Today: CFGs and PDAs. §§ 2.2–2.3.
Next class: Non-context-free languages. § 2.3.
Reminders: Reading. Newsgroup.

1. List the members of your group below. Underline your name.

2. Consider the the grammar G_1:

$$\begin{aligned} E &\rightarrow E{+}T \mid E{-}T \mid T \\ F &\rightarrow (E) \mid \texttt{i} \\ T &\rightarrow F \mid T/F \mid T{*}F \end{aligned}$$

   For each of the following strings, either provide a leftmost derivation of the string from S or explain why the string is not in $L(G_1)$: `i+i+i/i*i`; `i-ii*i`.

3. Is the grammar G_1 ambiguous? Are its parse trees consistent with the usual interpretation of arithmetic symbols and expressions? Justify your answers.

4. Convert the grammar G_1 of Question 2 to Chomsky normal form. Show intermediate grammars.

[additional space for answering the earlier question]

5. Provide informal and formal descriptions of a pushdown automaton that is equivalent to the grammar G_1 of Question 2.