

# Runtime Analysis

yash yash

printDictionary() - A For loop that runs  $n$  times,  $n$  being the length of wordlist.

$$T(n) = n \Rightarrow O(n)$$

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searchDictionary() - Implements binary search and runs an if statement

$$T(n) = \log_2 n + 1 \Rightarrow O(\log_2 n)$$

binary search - uses a while loop that halves wordlist.

$$T(n) = \log_2 n \Rightarrow O(\log_2 n)$$