QN Link : https://www.geeksforgeeks.org/count-quadruplets-with-sum-k-from-given-array/

Question Summary :

• You are given an array of size n , find the quadruplets such that their sum is K

Observation :

• Nums[i] + Nums[j] + Nums[k] + Nums[l] = k this is the given eqn.

• Break down the eqn like , nums[i] + nums[j] = k – (nums[k] + nums[l]).

Step 1 : Create an empty hashmap and an variable count.

Step 2 : Check all possible pairs of sum for the given array and store it in the hashmap along eith it count .

Step 3 : The above loop will give us the sum , nums[i] + nums[j].

Step 4 : Now , again run the for loop , but this time calculate the count by cnt += map.getOrDefault(k – ( nums[k] + nums[l]))

class Solution {

public int countQuadraplets(int[] nums) {

Map<Integer , Integer> map = new HashMap<>();

int count = 0;

for(int i = 0 ; i< n ; i++){

for(int j = 0 ; j< n ; j++){

int sum = nums[i] + nums[j];

map.put(sum , map.getOrDefault(sum , 0) + 1);

}

}

for(int i = 0 ; i< n ; i++){

for(int j = 0 ; j< n ; j++){

int sum = nums[i] + nums[j];

count += map.getOrDefault(k - sum , 0);

}

}

return count;

}

}