

# Analyses

KE DING #8318

## 1 Exclude Edit Distance 0

Below is the test result table for my original submitted program.

We can see that for old golden.txt the score is consistent on 20%, but for the new golden.txt the score is around 14% since new words are picked randomly.

The reason is that in the original program, I choose not to return any same words on purpose. That means I return words with smaller edit distance started at one. Since there is no same words matching in the golden.txt, it is a reasonable choice by forcing the program to see each word is misspelled and always trying to fix spelling mistakes. It increases the score for old golden.txt from 17% to 20%.

But for new golden.txt, since the append words are always correct, which make the program return wrong corrected words for sure.

round	Old golden.txt		New golden.txt	
1	Total: 382 Correct: 80 Incorrect: 302	Score(%): 20.94240837696335	Total: 782 Correct: 115 Incorrect: 667	Score(%): 14.705882352941176
2	Total: 382 Correct: 80 Incorrect: 302	Score(%): 20.94240837696335	Total: 782 Correct: 114 Incorrect: 668	Score(%): 14.578005115089514
3	Total: 382 Correct: 80 Incorrect: 302	Score(%): 20.94240837696335	Total: 782 Correct: 109 Incorrect: 673	Score(%): 13.938618925831202
4	Total: 382 Correct: 80 Incorrect: 302	Score(%): 20.94240837696335	Total: 782 Correct: 119 Incorrect: 663	Score(%): 15.217391304347826

## 2 Include Edit Distance 0

Below is the second version program testing result. I change the preference to return smaller edit distance words started at 0 which means the program will return the same words if the words are in the learn dictionary.

We can the score for old golden.txt is back to 17%. But the score for new golden.txt is up to 59%, since the new added 400 words are all correct words and they can always be outputted correctly by the new program.

round	Old golden.txt		New golden.txt	
1	Total: 382 Correct: 65 Incorrect: 317	Score(%): 17.015706806282722	Total: 782 Correct: 465 Incorrect: 317	Score(%): 59.46291560102302

<b>2</b>	Total: 382 Correct: 65 Incorrect: 317	Score(%): 17.015706806282722	Total: 782 Correct: 465 Incorrect: 317	Score(%): 59.46291560102302
<b>3</b>	Total: 382 Correct: 65 Incorrect: 317	Score(%): 17.015706806282722	Total: 782 Correct: 465 Incorrect: 317	Score(%): 59.46291560102302
<b>4</b>	Total: 382 Correct: 65 Incorrect: 317	Score(%): 17.015706806282722	Total: 782 Correct: 465 Incorrect: 317	Score(%): 59.46291560102302