

1. Counting Elements Given an integer array arr, count how many elements x there are, such that x + 1 is also in arr. If there are duplicates in arr, count them separately. Example Input: arr = [1,2,3] Output: 2 Explanation: 1 and 2 are counted cause 2 and 3 are in arr. Example 2: Input: arr = [1,1,3,3,5,5,7,7] Output: 0 Explanation: No numbers are counted, cause there is no 2, 4, 6, or 8 in arr. Constraints: • $1 \leq \text{arr.length} \leq 1000$ • $0 \leq \text{arr}[i] \leq 1000$

Program:-

```
def count_elements(arr):  
    return sum(1 for x in arr if x + 1 in arr)  
  
# Test the function with examples  
print(count_elements([1, 2, 3])) # Output: 2  
print(count_elements([1, 1, 3, 3, 5, 5, 7, 7]))
```

output:-

```
2  
0  
  
=== Code Execution Successful ===
```

Time complexity:- $O(n)$