Natural Language Parsing: Work with your partner(s) to understand how natural language sentences are "parsed".

Follow the instructions:

1. Login to phoenix and download files ch8_1.pl, ch8_2.pl, and ch8_3.pl. The first file defines properties in a world of people, parks, trees, and hats, similar to the one given on p160 of your text. The second file is a lexicon, given on p161 of your text, which describes all the English words that are to be used, categorizes them, and indicates how the words relate to the predicates and constants in the world model.

    Add the words "guy" and "tiny" to the lexicon so that we can understand the phrase "the guy with a tiny hat". This only changes the lexicon – not the world.

2. The file ch8_3.pl defines a "parser" for noun phrases, given on p 163 of your text.
    If we are parsing the phrase "a big tree" we would type the phrase as a list of words:
    np([a,big,tree],X).

    The parser would break up the phrase as a parse tree:
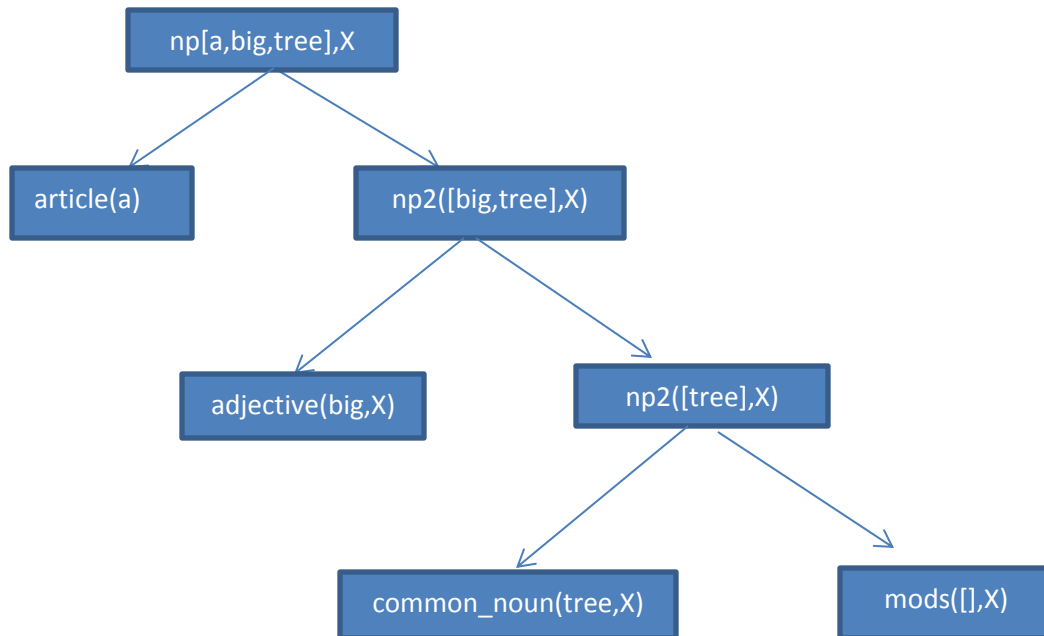
Draw the parse trees for the following phrases:

   a. The woman with a red hat

   b. The hat on the man beside Mary

   c. A man beside a woman with a small blue hat

3. Try the noun phrases above in Prolog and give the results. Check that these results match what you would expect from the world model.