**1.6 MAXIMUM ELEMENT IN SORTED ARRAY**

**AIM**:

To sort a list of integers efficiently and return the maximum element from the sorted list, while handling edge cases properly.

**ALGORITHM:**

1. If the list is empty, return None or print a message.

2. Sort the list using an efficient algorithm (O(n log n)).

3. Return the last element (which is the maximum).

**PROGRAM:**

A screenshot of a computer

AI-generated content may be incorrect.

Input:

nums = [0, 1, 2, 5]

Output:

A screenshot of a computer

AI-generated content may be incorrect.

**RESULT:**

Thus the program is successfully executed, and the output is verified.

**PERFORMANCE ANALYSIS:**

* Sorting → O(n log n)

• Accessing last element → O(1)

• Total: O(n log n)

• Space: O(1) (in-place sort) or O(n) (depending on sorting algorithm).