This assignment asks you to prepare written answers to questions on bottom-up parsing. The answers are longer but more mechanical than on previous assignments. You may discuss this assignment with other students and work the problems together. However, your writeup should be your own individual work. Remember written assignments are to be turned in in class on the date due.

One of the least loved and least understood aspects of the C programming language is its type declarators. We can improve on the latter problem by considering the following simplified declarator grammar.

In this grammar, S is the start symbol, T is a C type, P is a pointer declarator, and D is an ordinary declarator. The terminals are the punctuation marks, "int", and "char".

- 1. Give the LR(0) item sets, and the DFA of the LR(0) item sets for this grammar. Please show all of your work.
- 2. Is this grammar SLR(1)? Why or why not?
- 3. Show the sequence of moves of an SLR(1) parser on the following input. Resolve any shift-reduce conflicts in favor of shifting. char \* id()