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//CPAS 1 - Pythonists
//Data/Hora:29-04-2010 13:10:28 Pontos:100
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#include <stdio.h>
#include <stdlib.h>
#include <math.h>
#include <string.h>

#define FOR(i,a,b) for (i = (a); i < (b); i++)

int d[22],m[22],a[22];

void swap(int i, int j){
    int tmp;
    tmp = d[i];
    d[i]=d[j];
    d[j] = tmp;

    tmp = m[i];
    m[i]=m[j];
    m[j] = tmp;

    tmp = a[i];
    a[i]=a[j];
    a[j] = tmp;
}

int main(){
    int i, j, n;

    scanf("%d", &n);
    FOR(i,0,n){
        scanf("%d %d %d", &d[i], &m[i], &a[i]);
    }

    for(i=0;i<n;i++){
        for(j=i+1;j<n;j++){
            if(a[i] > a[j]){
                swap(i,j);
            }else if(a[i]==a[j]){
                if(m[i]>m[j]){
                    swap(i,j);
                }else if(m[i]==m[j]){
                    if(d[i]>d[j]){
                        swap(i,j);
                    }
                }
            }
        }
    }

    FOR(i,0,n){
        if (d[i] < 10) putchar('0');
        printf("%d ", d[i]);
        if (m[i] < 10) putchar('0');
        printf("%d ", m[i]);
        if (a[i] < 10) putchar('0');
        printf("%d\n", a[i]);
    }

    return 0;
}
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}

//CPAS2 - Pythonists
//Data/Hora:29-04-2010 13:17:21 Pontos:100

#include <stdio.h>
#include <stdlib.h>
#include <math.h>
#include <string.h>

#define FOR(i,a,b) for (i = (a); i < (b); i++)

int mat[50][50];

int main(){
    int i, j, m, n, flag = 1;

    scanf("%d %d", &m, &n);
    FOR(i,0,m)
        FOR(j,0,n)
            scanf("%d", &mat[i][j]);

    if (m != n) {
        printf("A MATRIZ NAO E QUADRADA\n");
    }
    else {
        FOR(i,1,m)
            FOR(j,0,i)
                if (mat[i][j] != 0)
                    flag = 0;

        if (flag == 1)
            printf("A MATRIZ E TRIANGULAR SUPERIOR\n");
        else
            printf("A MATRIZ NAO E TRIANGULAR SUPERIOR\n");
    }

    return 0;
}

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//CPAS 3 - Pythonists
//Data/Hora:29-04-2010 13:24:45 Pontos:100

#include <stdio.h>
#include <stdlib.h>
#include <math.h>
#include <string.h>

#define FOR(i,a,b) for (i = (a); i < (b); i++)

int nrs[10];

int main(){
    int i, j, n,len, tec, pre;
    char palavra[110];

    scanf("%s", palavra);
    len = strlen(palavra);

    for(i=0;i<len;i++){
        if('a' <= palavra[i] && palavra[i] <= 'c')

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        tec = 2, pre = palavra[i] - 'a' + 1;
    else if('d' <= palavra[i] && palavra[i] <= 'f')
        tec = 3, pre = palavra[i] - 'd' + 1;
    else if('g' <= palavra[i] && palavra[i] <= 'i')
        tec = 4, pre = palavra[i] - 'g' + 1;
    else if('j' <= palavra[i] && palavra[i] <= 'l')
        tec = 5, pre = palavra[i] - 'j' + 1;
    else if('m' <= palavra[i] && palavra[i] <= 'o')
        tec = 6, pre = palavra[i] - 'm' + 1;
    else if('p' <= palavra[i] && palavra[i] <= 's')
        tec = 7, pre = palavra[i] - 'p' + 1;
    else if('t' <= palavra[i] && palavra[i] <= 'v')
        tec = 8, pre = palavra[i] - 't' + 1;
    else if('w' <= palavra[i] && palavra[i] <= 'z')
        tec = 9, pre = palavra[i] - 'w' + 1;
    printf("T%d#%d\n", tec, pre);
}

return 0;
}

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//CPAS4 - Pythonists
//Data/Hora:29-04-2010 13:28:29 Pontos:100

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#include <stdio.h>
#include <stdlib.h>
#include <math.h>
#include <string.h>

#define FOR(i,a,b) for (i = (a); i < (b); i++)

char s1[300],s2[300];

int main(){
    int i, j, n, len;
    char tmp;

    scanf("%s", s1);
    scanf("%s", s2);
    scanf("%d", &n);

    len = strlen(s1);

    for(i=n;i<len;i++){
        tmp = s1[i];
        s1[i]=s2[i];
        s2[i]=tmp;
    }
    printf("%s\n%s\n", s1,s2);

    return 0;
}

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//CPAS5 - Pythonists
//Data/Hora:29-04-2010 13:37:24 Pontos:100

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#include <stdio.h>
#include <stdlib.h>
#include <math.h>

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#include <string.h>

#define FOR(i,a,b) for (i = (a); i < (b); i++)

char str[300];

int main(){
    int i, j, n = 0, tmp;

    fgets(str, 300, stdin);
    j = strlen(str);

    for(i=0;i<=j;i++){
        if(str[i] == ' ') n++;
        else str[i-n] = str[i];
    }
    for(i=0;i<(j-n-1);i++){
        tmp = (str[i]+(i%5)+1);
        if(tmp > 'Z'){
            str[i] = 'A'+(tmp-'Z')-1;
        }else str[i] = tmp;
    }
    printf("%s\n", str);

    return 0;
}

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//CPAS6 - Last_Chance
//Data/Hora:29-04-2010 14:57:32 Pontos:100

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#include <iostream>
#include <math.h>
#include <string>
using namespace std;

int main()
{
    int n,i,j,x,f;
    char *c;
    char s[200],v[100][100],fr[200];
    cin >> n;
    for (i=0;i<=n;i++)
    {
        cin.getline(s,sizeof(s));
        strcpy(fr,s);
        strlwr(s);
        x=0;
        f=0;
        c=strtok(s," ,. ; : ? ! 0 1 2 3 4 5 6 7 8 9");
        while (c)
        {
            strcpy(v[x],c);
            for (j=0;j<x;j++)
            {
                if (strcmp(c,v[j])==0)
                    f=1;
            }

            x++;
        }
    }
}

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        c=strtok(NULL, " ,.;;?!0123456789");
    }
    if (f==1)
        cout << fr << endl;
}
// system("pause");
return 0;
}

//CPAS7 - Pythonists
//Data/Hora:29-04-2010 15:23:07 Pontos:100

#include <stdio.h>
#include <stdlib.h>
#include <math.h>
#include <string.h>

#define FOR(i,a,b) for (i = (a); i < (b); i++)

int w, h;
char m[22][22];

int valid(int x, int y){
    if (0 <= x && x < w && 0 <= y && y < h)
        return 1;
    return 0;
}

int main(){
    int i, j, n, k = 1, f1, f2;

    scanf("%d %d", &h, &w);
    FOR(i,0,h)
        FOR(j,0,w)
            scanf("%d", &m[i][j]);

    FOR(i,0,h)
        FOR(j,0,w){
            //horiz

            // printf("%d %d ", i, j);

            f1 = 1; f2 = 1;

            if ( valid(j-1,i) ) {
                if ( m[i][j-1] != -1)
                    f1 = 0;
                else if (valid(j+1,i)){
                    if(m[i][j+1] < 0)
                        f1=0;
                }
                else if (!valid(j+1,i)) f1 = 0;
            }
            else if (!valid(j-1,i))
                if (valid(j+1,i))
                    if(m[i][j+1] < 0)
                        f1=0;

            if ( valid(j,i-1) ) {
                if ( m[i-1][j] != -1)
                    f2 = 0;
                else if (valid(j,i+1)){

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        if(m[i+1][j] < 0)
            f2=0;
    }
    else if (!valid(j,i+1)) f2 = 0;
}
else if (!valid(j,i-1))
    if (valid(j,i+1))
        if(m[i+1][j] < 0)
            f2=0;

// printf("-> %d %d\n", f1, f2);

    if ((f1 || f2) && m[i][j] != -1)
        m[i][j] = k++;
}

FOR(i,0,h) {
    FOR(j,0,w-1)
        printf("%d ", m[i][j]);
        printf("%d\n", m[i][j]);
}

return 0;
}

//CPAS8 - Pythonists
//Data/Hora:29-04-2010 14:22:52 Pontos:100

#include <stdio.h>
#include <stdlib.h>
#include <math.h>
#include <string.h>

#define FOR(i,a,b) for (i = (a); i < (b); i++)

char nrs[][8] = {"UM", "DOIS", "TRES", "QUATRO", "CINCO", "SEIS", "SETE",
"OITO", "NOVE"};

int main(){
    int i, j, k,n,flag,flag2=0;
    char buff[111];

    while(1){
        scanf("%s", buff);
        if(strcmp(buff,"#")==0) break;

        flag2=0;

        for(i=0;i<9;i++){
            k=0;
            for(j=0;j<strlen(buff);j++){
                if(buff[j] == nrs[i][k]) k++;
            }
            if(k>=strlen(nrs[i])){ printf("%d\n", i+1); flag2 =1; break; }
        }

        if(flag2==0) printf("NAO E PALAVRA DIGITO\n");
    }
    return 0;
}

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//CPAS9 - Pythonists
//Data/Hora:29-04-2010 14:45:59 Pontos:100

#include <stdio.h>
#include <stdlib.h>
#include <math.h>
#include <string.h>

#define FOR(i,a,b) for (i = (a); i < (b); i++)

int vals[20], flag = 0, sols[20], b, s, k = 0, n;

void dfs(int sum, int d) {
    int i;

    if (flag) return;

    if (sum == s) {
        k++;
        if (k == n) {
            flag = 1;
            FOR(i,0,20) sols[i] = vals[i];
            b = d;
            return;
        }
    }

    for (i = 1; i + sum <= s; i++) {
        vals[d] = i;
        dfs(sum + i, d+1);
    }
}

int main(){
    int i;

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

    dfs(0, 0);
    FOR(i,0,b-1) {
        printf("%d ", sols[i]);
    } printf("%d\n", sols[b-1]);

    return 0;
}

```