

# Compilers

## Assignment 1: Lexical Analysis

### Deadline: 2011-11-12, 2:30 PM

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#### 1- The Assignment: from the Appel Exercise 2.9:

An interpreted DFA-based lexical analyser uses two tables:

**edges** indexed by state and input symbol, yielding a state number

**final** indexed by state, returning 0 or an action number

Starting with this lexical specification:

<code>(aba) +</code>	<code>action 1: token 1</code>
<code>(a (b*) a)</code>	<code>action 2: token 2</code>
<code>(a b)</code>	<code>action 3: token 3</code>

Generate the edges and final tables for a lexical analyser.

Then show each step of the lexer on the string `abaabbaba`. Be sure to show the values of the important internal variables of the recognizer. There will be repeated calls to the lexer to get all tokens from the string.

#### 2- The Report

The report should be printed from a computer (hand-written reports can be difficult to read), and should include a front page with your name and email address, the name of the course, and the number of the assignment. The assignment should be solved individually.

You can leave the report in my room (room number 5, besides Mr. Salar's room, ground floor), or send it to my email address ([amanjpro@gmail.com](mailto:amanjpro@gmail.com)), no later than the deadline date.