CSE321 HOMEWORK 4

Part1

Explanation: Initially, I checked the penalty for the path between A[i] and A[i+1]. Then, if the penalty is not 0 I checked the penalty for the path between A[i] and A[i + 2] and continue if the new penalty is less than previous penalty.

Complexity: O(n)

Part2

Explanation: Since some big words may contain valid smaller words inside them, I started by considering the whole text as a word and cropped it's end letter by letter till I find a match in dictionary.

Complexity: O(n^2)

Part3

Explanation: I applied the basic merge sort algorithm to this case

Complexity: O(nlogk)