

Sequence detector

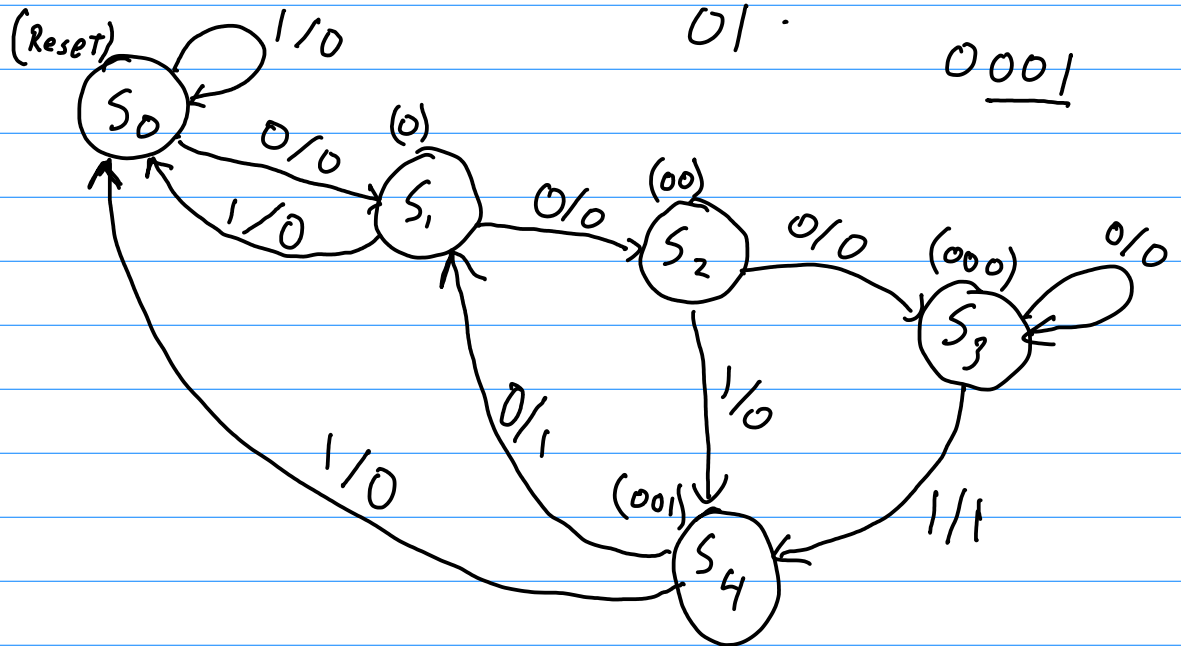
Ex. detect sequences of $\begin{cases} 0010 \leftarrow R \\ 0001 \leftarrow OR \end{cases}$

Allow overlap

$X = 0100100100010110011$

$Z = 0000010010011000000$

mealy



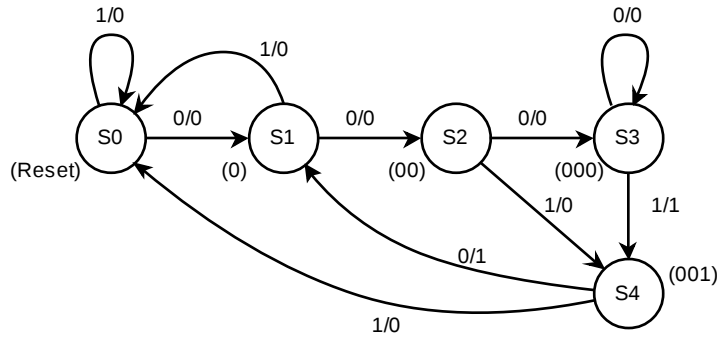
State Diagrams

Sequence detector: detect sequences of 0010 or 0001
 Overlapping patterns are allowed

Example output:

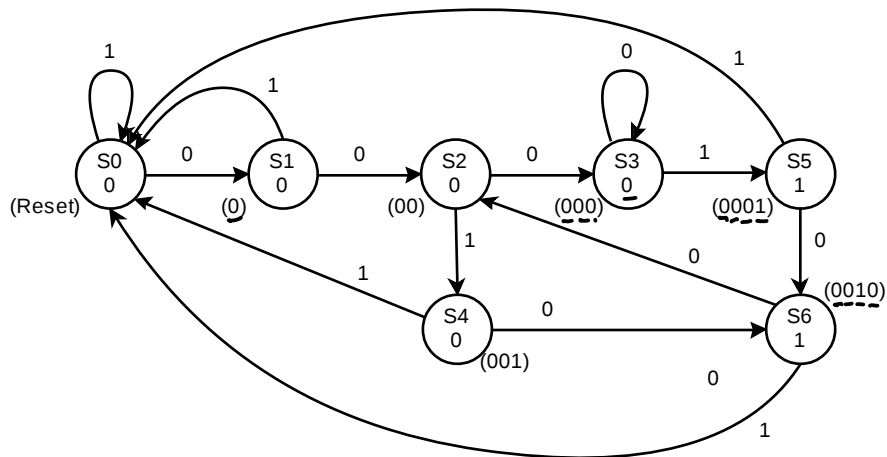
X: 1 0 0 1 1 0 0 0 0 1 0 0 1 0 1 1 1 0 1 0 0 1 0
 Z - Mealy 0 0 0 0 0 0 0 0 0 1 1 0 0 1 0 0 0 0 0 0 0 0 1
 Z - Moore 0 0 0 0 0 0 0 0 0 0 1 1 0 0 1 0 0 0 0 0 0 0 1

Mealy Design



5 states
 => 3-ff

Moore Design ← output = function of P.S. only



7 states
 3-ff