

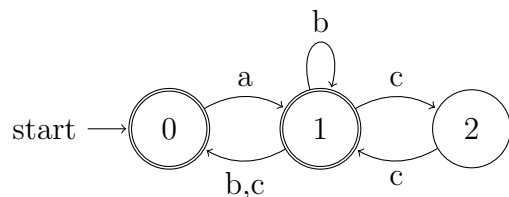
ECS 120 Problem Set 3

Hardy Jones

999397426

Professor Rogaway

Spring 2014



Problem 1

We need to start by enumerating all sets of states, and their transitions for each input.

State	a	b	c
$\{0\}$	$\{1\}$	$\{\}$	$\{\}$
$\{1\}$	$\{\}$	$\{0,1\}$	$\{0,2\}$
$\{0,1\}$	$\{1\}$	$\{0,1\}$	$\{0,1,2\}$
$\{0,2\}$	$\{1\}$	$\{\}$	$\{1\}$
$\{0,1,2\}$	$\{1\}$	$\{0,1\}$	$\{0,1,2\}$

Now we need to generate new final states. These are any state sets that contain the original final states. In this case, all of the states in the first column are final states.

Finally, we can generate our DFA.

