Algo 1 :

Given two sets of elements, find the sum of all distinct elements from the set. In other words, find the sum of all elements which are present in either of the given set.

import java.util.\*;

public class DistinctElementsInTwoSets {

public static void findDistinctElements(int [] setOne, int [] setTwo){

System.out.println("Set 1: " + Arrays.toString(setOne) + ", Set 2: " + Arrays.toString(setTwo));

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

for (int i = 0; i <setOne.length ; i++) {

int element = setOne[i];

if(map.containsKey(element)) {

int count = map.get(element);

map.put(element, count+1);

}else

map.put(element, 1);

}

for (int i = 0; i <setTwo.length ; i++) {

int element = setTwo[i];

if(map.containsKey(element)) {

int count = map.get(element);

map.put(element, count+1);

}else

map.put(element, 1);

}

//get sum of distinct elements

int sum = 0;

Set<Integer> set = map.keySet();

Iterator<Integer> iterator = set.iterator();

while (iterator.hasNext()){

int key = iterator.next();

if(map.get(key)==1)

sum += key;

}

System.out.println("Distinct Elements Sum : " + sum);

}

public static void main(String[] args) {

int [] setOne = {3, 1, 7, 9};

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

findDistinctElements(setOne, setTwo);

}

}

Algo 2:

Given two sets of integers, write an algorithm to print the sum of overlapping elements in two sets.

import java.util.\*;

public class SumOfOverlappingElements {

public static void findOverlappingElements(int [] setA, int [] setB){

System.out.println("Set 1: " + Arrays.toString(setA) + ", Set 2: " + Arrays.toString(setB));

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

for (int i = 0; i <setA.length ; i++) {

int element = setA[i];

if(map.containsKey(element)) {

int count = map.get(element);

map.put(element, count+1);

}else

map.put(element, 1);

}

for (int i = 0; i <setB.length ; i++) {

int element = setB[i];

if(map.containsKey(element)) {

int count = map.get(element);

map.put(element, count+1);

}else

map.put(element, 1);

}

//get sum of distinct elements

int sum = 0;

Set<Integer> set = map.keySet();

Iterator<Integer> iterator = set.iterator();

while (iterator.hasNext()){

int key = iterator.next();

int count = map.get(key);

if(count==2)

sum += key\*count;

}

System.out.println("Sum of overlapping elements: " + sum);

System.out.println("----------------------------------------");

}

public static void main(String[] args) {

int A[] = {2, 3, 1, 6};

int B[] = {4, 0, 6, 7};

findOverlappingElements(A, B);

int C[] = {12, 13, 6, 10};

int D[] = {13, 10, 16, 15};

findOverlappingElements(C, D);

}

}