


```
1 nums=[1,2,1]
2 length=len(nums)
3 result=0
4 for i in range(length):
5     subarray=[]
6     for j in range(i,length):
7         subarray.append(nums[j])
8         distinct_elements=list(set(subarray))
9         distinct_count=len(distinct_elements)
10        result+=distinct_count**2
11 print(result)
12
```


```
15
--- Code Execution Successful ---
```

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```
1 nums=[3,1,2,2,2,1,3]
2 k=2
3 count=0
4 for i in range(len(nums)):
5     for j in range(i+1,len(nums)):
6         if(nums[i]==nums[j] and (i*j)%k==0):
7             count+=1
8 print("number of pairs:",count)
```

Output

number of pairs: 4
--- Code Execution Successful ---

JS
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```
1 testcases-[[1,2,3,4,5],[7,7,7,7,7],[-10,2,3,-4,5]]
2 output=[]
3 for case in testcases:
4     max_value=max(case)
5     output.append(max_value)
6 for i in range(len(output)):
7     print("output for testcases{}:{}".format(i+1,output[i]))
```

Output

output for testcases1:5
output for testcases2:7
output for testcases3:5

=== Code Execution Successful ===

JS

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```
1 nums=[]
2 if not nums:
3     print("list is empty")
4 else:
5     nums.sort()
6     print(nums[-1])
7 nums=[5]
8 if not nums:
9     print("list is empty")
10 else:
11     nums.sort()
12     print(nums[-1])
13 nums=[3,3,4,7,8]
14 if not nums:
15     print("list is empty")
16 else:
17     nums.sort()
18     print(nums[-1])
```

Output

list is empty
5
8

=== Code Execution Successful ===

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```
1 arr=[10,20,30,40,50,60]
2 length=len(arr)
3 for i in range(length-1):
4     for j in range(length-1):
5         if(arr[j]>arr[j+1]):
6             arr[j],arr[j+1]=arr[j+1],arr[j]
7 print("sorted array:",arr)
```

Output

sorted array: [10, 20, 30, 40, 50, 60]
--- Code Execution Successful ---

JS

GO

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Output

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```
1 arr=[3,4,6,-9,10,8,9,30]
2 key=10
3 arr.sort()
4 left=0
5 right=len(arr)-1
6 found=False
7 while(left<=right):
8     middle=(left+right)//2
9     if(arr[middle]==key):
10         print("element {} is found at position {}".format(key,middle+1))
11         found=True
12         break
13     elif(arr[middle]<key):
14         left=middle+1
15     else:
16         right=middle-1
17 if not found:
18     print("element is not found")
```

element 10 is found at position 7

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```
2 def quick_sort(arr, low, high):
3     if low < high:
4         # Partition the array and get the pivot index
5         pivot_index = partition(arr, low, high)
6         # Recursively sort the left and right sub-arrays
7         quick_sort(arr, low, pivot_index - 1)
8         quick_sort(arr, pivot_index + 1, high)
9
10 def partition(arr, low, high):
11     pivot = arr[(low + high) // 2] # Middle element as pivot
12     left = low
13     right = high
14     while left <= right:
15         while arr[left] < pivot:
16             left += 1
17         while arr[right] > pivot:
18             right -= 1
19         if left <= right:
20             # Swap elements
21             arr[left], arr[right] = arr[right], arr[left]
22             left += 1
23             right -= 1
```

Output

Clear

Sorted array: [1, 2, 5, 5, 6, 9]

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Output

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```
14- while left <= right:
15-     while arr[left] < pivot:
16-         left += 1
17-     while arr[right] > pivot:
18-         right -= 1
19-     if left <= right:
20-         # Swap elements
21-         arr[left], arr[right] = arr[right], arr[left]
22-         left += 1
23-         right -= 1
24-     return left # Return the partition point
25-
26- # Main function to sort the array
27- def sort_array(nums):
28-     quick_sort(nums, 0, len(nums) - 1)
29-     return nums
30-
31- # Example usage
32- nums = [5, 2, 9, 1, 5, 6]
33- sorted_nums = sort_array(nums)
34- print("Sorted array:", sorted_nums)
35-
```

Sorted array: [1, 2, 5, 5, 6, 9]

--- Code Execution Successful ---

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