Run Time Analysis:

1. Assumption: Input size n, data volume for vocabularies m.
2. Anagram detection best case: O(1) index for each word, total O(n), linear. Worst case O(n) indexing each word. Total O(n^2).
3. Make Anagram Data base: best case: indexing, hashing word: O(1), linear, total O(m). Worst case O(m^2). In practice, m = 230,000. Running time: <3s