**DictionSeq.translateS**

Input: A string (eng)

Output: Spanish translation

Function: Takes an English word (string) as input and does a sequential search through the dictionArr[ ] array. This searches all the elements in the array to find the index of its Spanish equivalent. When found, the value at that index is returned. If not found, return the string “No comprehendo”.

Time complexity: ꓳ(n)

**DictionBin.translateB**

Input: A string (eng)

Output: Spanish translation

Function: Takes an English word (string) and two integers (lo, hi) as inputs and does a binary search through the dictionArr[ ] array. This searches the elements the array by finding the middle of the array (mid= lo + (hi-lo)/2) then makes a comparison with the value at that index. If the value is found, it is returned. If the value is smaller than the value found at the middle index, the search will continue to the left half of the array, again finding the middle index and comparing the values. If the value is larger than the middle index, the right half of the array is searched by finding the middle of that half and comparing the values. This is done until the target value is found. If the value is not there, “No comprehend” will be returned.

Time complexity: ꓳ(log n)

**DictionBin.translate**

Input: A string (eng)

Output: Spanish translation

Function: It invokes the method translateB with eng, 0 and the method getCount() as it parameters and returns the value when it is found.

Time complexity: ꓳ(log n)