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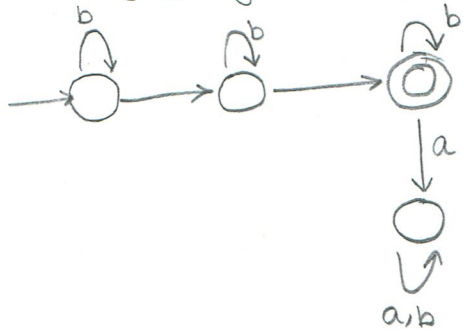
Homework I
FA and RegEx

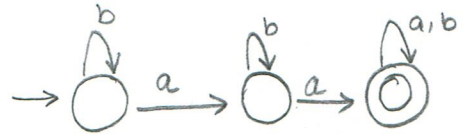
Problem 1 Draw an FA accepting the indicated language over $\{a, b\}$:

1.) The language of all strings containing exactly two a's
2.) The language of all strings containing atleast two a's

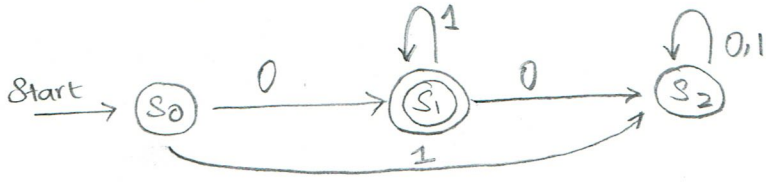
1.)



2.)



Problem 2 Construct a deterministics finite-state automaton that recognizes the set of all bit strings such that the first bit is 0 and all remaining bit are 1s



Problem 3> consider the following two regular expressions:

$R = a^* + b^*$;

$S = ab^* + ba^* + b^*a + (a^*b)^*$

a) Find a string corresponding to R but not to S

Sol:> $R = aa$, not accepted by S

b> Find a string corresponding to S but not to R

Sol:> $S = ab$

It is not accepted by R.