Python Exercise on Lists and Tuples

Problem 1: List Manipulation

Problem Statement: Write a Python program that takes a list of numbers as input and performs the following operations:

1. Remove duplicates from the list.
2. Sort the list in ascending order.
3. Reverse the sorted list.
4. Find the second largest number in the list.
5. Find the sum of all elements in the list.

Input Format: A list of integers separated by space.

Output Format:

- The modified list after removing duplicates and sorting.
- The reversed sorted list.
- The second largest number.
- The sum of the list elements.

Example Input:

```
10 20 20 30 40 10 50
```

Example Output:

```
[10, 20, 30, 40, 50]
[50, 40, 30, 20, 10]
40
150
```

Problem 2: Tuple Operations

Problem Statement: Write a Python program that:

1. Takes a tuple of numbers as input.
2. Finds the minimum and maximum value in the tuple.
3. Converts the tuple into a list and adds a new element to it.
4. Converts the list back into a tuple and prints the final tuple.

Input Format: A tuple of integers separated by space.

Output Format:

- The minimum and maximum values.
- The modified tuple after adding an element.

Example Input:

```
(5, 12, 7, 18, 3)
```

Example Output:

```
Minimum: 3, Maximum: 18
(5, 12, 7, 18, 3, 25)
```

Problem 3: Basic List Operations

Problem Statement: Write a Python program that:

1. Takes a list of numbers as input.
2. Finds the largest and smallest numbers in the list.
3. Counts the occurrence of a user-given number in the list.

Input Format: A list of integers separated by space. A single integer to count occurrences.

Output Format:

- The largest and smallest numbers.
- The count of the given number.

Example Input:

```
10 20 30 40 50 20 10
20
```

Example Output:

```
Largest: 50, Smallest: 10
Count of 20: 2
```

Problem 4: List and Tuple Conversion

Problem Statement: Write a Python program that:

1. Takes a list of numbers as input.
2. Converts the list into a tuple.

3. Prints both the list and tuple.

Input Format: A list of integers separated by space.

Output Format:

- The list of numbers.
- The tuple of numbers.

Example Input:

```
5 10 15 20 25
```

Example Output:

```
[5, 10, 15, 20, 25]
(5, 10, 15, 20, 25)
```