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**COS485**

**PROG3: Text Formating**

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**Program #3 – Optimal Text Formatting**

**– briefly describe your algorithm in English**

My algorithm is using the bottom-up dynamic programing.

First it tries all the cominations possible or words per line.

Then it eliminates combinations that has words that goes beyond the acceptable width.

It finds the best way of formatting by starting from the last word which helps figure the badness per line.

Then it tracks the best badness possible per line with the index of the word that start that line.

The algorithm then stores the best badness per line from the previous line by adding it in the next line best badness.

The best badness for all the words is stored at the first index of the badness per line combined.

The last part then uses those words indexes at the beginning of the line to print the results

**– analyze the worst case execution time of your program**

My algorithm is using the bottom up dynamic programing, so it’s worst case is O(n2).