```
#include<iostream>
#include<cstdio>
#include<algorithm>
const int N=100;
using namespace std;
int main()
    int i, j, n, a, b, c, d, ans=0;
    int l[N], r[N], m[2][N] = \{0\}, w[N] = \{0\}, p[2][N] = \{0\};
    cin>>n;
    for(i=1;i<=n;i++) cin>>l[i]>>r[i];
    m[0][1]=m[1][1]=0;
    for(i=1;i<n;i++)//
    {
        // a|b
                    cld
        // si si+1
        a=l[i],b=r[i];
        c=1[i+1], d=r[i+1];
        if((m[0][i]+b*c)>(m[1][i]+a*c))
             m[0][i+1]+=m[0][i]+b*c,p[0][i+1]=0;
        else m[0][i+1]+=m[0][i]+a*c,p[0][i+1]=1;
        if((m[0][i]+b*d)>(m[1][i]+a*d))
             m[1][i+1]+=m[0][i]+b*d,p[1][i+1]=0;
        else m[1][i+1]+=m[0][i]+a*d,p[1][i+1]=1;
    if (m[0][n]>m[1][n]) w[n]=0, cout << m[0][n] << end1;
    else
                          w[n]=1, cout << m[1][n] << end1;
    for(i=n;i>1;i--)
        if(w[i] == 0) w[i-1] = p[0][i];
        else w[i-1]=p[1][i];
    for(i=1;i<=n;i++) cout<<w[i]<<"";
```