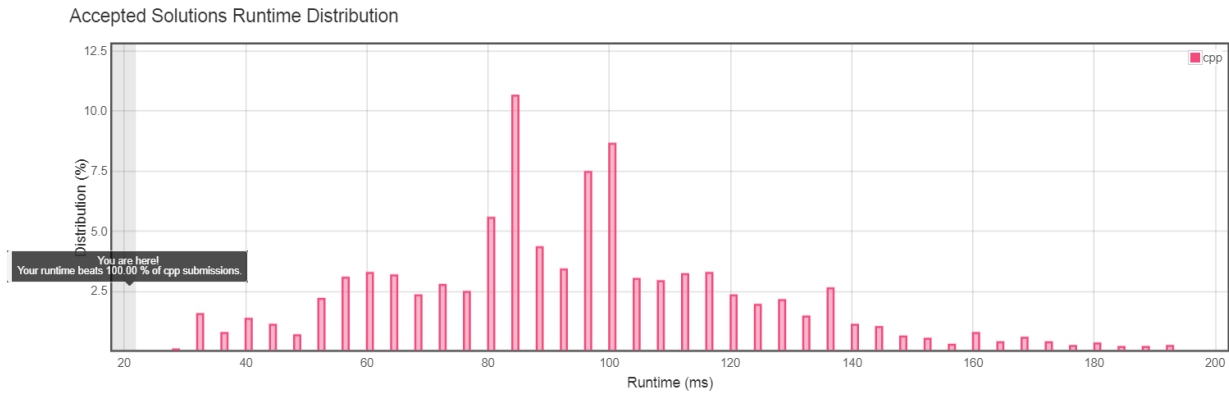1. DP. $O(n^2)$.
2. We can reduce this to LCS, by computing the LCS between s and its reverse.
For the LCS algorithms, see 097. Interleaving String.

The following implementation is $O(\frac{n^2}{w})$.

note. if we want to output the subsequence, one pass of LCS can only get half of the solution.

References