Project: Longest Word [Part 2]

In this game, two players compete to find the longest word using randomly drawn letters (consonants and vowels).

Assigned work - Part 2

The aim of this second part is to integrate the search using a dictionary to find the longest word (or all the n-letter words).

To be efficient, we represent the dictionary containing n-letter words by a planar tree, such that:
   - Each node in this tree has up to n children.
   - The relationship between a node and its ith child (if it exists) in terms of letters is that they have (i - 1) identical character(s) (same letter, same position). Specifically, the relationship between a node and its children is as follows:
      - First child: 0 identical (in common) characters.
      - Second child: 1 identical character.
      - nth child: n - 1 identical characters.

Illustrative example of a 3-letter dictionary/tree
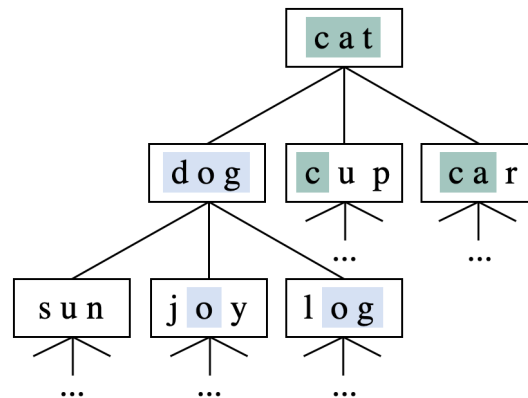
Steps to follow

   - Download a free ".txt" or ".csv" file/dictionary containing all English words.
      - You can pick the language of your choice (Arabic, English, French, etc.).

   - Write the subprograms (functions) that use the provided files to create/load the dictionaries of n-letter words before starting the game (2 ≤ n ≤ 10).

   - Write the subprograms that search for a word in these dictionaries.

   - After finishing the game, you have to delete the created dynamic dictionaries.