**2.1** Write a program to perform the following

An empty list

A list with one element

A list with all identical elements

A list with negative numbers

**AIM**

To write a program that sorts a list containing negative numbers in ascending order.

**ALGORITHM**

1. Start the program.

2. Define a function sort\_list(arr) that uses Python’s built-in sorted().

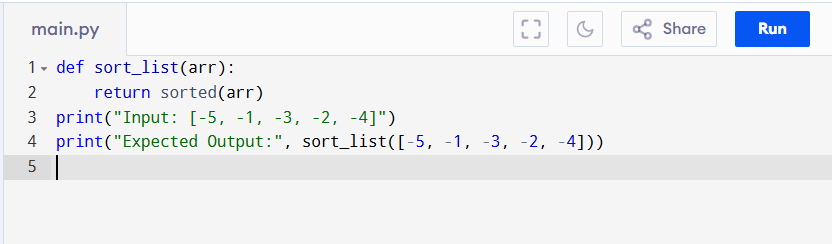
3. Pass the list [-5, -1, -3, -2, -4] to the function.

4. The function returns the sorted list.

5. Print the result.

6. End the program.

**PROGRAM**



Input:

[-5, -1, -3, -2, -4]

Output:

A screenshot of a computer program

AI-generated content may be incorrect.

**RESULT:**

Thus the program that sorts a list containing negative numbers in ascending order is successfully executed and the output is verified.

**PERFORMANCE ANALYSIS:**

Time Complexity:

* Best Case: O(n) (if already sorted).
* Average & Worst Case: O(n log n).

Space Complexity:

* O(n), due to Timsort’s auxiliary storage.