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pa4 write up

No Duplicate Words; **Unique**

# of unique memory references

	0 words	1 word	5 words	26 words	52 words
Sorted	18,120	18,309	18,431	19,103	19,808
Reverse Sort	--	--	18,448	19,075	19,719
Random	--	--	18,452	18,928	19,390

Duplicates (26 unique words Randomly sorted)

# of unique memory references

52 words total	76 words total
19,100	19,272

In analyzing the results, we notice that the order in which the input is entered doesn't really matter that much. It does appear that random insertion does generate slightly fewer (almost negligible) number of unique references than the Sorted and Reverse Sort.

Also, we notice that in going from 0 words to 1 word there was a larger difference than going from 1 word to 5 words (in all cases of sorting). I dont know if a hash table or binary tree was used in the source code for wordstat, but it would seem that some setup needs to be done right before the 1st word is added to the data structure.

Also, In holding the number of unique words constant (26 in this case), if we add another instance of that word, it really doesnt affect the number of unique memory addresses. This would hold true for a binary tree and a hash table. If its already in there, we just add 1 to the count (No need to allocate more space).