**Q1. What is the syntax for adding an element to a list in Python?**

**Ans:** In Python, you can add an element to a list using the append() method or the insert() method.

Syntax Using append()

list\_name.append(element)

Syntax Using insert()

list\_name.insert(index, element)

**Q2. What is the difference between remove() and pop() functions in Python?**

Ans: The remove() and pop() methods in Python are used to remove elements from a list, but they work in different ways and have distinct behaviours:

Remove() :- Removes the first occurrence of a specified value from the list. It does not return anything. Raises an error if the value is not found.

Syntax:- list.remove(value)

Pop(): Removes and returns an element at a specified index. If no index is specified, it removes and returns the last element.Removes by index and returns the removed element.Raises an error if the index is out of range.

**Syntax:** list.pop(index)

**Q3. Write a Python code to sort a list in descending order.**

Ans:- Python code to sort a list in descending order:-

my\_list = [5, 2, 9, 1, 5, 6]

my\_list.sort(reverse=True) print(my\_list)

# Output: [9, 6, 5, 5, 2, 1]

**Q4. Write a Python code to count the number of occurrences of an element in a list.**

Ans:- Python code to count the number of occurrences of an element in a list:

my\_list = [1, 2, 3, 2, 4, 2, 5]

element\_to\_count = 2

count = my\_list.count(element\_to\_count)

print(f"The element {element\_to\_count} occurs {count} times in the list.")

# Output: The element 2 occurs 3 times in the list.

Q5. Write a Python code to reverse a list.

Ans: We can reverse a list in Python using the reverse() method or by using slicing. Here’s how to do both:

### **Using reverse()**

The reverse() method reverses the list in place.

my\_list = [1, 2, 3, 4, 5]

my\_list.reverse()

print(my\_list)

# Output: [5, 4, 3, 2, 1]

### **Using Slicing**

You can also reverse a list using slicing.

my\_list = [1, 2, 3, 4, 5]

reversed\_list = my\_list[::-1]

print(reversed\_list)

# Output: [5, 4, 3, 2, 1]