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import java.util.*;
import java.lang.*;
import java.io.*;
class Main
{
    public static void main (String[] args) throws java.lang.Exception
    {
        Scanner input=new Scanner(System.in);
        try
        {
            int t=0;
            if(input.hasNextInt())
                t=input.nextInt();
            while(t-->0)
            {
                int N=input.nextInt();
                Item[] it=new Item[N];
                for(int i=0;i<N;i++)
                {
                    long a=input.nextLong();
                    long b=input.nextLong();
                    long c=input.nextLong();
                    long d=input.nextLong();
                    it[i]=new Item(a,b,c,d);
                }
                int res=solution(it,N);
                System.out.println(res);
            }
        }
        catch(Exception e)
        {
            e.printStackTrace();
            return;
        }
        finally
        {
            input.close();
        }
    }
    private static int solution(Item[] it,int n)
    {
        Arrays.sort(it,0,n,(a,b)->Long.compare(a.cost,b.cost));
        TreeSet<Long>v=new TreeSet<Long>();
        long max=0;
        boolean fail=false;
        for(int i=0;i<n;i++)
        {
            long l=it[i].l;
            long r=it[i].r;
            long a=it[i].attr;
            if(r <= max)
            {
                fail = true;
                break;
            }
        }
    }
}

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        while(!v.isEmpty() && v.last() >= r)
            v.remove(v.last());
        if(a > max){
            if(v.isEmpty() || a> v.last())
                v.add(a);
            else {
                long pos = v.ceiling(a);
                v.remove(pos);
                v.add(a);
            }
        }
        max = Math.max(max, l);
    }
    if(!fail)
        return n - v.size();
    return -1;
}

}

class Item {
    long attr;
    long cost;
    long l;
    long r;
    public Item(long attr, long cost, long lattr, long rattr)
    {
        this.attr = attr;
        this.cost = cost;
        this.l = lattr;
        this.r = rattr;
    }
}

}

```