One-hot encoding!

Read chapter 8 ( $\frac{0}{8}$1 — $\frac{0}{8}$.3 ) by wednesday
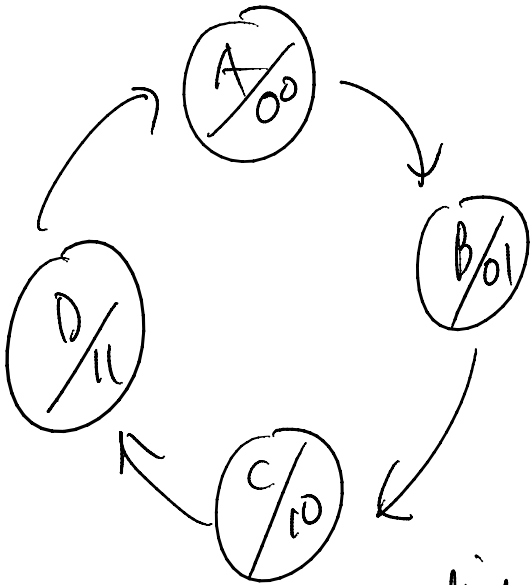


| Present State | Next State | Output |
|---|---|---|
| A | B | 00 |
| B | C | 01 |
| C | D | 10 |
| D | A | 11 |

encoding   A = "00", B = "01", C = "10", D = "11"

minimized bits encoding

one-hot encoding
A = 0001
B = 0010
C = 0100
D = 1000

Detect "01", overlapping
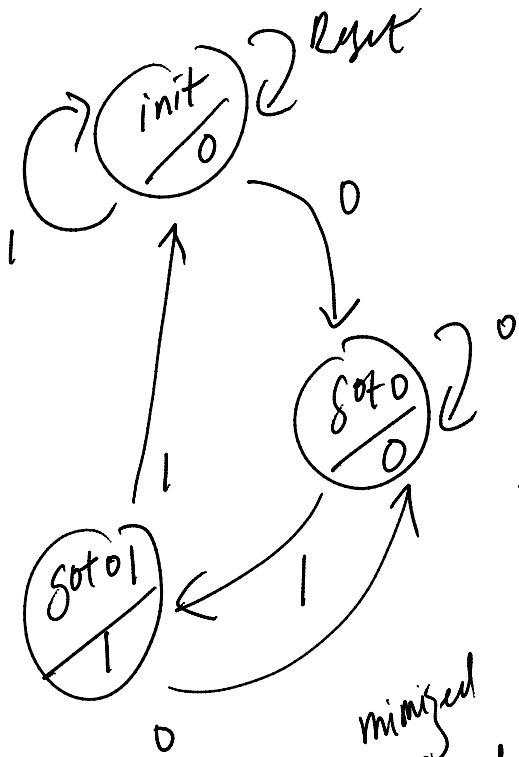


| present state | Next State | | output |
|---|---|---|---|
| | W=0 | W=1 | |
| init | goto0 | init | 0 |
| goto0 | goto0 | goto1 | 0 |
| goto1 | goto0 | init | 1 |

init = "00", goto0 = "01", goto1 = "10"

| present state $y_1 y_0$ | Next State | | output f |
|---|---|---|---|
| | W=0 $Y_1 Y_0$ | W=1 $Y_1 Y_0$ | |
| 0 0 | 0 1 | 0 0 | 0 |
| 0 1 | 0 1 | 1 0 | 0 |
| 1 0 | 0 1 | 0 0 | 1 |

minimized bit encoding

one-hot encoding

init = "001"
goto0 = "010"
goto1 = "100"

| present state $y_2 y_1 y_0$ | Next State | | output f |
|---|---|---|---|
| | W=0 $Y_2 Y_1 Y_0$ | W=1 $Y_2 Y_1 Y_0$ | |
| 001 | 010 | 001 | 0 |
| 010 | 010 | 100 | 0 |
| 100 | 010 | 001 | 1 |