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Written HW 2

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2.7

2) Can you propose a dynamic programing solution to to solve the longest common subsequence?

9)Given two DNA sequences S\_1 and S\_2 of length n and m, respectively, we would like to compute the minimum number of operations required for transforming S\_1 to S\_2, where the allowed operation include (1) insertion of one base, (2) deletion of one base, (3) replacement of one base, and (4) reversal if a DNA substring. In addition, for operation (4), once it is applied on a segment of the DNA sequence, the bases in the segment cannot be further transformed using any operation. Can you give and efficient algorithm, which returns the minimum number of operations to transform S\_1 to S\_2? What is the time complexity