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ICS 313
Quiz #1
February 3, 2008

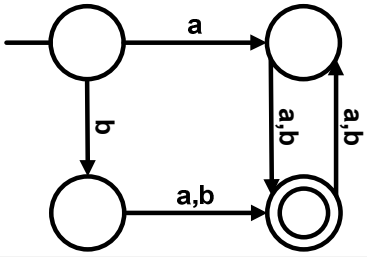
Quiz #1

Give a regular expression for the set of all strings on the alphabet {0, 1}, which have an add number of 1's.

Answer:

$$0^*(10^*1)^*0^*10^*$$

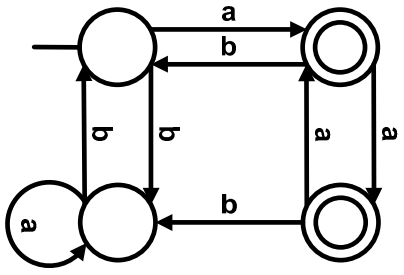
Give the regular expression for the following DFA.



Answer:

$$a(a|b)((a|b)(a|b))^*|b(a|b)((a|b)(a|b))^*$$

Give the regular expression for the following DFA.



Answer:

Ways to get to the accepting state:	a^+
Ways to get back to the starting state:	$a(aa)^*b\|(aa)^+ba^*b\|ba^*b$
Therefore, the solution is:	$(a(aa)^*b\|(aa)^+ba^*b\|ba^*b)^*a^+$