Lab #9 (10 points)

Revise the animal guessing game discussed in class and in the text so that it reads the initial knowledge tree from a file, then writes the tree back to the file at the end of the game. The original code has been posted for your reference. A compiled version of the program (animal.class) and an initial input file (animals.txt) are also posted. To run the working version, copy both files to your disk and work from there. The structure of the input file may be helpful to you in determining how your recursive I/O methods should work.

Some hints:

- It is useful to distinguish between questions (stored in non-leaf nodes) and answers (stored in leaf nodes). The easiest way to do this is to note that questions end in question marks, while answers do not. Modify the learn() method to make sure that this distinction is maintained.
- Both the readFromFile and writeFromFile methods should be written recursively, as they are basically traversal methods. Do NOT declare or open the file itself within these methods – your best option is to make the file an instance variable, and make opening for reading/writing the file a problem for another method. Remember, each method is recursive, you don’t want to keep opening the same file.

For fun (and 5 points extra credit), modify the program so that it deals with a different knowledge base than the original animal guessing game.