Data Structures and Algo in Java - Day 18

Completed Medium Level Array Questions in the A2Z Striver’s Sheet today

1. Printing the Matrix in Spiral Form
2. Finding the Count of Subarray with the sum K.

here’s the code

import java.util.HashMap;

public class day18

{

public static void main(String[] args)

{

int arr1 [][] = {

{1,2,3,4,5,6},

{20,21,22,23,24,7},

{19,32,33,34,25,8},

{18,31,36,35,26,9},

{17,30,29,28,27,10},

{16,15,14,13,12,11},

};

//printSpiral(arr);

int arr [] = {1,2,3,-3,1,1,1,4,2,-3};

int k = 3;

countofsubarrays(arr,k);

}

public static void printSpiral(int arr [] [])

{

int n = arr.length;

int m = arr[0].length;

int top = 0;

int left = 0;

int right = m-1;

int bottom = n-1;

while(top<=bottom && left<=right)

{

for(int i=left;i<=right;i++) // top horizontal line

{

System.out.print(arr[top][i]+" ");

}

top++;

for(int i=top;i<=bottom;i++) // right vertical right

{

System.out.print(arr[i][right]+" ");

}

right--;

if(top<=bottom) // edge cases

{

for(int i=right;i>=left;i--) // bottom horizontal line

{

System.out.print(arr[bottom][i]+" ");

}

}

if(left<=right) // edge cases

{

bottom--;

for(int i=bottom;i>=top;i--)

{

System.out.print(arr[i][left]+" ");

}

left++;

}

}

}

public static void countofsubarrays(int arr [] , int k)

{

int prefixSum = 0;

int count = 0;

int n = arr.length;

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

map.put(0,1);

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

{

prefixSum = prefixSum + arr[i];

int remove = prefixSum - k ;

if(map.containsKey(remove))

{

count += map.get(remove);

}

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

}

System.out.println(count);

}

}