**Q1: WRITE A CODE SO THAT IT RETURN NO OF PAIRS OF NUMBER SUM OF WHICH TWO NUMBER IN A ARRAY IS EQUAL TO GIVEN NUMBER**

**INPUT:**

**int n=6;**

**int target=7;**

**int ans =0;**

**int [] arr= {4,6,5,8,3,2};**

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

**for (int j = i+1; j <n ; j++) {**

**if(arr[i]+arr[j]==target){**

**ans++;**

**}**

**}**

**}**

**System.out.println(ans);**

**OUTPUT:**

**2**

**Q2:**

**FIND UNIQUE ELEMENT IN ARRAY WHERE ALL ELEMENTS ARE DUPLICATED EXCEPT ONE**

**INPUT:**

**int n=7;**

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

**int ans=0;**

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

**for (int j = i+1; j <n ; j++) {**

**if (arr[i]==arr[j]){**

**arr[i]=-1;**

**arr [j]=-1;**

**}**

**}**

**}**

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

**if(arr[i]>0){**

**ans =arr[i];**

**}**

**}**

**System.*out*.println(ans);**

**OUTPUT: 4**

**Q3:FIND THE SECOND LARGEST ELEMENT IN GIVEN ARRAY**

**INPUT:**

**int n = 8;**

**int[] arr = {1, 4, 43, 34, 99, 12, 2, 90};**

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

**Arrays.*sort*(arr);**

**}**

**System.*out*.println(arr[n-2]);**

**NOTE:WE HAVE TO INCLUDE import java.util.Array; to use Array.sort()function**

Q4:IN A GIVEN ARRAY RETURN FIRST VALUE WHICH IS REPEATING IF ALL IS DISTINCT RETURN -1.

INPUT:

int n=9;

int [] arr={1,2,3,4,5,6,7,3,8};

int duplicate=-1;

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

for (int j = i+1; j <n ; j++) {

if(arr[i]==arr[j]){

duplicate=arr[i];

}

}

}

System.*out*.println(duplicate);

int n=9;

int [] arr={1,2,3,4,5,6,7,9,8};

int duplicate=-1;

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

for (int j = i+1; j <n ; j++) {

if(arr[i]==arr[j]){

duplicate=arr[i];

}

}

}

System.*out*.println(duplicate);

OUTPUT:3,-1

Q5:- Given an array sorted in increasing order of size n and an integer x, find if there exists a

pair in the array whose absolute difference is exactly x.(n>1)

CODE :

int n=6;

int [] arr={5,10,15,20,25,30};

int x=10;

int no\_of\_pairs=0;

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

for (int j = i+1; j <n ; j++) {

if (arr[j]-arr[i]==x){

no\_of\_pairs=no\_of\_pairs+1;

}

}

}

System.*out*.println(no\_of\_pairs);

OUTPUT: 4

Q6:Given an array of size n, find the total number of occurrences of given number x.

CODE:

int n=9;

int []arr={1,5,2,3,2,4,3,9,2};

int target=2;

int occ=0;

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

if(arr[i]==target){

occ=occ+1;

}

}

System.*out*.println("Total no of occurence of "+target+"="+occ);

OUTPUT:3

Q7:- Given an array arr[] of size N-1 with integers in the range of [1, N], the task is to find the

missing number from the first N integers. There are no duplicates in the list.

CODE:

int n=7;

int []arr={1,2,4,6,7,3,8};

int missed=0;

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

Arrays.*sort*(arr);

if (arr[i]!=i+1){

missed=i+1;

break;

}

}

System.*out*.println(missed);

OUTPUT:3