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PROG: essay

LANG: C++

ID: hayk.sa1

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#include <stdio.h>

#define inf 1000000000

int w[1010][2];

int d[2][5010];

int main()

{

freopen("essay.in", "r", stdin);

freopen("essay.out", "w", stdout);

int n, m, p, sw, i, j;

scanf("%d%d", &n, &m);

for (i = 0; i < n; i++)

scanf("%d%d", w[i], w[i]+1);

p = 0;

sw = 0;

d[sw][0] = 0;

for (i = 1; i <= m; i++)

d[sw][i] = -inf;

for (i = 0; i < n; i++, sw^=1)

{

d[sw^1][0] = -inf;

for (j = 0; j <= w[i][1]; j++)

if (d[sw^1][0] < d[sw][j])

d[sw^1][0] = d[sw][j];

if (w[i][0] == 0 && d[sw^1][0] < d[sw][0]+1)

d[sw^1][0] = d[sw][0]+1;

if (p < d[sw^1][0])

p = d[sw^1][0];

for (j = 1; j <= m; j++)

{

d[sw^1][j] = -inf;

if (j >= w[i][0] && d[sw^1][j] < d[sw][j-w[i][0]]+1)

d[sw^1][j] = d[sw][j-w[i][0]]+1;

if (j+w[i][1] <= m && d[sw^1][j] < d[sw][j+w[i][1]])

d[sw^1][j] = d[sw][j+w[i][1]];

if (p < d[sw^1][j])

p = d[sw^1][j];

}

}

printf("%d\n", p);

return 0;

}