

Q2. Difference b/w Mealy & Moore state machines.

Mealy \rightarrow output depends on present state as well as input.

Moore \rightarrow output depends on present state only.

Moore

Mealy

\Rightarrow The outputs are slower
i.e. after one clock cycle

\Rightarrow outputs are faster,
i.e. on the same clock cycle.

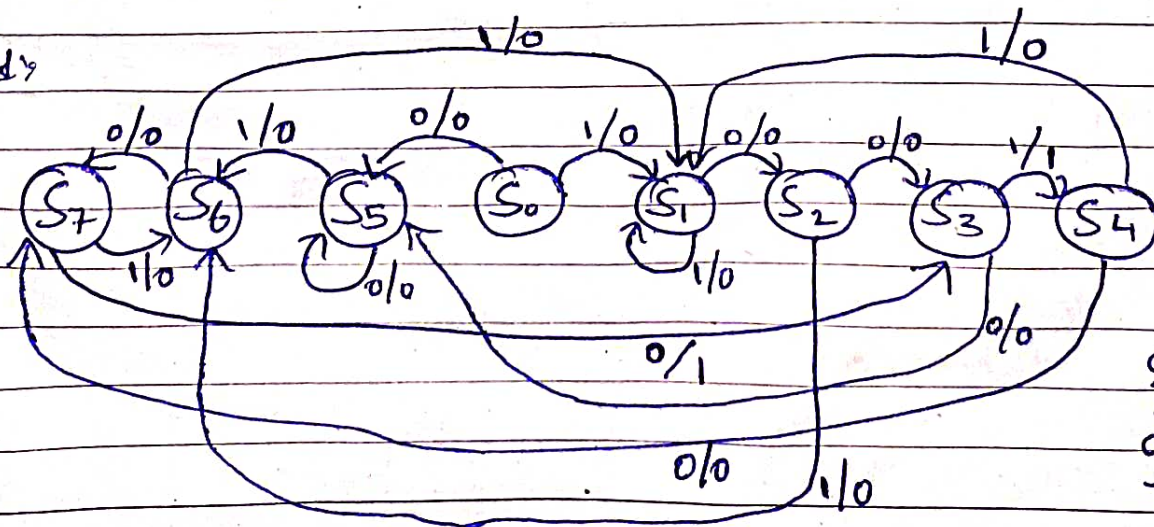
\Rightarrow More states are required

\Rightarrow Less states are required.

Sequence detector 1001 & 0100

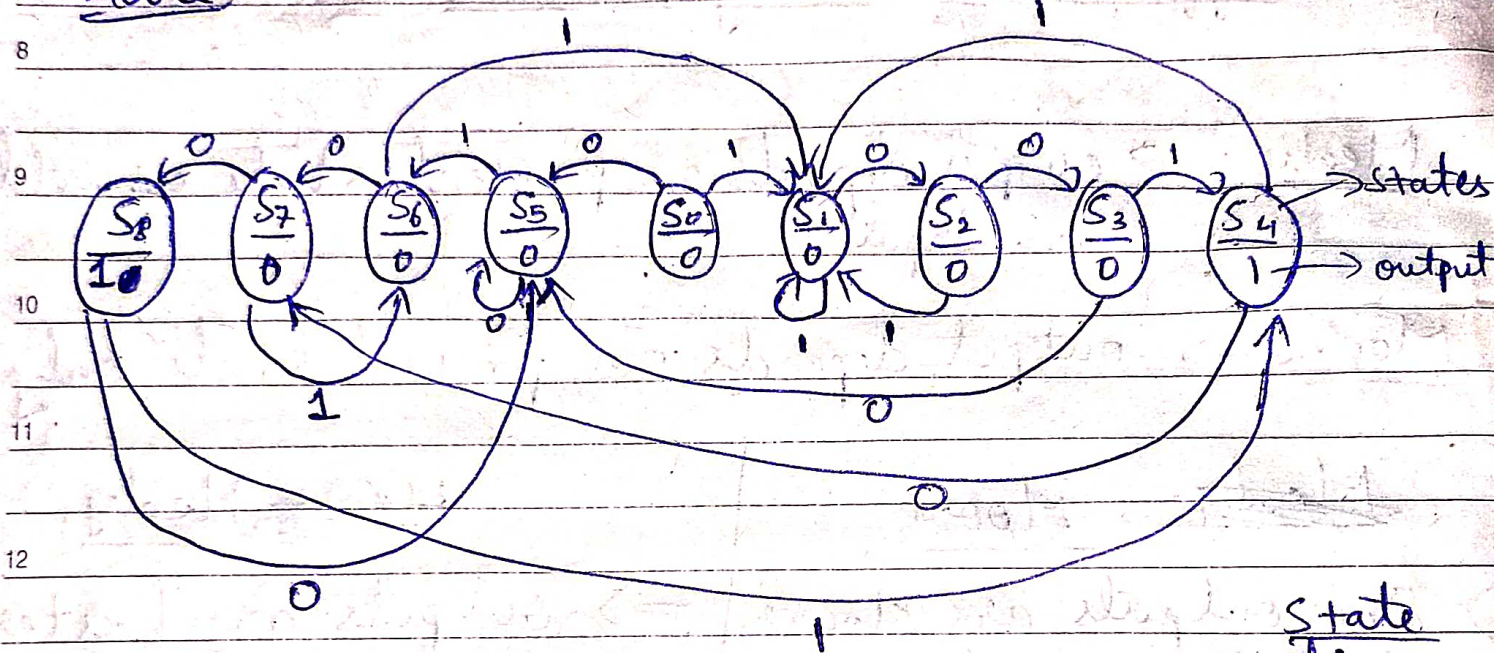
$S_0 = 000$
 $S_1 = 001$
 $S_2 = 010$
 $S_3 = 011$
 $S_4 = 100$
 $S_5 = 101$
 $S_6 = 110$
 $S_7 = 111$

Mealy's



State
diagram
2022

Moore



State
diagram

$S_0 = 0000$
 $S_1 = 0001$
 $S_2 = 0010$
 $S_3 = 0011$
 $S_4 = 0100$
 $S_5 = 0101$
 $S_6 = 0110$
 $S_7 = 0111$
 $S_8 = 1000$