

Jubail University College
Department of Computer Science & Engineering
SEMESTER 401
CS 206 DIGITAL LOGIC DESIGN
LAB 10

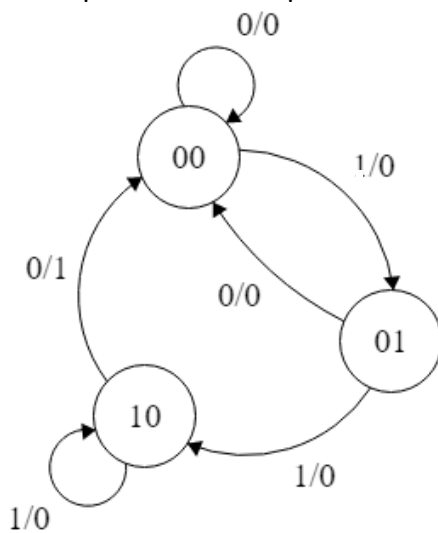
Name :

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Q1. Using D Flip-Flops design a sequential circuit to detect the sequence

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- Show the state diagram.
- Show the state table.
- Implement the sequential circuit on the logic simulator.



Present State		Input	Next State		Output
q1	q2	x	q1	q2	y
0	0	0	0	0	0
0	0	1	0	1	0
0	1	0	0	0	0
0	1	1	1	0	0
1	0	0	0	0	1
1	0	1	1	0	0
1	1	0	x	x	x
1	1	1	x	x	x

$$q1 = x(q1 + q2)$$

$$q2 = q1'q2'x$$

$$y = q1x'$$

