#include<bits/stdc++.h>

using namespace std ;

//#include <ext/pb\_ds/tree\_policy.hpp> // Include for built in treap

//#include <ext/pb\_ds/assoc\_container.hpp>

//using namespace \_\_gnu\_pbds;

#define pb push\_back

#define MP make\_pair

#define ff first

#define ss second

#define nl puts("")

#define sp printf(" ")

#define phl bebug("hello")

#define FOR(i,x,y) for(vlong i=(x) ; i<= (y) ; ++i )

#define ROF(i,x,y) for(vlong i=(y) ; i>=x ; --i )

#define CLR(x,y) memset(x,y,sizeof(x))

#define ALL(x) (x).begin(),(x).end()

#define SZ(x) ((vlong)(x).size()

#define MIN(a,b) ((a)<(b)?(a):(b))

#define MAX(a,b) ((a)>(b)?(a):(b))

#define ABS(x) ((x<0?-(x):(x)))

#define FABS(x) ((x)+eps<0?-(x):(x))

#define SQ(x) ((x)\*(x))

#define LCM(x,y) (((x)/gec((x),(y)))\*(y))

#define ODD(x) (((x)&1) == 0? (0):(1))

#define Fix( x ) setprecision( x ) <<fixed

#define LL long long

#define LLU long long unsigned int

typedef long long vlong;

typedef unsigned long long uvlong;

typedef pair<int,int> pii ;

typedef pair<vlong,vlong> pll ;

typedef vector<int> vi ;

typedef vector<vlong> vl ;

/\* Treap declaration

template < typename T >

using orderset = tree<T,null\_type,less<T>,rb\_tree\_tag,tree\_order\_statistics\_node\_update>;

orderset <int> S;

\*/

int main(){

#ifdef AbirRahman

//freopen ( "input.txt", "r", stdin );

//freopen ( "output.txt", "w", stdout );

#endif // AbirRahman

return 0 ;

}