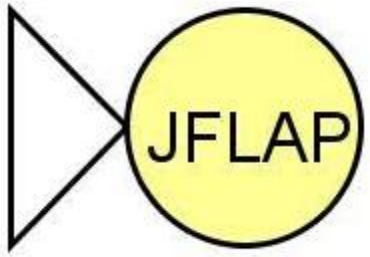


JFLAP

Susan Rodger

Duke University

Oct 12, 2007

Students: Thomas Finley, Stephen Reading, Bartlett Bressler, Ryan Cavalcante, Jinghui Lim, Chris Morgan, and Kyung Min (Jason) Lee

Support by NSF Grant DUE-0442513

Thanks to 33 Students for JFLAP!

- NPDA - 1990, C++, Dan Caugherty
- FLAP - 1991, C++, Mark LoSacco, Greg Badros
- JFLAP - 1996-1999, Java version
Eric Gramond, Ted Hung, Magda and Octavian Procopiuc
- Pâté, JeLLRap, Lsys - Anna Bilska, Jason Salemme, Lenore Ramm, Alex Karweit, Robyn Geer
- JFLAP 4.0 – 2003, Thomas Finley, Ryan Cavalcante
- JFLAP 6.0-6.2 – 2005-2007 Stephen Reading, Bart Bressler, Jinghui Lim, Chris Morgan, Jason Lee
- Other related tools – Poladian, James, Daglas, Neisheiwat, Wong, Luce, Blythe, Dogrusoz, Vasudevan, Nibhunupudi, Tsang, Wolfman, Hardekopf, Leider

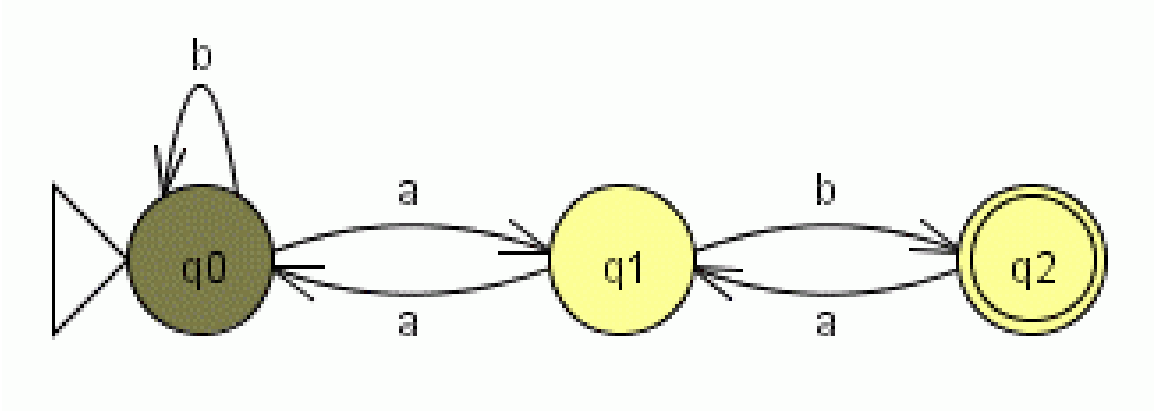
With JFLAP – theoretical computer science comes alive!

- Traditionally: pencil/paper formula approach

$$(\{q_0, q_1, q_2\}, \{a, b\}, \delta, q_0, \{q_2\})$$

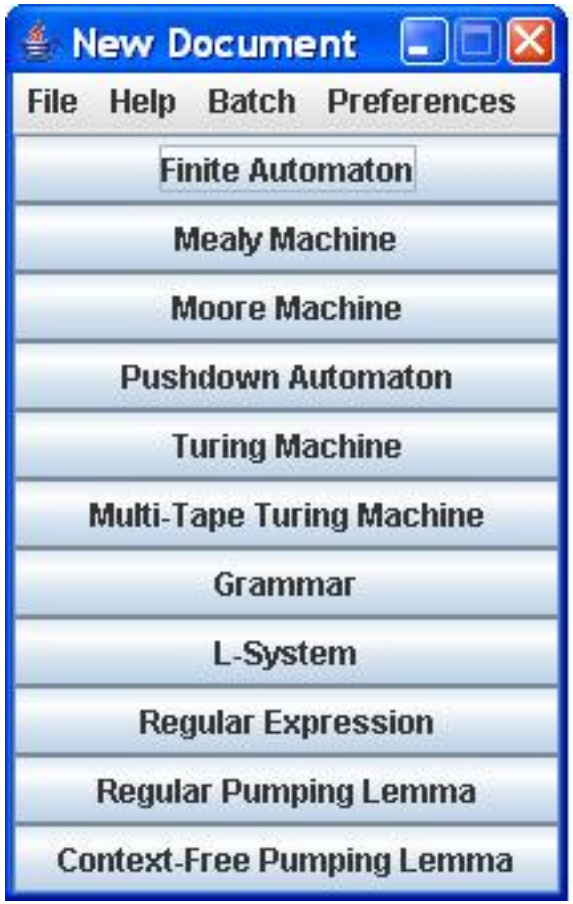
$$\delta = \{(q_0, b, q_0), (q_0, a, q_1), (q_1, a, q_0), (q_1, b, q_2), (q_2, a, q_1)\}$$

- With JFLAP: interactive and visual



Topics in JFLAP

- Create and experiment with
  - Theoretical machines
    - Finite Automata
    - Pushdown Automata
    - Turing machines
  - Grammars
- Explore Construction type Proofs
  - Examples:
    - Convert DFA to regular grammar
    - Convert NPDA to CFG



Demos

- Please see the movie on the JFLAP web site