Build a dictionary, which support search queries and spell correction. Analyze performance using different underlying data structures.

Data structures:

Test file : 1,00,000 random words

1.Hashmap :

Memory : 42.15 MB

Time : 60 ms

2.RB Tree :

Memory : 40.283.

Time : 280 ms

3.Trie :

Memory : 592 MB

Time : 130 ms(searching)

4.Ternary Tree :

Memory: 68 MB

Time : 150 ms (for searching only)

Ternary Search Tree :

1. Combination of BST and Tries

2. Uses small amount of space as compared to Trie