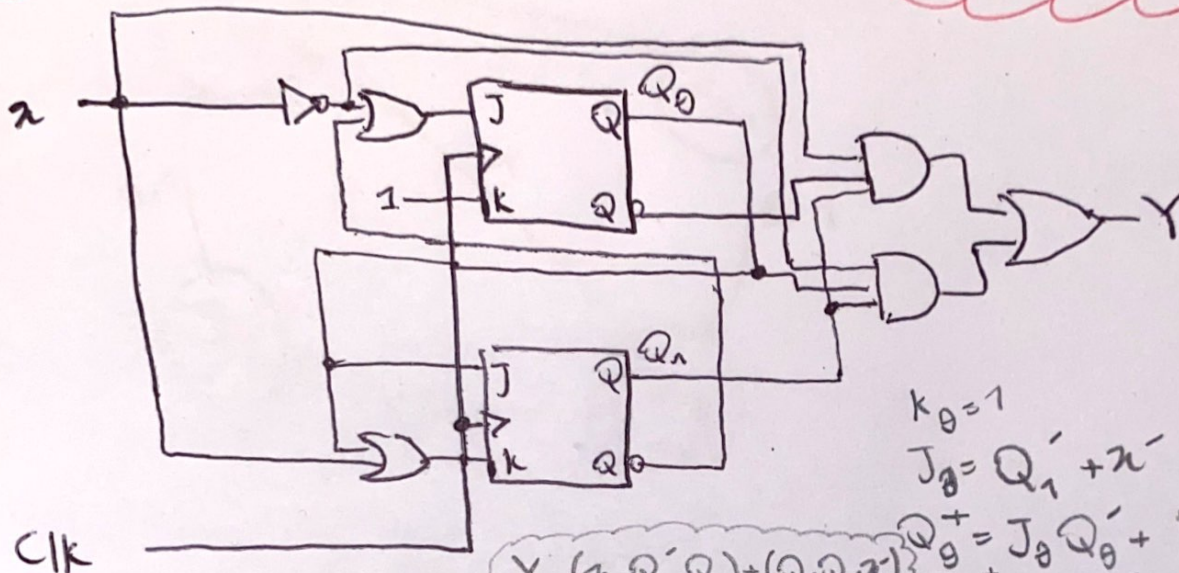


# Digital Logic Design - HW#9

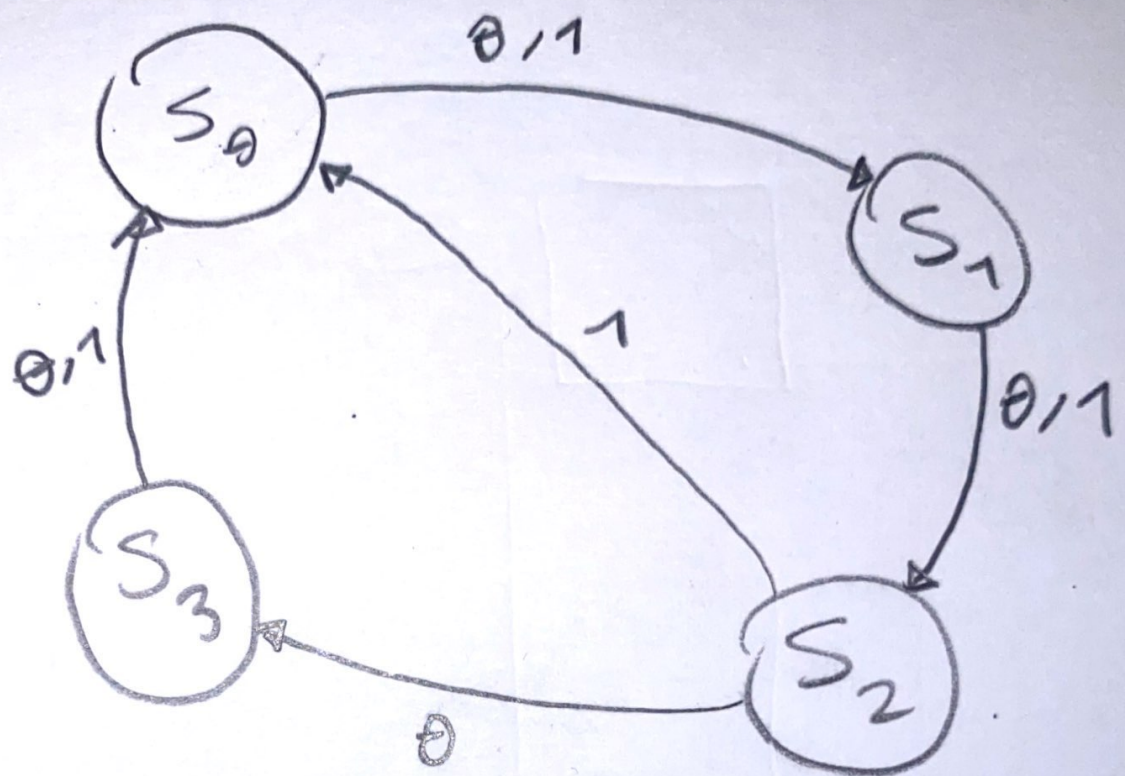
رساختاری 97243008



$$\begin{aligned}
 K_0 &= 1 & K_1 &= x + Q_0 \\
 J_0 &= Q_1' + x' & J_1 &= Q_0 \\
 Q_0^+ &= J_0 Q_0' + K_0' Q_0 = J_0 Q_0' \\
 Q_1^+ &= J_1 Q_1' + K_1' Q_1
 \end{aligned}$$

$$Y = (x \cdot Q_0' \cdot Q_1) + (Q_1 \cdot Q_0 \cdot x)$$

	$Q_1$ $CS_1$	$Q_0$ $CS_0$	$x$	$Q_1^+$ $NS_1$	$Q_0^+$ $NS_0$	$Y$
$S_0$ [	0	0	0	0	1	0
	0	0	1	0	1	0
$S_1$ [	0	1	0	1	0	0
	0	1	1	1	0	0
$S_2$ [	1	0	0	1	1	0
	1	0	1	0	0	1
$S_3$ [	1	1	0	0	0	1
	1	1	1	0	0	0

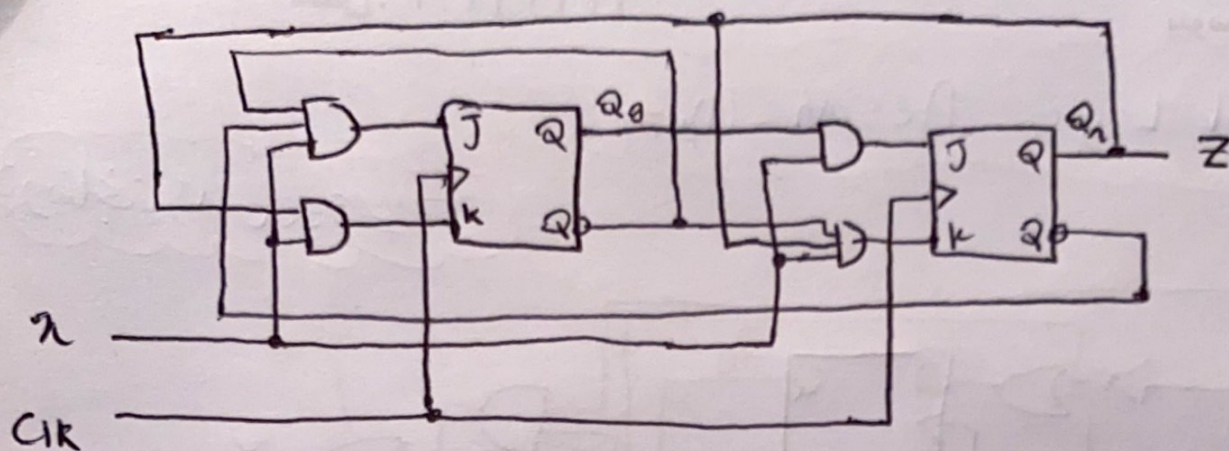


$$Q_0^+ = J_0 Q_0' = (Q_1' + \lambda') Q_0'$$

$$Q_1^+ = Q_0 \cdot Q_1' + \lambda \cdot Q_0' \cdot Q_1$$



2



$$J_0 = Q_0 \cdot X \cdot Q_1$$

$$K_0 = X \cdot Q_1$$

$$J_1 = X \cdot Q_0$$

$$K_1 = X \cdot Q_1 \cdot Q_0$$

$$Q_0^+ = J_0 \cdot Q_0' + K_0' \cdot Q_0$$

$$Q_1^+ = J_1 \cdot Q_1' + K_1' \cdot Q_1$$

$$Z = Q_1$$

$$Q_0^+ = Q_0 \cdot X \cdot Q_1' + (X \cdot Q_1)' \cdot Q_0$$

$$Q_1^+ = X \cdot Q_0 \cdot Q_1' + (X \cdot Q_1 \cdot Q_0')' \cdot Q_1$$

	$Q_1$ $CS_1$	$Q_0$ $CS_0$	$X$	$Q_1^+$ $NS_1$	$Q_0^+$ $NS_0$	$Z$
$S_0$	0	0	0	0	0	0
	0	0	1	0	1	0
$S_1$	0	1	0	0	1	0
	0	1	1	1	1	0
$S_2$	1	0	0	1	0	1
	1	0	1	0	0	1
$S_3$	1	1	0	1	1	1
	1	1	1	1	0	1

