Programiz
Python Online Compiler

Programiz PRO

main.py   Output

```python
1  # Online Python compiler (interpreter)
       to run Python online.
2  # Write Python 3 code in this online
       editor and run it.
3  def three_sum(nums):
4      nums.sort()  # Step 1: Sort the
           array
5      result = []
6
7      for i in range(len(nums) - 2):  #
           Step 2: Iterate through the
           array
8          # Skip duplicate elements to
               avoid duplicate triplets
9          if i > 0 and nums[i] == nums[i
               - 1]:
10             continue
11
12         # Step 3: Two-pointer technique
13         left, right = i + 1, len(nums)
               - 1
14
15         while left < right:
16             total = nums[i] +
                   nums[left] +
                   nums[right]
17
18             if total == 0:
19                 result.append([nums[i],
                       nums[left],
                       nums[right]])
20                 # Skip duplicates for
                       the second element
21                 while left < right and
                       nums[left] ==
                       nums[left + 1]:
22                     left += 1
23                 # Skip duplicates for
                       the third element
24                 while left < right and
                       nums[right] ==
                       nums[right - 1]:
25                     right -= 1
26                 # Move pointers after
                       processing the
                       triplet
27                 left += 1
28                 right -= 1
29             elif total < 0:
30                 left += 1  # Need a
                       larger sum, move the
                       left pointer to the
                       right
31             else:
32                 right -= 1  # Need a
                       smaller sum, move
                       the right pointer to
                       the left
33
34     return result
35
36  # Sample usage
37  nums = [-1, 0, 1, 2, -1, -4]
38  print(three_sum(nums))
```

Run

```
[[-1, -1, 2], [-1, 0, 1]]

=== Code Execution Successful ===
```