# Program 2 report

Output for program 2:

Successfully opened file

ACCGTCTTAGCGATCAACACATTTAACAACGCGCCGCACCCCCCGTCAAACGAGCTTTTGGGCTCTTGTCCTTTTACAAGCTTCACGACGCATACAGCCTTGATCAACGGTTTGATCTGTCTCCCTTCAGCTGGCTTTAAAGGACATACATATGAAGGCCTTAATAAGGTCCGGGAACTCCACATATTCGGTACTGGGCAAACCCCATGAACCACCTCAACATGAAGAGTCCGAGGACTCTCACGATCCACCAATGCAGATCGGAACTGTGCGATCGCGTAATGAGCCGAGTACTTGGTTTGTGTTTAGGTTATGGGGGCCGGGAGCCGGTTCAATATAAGGAAGTAGTTGCAGATTAGTTGTTGCGAACGGTCATAAATTTGATGGGTAAACGTGAACTTAACAAACCGTGATAGCTAATCCTATGCATCCCTTACGTGGATCGACTCGAGTACCCAGGTGAACCGACTACTTGATAACCGGAAATCGCGGTATAAAAGCGCTCACGGTCAGGAGATATACCTCCAAGCAGTAGTCTTTCTGAGCCTAGAGTAGTAAATTACAGGGACGATGTCTTTTACCGAGGCAACATTTTATTGAGAATCACATGAGGCACAGGTAAAGGCGACATCACGATCGAGATCAACCCCTACTTGTTCAAAACATTGAGAACCAGCTCTGTTTTGGAACCTAGAAAGATAACGCATCCGCTTGATATTCCACGGCTTGTCCCTCTTGTGCGGTCCATCTATCGGAGTTTCCTCCGATACGACCCGCAATGTTTCCAGGCGTACGGTACTTTATGAATACACTCGCGCTGTAACCTGTTATGTGAAACACACACGACAGAGCTTCGCGTGGGCCCAGCGACCCGGTAATACTACATCACCGCACACGACCTCGAGCAGTCTTTGCCGGCGTCCGTAAGTAGTCTAAAGTTGTGTTGATGCTTGGGGTTAAAGCTAAATCGTCCGCAGAATACGACTCTCATCCCAAT

ACCCGCACGCGCTTTGGTCTAGATTCTAGCTCCAACTTGCCTGCTAGATACTCTGTTAAAAGATGGTTTTACAACCCCCTCCTCTGTCCCTGGGGTATTATATAATACGTCGGATAGTCAGGTACAAATACAAGTGGGTGGGAATACTTTTCCTCGGATCCTAGACCACGGATTACTGCGTGGTTGACAAGAGTCGGCCCGGAGGGAAACGTGAAGGTTAGTGCAATTAAAGTCTCTAATGTGAAGCCTCCGCGAAGCGAGGAGTTTCTGAGATCGAGTACTATTTAGAGTTCGAAATCACGGCTTAACCTCACTGCCACGCATAACTTGCCGGCAATCCAGTTTTGCAACGATACTTAATTTGTGCAGCTCATCTTTGCTGTCCAGAAATAGAGCTAGTCGATCTCATCTTGCGGGTAGCCAGAAGTCCTACCGTCTCCTCCATGTAGCTTAAAAATTTCGGTGAGGATCAAAAATGATAAACGTGACAGGTAAGCTCCTACGTCTATCCTATGACCCCCGCGGCAGAATAGGTTGGTAGTGTTAGTGCGTGAGCTGGTAGAATAGAGCACACTTAGGGAAACGGGAACCGTTATGTAGGGCTGCGACACACAAAAAAGTGTTCGTTGGTAAGCTGCCTCTCCACTAAACAGGATTTCTCTGGATGATCCCATCGAAGCAAGTTACGCACCACGCCGAGGCGGACCCTGGTACTAGCTGCCCCCCCCTTTATGGGGCGCTCGTACATCAAGATGATCGCGGACTCAACCTGATTACGAGTTGTCCAAGTAGTCCAGGGTAAGAGAAACTGGAGAGA

//part 1

lCS LENGTH IS 573

LCS is ACCGCAGCGCCAATTTACAACGCCGCACCGTAAAAGTGGTTTTACAACCCCCTCCTTGTCCGGTTTATTTCTCTAGTCAGGTACAAAACAATGGTGGGAATACTTTTCTGGACCTAACCACGGATCCGGGTTGACAAGAGTCGGCCCGGAGGGAACGTGAGGTTAGTCAATTAAAGTTCAATGTGTGCGAACGGATTTTGAGGGTACTATTAACAAACCGGCTAACCTATGCCCCTACTTGCCGGCCCAGTGAACGATACTTAATTTGCGCTCACGGTCAGAAATAGAGTAGTCTTTCTGCGGTAGAAATTACCGTCTTCCAGGCAAATTTTGAGATCAATGAGGACAGGTAAGCTCACGTCATCAACCCCCGCAAAATTGGAGTGTTTGGACTGAGATAAGCACCTTGAAACGGGCCTTTGTGGGTCCACACAGTTTCTGTAAGCTGTTCCACTACGGATTTTGATATCCCTGAAGAGTACCACCACGCCGGGCGGACCCGGTACTACTGCCCCCCCCTTTGGGCGCCGTAATCAAGTGATCGGGAAACTAAATGTCCGCAGAAAGACTAAA

//part 2

Enter trial time for iterative version (less than min(|x|,|y|)

100

The length of the LCS is 58

Enter trial time for recursive version (less than 20)

4

The length of the LCS is 3

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Plots for iteration

1 0.009

2 0.007

3 0.007

4 0.007

5 0.006

6 0.006

7 0.007

8 0.007

9 0.007

10 0.007

11 0.007

12 0.006

13 0.007

14 0.009

15 0.007

16 0.007

17 0.006

18 0.006

19 0.006

20 0.007

21 0.006

22 0.007

23 0.007

24 0.007

25 0.007

26 0.007

27 0.007

28 0.007

29 0.007

30 0.007

31 0.007

32 0.007

33 0.007

34 0.007

35 0.007

36 0.007

37 0.008

38 0.007

39 0.007

40 0.007

41 0.007

42 0.007

43 0.006

44 0.006

45 0.006

46 0.007

47 0.006

48 0.006

49 0.006

50 0.007

51 0.007

52 0.007

53 0.007

54 0.007

55 0.007

56 0.007

57 0.007

58 0.006

59 0.007

60 0.007

61 0.007

62 0.006

63 0.008

64 0.007

65 0.007

66 0.007

67 0.007

68 0.008

69 0.007

70 0.006

71 0.007

72 0.007

73 0.007

74 0.007

75 0.008

76 0.007

77 0.007

78 0.007

79 0.007

80 0.007

81 0.006

82 0.007

83 0.007

84 0.008

85 0.007

86 0.007

87 0.007

88 0.007

89 0.007

90 0.007

91 0.007

92 0.006

93 0.006

94 0.007

95 0.007

96 0.007

97 0.007

98 0.007

99 0.007

100 0.008

Plots for recursion

0.003

0.001

0.001

0.001

0.001

0.001

0.001

0.002

0.001

0.001

0.001

0.002

0.001

(3) The big o for iteration function is o(m\*n)

The big o for recursion is o(2^n), this n is the sum of the length of two strings