Computational Linguistics Assignment #1
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Exercise 1

Conf	**Agenda**
-	$<q_o, abaaba>$
$<q_o, abaaba>$	$<q_1, baaba>$
$<q_1, baaba>$	$<q_2, aaba>, <q_3, aaba>$
$<q_2, aaba>$	$<q_1, aba>, <q_3, aaba>$
$<q_1, aba>$	$<q_3, aaba>$
$<q_3, aaba>$	$<q_2, aba>$
$<q_2, aba>$	$<q_1, ba>$
$<q_1, ba>$	$<q_2, a>, <q_3, a>$
$<q_2, a>$	$<q_1, \varepsilon>, <q_3, a>$
$<q_1, \varepsilon>$	$<q_3, a>$
$<q_3, a>$	$<q_2, \varepsilon>$
$<q_2, \varepsilon>$	

One potential problem with this algorithm is that an NFA with a loop of ε-transitions could cause an infinite loop. A solution would be to keep a history of visited configurations, and only add configurations that haven't been visited to the agenda.

Exercise 2

	"a"	**"b"**
$\{q_0\}$	$\{q_1\}$	Ø
$\{q_1\}$	Ø	$\{q_2, q_3\}$
Ø	Ø	Ø

{q_2, q_3}	{q_1, q_2}	∅
{q_1, q_2}	{q_1}	{q_2, q_3}

start state = {q_o}
final states = { {q_0}, {q_2, q_3}, {q_1, q_2} }