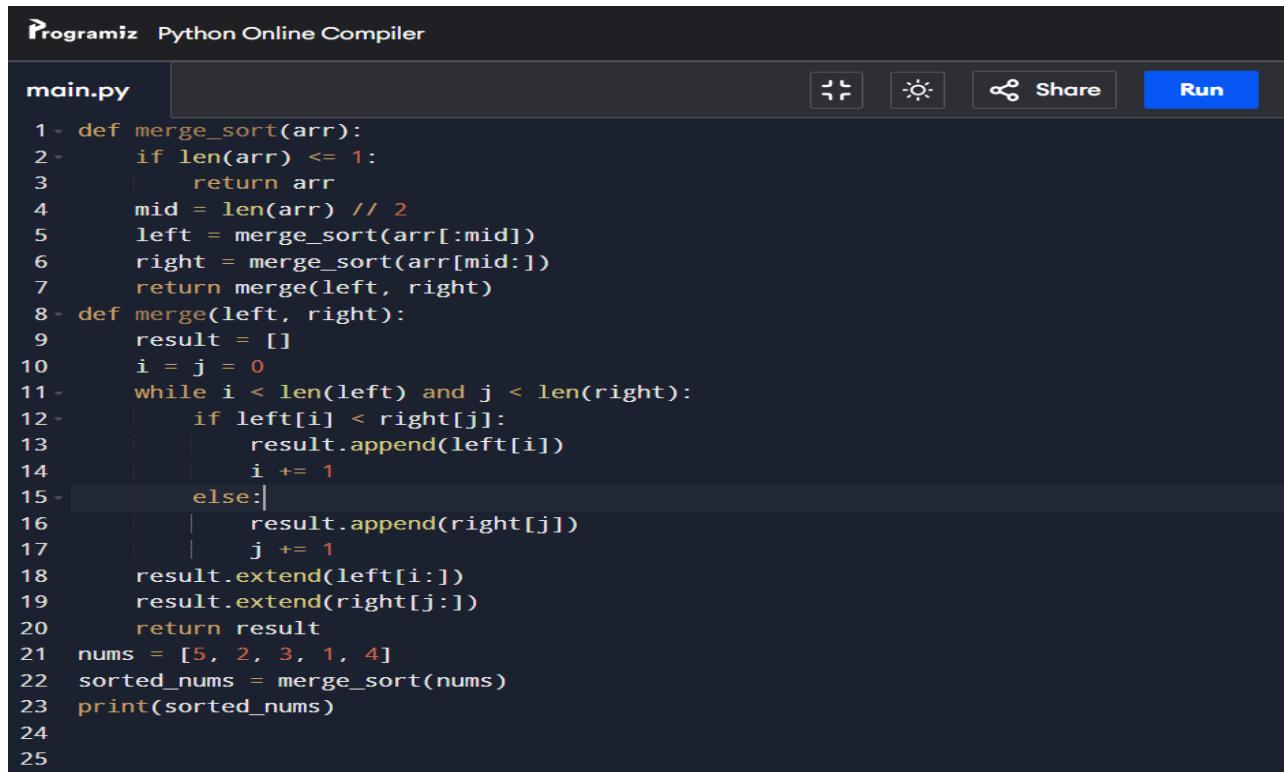


EXPERIMENT-10

TO FIND SORTED ARRAY USING ANY BUILT_IN FUNCTION

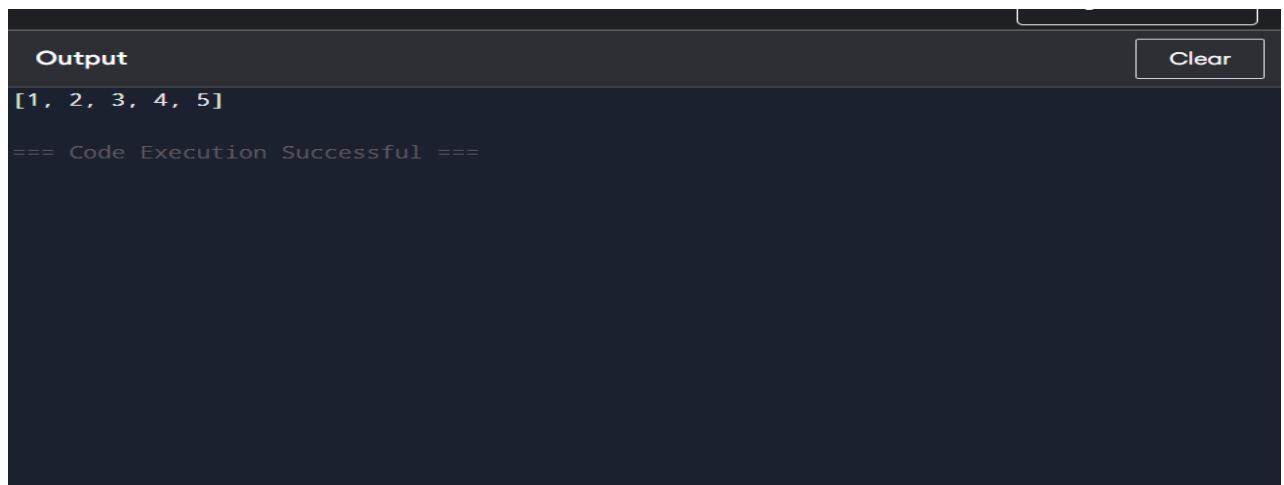
PROGRAM:



The screenshot shows the Programiz Python Online Compiler interface. The code editor window contains the following Python script named `main.py`:

```
1 def merge_sort(arr):
2     if len(arr) <= 1:
3         return arr
4     mid = len(arr) // 2
5     left = merge_sort(arr[:mid])
6     right = merge_sort(arr[mid:])
7     return merge(left, right)
8 def merge(left, right):
9     result = []
10    i = j = 0
11    while i < len(left) and j < len(right):
12        if left[i] < right[j]:
13            result.append(left[i])
14            i += 1
15        else:
16            result.append(right[j])
17            j += 1
18    result.extend(left[i:])
19    result.extend(right[j:])
20    return result
21 nums = [5, 2, 3, 1, 4]
22 sorted_nums = merge_sort(nums)
23 print(sorted_nums)
24
25
```

OUTPUT:



The screenshot shows the output window of the Programiz Python Online Compiler. It displays the output of the `print(sorted_nums)` statement from the script.

Output

```
[1, 2, 3, 4, 5]
== Code Execution Successful ==
```