AI, November 13, 2006

Some Review Ideas

• Why do you supposed that Thailand is not spelled Tailand?

• Who are the authors of your text? When I was in high school Biology, that was the first question on the first exam. I got it wrong, but I remember to this day now that they were Moon, Mann, and Otto. Your authors are famous in AI; their names are worth learning. I was sensitized to this on Friday when I asked a student at Penn State taking a Programming Languages course, "Are you using Sebesta's seventh edition?" He didn't know. So I said, "Is it a white glossy cover with little stories about Larry Wall and Bjarne Stroustroup?" Yes! Professional refer to books by their authors. Hint.

• Here are some fun garden-path sentences:
en.wikipedia.org/wiki/Garden_path_sentence

• This bullet point is actually a review of all of your courses! When you write a report for me for your last homework assignment, be sure to remember the following things from the following courses:

" From first-year seminar, remember how to reference sources and avoid plagiarism, how to spell-check and use 12-point Times Roman or other standard font for reports with at least 1" margins, how to find references in the Library and not just on the internet.

" From earlier CS courses, remember that an end-of-semester presentation is a professional statement. You should dress in business dress and prepare your materials, whether handouts or Powerpoint or document camera materials, to communicate well.

" From earlier CS courses, remember that lab reports have a purpose (or abstract or summary) at the start. They have discussion. They have a statement which I sometimes call "limitations" but can also be called "things that I would do to improve this next time." It's often in the form of "I tried X and it didn't work, so I did Y. I think the reason is Z."

If there are computer programs included, the programs have internal documentation, are formatted according to good style, and have sample input and output that serve to prove or disprove whatever reason it was that you included the program. For style reminders in Java at least, you could see my link:
www.messiah.edu/departments/mathsci/courses/misc/coverSheetAndRubric.htm

• dcg : fopc :: bnf : sc [Definite Clause Grammars are more powerful than BNF grammars in the same way that FPOC is more powerful than Statement Calculus—both introduce variables.]

Exam 3 Postmortem

Question #3. At first I was thinking of models that make minimal commitments (they're called "Henken" models). The advantage of them is that one gets the same provable statements. See p. 274 where we learn that "propositionalizing" gives from a FOPC statement a Statement Calculus statement that is "inferentially equivalent." But Question #3 does not ask for the most general model, just any model. So ∃ elimination can find any constant, not necessarily one not seen yet.

Question #5a. Some folks tried to figure out what I had in mind, in an election week, by giving a formula like

$$\exists x \, \forall y \; President(y) \Rightarrow Succeeds(x, y).$$

succeeds(c, Y) :- president(Y).

In English it says that every president has a successor. I was originally going to give a much more complicated example that would be a take-off on Exercise 8.19 on p. 271 (which asked you to translate rules about passports into FOPC). In other years, I've used IRS forms as part of a homework assignment. So my idea was to give a problem which captured what the U.S. Constitution says about presidential succession. Perhaps you remember that the following things could be true:

The President could succeed himself, or could be succeeded by another in an election decided by electoral vote, or if in the case of a tie, decided by the House of Representatives. But if he dies, is incapacitated or impeached, then the Vice President becomes President, unless the Vice President is also unable to serve. Then see http://en.wikipedia.org/wiki/United_States_presidential_line_of_succession

The simple form of Question #5a is all that survived from my original plan.

Question #6. Why did I give a question that's so much like a similar question on the first exam? Because I forgot to tell you to look at the pages of Chapter 10 to which I had earlier drawn your attention. Thus to be fair, all I had to go on for Dr. Rohrbaugh's second lecture was some kind of notion of general and specific ontologies in hierarchy. A sample answer: One ontology addressed people and musical instruments; another, men and stringed instruments. Then whether you were going for general or specific you would choose the first or the second. I was pretty lax in grading this. Anthing that showed me that you could write two ontologies and some excuse for a preference got credit.

Question #7c. I had to go back and regrade this because I wanted to use the 21x21 matrix WeightJ. So I graded it as if I *had* used WeightJ. Then the answer would have been that the information that affects output 3 is in the entire WeightJ matrix, not in any particular part of it. But for WeightK, which I *did* use (when it turned out that the 21x21 matrix wouldn't fit on the page nicely), only column 3 contributes to the output; all of col. 3 does.

Who presents when, and what

Dec 1	Pohly, Devin, a linguistic topic	Dec 4	Grenier, Michael
Dec 1	Green, Kevin	Dec 4	Crouse, Ben
Dec 1	Books, Danielle		
Dec 1	Battaglia, Shanna	Dec 6	Melious, Ethan
		Dec 6	Curd, Val
Dec 4	Cook, David	Dec 6	Predergrast, Joe
Dec 4	Cook, Alan	Dec 6	Edwards, Dan

There will be two more assignments, one on natural language processing for all, and one of your choice for a presentation. Please **select a topic for your presentation by Friday, November 17, and give me a typewritten paragraph about what you have chosen to do by then.**