Spellcheck Coding Problem

Write a command line program that reads a large list of English words from *en_US.dic* (provided in the zip) into memory, and then reads words from a specified file, one word per line, and prints either the best spelling suggestion (based on the rules below) in lowercase, or "UNKNOWN" if no suggestion can be found.

This is what a session with your code should look like:

Input File:
Follow
tuumble
abanden
dugpd

Standard Output:
follow
tumble
abandon
UNKNOWN

Your code should correct the following four classes of spelling mistakes:

1. Case (upper/lower) errors: "fuNKY" => "funky"
2. Repeated letters: "mmoonnnnneyyyyy" => "money"
3. Incorrect vowels [A,E,I,O,U]: "dussier" => "dossier"
4. Any combination of the three above types of error in a single word should be corrected: "FUNtisttaC" => "fantastic" or "pediaiaiaiaiaiaaaaiiaiatric" => "pediatric"

If the word is in the dictionary, your program should respond with that word. If there are many possible corrections of an input word, your program can choose one in any way you like. It just has to be a word from the dictionary that is a spelling correction of the input by the above rules.

You can use whatever programming language you like for this exercise. However, if it is a compiled language you must supply instructions or build scripts for compilation. We prefer you use Java or another JVM language, please get prior approval before using another language for your solutions. Also, if any third party or open source libraries are used they should be included in the delivery as well. If we are unable to build and or run your program this will count against you in the interview process. This problem should take two to four hours. If you're spending much more than that, it's fine to stop and send us what you have along with an outline of what's left and how you would solve it. Send a zipped or tarred file containing your source and all instructions or build scripts via email. Please don't put your solution in a publicly accessible location (ie. public GitHub or BitBucket repo).