

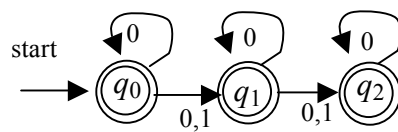
## Exercises for FLL, Fall 2012, sheet 2

*Return Wed Sep 17, in class*

*Note: you may work in teams of 2 if you wish. If you do, hand in a single solution sheet for both of you.*

**Exercise 1.** Design a DFA which accepts the language  $L = \{ w \in \{a, b\}^* \mid |w| > 0, \text{ and the last symbol in } w \text{ is equal to the first} \}$ . Describe your DFA both by a complete transition table and through a graphical transition diagram.

**Exercise 2.** Describe the language accepted by the NFA shown below in plain English.



**Exercise 3.** Construct a DFA equivalent to the NFA depicted above, *using the subset construction*. Present your DFA by a transition diagram.