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1 Algorithm print-LCS (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] == LLCS[n-1][m-1] + 1 and LLCS[n-1][m]
      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])

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2 Proof:

Let C_s be the vertex set containing s and C_t the vertex set containing t . A vertex moving 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, $|f| = f(x)$

3

Initial Array

0 1 2 3 4 5 6 7 8 9

1 0 1 2 3 4 5 6 7 8

2 0 1 2 3 4 5 6 7 8

3 0 1 2 3 4 5 6 7 8

4 0 1 2 3 4 5 6 7 8

5 0 1 2 3 4 5 6 7 8

6 0 1 2 3 4 5 6 7 8

7 0 1 2 3 4 5 6 7 8

8 0 1 2 3 4 5 6 7 8

9 0 1 2 3 4 5 6 7 8

10 0 1 2 3 4 5 6 7 8

11 0 1 2 3 4 5 6 7 8

12 0 1 2 3 4 5 6 7 8

13 0 1 2 3 4 5 6 7 8

14 0 1 2 3 4 5 6 7 8

15 0 1 2 3 4 5 6 7 8

16 0 1 2 3 4 5 6 7 8

17 0 1 2 3 4 5 6 7 8

18 0 1 2 3 4 5 6 7 8

19 0 1 2 3 4 5 6 7 8

20 0 1 2 3 4 5 6 7 8

21 0 1 2 3 4 5 6 7 8

22 0 1 2 3 4 5 6 7 8

23 0 1 2 3 4 5 6 7 8

24 0 1 2 3 4 5 6 7 8

25 0 1 2 3 4 5 6 7 8

26 0 1 2 3 4 5 6 7 8

27 0 1 2 3 4 5 6 7 8

28 0 1 2 3 4 5 6 7 8

29 0 1 2 3 4 5 6 7 8

30 0 1 2 3 4 5 6 7 8

31 0 1 2 3 4 5 6 7 8

32 0 1 2 3 4 5 6 7 8

33 0 1 2 3 4 5 6 7 8