#include <bits/stdc++.h>

using namespace std;

int main()

{

cout << "Give in two strings to find lcs of\n";

string a, b;

cin >> a >> b;

int m = a.size();

int n = b.size();

vector<vector<int>> v(m + 1, vector<int>(n+1));

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

{

for(int j = 1; j <= n; j++)

{

if(a[i-1] == b[j-1])

{

v[i][j] = v[i-1][j-1]+1;

}

else

{

v[i][j] = max(v[i-1][j], v[i][j-1]);

}

}

}

int i = m, j = n;

string lcs = "";

while(i >= 0 && j >= 0)

{

if(a[i] == b[j])

{

lcs = a[i] + lcs;

i--;

j--;

}

else if(v[i-1][j] < v[i][j-1])

{

i--;

}

else

{

j--;

}

}

cout << "Length of LCS is: " << v[m][n] << "\n";

cout << "LCS is " << lcs << "\n";

}

