

Homework #3  
CS322/KAIST 2011 Fall  
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Due Date: 10/6, 14:30

2011/9/29

**Exercise 1 (10pt)** Convert the following regular expressions to  $\varepsilon$ -NFA's and then DFA.

- a)  $(0+1)01$
- b)  $(0+1)^*00(0+1)^*$

**Exercise 2 (10pt)** Here is a transition table for a DFA:

	0	1
$\rightarrow$ *p	s	p
q	p	s
r	r	q
s	q	r

- a) Give all the regular expressions  $R_{ij}^{(2)}$ . Try to simplify the expressions as much as possible
- b) Give a regular expression for the language of the automaton.