

#Exercises 7

#Display Array Items

```
import array
```

```
arr = array.array('i', [2, 18, 14])
```

```
for element in arr:  
    print(element)
```

#Append a new item

```
arr = array.array('i', [1, 2, 6, 8, 9])
```

```
print("Original array:", arr)
```

```
arr.append(11)
```

```
print("Append 11 at the end of the array:")  
print("New array:", arr)
```

#Reverse the order

```
arr = array.array('i', [2, 14, 18, 5, 23, 21,])
```

```
print("Original array:", arr)
```

```
arr.reverse()
```

```
print("Reverse the order of the items:")  
print(arr)
```

#Check for Duplicate Elements

```
def has_duplicates(arr):  
    return len(set(arr)) < len(arr)
```

```
arr1 = [1, 2, 3, 4, 5]  
arr2 = [1, 2, 3, 3, 4, 5]  
arr3 = [1, 1, 2, 2, 3, 3]
```

```
print(has_duplicates(arr1))  
print(has_duplicates(arr2))  
print(has_duplicates(arr3))
```

#Find the First Duplicate Element

```
def first_duplicate(arr):
    seen = set()
    for element in arr:
        if element in seen:
            return element
        seen.add(element)
    return -1
```

```
arr4 = [1, 2, 3, 4, 4, 5]
arr5 = [1, 2, 3, 4, 5]
arr6 = [5, 4, 3, 1, 1]
print(first_duplicate(arr4))
print(first_duplicate(arr5))
print(first_duplicate(arr6))
```

```
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2
3 #Display Array Items
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5 import array
6
7 arr = array.array('i', [2, 18, 14])
8
9 for element in arr:
10     print(element)
11
12
13 #Append a new item
14 arr = array.array('i', [1, 2, 6, 8, 9])
15
16 print("Original array:", arr)
17
18 arr.append(11)
19
20 print("Append 11 at the end of the array:")
21 print("New array:", arr)
22
23 #Reverse the order
24
25 arr = array.array('i', [2, 14, 18, 5, 23, 21])
26
27 print("Original array:", arr)
28
29 arr.reverse()
30
31 print("Reverse the order of the items:")
32 print(arr)
33
34 #Check for Duplicate Elements
35
36 def has_duplicates(arr):
37     return len(set(arr)) < len(arr)
38
39 arr1 = [1, 2, 3, 4, 5]
40 arr2 = [1, 2, 3, 3, 4, 5]
41 arr3 = [1, 1, 2, 2, 3, 3]
42
43 print(has_duplicates(arr1))
44 print(has_duplicates(arr2))
45 print(has_duplicates(arr3))
46
47 #Find the First Duplicate Element
48
49 def first_duplicate(arr):
50     seen = set()
51     for element in arr:
52         if element in seen:
53             return element
54         seen.add(element)
55     return -1
56
57 arr4 = [1, 2, 3, 4, 4, 5]
58 arr5 = [1, 2, 3, 4, 5]
59 arr6 = [5, 4, 3, 1, 1]
60 print(first_duplicate(arr4))
61 print(first_duplicate(arr5))
62 print(first_duplicate(arr6))
```

2
18
14
Original array: array('i', [1, 2, 6, 8, 9])
Append 11 at the end of the array:
New array: array('i', [1, 2, 6, 8, 9, 11])
Original array: array('i', [2, 14, 18, 5, 23, 21])
Reverse the order of the items:
array('i', [21, 23, 5, 18, 14, 2])
False
True
True
4
-1
1
>