

Python Code

```
1 """
2 xlist=["apple", "banana", "cherry"]
3 1. ["apple", "banana", "cherry", "orange"]
4 2. ["apple", "mango", "banana", "cherry", "orange"]
5 3. ["apple", "mango", "banana", "cherry", "orange", "kiwi", "grape"]
6 """
7 mainList=["apple", "banana", "cherry"]
8 print(f"The main list is: {mainList}")
9 xlist=[(mainList.append("orange"),mainList.copy()),
10      (mainList.insert(1,"mango"),mainList.copy()),
11      (mainList.extend(["kiwi","grape"]),mainList.copy())]
12
13 for i,x in enumerate(xlist):
14     print(f"{i+1}. {x[1]}")
15
16 print("====")
17 #####
18 """
19 [10,20,30,40,50]
20 1. [10,20,300,40,50]
21 2. [10,200,3000,400,50]
22 """
23 mainList=[10,20,30,40,50]
24 print(f"The main list is: {mainList}")
25 xlist=[(mainList.__setitem__(2,300),mainList.copy())[1],
26        (mainList.__setitem__(2,3000),mainList.__setitem__(1,200),mainList.__setitem__(3,400),mainList.copy())
27 [3])
28
29 for i,x in enumerate(xlist):
30     print(f"{i+1}. {x}")
31
32 print("====")
33 #####
34 """
35 [1,2,3]
36 1. [1,100,2,3]
37 2. [1,100,2,999]
38 """
39 mainList=[1,2,3]
40 print(f"The main list is: {mainList}")
41 xlist=[(mainList.insert(1,100),mainList.copy()),
42        (mainList.extend([999]),mainList.copy())]
43
44 for i,x in enumerate(xlist):
45     print(f"{i+1}. {x[1]}")
46
47 print("====")
48 #####
49 """
50 [10,20,30,40,50]
51 1. [10,20,30,40,50,60]
52 2. [5,10,20,30,40,50,60]
53 3. [5,10,20,30,40,50,60,70,80,90]
54 """
```

```

54 mainList=[10,20,30,40,50]
55 print(f"The main list is: {mainList}")
56 xlist=[(mainList.append(60),mainList.copy()),
57         (mainList.insert(0,5),mainList.copy()),
58         (mainList.extend([70,80,90]),mainList.copy())]
59
60 for i,x in enumerate(xlist):
61     print(f"{i+1}. {x[1]}")
62
63 print("=====")
64 #####
65 """
66
67 [42,3.14,"Hello",True]
68 1. [2.718,3.14,"Hello",True]
69 2. [2.718,3.14,"Hello",True,1000]
70 3. [2.718,False,3.14,"Hello",True,1000]
71 4. [5,3.14,"Hello",True,1000]
72 """
73
74 mainList=[42,3.14,"Hello",True]
75 print(f"The main list is: {mainList}")
76 xlist=[(mainList.__setitem__(0,2.718),mainList.copy()),
77         (mainList.append(1000),mainList.copy()),
78         (mainList.insert(1,False),mainList.copy()),
79         (mainList.__setitem__(0,5),mainList.pop(1),mainList.copy())[1:])
80
81 for i,x in enumerate(xlist):
82     print(f"{i+1}. {x[1]}")
83
84 print("=====")
85 #####
86 """
87 [ "Cat", "Dog", "Lion", "Tiger", "Rabbit", "Monkey"]
88 1) ["lion"]
89 2) ["Monkey", "Rabbit"]
90 3) ["Tiger", "Lion", "Dog"]
91 4) ["Cat", "Tiger"]
92 5) ["Tiger", "Cat"]
93 6) ["Monkey", "Lion"]
94 7) ["Rabbit", "Lion", "Cat"]
95 8) ["Monkey", "Rabbit", "Tiger", "Lion", "Dog", "Cat"]
96 """
97
98 mainList=["Cat", "Dog", "Lion", "Tiger", "Rabbit", "Monkey"]
99 print(f"The main list is: {mainList}")
100 copy_mainList=mainList.copy()
101 xlist=[(mainList.clear(),mainList.append(copy_mainList[2].lower()),mainList.copy())[1:],
102         (mainList.clear(),mainList.extend(copy_mainList[:-3:-1]),mainList.copy())[1:],
103         (mainList.clear(),mainList.extend(copy_mainList[-3:0:-1]),mainList.copy())[1:],
104         (mainList.clear(),mainList.extend(copy_mainList[:-2:3]),mainList.copy())[1:],
105         (mainList.reverse(),mainList.copy()),
106         (mainList.clear(),mainList.extend(copy_mainList[::-3]),mainList.copy())[1:],
107         (mainList.__setitem__(0,copy_mainList[-2]),mainList.extend([copy_mainList[0]]),mainList.copy())[1:],
108         (copy_mainList.reverse(),copy_mainList.copy())
109     ]
110
111 for i,x in enumerate(xlist):
112     print(f"{i+1}. {x[1]}")

```

```

111
112 print("====")
113 #####
114 """
115 l1=[50, "apple", True, "car", 40.5]
116 1. Find the length of l1.
117 2. Replace 'True' with 'False'.
118 3. [50, "Kiwi", "Boat", 20, "car", 40.5]
119 4. [5000, "Kiwi", "Boat", 20, "car", 40.5]
120 5. ["Kiwi", "Boat", 20, "car", 40.5] (remove)
121 6. ["Kiwi", 20, "car", 40.5] (pop)
122 7. ["Kiwi", 20, "car"] (del)
123 8. ["Kiwi", 20, "car", 100]
124 9. ["Banana", "Kiwi", 20, "car", 100]
125 10. ["Banana", "Kiwi", 20, 30.5, "car", 100]
126 11. [] (Empty list)
127 """
128 l1 = [50, "apple", True, "car", 40.5]
129 print(f"The main list is: {l1}")
130 xlist = [
131     (None, len(l1)),
132     (l1.__setitem__(2, False), l1.copy()),
133     (l1.__setitem__(slice(1, 3), ["Kiwi", "Boat", 20]), l1.copy()),
134     (l1.__setitem__(0, 5000), l1.copy()),
135     (l1.remove(5000), l1.copy()),
136     (l1.pop(1), l1.copy()),
137     (l1.__delitem__(-1), l1.copy()),
138     (l1.append(100), l1.copy()),
139     (l1.insert(0, "Banana"), l1.copy()),
140     (l1.insert(3, 30.5), l1.copy()),
141     (l1.clear(), l1.copy())
142 ]
143
144 for i, x in enumerate(xlist):
145     print(f"{i+1}. {x[1]}")
146 print("====")
147 #####
148 """
149 l2 = [50, -1, 2, 100, -6, -3, 67, 79, -55]
150 1. Reverse
151 2. Ascending
152 3. Descending
153 """
154
155 l1=[50, -1, 2, 100, -6, -3, 67, 79, -55]
156 print(f"The main list is: {l1}")
157 xlist=[
158     (l1.reverse(),l1.copy()),
159     (l1.sort(),l1.copy()),
160     (l1.sort(reverse=True),l1.copy())]
161
162 for i,x in enumerate(xlist):
163     print(f"{i+1}. {x[1]}")
164
165 print("====")
166 #####

```

```
PS C:\Internship\Kakunje\day3> python task.py
```

```
The main list is: ['apple', 'banana', 'cherry']
```

1. ['apple', 'banana', 'cherry', 'orange']
 2. ['apple', 'mango', 'banana', 'cherry', 'orange']
 3. ['apple', 'mango', 'banana', 'cherry', 'orange', 'kiwi', 'grape']
-

```
The main list is: [10, 20, 30, 40, 50]
```

1. [10, 20, 300, 40, 50]
 2. [10, 200, 3000, 400, 50]
-

```
The main list is: [1, 2, 3]
```

1. [1, 100, 2, 3]
 2. [1, 100, 2, 3, 999]
-

```
The main list is: [10, 20, 30, 40, 50]
```

1. [10, 20, 30, 40, 50, 60]
 2. [5, 10, 20, 30, 40, 50, 60]
 3. [5, 10, 20, 30, 40, 50, 60, 70, 80, 90]
-

```
The main list is: [42, 3.14, 'Hello', True]
```

1. [2.718, 3.14, "Hello", True]
 2. [2.718, 3.14, "Hello", True, 1000]
 3. [2.718, False, 3.14, 'Hello', True, 1000]
 4. [5, 3.14, 'Hello', True, 1000]
-

```
The main list is: ['Cat', 'Dog', 'Lion', 'Tiger', 'Rabbit', 'Monkey']
```

1. ['lion']
 2. ['Monkey', 'Rabbit']
 3. ['Tiger', 'Lion', 'Dog']
 4. ['Cat', 'Tiger']
 5. ['Tiger', 'Cat']
 6. ['Monkey', 'Lion']
 7. ['Rabbit', 'Lion', 'Cat']
 8. ['Monkey', 'Rabbit', 'Tiger', 'Lion', 'Dog', 'Cat']
-

```
The main list is: [50, 'apple', True, 'car', 40.5]
```

1. 5
 2. [50, 'apple', False, 'car', 40.5]
 3. [50, 'Kiwi', 'Boat', 20, 'car', 40.5]
 4. [5000, 'Kiwi', 'Boat', 20, 'car', 40.5]
 5. ['Kiwi', 'Boat', 20, 'car', 40.5]
 6. ['Kiwi', 20, 'car', 40.5]
 7. ['Kiwi', 20, 'car']
 8. ['Kiwi', 20, 'car', 100]
 9. ['Banana', 'Kiwi', 20, 'car', 100]
 10. ['Banana', 'Kiwi', 20, 30.5, 'car', 100]
 11. []
-

```
The main list is: [50, -1, 2, 100, -6, -3, 67, 79, -55]
```

1. [-55, 79, 67, -3, -6, 100, 2, -1, 50]
 2. [-55, -6, -3, -1, 2, 50, 67, 79, 100]
 3. [100, 79, 67, 50, 2, -1, -3, -6, -55]
-

```
PS C:\Internship\Kakunje\day3> python task.py
```

```
The main list is: ['apple', 'banana', 'cherry']
```

1. ['apple', 'banana', 'cherry', 'orange']
 2. ['apple', 'mango', 'banana', 'cherry', 'orange']
 3. ['apple', 'mango', 'banana', 'cherry', 'orange', 'kiwi', 'grape']
-

```
The main list is: [10, 20, 30, 40, 50]
```

1. [10, 20, 300, 40, 50]
 2. [10, 200, 3000, 400, 50]
-

```
The main list is: [1, 2, 3]
```

1. [1, 100, 2, 3]
 2. [1, 100, 2, 3, 999]
-

```
The main list is: [10, 20, 30, 40, 50]
```

1. [10, 20, 30, 40, 50, 60]
 2. [5, 10, 20, 30, 40, 50, 60]
 3. [5, 10, 20, 30, 40, 50, 60, 70, 80, 90]
-

```
The main list is: [42, 3.14, 'Hello', True]
```

1. [2.718, 3.14, "Hello", True]
 2. [2.718, 3.14, "Hello", True, 1000]
 3. [2.718, False, 3.14, 'Hello', True, 1000]
 4. [5, 3.14, 'Hello', True, 1000]
-

```
The main list is: ['Cat', 'Dog', 'Lion', 'Tiger', 'Rabbit', 'Monkey']
```

1. ['lion']
 2. ['Monkey', 'Rabbit']
 3. ['Tiger', 'Lion', 'Dog']
 4. ['Cat', 'Tiger']
 5. ['Tiger', 'Cat']
 6. ['Monkey', 'Lion']
 7. ['Rabbit', 'Lion', 'Cat']
 8. ['Monkey', 'Rabbit', 'Tiger', 'Lion', 'Dog', 'Cat']
-

```
The main list is: [50, 'apple', True, 'car', 40.5]
```

1. 5
 2. [50, 'apple', False, 'car', 40.5]
 3. [50, 'Kiwi', 'Boat', 20, 'car', 40.5]
 4. [5000, 'Kiwi', 'Boat', 20, 'car', 40.5]
 5. ['Kiwi', 'Boat', 20, 'car', 40.5]
 6. ['Kiwi', 20, 'car', 40.5]
 7. ['Kiwi', 20, 'car']
 8. ['Kiwi', 20, 'car', 100]
 9. ['Banana', 'Kiwi', 20, 'car', 100]
 10. ['Banana', 'Kiwi', 20, 30.5, 'car', 100]
 11. []
-

```
The main list is: [50, -1, 2, 100, -6, -3, 67, 79, -55]
```

1. [-55, 79, 67, -3, -6, 100, 2, -1, 50]
 2. [-55, -6, -3, -1, 2, 50, 67, 79, 100]
 3. [100, 79, 67, 50, 2, -1, -3, -6, -55]
-