[**NK 1248 郁闷的出纳员 用树状数组动态统计 ★★★**](http://www.cppblog.com/Yuan/archive/2010/07/17/120632.html)

http://www.cppblog.com/Images/OutliningIndicators/ExpandedBlockStart.gifhttp://www.cppblog.com/Images/OutliningIndicators/ContractedBlock.gif/\*\*//\*  
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif    题意：实现对所有员工工资加x、减x（如果减了后发现低于最低工资，则离开）  
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif           并查询第k大的工资  
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif        这里用树状数组  
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif        插入容易实现  
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif        删除时注意for(int i = 1;;i++) i从小到大，则c[i]存的就是工资为i时的人数了！  
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif        还有是整个线段操作，所以用delta标记，会快很多！！  
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif        插入时，就插入 x-delta+INF   
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif        加上INF避免变为负数了~  
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif        还有findK() 其实是用二分不断逼近  保持着cnt<K 则最后ans+1即为答案了  
http://www.cppblog.com/Images/OutliningIndicators/ExpandedBlockEnd.gif\*/  
http://www.cppblog.com/Images/OutliningIndicators/None.gif#include<cstdio>  
http://www.cppblog.com/Images/OutliningIndicators/None.gif#include<cstring>  
http://www.cppblog.com/Images/OutliningIndicators/None.gif  
http://www.cppblog.com/Images/OutliningIndicators/None.gifconst int MAX\_VAL = 300000,INF = 100000;  
http://www.cppblog.com/Images/OutliningIndicators/None.gif  
http://www.cppblog.com/Images/OutliningIndicators/None.gifint c[MAX\_VAL+5];  
http://www.cppblog.com/Images/OutliningIndicators/None.gifint delta;  
http://www.cppblog.com/Images/OutliningIndicators/None.gif  
http://www.cppblog.com/Images/OutliningIndicators/ExpandedBlockStart.gifhttp://www.cppblog.com/Images/OutliningIndicators/ContractedBlock.gifinline int lowbit(int x)http://www.cppblog.com/Images/dot.gif{return x&(-x);}  
http://www.cppblog.com/Images/OutliningIndicators/None.gif  
http://www.cppblog.com/Images/OutliningIndicators/None.gifint sum(int p)  
http://www.cppblog.com/Images/OutliningIndicators/ExpandedBlockStart.gifhttp://www.cppblog.com/Images/OutliningIndicators/ContractedBlock.gifhttp://www.cppblog.com/Images/dot.gif{  
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif    int ans = 0;  
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif    while(p>0)  
http://www.cppblog.com/Images/OutliningIndicators/ExpandedSubBlockStart.gifhttp://www.cppblog.com/Images/OutliningIndicators/ContractedSubBlock.gif    http://www.cppblog.com/Images/dot.gif{  
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif        ans+=c[p];  
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif        p-=lowbit(p);  
http://www.cppblog.com/Images/OutliningIndicators/ExpandedSubBlockEnd.gif    }  
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif    return ans;  
http://www.cppblog.com/Images/OutliningIndicators/ExpandedBlockEnd.gif}  
http://www.cppblog.com/Images/OutliningIndicators/None.gifvoid update(int p,int x)  
http://www.cppblog.com/Images/OutliningIndicators/ExpandedBlockStart.gifhttp://www.cppblog.com/Images/OutliningIndicators/ContractedBlock.gifhttp://www.cppblog.com/Images/dot.gif{  
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif    while(p<=MAX\_VAL)  
http://www.cppblog.com/Images/OutliningIndicators/ExpandedSubBlockStart.gifhttp://www.cppblog.com/Images/OutliningIndicators/ContractedSubBlock.gif    http://www.cppblog.com/Images/dot.gif{  
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif        c[p]+=x;  
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif        p+=lowbit(p);  
http://www.cppblog.com/Images/OutliningIndicators/ExpandedSubBlockEnd.gif    }  
http://www.cppblog.com/Images/OutliningIndicators/ExpandedBlockEnd.gif}  
http://www.cppblog.com/Images/OutliningIndicators/None.gifint findK(int K)  
http://www.cppblog.com/Images/OutliningIndicators/ExpandedBlockStart.gifhttp://www.cppblog.com/Images/OutliningIndicators/ContractedBlock.gifhttp://www.cppblog.com/Images/dot.gif{  
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif    int ans = 0,cnt = 0;  
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif    for(int i=19;i>=0;i--)  
http://www.cppblog.com/Images/OutliningIndicators/ExpandedSubBlockStart.gifhttp://www.cppblog.com/Images/OutliningIndicators/ContractedSubBlock.gif    http://www.cppblog.com/Images/dot.gif{  
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif        ans+=(1<<i);  
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif        if(ans>=MAX\_VAL||cnt+c[ans]>=K)ans-=(1<<i);  
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif        else cnt+=c[ans];  
http://www.cppblog.com/Images/OutliningIndicators/ExpandedSubBlockEnd.gif    }  
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif    return ans+1;  
http://www.cppblog.com/Images/OutliningIndicators/ExpandedBlockEnd.gif}  
http://www.cppblog.com/Images/OutliningIndicators/None.gifint main()  
http://www.cppblog.com/Images/OutliningIndicators/ExpandedBlockStart.gifhttp://www.cppblog.com/Images/OutliningIndicators/ContractedBlock.gifhttp://www.cppblog.com/Images/dot.gif{  
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif    int Q,Min;  
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif    while(~scanf("%d%d",&Q,&Min))  
http://www.cppblog.com/Images/OutliningIndicators/ExpandedSubBlockStart.gifhttp://www.cppblog.com/Images/OutliningIndicators/ContractedSubBlock.gif    http://www.cppblog.com/Images/dot.gif{  
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif        memset(c,0,sizeof(c));  
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif        delta = 0;  
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif        int tot = 0,del = 0;  
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif        while(Q--)  
http://www.cppblog.com/Images/OutliningIndicators/ExpandedSubBlockStart.gifhttp://www.cppblog.com/Images/OutliningIndicators/ContractedSubBlock.gif        http://www.cppblog.com/Images/dot.gif{  
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif            char op;  
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif            int x;  
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif            scanf(" %c%d",&op,&x);  
http://www.cppblog.com/Images/OutliningIndicators/ExpandedSubBlockStart.gifhttp://www.cppblog.com/Images/OutliningIndicators/ContractedSubBlock.gif            if(op=='I')http://www.cppblog.com/Images/dot.gif{  
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif                if(x<Min)continue;  
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif                update(x-delta+INF,1);  
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif                tot++;  
http://www.cppblog.com/Images/OutliningIndicators/ExpandedSubBlockEnd.gif            }  
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif            else if(op=='S')  
http://www.cppblog.com/Images/OutliningIndicators/ExpandedSubBlockStart.gifhttp://www.cppblog.com/Images/OutliningIndicators/ContractedSubBlock.gif            http://www.cppblog.com/Images/dot.gif{  
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif                delta-=x;  
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif                int tmp = sum(Min-1-delta+INF);  
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif                tot-=tmp;  
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif                del+=tmp;  
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif                for(int i=1;i<=Min-1-delta+INF;i++)  
http://www.cppblog.com/Images/OutliningIndicators/ExpandedSubBlockStart.gifhttp://www.cppblog.com/Images/OutliningIndicators/ContractedSubBlock.gif                http://www.cppblog.com/Images/dot.gif{  
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif                    if(c[i]==0)continue;  
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif                    update(i,-c[i]);  
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif                    //因为是从小到大删除，这时的c[i]其实就是工资为i的实际人数！  
http://www.cppblog.com/Images/OutliningIndicators/ExpandedSubBlockEnd.gif                }  
http://www.cppblog.com/Images/OutliningIndicators/ExpandedSubBlockEnd.gif            }  
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif            else if(op=='A')delta+=x;  
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif            else   
http://www.cppblog.com/Images/OutliningIndicators/ExpandedSubBlockStart.gifhttp://www.cppblog.com/Images/OutliningIndicators/ContractedSubBlock.gif            http://www.cppblog.com/Images/dot.gif{  
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif                if(x>tot)puts("-1");  
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif                else printf("%d\n",findK(tot-x+1)+delta-INF);  
http://www.cppblog.com/Images/OutliningIndicators/ExpandedSubBlockEnd.gif            }  
http://www.cppblog.com/Images/OutliningIndicators/ExpandedSubBlockEnd.gif        }  
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif        printf("%d\n",del);  
http://www.cppblog.com/Images/OutliningIndicators/ExpandedSubBlockEnd.gif    }  
http://www.cppblog.com/Images/OutliningIndicators/InBlock.gif    return 0;  
http://www.cppblog.com/Images/OutliningIndicators/ExpandedBlockEnd.gif}