Assignment 1 - Problem 3:

- Consider the following definitions of poems in Planet Z:
  - Doha:
    - A *doha* is a poem with two lines, each line made of two phrases, the first phrase four words long and the second phrase three words long.
    - The last words of the first phrase and the second phrase in the first line should rhyme with the last words of the first phrase and the second phrase (respectively) in the second line.
  - Quartet:
    - A *quartet* is a poem with four lines, each line made of seven words.

        - The first word of the first line must rhyme with the first word of the third line.
        - The last word of the second line must rhyme with the last word of the fourth line.
    - Haiku:
        - A *haiku* is a poem with one line of seven words, no word rhyming with any other word.
    - Fusion Sonnet:
        - A *fusion sonnet* is a poem with any number of lines.
        - If the number of lines is even, then it can be broken down to some combination of dohas and quartets.
        - If the number of lines is odd, then the last line must be a haiku. The rest of the sonnet can be broken down

to some combination of dohas and quartets.

- **[Ex. 1]: Write a Prolog program that will classify a given poem as a haiku, doha, quartet, fusion sonnet, or unknown.**

  Assume that the poem is **input as a list of words e.g [a cuckoo flew over an empty nest].**

  Assume that you are given pairs of words that rhyme. These pairs can be stored in a Prolog database (using assert operations) and retrieved (like other facts).

[Ex. 2 *required for 3-person teams*]: Write a Prolog program that will make up a doha - *that may or may not be meaningful* - based on a given dictionary of words and a database of rhyming pairs.