

```

/**
NAME: COMANICIU Maria
Grade: 11
SCHOOL: NCSC "Gr. Moisil"
DIVISION: SR3
**/

#include <stdio>
#include <cstring>
#include <algorithm>

using namespace std;

char a1[255], a2[255], copd1[255], copd2[255], cops1[255], cops2[255],
aux[255];
int ok, l1, l2, sum, lenmax, pozi, pozj, spatii;

void convertUpper(char a[], int len)
{
    for(int i=0; i<len; i++)
    {
        if(a[i] >= 'a' && a[i] <= 'z')
            a[i]-=32;
    }
}

void stergeSpatii(char a[], int &len)
{
    int nrel=0;
    for(int i=0; i<len; i++)
    {
        if(a[i] >= 'A' && a[i] <= 'Z')
            aux[nrel++]=a[i];
    }
    strcpy(a, aux);
    len=nrel;
    a[len]=0;
}

int comparare(char s1[], int lungime, int pi1, int pi2)
{
    for(int i=pi1, j=pi2, k=0; k<lungime; i++, j++, k++)
    {
        if(s1[i] < s1[j])
            return -1;
        if(s1[i] > s1[j])
            return 1;
    }
    return 0;
}

void longestCommonSubstring(char s1[], char s2[], int len1, int len2)
{
    lenmax=0;

```

```

pozi=0;
pozj=0;

for(int i=0; i<len1; i++)
{
    for(int j=0; j<len2; j++)
    {
        if(s1[i] == s2[j])
        {
            int nrLung=0;
            int pozci=i;
            int pozcj=j;

            int copi=i;
            int copj=j;
            while(s1[copi] == s2[copj] && copi<len1 && copj<len2)
            {
                nrLung++;
                copi++;
                copj++;
            }
            if(nrLung > lenmax)
            {
                lenmax=nrLung;
                pozci=pozci;
                pozj=pozcj;
            }
            else if(nrLung == lenmax)
            {
                if(comparare(s1, nrLung, pozci, pozi) < 0)
                {
                    lenmax=nrLung;
                    pozci=pozci;
                    pozj=pozcj;
                }
            }
        }
    }
}
sum+=lenmax;
if(lenmax != 0)
    ok=1;
//printf("%d, %s %s\n", lenmax, s1+pozi, s2+pozj);
}

```

```

void rezolv(char s1[], char s2[], int len1, int len2)
{
    ok=0;
    longestCommonSubstring(s1, s2, len1, len2);
    if(ok == 0)
        return;
    //printf("%d, %s %s\n", lenmax, s1+pozi, s2+pozj);
    int pozitiei=pozi;
    int pozitiej=pozj;
}

```

```

    int lenny=lenmax;
//    int caract=spatii;
    strcpy(cops1, s1);
    strcpy(cops2, s2);
    cops1[pozitie1]=0;
    cops2[pozitie2]=0;
    int length1=strlen(cops1);
    int length2=strlen(cops2);
    rezolv(cops1, cops2, length1, length2);

    strcpy(copd1, s1+pozitie1+lenny);
    strcpy(copd2, s2+pozitie2+lenny);
    length1=strlen(copd1);
    length2=strlen(copd2);
    rezolv(copd1, copd2, length1, length2);
}

int main()
{
    freopen("factor.in", "r", stdin);
    //freopen("factor.out");

    for(int acsl=1; acsl<=5; acsl++)
    {
        fgets(a1, 255, stdin);
        sum=0;
        l1=strlen(a1);
        if(a1[l1-1] == '\n')
            a1[--l1]=0;
        fgets(a2, 255, stdin);
        l2=strlen(a2);
        if(a2[l2-1] == '\n')
            a2[--l2]=0;
        convertUpper(a1, l1);
        convertUpper(a2, l2);
        stergeSpatii(a1, l1);
        stergeSpatii(a2, l2);
        //printf("%s %s\n", a1, a2);
        ok=1;
        rezolv(a1, a2, l1, l2);
        printf("%d\n", sum);
        //if(strncmp("C", "E", 1))
        //longestCommonSubstring(a1, a2, l1, l2);
        //printf("%d", 'A'-'a');
    }

    return 0;
}

```