

Exercises

1. Write a Python program to sum all the items in a list.
2. Write a Python program to get the largest number from a list.
3. Write a Python program to remove duplicates from a list.
4. Write a Python program to find the index of a given element in a list.
5. Write a Python program to merge two lists into a single list.
6. Write a Python program to sort a list in ascending order.
7. Write a Python program to reverse a list.
8. Write a Python program to find the second largest number in a list.
9. Write a Python program to count the number of occurrences of a given element in a list.
10. Write a Python program to remove the first occurrence of a given element in a list.

Exercises and solution

1. Sum all items in a list:

```
my_list = [1, 2, 3, 4, 5]
sum = 0

for num in my_list:
    sum += num

print("The sum of the items in the list is:", sum)
```

2. Get the largest number from a list:

```
my_list = [1, 2, 3, 4, 5]
largest = my_list[0]

for num in my_list:
    if num > largest:
        largest = num

print("The largest number in the list is:", largest)
```

3. Remove duplicates from a list:

```
my_list = [1, 2, 3, 3, 4, 4, 5]
new_list = []

for num in my_list:
    if num not in new_list:
        new_list.append(num)

print("The list with duplicates removed is:", new_list)
```

4. Find the index of a given element in a list:

```
my_list = [1, 2, 3, 4, 5]
element = 4

if element in my_list:
    index = my_list.index(element)
    print("The index of", element, "is:", index)
else:
    print("Element not found in list.")
```

5. Merge two lists into a single list:

```
list1 = [1, 2, 3]
list2 = [4, 5, 6]

new_list = list1 + list2

print("The merged list is:", new_list)
```

6. Sort a list in ascending order:

```
my_list = [3, 1, 4, 1, 5, 9, 2, 6, 5, 3, 5]
my_list.sort()

print("The sorted list is:", my_list)
```

7. Reverse a list:

```
my_list = [1, 2, 3, 4, 5]
my_list.reverse()

print("The reversed list is:", my_list)
```

8. Find the second largest number in a list:

```
my_list = [1, 2, 3, 4, 5]
largest = second_largest = float('-inf')

for num in my_list:
    if num > largest:
        second_largest = largest
        largest = num
    elif num > second_largest:
        second_largest = num

print("The second largest number in the list is:", second_largest)
```

9. Count the number of occurrences of a given element in a list:

```
my_list = [1, 2, 3, 4, 5, 4, 3, 2, 1, 1]
```

```
element = 1
```

```
count = my_list.count(element)
```

```
print("The number of occurrences of", element, "in the list is:", count)
```

10. Remove the first occurrence of a given element in a list:

```
my_list = [1, 2, 3, 4, 5, 4, 3, 2, 1, 1]
```

```
element = 2
```

```
if element in my_list:
```

```
    my_list.remove(element)
```

```
    print("The first occurrence of", element, "has been removed from the  
list.")
```

```
else:
```

```
    print("Element not found in list.")
```