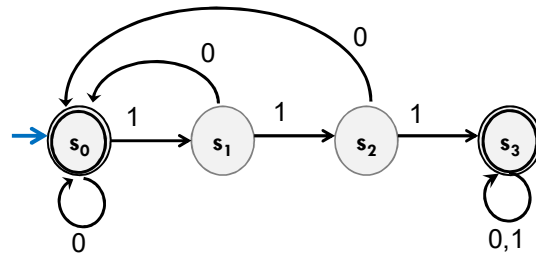


## Deterministic Finite Automata

What is the language of this DFA?  
I.e. the set of all strings it accepts?

Old State	0	1
$s_0$	$s_0$	$s_1$
$s_1$	$s_0$	$s_2$
$s_2$	$s_0$	$s_3$
$s_3$	$s_3$	$s_3$



## Design some DFAs

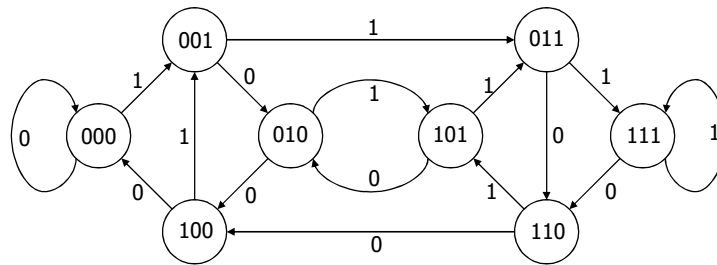
Let  $\Sigma = \{0,1,2\}$

$M_1$  should recognize "strings with an even number of 2's."

What do you need to remember?

$M_2$  should recognize "strings where the sum of the digits is congruent to 0 (mod 3)"

## 3 bit shift register “Remember the last three bits”



What language does this machine recognize?

