

Find Maximum Manually Using Loop

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# □ Find Maximum Element Using a Loop
# -----

numbers = [10, 25, 7, 89, 42]

# Start with smallest possible number
max_num = float('-inf')

for num in numbers:
    if num > max_num:
        max_num = num

print("□ Maximum number is:", max_num)

# Time Complexity: O(n)

□ Maximum number is: 89
```

Swap Elements in an Array/List in Python

```
# □ Swap Two Elements in a List (Array)

arr = [10, 20, 30, 40, 50]

print("Before swapping:", arr)

# Swap index 1 and 3 (i.e., 20 and 40)
arr[1], arr[3] = arr[3], arr[1]

print("After swapping index 1 and 3:", arr)

# Time Complexity: O(1)

Before swapping: [10, 20, 30, 40, 50]
After swapping index 1 and 3: [10, 40, 30, 20, 50]
```