**Praneeta and Friends Explanation and Solution**

The Explanation of the Problem Statement was right in the Problem statement where the problem stated that “ Given the coordinates of the bottom-left and top-right corner of the **rectangular** photograph of the friends who hate each other .” Check if those 2 photographs(**Rectangles**) overlap or not.

Note: It may be assumed that the rectangles are parallel to the coordinate axis

Question was to check when the co-ordinates (bottom-left and top-right corner)of 2 rectangle are given whether they overlap or not .

The solution to the above problem can be simplified if we look at the conditions when the rectangle do not overlap each other

The conditions are

* One rectangle is either on the **top** or **bottom** of the other rectangle
* One rectangle is either **left** or **right** of the other rectangle.

Sample input

0 0 2 2

1 1 3 3

Sample output

1

**1st Rectangle is left of the 2nd** X4,Y4

X2,Y2

X1,Y1

X3,Y3

**2nd Rectangle is left to 1st**

X4 , Y4 X2 , Y2

X1,Y1

X3,Y3

**2nd Rectangle is above the first**

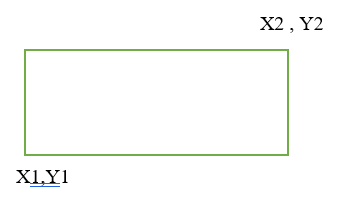
Shape, square

Description automatically generated

Shape, rectangle

Description automatically generated

**1st Rectangle is above 2nd**



Shape, square

Description automatically generated

**CPP Solution**

#include <iostream>

#include<bits/stdc++.h>

using namespace std;

int main() {

int t;

cin>>t;

while(t--){

int x1,x2,x3,x4;

int y1,y2,y3,y4;

cin>>x1>>y1>>x2>>y2;

cin>>x3>>y3>>x4>>y4;

int flag = 1; // assuming that it overlaps

// // To check if either rectangle is actually a line

if(x1 == x2 || y1 == y2 || x3 == x4 || y3 == y4){

flag =0;

}

// Case when 1 rectangle is left of the other

if(x2 <= x3 || x4 <= x1){

flag = 0;

}

// Case when 1 rectangle is above other

if(y2 <= y3 || y4 <=y1){

flag = 0;

}

cout<<flag<<"\n";

}

}

**Java Solution**

import java.io.\*;

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int t = sc.nextInt();

while(t-->0)

{

int flag = 1;

int x1,x2,x3,x4;

int y1,y2,y3,y4;

x1 = sc.nextInt();

y1 = sc.nextInt();

x2 = sc.nextInt();

y2 = sc.nextInt();

x3 = sc.nextInt();

y = sc.nextInt();

x4 = sc.nextInt();

y4 = sc.nextInt();

if(x1 == x2 || y1 == y2 || x3 == x4 || y3 == y4){

flag =0;

}

// Case when 1 rectangle is left of the other

if(x2 <= x3 || x4 <= x1){

flag = 0;

}

// Case when 1 rectangle is above other

if(y2 <= y3 || y4 <=y1){

flag = 0;

}

System.out.println(flag);

}

}

}