apples.cpp

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/* FILE: apples.c   last change: 5-Feb-2014   author: Romeo Rizzi
 * a DP algorithm to the Apples problem.
 */

//#define NDEBUG   // NDEBUG definita nella versione che consegno
#include <cassert>
#include <cstdio>
#include <string.h>

//#include <bits/stdc++.h>
using namespace std;

char s[10010], t[5010];
int c[300]; // definisco il costo su 256 (<300) caratteri

int main() {
    FILE *fin = fopen ("input.txt", "r"); assert( fin );
    assert( fscanf(fin, "%s%s", s, t) );
    assert( fscanf(fin, "%d%d%d%d", &c['A'], &c['C'], &c['G'], &c['T']) );
    fclose(fin);
    int n = strlen(s), m = strlen(t), ans = 1E9;
    for (int i = 0; i <= n; i++) {
        int pos = i, tmp = 0;
        for (int j = 0; j < m; j++)
            if (s[pos] != t[j])
              tmp += c[(int) t[j]];
            else pos++;
        if (ans > tmp) ans = tmp;
    }
    FILE *fout = fopen ("output.txt", "w"); assert( fout );
    fprintf(fout,"%d\n", ans);
    fclose(fout);
    return 0;
}
```