

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  """
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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 mainList=[42,3.14,"Hello",True]
74 print(f"The main list is: {mainList}")
75 xlist=[(mainList.__setitem__(0,2.718),mainList.copy()),
76         (mainList.append(1000),mainList.copy()),
77         (mainList.insert(1,False),mainList.copy()),
78         (mainList.__setitem__(0,5),mainList.pop(1),mainList.copy())[1:])]
79
80 for i,x in enumerate(xlist):
81     print(f"{i+1}. {x[1]}")
82
83 print("=====")
84 #####
85 ""
86 ["Cat", "Dog", "Lion", "Tiger", "Rabbit", "Monkey"]
87 1) ["lion"]
88 2) ["Monkey", "Rabbit"]
89 3) ["Tiger", "Lion", "Dog"]
90 4) ["Cat", "Tiger"]
91 5) ["Tiger", "Cat"]
92 6) ["Monkey", "Lion"]
93 7) ["Rabbit", "Lion", "Cat"]
94 8) ["Monkey", "Rabbit", "Tiger", "Lion", "Dog", "Cat"]
95 ""
96 mainList=["Cat", "Dog", "Lion", "Tiger", "Rabbit", "Monkey"]
97 print(f"The main list is: {mainList}")
98 copy_mainList=mainList.copy()
99 xlist=[(mainList.clear(),mainList.append(copy_mainList[2].lower()),mainList.copy())[1:],
100         (mainList.clear(),mainList.extend(copy_mainList[:-3:-1]),mainList.copy())[1:],
101         (mainList.clear(),mainList.extend(copy_mainList[-3:0:-1]),mainList.copy())[1:],
102         (mainList.clear(),mainList.extend(copy_mainList[:-2:3]),mainList.copy())[1:],
103         (mainList.reverse(),mainList.copy()),
104         (mainList.clear(),mainList.extend(copy_mainList[::-3]),mainList.copy())[1:],
105         (mainList.__setitem__(0,copy_mainList[-2]),mainList.extend([copy_mainList[0]]),mainList.copy())[1:],
106         (copy_mainList.reverse(),copy_mainList.copy())
107     ]
108
109 for i,x in enumerate(xlist):
110     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]
=====
```