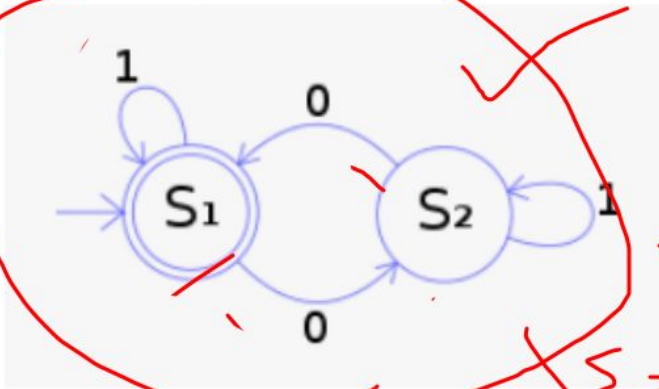


# Conversion of Transition Diagram into Transition Table



no of state= no of rows  
no of inputs=no of columns

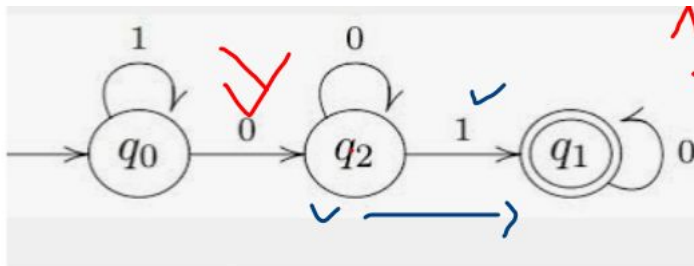
Transition Diagram in to  
Transition Table

$\Sigma = \{0, 1\}$

\* final  
-> starting state

	0	1	$\Phi$
* $\rightarrow$ S <sub>1</sub>	S <sub>2</sub>	S <sub>1</sub>	$\Sigma$
S <sub>2</sub>	S <sub>1</sub>	S <sub>2</sub>	$\emptyset$

# Conversion of Transition Diagram into Transition Table



$Q = \{q_0, q_2, q_1\}$   
 Alphabets =  $\{0, 1\}$   
 IN =  $q_0$   
 FI =  $q_1$   
 delta: 5 edges

Convert into Transition Table

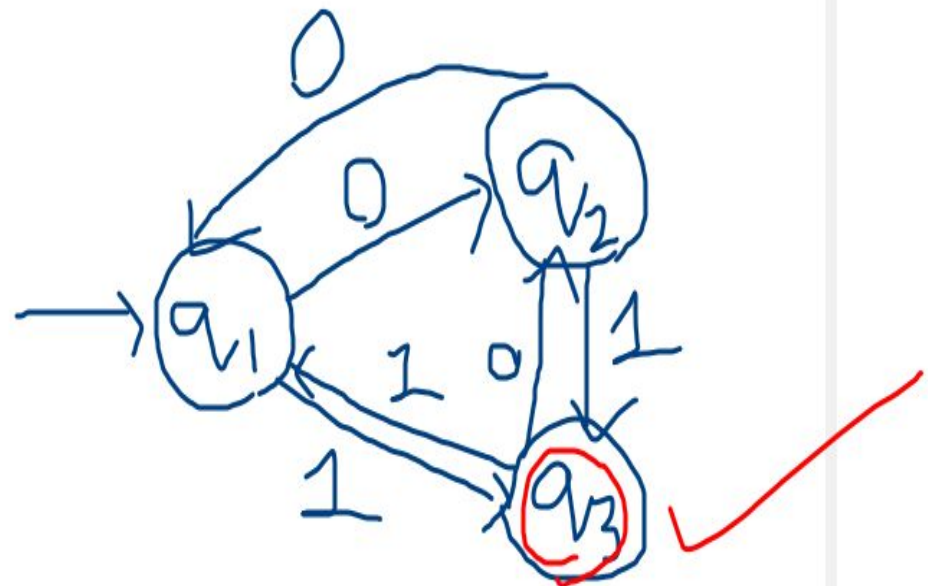
	0	1
$\rightarrow q_0$	$q_2$	$q_0$
$q_2$	$q_2$	$q_1$
$*q_1$	$q_1$	$\emptyset$

The table is handwritten in blue ink. The header row has '0' and '1' with checkmarks. The first column lists the states  $\rightarrow q_0$ ,  $q_2$ , and  $*q_1$  (the asterisk is handwritten). The cells contain the next state or the empty set  $\emptyset$ . A red circle is drawn around the empty set cell, and a red arrow points from it to the text 'blank' written in red.

# Conversion of transition table into transition diagram

	0	1
$\rightarrow q_1$	$q_2$	$q_3$
$q_2$	$q_1$	$q_3$
$*q_3$	$q_2$	$q_1$

How to convert A transition table into transition diagram

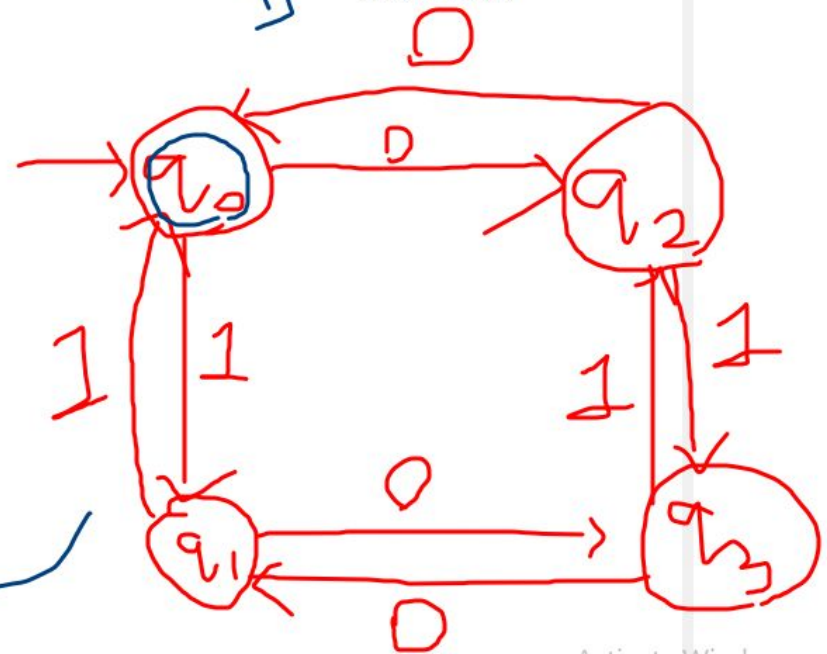


# Conversion of transition table into transition diagram

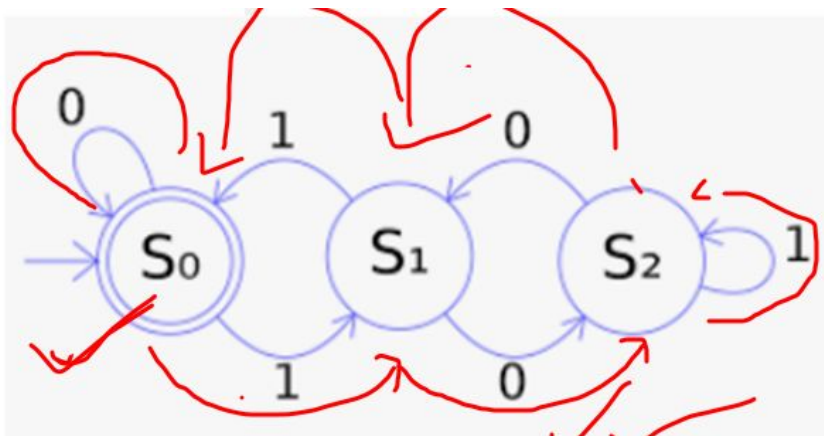
Tabular representation of the DFA

	0	1
* $\rightarrow$ $q_0$	$q_2$	$q_1$
$q_1$	$q_3$	$q_0$
$q_2$	$q_0$	$q_3$
$q_3$	$q_1$	$q_2$

Same information  
in both



Check whether the string is accepted by the given automation or not



String= $w$ ="0010101"  
Check whether the string is accepted by the above automation or not

AS  $s_0$  is a final state so the string is acceptable

$$\begin{aligned}
 & \delta(s_0, 0010101) \\
 &= \delta(s_0, 010101) \\
 &= \delta(s_0, 10101) \\
 &= \delta(s_1, 0101) \\
 &= \delta(s_2, 101) \\
 &= \delta(s_2, 01) \\
 &= \delta(s_0, \lambda)
 \end{aligned}$$

0010101 ✓

$\delta(s_1, 1)$

$\delta(s_0, \lambda)$

As  $S_0$  is the final state , so the string  
0010010 is acceptable

$$\begin{aligned} &\delta(S_0, 0010010) \\ &= \delta(S_0, 010010) \\ &= \delta(S_0, 10010) \\ &= \delta(S_1, 0010) \\ &= \delta(S_2, 010) \\ &= \delta(S_1, 10) \\ &= \delta(S_0, 0) \\ &= \delta(S_0, \lambda) \end{aligned}$$

