```c
//sample code for the computation of the
// length of the longest common subsequence of two strings
#include<stdio.h>
#include<malloc.h>
#include<string.h>

int max(int a, int b){
        return(a>b?a:b);
}

int lcsl(char *x, char *y){
        int m,n,i,j,l;
        //int a[m][n];
        int **a;

        m=strlen(x);
        n=strlen(y);

        //allocation
        a=(int **)malloc((m+1)*sizeof(int *));
        for(i=0;i<=m;i++)
                a[i]=(int *)malloc((n+1)*sizeof(int));


        for(i=0;i<=m;i++) //fill first column with 0
                a[i][0]=0;

        for(j=0;j<=n;j++)  //fill first row with
                a[0][j]=0;

        for(i=1;i<=m;i++)  //fill the remaining cells of the matrix
                for(j=1;j<=n;j++)
                        a[i][j]=(x[i-1]==y[j-1])?
                                a[i-1][j-1]+1:
                                max(a[i-1][j],a[i][j-1]);
        l=a[m][n];

        //displaym(a,x,y); //assignment

        //deallocate dmatrix
        for(i=0;i<=m;i++)
                free(a[i]);
        free(a);

        return(l);
}

int main(){
        char *x="GATAC",*y="GTAA";

        printf("the lcs length of %s and %s = %i\n",x,y,lcsl(x,y));

}
```