

Exercises for chapter: *yacc*

1. Try to write *lex* or *yacc* programs for the following languages:

$$a^n b^m, \quad a^n b^n, \quad a^n b^n c^n$$

Discuss the theoretical power of *lex* and *yacc*.

2. Use the $\text{T}_{\text{E}}\text{X}$ parser you wrote in *lex* to parse $\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$ documents. The parser should
 - Report the documentclass used,
 - Check that `\begin{document}` and `\end{document}` are used, with no text before the begin command;
 - Recognize proper matching of begin/end of an environment.