST1 = ['KIWI', 'POMEGRANATE', 'STRAWBERRY', 'MANGO', 'APPLE', 'BANANA', 'WATERMELON', 'PAPAYA', 'LITCHI', 'KIWI', 'POMEGRANATE', 'STRAWBERRY']

LIST1 FRUITS AFTER EXTENDING TUPLE 1 = ['MANGO', 'APPLE', 'BANANA', 'WATERMELON', 'PAPAYA', 'LITCHI', 'KIWI', 'POMEGRANATE', 'STRAWBERRY', 'GUAVA', 'PINEAPPLE', 'AVACADO']

LIST5 AFTER JOINING = ['ROSE', 'BELA', 'LILY', 'MARIGOLD', 'JASMINE', 'TUBEROSE', 'HIBISCUS']

LIST6 AFTER JOINING = ['ROSE', 'BELA', 'LILY', 'MARIGOLD', 'JASMINE', 'TUBEROSE', 'HIBISCUS']

```
In [9]: print("LIST - REMOVE, DELETE, CLEAR ")#all change the actual list

list_1 = ["MANGO", "APPLE", "BANANA", "WATERMELON", "PAPAYA", "LITCHI", 'KIWI',
print("LIST 1 FRUITS\t\t\t\t=", list_1)

list_1.remove("APPLE")
print("LIST1 FRUITS AFTER REMOVING (APPLE)\t=", list_1)

list_1.pop(3)# IT WILL POP SPECIFIC POSITION ELEMENT
print("LIST1 FRUITS AFTER POPPING (3rd ELEMENT)=", list_1)

list_1.pop()# IT WILL POP LAST ELEMENT
print("LIST1 FRUITS AFTER POPPING ()\t\t=", list_1)

list_1.clear()# IT WILL CLEAR THE ENTIRE LIST AND RETURN EMPTY LIST
print("LIST1 FRUITS AFTER CLEARING\t\t=", list_1)

list_2 = ["APPLE", "LITCHI", 'KIWI', 'POMEGRANATE', 'STRAWBERRY']
print("LIST2 FRUITS\t\t\t\t=", list_2)

del list_2[3]# # IT WILL DELETE SPECIFIC POSITION ELEMENT
print("LIST2 FRUITS AFTER DELETING(3rd ELEMENT)=", list_2)

del list_2 # IT DELETE THE ENTIRE LIST
print("LIST2 FRUITS AFTER DELETING THE ENTIR LIST=", list_2)
```

LIST - REMOVE, DELETE, CLEAR

```
LIST 1 FRUITS = ['MANGO', 'APPLE', 'BANANA', 'WATER
MELON', 'PAPAYA', 'LITCHI', 'KIWI', 'POMEGRANATE', 'STRAWBERRY']
LIST1 FRUITS AFTER REMOVING (APPLE) = ['MANGO', 'BANANA', 'WATERMELON',
'PAPAYA', 'LITCHI', 'KIWI', 'POMEGRANATE', 'STRAWBERRY']
LIST1 FRUITS AFTER POPPING (3rd ELEMENT)= ['MANGO', 'BANANA', 'WATERMELON',
'LITCHI', 'KIWI', 'POMEGRANATE', 'STRAWBERRY']
LIST1 FRUITS AFTER POPPING () = ['MANGO', 'BANANA', 'WATERMELON',
'LITCHI', 'KIWI', 'POMEGRANATE']
LIST1 FRUITS AFTER CLEARING = []
LIST2 FRUITS = ['APPLE', 'LITCHI', 'KIWI', 'POMEGR
ANATE', 'STRAWBERRY']
LIST2 FRUITS AFTER DELETING(3rd ELEMENT)= ['APPLE', 'LITCHI', 'KIWI', 'STRAWB
ERRY']
```

```
-----
NameError                                Traceback (most recent call last)
Cell In[9], line 25
    22 print("LIST2 FRUITS AFTER DELETING(3rd ELEMENT)=", list_2)
    24 del list_2 # IT DELETE THE ENTIRE LIST
--> 25 print("LIST2 FRUITS AFTER DELETING THE ENTIR LIST=", list_2)
```

NameError: name 'list_2' is not defined

```
In [10]: print("LIST - SHOWING ELEMENT WITH FOR-IN LOOP ")

list_1 = ["MANGO", "APPLE", "BANANA", "WATERMELON", "PAPAYA", "LITCHI", 'KIWI',
print("LIST 1 FRUITS\t=", list_1)

for item in list_1:#HERE ITEM WILL HOLD FRUIT'S NAME OF LIST_1
    print("ELEMENT = " + item)
```

```
LIST - SHOWING ELEMENT WITH FOR-IN LOOP
LIST 1 FRUITS  = ['MANGO', 'APPLE', 'BANANA', 'WATERMELON', 'PAPAYA', 'LITCH
I', 'KIWI', 'POMEGRANATE', 'STRAWBERRY']
ELEMENT = MANGO
ELEMENT = APPLE
ELEMENT = BANANA
ELEMENT = WATERMELON
ELEMENT = PAPAYA
ELEMENT = LITCHI
ELEMENT = KIWI
ELEMENT = POMEGRANATE
ELEMENT = STRAWBERRY
```

```
In [11]: print("LIST - SHOWING ELEMENT USING FOR-IN LOOP WITH RANGE ")

list_1 = ["MANGO", "APPLE", "BANANA", "WATERMELON", "PAPAYA", "LITCHI", 'KIWI',
print("LIST 1 FRUITS\t=", list_1)

for item in range(len(list_1)):# HERE ITEM WILL HOLD NUMBER, WHICH IS RANGE OF
    print("ELEMENT = " + list_1[item])

for i in range(6):
    print(i)
```

```
LIST - SHOWING ELEMENT USING FOR-IN LOOP WITH RANGE
LIST 1 FRUITS  = ['MANGO', 'APPLE', 'BANANA', 'WATERMELON', 'PAPAYA', 'LITCH
I', 'KIWI', 'POMEGRANATE', 'STRAWBERRY']
ELEMENT = MANGO
ELEMENT = APPLE
ELEMENT = BANANA
ELEMENT = WATERMELON
ELEMENT = PAPAYA
ELEMENT = LITCHI
ELEMENT = KIWI
ELEMENT = POMEGRANATE
ELEMENT = STRAWBERRY
0
1
2
3
4
5
```



```
In [12]: print("LIST - COPY ELEMENT INTO A NEW BLANK LIST (EXTEND & FOR-IN LOOP) ")

list_1 = ["MANGO", "APPLE", "BANANA", "WATERMELON", "PAPAYA", "LITCHI", 'KIWI',
print("LIST 1 FRUITS\t=", list_1)

#USING EXTEND
list_2 = []
list_2.extend(list_1)
print("LIST 2 FRUITS\t=", list_2)

#USING APPEND
list_3 = ["MANGO", "BERRY", "WATERMELON", "PAPAYA", "LITCHI", 'KIWI', 'POMEGRANA'
print("LIST 3 FRUITS\t=", list_3)
list_4 = []

for item in list_3:
    list_4.append(item)
print("LIST 4 FRUITS\t=", list_4)

#USING COPY
list_5 = ["ROSE", "BELA", "MARIGOLD", "LILY"]
list_6 = list_5.copy()
print("LIST 5 FRUITS\t=", list_5)
print("LIST 6 FRUITS\t=", list_6)
```

```
LIST - COPY ELEMENT INTO A NEW BLANK LIST (EXTEND & FOR-IN LOOP)
LIST 1 FRUITS    = ['MANGO', 'APPLE', 'BANANA', 'WATERMELON', 'PAPAYA', 'LITCH
I', 'KIWI', 'POMEGRANATE', 'STRAWBERRY']
LIST 2 FRUITS    = ['MANGO', 'APPLE', 'BANANA', 'WATERMELON', 'PAPAYA', 'LITCH
I', 'KIWI', 'POMEGRANATE', 'STRAWBERRY']
LIST 3 FRUITS    = ['MANGO', 'BERRY', 'WATERMELON', 'PAPAYA', 'LITCHI', 'KIW
I', 'POMEGRANATE', 'STRAWBERRY']
LIST 4 FRUITS    = ['MANGO', 'BERRY', 'WATERMELON', 'PAPAYA', 'LITCHI', 'KIW
I', 'POMEGRANATE', 'STRAWBERRY']
LIST 5 FRUITS    = ['ROSE', 'BELA', 'MARIGOLD', 'LILY']
LIST 6 FRUITS    = ['ROSE', 'BELA', 'MARIGOLD', 'LILY']
```

```
In [13]: print("LIST- APPENDING LIST ELEMENT AFTER CHECKING INTO A NEW BLANK LIST (FOR-IN LOOP)")

list_1 = ["MANGO", "APPLE", "BANANA", "WATERMELON", "PAPAYA", "LITCHI", 'KIWI', 'APPLE', 'STRAWBERRY']
print("LIST 1 FRUITS\t=", list_1)

varA, varB, varC = "MANGO", "APPLE", "JACKFRUIT"
list_2 = []
for item in list_1:
    if (varA in item) or (varB in item) or (varC in item):
        list_2.append(item)

print("LIST 2 FRUITS\t=", list_2)

list_3 = []
for item in list_1:
    if item == "CHERRY" or item == "APPLE":
        list_3.append(item)
print("LIST 3 FRUITS\t=", list_3)
```

LIST- APPENDING LIST ELEMENT AFTER CHECKING INTO A NEW BLANK LIST (FOR-IN LOOP)

LIST 1 FRUITS = ['MANGO', 'APPLE', 'BANANA', 'WATERMELON', 'PAPAYA', 'LITCHI', 'KIWI', 'APPLE', 'STRAWBERRY']

LIST 2 FRUITS = ['MANGO', 'APPLE', 'APPLE']

LIST 3 FRUITS = ['APPLE', 'APPLE']

```
In [14]: print("LIST- SORTING & REVERSE")

list_1 = ["MANGO", "APPLE", "BANANA", "WATERMELON", "PAPAYA", "LITCHI", 'KIWI',
print("LIST1 BEFORE SORTING\t\t=", list_1)
list_1.sort()
print("LIST1 AFTER SORTING (ASCENDING) =", list_1)
list_1.sort( reverse = True)
print("LIST1 AFTER SORTING (DESCENDING)=", list_1)
print("\n")

list_2 = ["MANGO", "APPLE", "BANANA", "WATERMELON", "apple", "pineapple", "cheri
print("LIST2 BEFORE SORTING\t\t=", list_2)
list_2.sort()
print("LIST1 AFTER SORTING (ASCENDING) =", list_2)
list_2.sort( reverse = True)
print("LIST2 AFTER SORTING (DESCENDING)=", list_2)
print("\n")

#REVERSE
list_3 = ["MANGO", "APPLE", "BANANA", "WATERMELON", "apple", "pineapple", "cheri
print("LIST3 BEFORE REVERSE\t\t=", list_3)
list_3.reverse()
print("LIST3 AFTER REVERSE\t\t=", list_3)
print("\n")

# upper lower sort
list_4 = ["MANGO", "APPLE", "BANANA", "WATERMELON", "apple", "pineapple", "cheri
print("LIST4 BEFORE SORTING\t\t=", list_4)
list_4.sort(key= str.lower)
print("LIST4 AFTER SORTING\t\t=", list_4)
print("\n")

list_5 = ["MANGO", "APPLE", "BANANA", "WATERMELON", "apple", "pineapple", "cheri
print("LIST5 BEFORE SORTING\t\t=", list_5)
list_5.sort(key= str.upper)
print("LIST5 AFTER SORTING\t\t=", list_5)
```

LIST- SORTING & REVERSE

```
LIST1 BEFORE SORTING          = ['MANGO', 'APPLE', 'BANANA', 'WATERMELON',  
'PAPAYA', 'LITCHI', 'KIWI', 'APPLE', 'STRAWBERRY']  
LIST1 AFTER SORTING (ASCENDING) = ['APPLE', 'APPLE', 'BANANA', 'KIWI', 'LITCH  
I', 'MANGO', 'PAPAYA', 'STRAWBERRY', 'WATERMELON']  
LIST1 AFTER SORTING (DESCENDING)= ['WATERMELON', 'STRAWBERRY', 'PAPAYA', 'MAN  
GO', 'LITCHI', 'KIWI', 'BANANA', 'APPLE', 'APPLE']
```

```
LIST2 BEFORE SORTING          = ['MANGO', 'APPLE', 'BANANA', 'WATERMELON',  
'apple', 'pineapple', 'cherry', 'kiwi']  
LIST1 AFTER SORTING (ASCENDING) = ['APPLE', 'BANANA', 'MANGO', 'WATERMELON',  
'apple', 'cherry', 'kiwi', 'pineapple']  
LIST2 AFTER SORTING (DESCENDING)= ['pineapple', 'kiwi', 'cherry', 'apple', 'W  
ATERMELON', 'MANGO', 'BANANA', 'APPLE']
```

```
LIST3 BEFORE REVERSE          = ['MANGO', 'APPLE', 'BANANA', 'WATERMELON',  
'apple', 'pineapple', 'cherry', 'kiwi']  
LIST3 AFTER REVERSE           = ['kiwi', 'cherry', 'pineapple', 'apple', 'W  
ATERMELON', 'BANANA', 'APPLE', 'MANGO']
```

```
LIST4 BEFORE SORTING          = ['MANGO', 'APPLE', 'BANANA', 'WATERMELON',  
'apple', 'pineapple', 'cherry', 'kiwi']  
LIST4 AFTER SORTING           = ['APPLE', 'apple', 'BANANA', 'cherry', 'kiw  
i', 'MANGO', 'pineapple', 'WATERMELON']
```

```
LIST5 BEFORE SORTING          = ['MANGO', 'APPLE', 'BANANA', 'WATERMELON',  
'apple', 'pineapple', 'cherry', 'kiwi']  
LIST5 AFTER SORTING           = ['APPLE', 'apple', 'BANANA', 'cherry', 'kiw  
i', 'MANGO', 'pineapple', 'WATERMELON']
```