**Exercise 2: Dictionary Lookup**

**Objective:** Write pseudocode for looking up a word in a dictionary using a binary search-like approach.

**Pseudocode:**

pseudocode

Copy code

start

Declarations

string targetWord = [Word to look up]

string currentWord

num low = 1

num high = [Total number of words in the dictionary]

num middle

while low <= high

middle = (low + high) / 2

currentWord = lookupWordAtPosition(middle) // Function to get the word at position

if currentWord < targetWord then

low = middle + 1

else if currentWord > targetWord then

high = middle - 1

else

output "Word found at position ", middle

exit

endif

endwhile

output "Word not found in dictionary"

stop

**Explanation:**

1. Start by declaring the necessary variables, including targetWord, currentWord, low, high, and middle.
2. Use a while loop to continue the search while low is less than or equal to high.
3. Calculate middle as the average of low and high.
4. Lookup the currentWord at the position middle.
5. Compare currentWord with targetWord:
   * If currentWord is less than targetWord, adjust low to middle + 1.
   * If currentWord is greater than targetWord, adjust high to middle - 1.
   * If currentWord matches targetWord, output the position and exit.
6. If the loop exits without finding the word, output that the word is not found.