1 Algorithm printLCS(LLCS[][], String x, String y)

```
n ← x.length() & Array x ← toCharArray(String x)
m ← y.length() & Array y ← toCharArray(String y)
String LCS ← empty String
int i = LLCS[n][m]
if i = 0 or j = 0 return
while (i != 0)
    if LLCS[n][m] == LCS[n-1][m-1]+1 and LCS[n-1][m]
                                    == LLCS[n][m-1]
        LCS = x[n-1] + LCS
        n--
        m--
    else if LLCS[n][m] == LLCS[n-1][m]
        n--
    else
        m--
    i = LLCS[n][m]
Array LCS ← toCharArray(String LCS)
for (int i = LCS.length()-1 ; i >= 0 ; i--
    System.out.print(LCS[i])
```

2 Proof:

Let C_s be the vertex set containing s and C_t the vertex set containing t. A vertex moving from from C_s to C_t does not change the value of f, because inflow = outflow. What comes from s equals to what goes in t, that is, when a vertex moves from C_s to C_t does not change the flow across the cut. Hence, $|f| = f(x)$

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	S	A	B	C	D	E	F
initial	0	∞	∞	∞	∞	∞	∞
1	0	2	9	3	6	7	5
2	0	2	9	3	6	7	5
3	0	2	6	3	6	7	5
4	0	2	6	3	6	7	5
5	0	2	6	3	6	7	5
6	0	2	6	3	6	7	5