# Assignment 4
## L245
### Due Monday, February 27

1. Try out the VIEW system (`http://sifnos.sfs.uni-tuebingen.de/VIEW/`) & answer the following:

   (a) Describe your user interaction: what kind of content did you give it, what exercises did you try, how easy was it to use, etc.? (Note: It works best with Firefox.)

   (b) In a sentence or two, describe the positives of these types of exercises. When would you want to use them for a language you're learning?

   (c) In a sentence or two, describe the limitations of these types of exercises. When would you not want to use them for a language you're learning, or what would you have to be careful about?

   (d) Describe in detail how a POS tagger can be used to generate fill-in-the-blank exercises. How could this be extended to other languages?

   It may help to take a look at the paper about VIEW/WERTi: `http://www.sfs.uni-tuebingen.de/~dm/papers/meurers-ziai-et-al-10.html`

2. Do question #6 on p. 88 of the textbook.

3. The goal of an automatic syntactic parser is to provide phrases (e.g., NPs) and/or relations between phrases (e.g., subjects), in order to help build a meaning for a sentence. Describe the difficulties a parser will have for the following examples from English language learners (describing future plans):

   (a) I will son, father and husband.

   (b) I think job, study, everythings are background for my dream, family.

   (c) This three plans base on my study, university studying, enough experience doing, and many article reading, for my dream.

   Be sure to discuss the source of the problem, and think especially about ambiguity.

4. We talked about using machine learning to predict the correct preposition in English sentences. The methods were quite different than the parser-based grammar checking methods discussed earlier. In the following questions, keep in mind both: i) the machine learning techniques we've discussed, and ii) the parser-based techniques we've discussed, as either or both could be relevant or preferable.

   (a) How would we adapt this machine learning strategy for predicting where there should be *the*, *a(n)*, or no article in English? What sorts of features are needed?

   (b) Would this approach be a good idea to predict the correct verb form for subject-verb agreement? Why or why not? What, for example, are the *categories* you're guessing? Is there a better way?

5. Do question #2 in chapter 4 of the textbook (p. 121). It may help to look at the different kinds of examples in question #1 (p. 120) to think through issues of prior knowledge.

6. Below is a list of the authors of 7 hypothetical books. So, for example, *knight* and *davis* wrote book 4, but *crean* did not.

   | 1) knight | 3) crean | 5) knight crean | 7) knight davis crean |
   | 2) davis | 4) knight davis | 6) davis crean | |

   For each of the following Boolean expressions, write down which author lists match the expression. For example, the Boolean expression *davis* matches 2, 4, 6, and 7.

   (a) knight

   (b) knight AND NOT crean

   (c) knight OR davis OR crean

   (d) knight AND (davis OR crean)

   (e) (knight AND davis) OR crean