Bioinformatics Lab Assignment 2

Q1. Find the Longest Common Subsequence in given two strings using Python and R programming. Comment on the advantages and disadvantages you faced while coding in both the languages. A report on these comments has to be submitted.

Given: Two strings.

Return: A longest common subsequence of these strings.

Sample Dataset

      AACCTTGG

      ACACTGTGA

Sample Output

      AACTGG

Once you have written your program, use the following input and show the desired result.

Input:
ACCGTCTTAGCGATCAACACATTTAACAACGCGCCGCACCCCCCGTCAAACGAG
CTTTTGGGCTCTTGTCCTTTTACAAGCTTCACGACGCATACAGCCTTGATCAACGG
TTTGATCTGTCTCCCTTCAGCTGGCTTTAAAGGACATACATATGAAGGCCTTAAT
AAGGTCCGGGAACTCCACATATTCGGTACTGGGCAAACCCCATGAACCACCTCA
ACATGAAGAGTCCGAGGACTCTCACGATCCACCAATGCAGATCGGAACTGTGCG
ATCGCGTAATGAGCCGAGTACTTGGTTTGTGTTTAGGTTATGGGGGCCGGGAGCC
GGTTCAATATAAGGAAGTAGTTGCAGATTAGTTGTTGCGAACGGTCATAAATTTG
ATGGGTAAACGTGAACTTAACAAACCGTGATAGCTAATCCTATGCATCCCTTACG
TGGATCGACTCGAGTACCCAGGTGAACCGACTACTTGATAACCGGAAATCGCGG
TATAAAAGCGCTCACGGTCAGGAGATATACCTCCAAGCAGTAGTCTTTCTGAGCC
TAGAGTAGTAAATTACAGGGACGATGTCTTTTACCGAGGCAACATTTTATTGAGA
ATCACATGAGGCACAGGTAAAGGCGACATCACGATCGAGATCAACCCCTACTTG
TTCAAAACATTGAGAACCAGCTCTGTTTTGGAACCTAGAAAGATAACGCATCCGC
TTGATATTCCACGGCTTGTCCCTCTTGTGCGGTCCATCTATCGGAGTTTCCTCCGA
TACGACCCGCAATGTTTCCAGGCGTACGGTACTTTATGAATACACTCGCGCTGTA
ACCTGTTATGTGAAACACACGACAGAGCTTCGCGTGGGCCCAGCGACCCGGT
AATACTACATCACCGCACACGACCTCGAGCAGTCTTTGCCGGCGTCCGTAAGTAG
TCTAAAGTTGTGTTGATGCTTGGGGTTAAAGCTAAATCGTCCGCAGAATACGACT
CTCATCCCAAT

ACCCGCACGCGCTTTGGTCTAGATTCTAGCTCCAACTTGCCTGCTAGATACTCTGT
TAAAAGATGGTTTTACAACCCCCTCCTCTGTCCCTGGGGTATTATATAATACGTC
GGATAGTCAGGTACAAATACAAGTGGGTGGGAATACTTTTCCTCGGATCCTAGA
CCACGGATTACTGCGTGGTTGACAAGAGTCGGCCCGGAGGGAAACGTGAAGGTT
AGTGCAATTAAAGTCTCTAATGTGAAGCCTCCGCGAAGCGAGGAGTTTCTGAGA
TCGAGTACTATTTAGAGTTCGAAATCACGGCTTAACCTCACTGCCACGCATAACT
TGCCGGCAATCCAGTTTTGCAACGATACTTAATTTGTGCAGCTCATCTTTGCTGTC
CAGAAATAGAGCTAGTCGATCTCATCTTGCGGGTAGCCAGAAGTCCTACCGTCTC
CTCCATGTAGCTTAAAAATTTCGGTGAGGATCAAAAATGATAAACGTGACAGGT
AAGCTCCTACGTCTATCCTATGACCCCCGCGGCAGAATAGGTTGGTAGTGTTAGT
GCGTGAGCTGGTAGAATAGAGCACACTTAGGGAAACGGGAACCGTTATGTAGGG
CTGCGACACACAAAAAGTGTTCGTTGGTAAGCTGCCTCTCCACTAAACAGGATT
TCTCTGGATGATCCCATCGAAGCAAGTTACGCACCACGCCGAGGCGGACCCTGG
TACTAGCTGCCCCCCCCTTTATGGGGCGCTCGTACATCAAGATGATCGCGGACTC
AACCTGATTACGAGTTGTCCAAGTAGTCCAGGGTAAGAGAAACTGGAGAGA

Desired Output:
ACCGCAGCGTCAATTTACAACGCCGCACCGTAAAGATGGTTTTACAACCCCCTCC
CTGTCCGGTTTATTTCTCTAGTCAGGACAAATAAAGTGGTGGGAATACTTTCTCG
GACCAGACCACTACTGGTGGTTGACAAGAGTCGGCCCGGAGGGAACTGGTTGTG
TTAGTTATGGGCCCCGGAAGGAGAGTTGAGATCGAGTCTATTTGAGTCGAATCAC
GGCTAACCTATGCACCTACTTGCCGATCCAGTGAACGATACTTATACCATCGCGT
AAAAAGGCTAGTCGATATCCTCCAGAGTAGTCTTCTGAGCTAAAAATTCGGGAG
ATCAAAAATATAAACTGACAGGTAAGCCTACGTCATCAACCCCCGCAAAATTGG
AGTGTTTTGGCTAGAAAGAGCACCTTGAAACGGGCCTTTGTGGGTCCACACAGTT
TCTGTAAGCTGTTCCACTACGGTCTTATGATCATCGGCAAGTTAGCACCACGCGA
GGCGGACCCGGTACTACTCCCCCACGCTCGACATCTTGCGGCTCCTGATTAAGTT
GTGTGTCGGGTAAAGAAACTGAGAGA