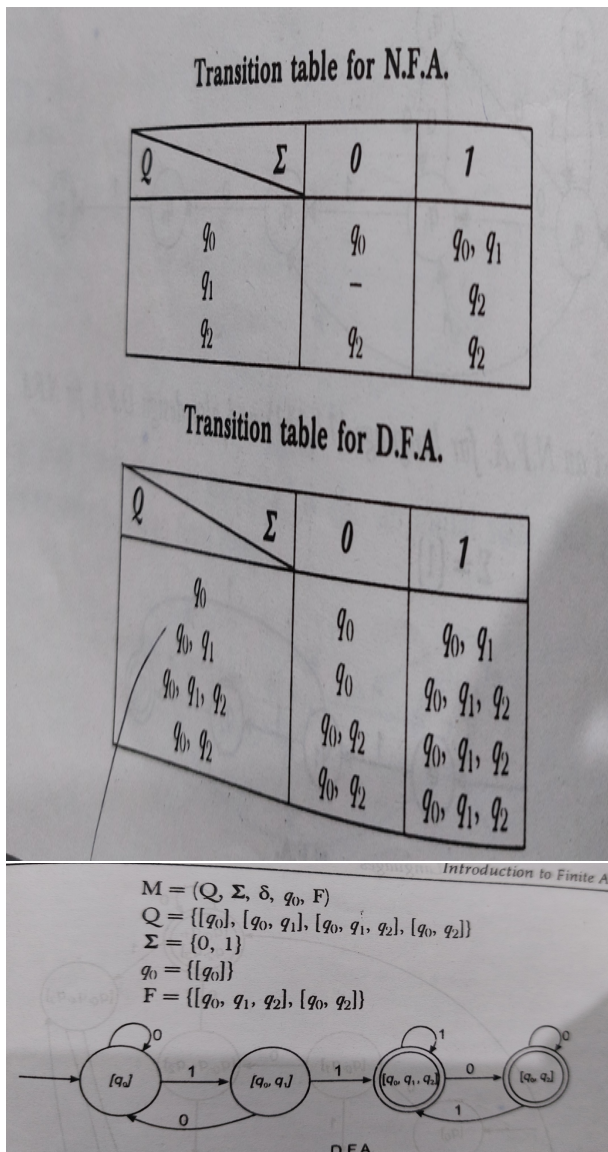


#### Home task 4

- Design NFA which accepts all inputs with a 11 and also construct DFA.

SOLUTION:

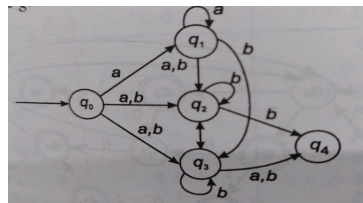


- Design an NFA that accepts all inputs with a triple letter like 111 ,000.

SOLUTION.



3. Convert the following NFA TO an equivalent DFA



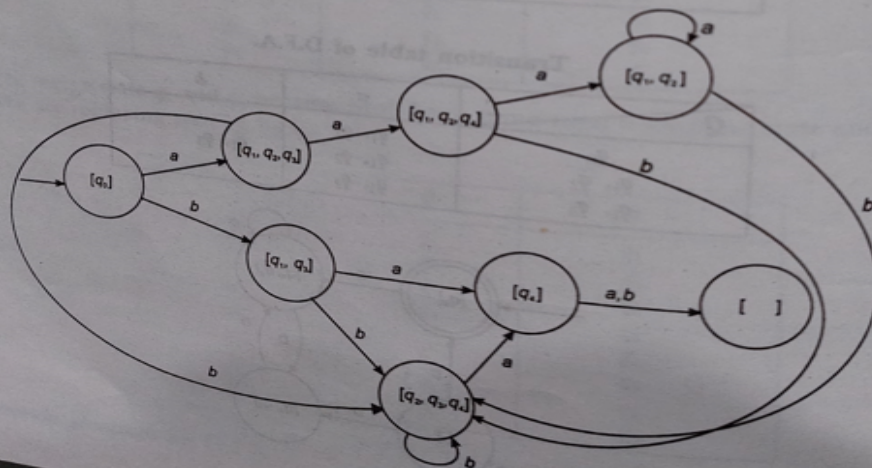
Answer

Transition table for given above N.F.A. Diagram.

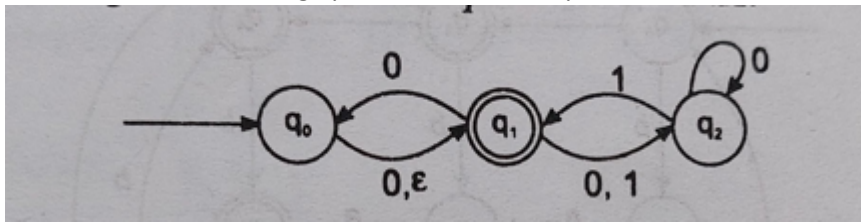
$Q \backslash \Sigma$	$a$	$b$
$q_0$	$q_1, q_2, q_3$	$q_2, q_3$
$q_1$	$q_1, q_2$	$q_2, q_3$
$q_2$	—	$q_2, q_3, q_4$
$q_3$	$q_4$	$q_2, q_3, q_4$
$q_4$	—	—

Transition table for D.F.A.

$Q \backslash \Sigma$	$a$	$b$
$q_0$	$q_1, q_2, q_3$	$q_2, q_3$
$q_2, q_3$	$q_4$	$q_2, q_3, q_4$
$q_1, q_2, q_3$	$q_1, q_2, q_4$	$q_2, q_3, q_4$
$q_4$	—	—
$q_1, q_2, q_4$	$q_1, q_2$	$q_2, q_3, q_4$
$q_1, q_2$	$q_1, q_2$	$q_2, q_3, q_4$
$q_2, q_3, q_4$	$q_4$	$q_2, q_3, q_4$



4. Convert the following Epsilon NFA TO an equivalent DFA



Solution

