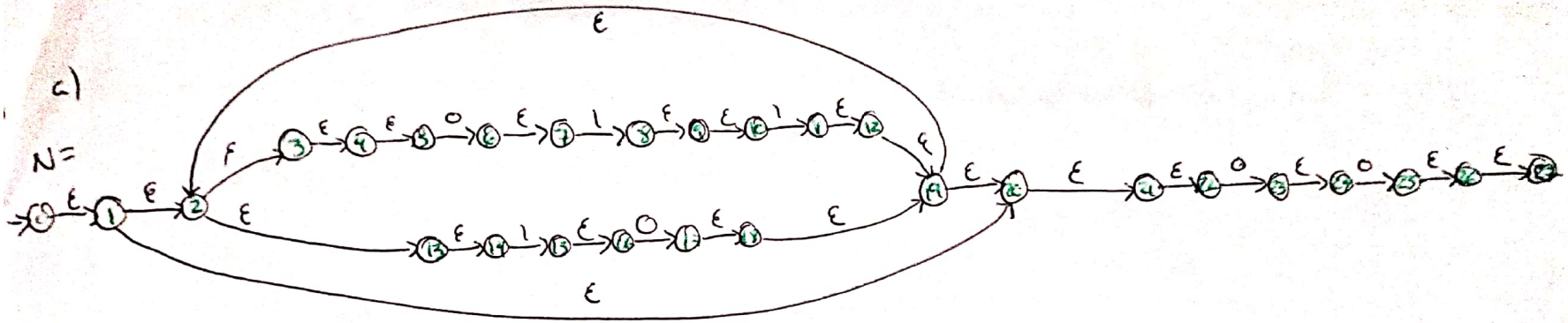
2- $(011 + 10)^*00$

c)

N=



b) $\varepsilon(q_0) = \{q_0, q_1, q_2, q_3, q_4, q_5, q_{13}, q_{14}, q_{20}, q_{21}, q_{22}\}$

$\varepsilon(q_1) = \{q_1, q_2, q_3, q_4, q_5, q_{13}, q_{14}, q_{20}, q_{21}, q_{22}\}$

$\varepsilon(q_2) = \{q_2, q_3, q_4, q_5, q_{13}, q_{14}\}$

$\varepsilon(q_3) = \{q_3, q_4\}$

$\varepsilon(q_4) = \{q_4\}$

$\varepsilon(q_5) = \{q_5\}$

$\varepsilon(q_6) = \{q_6, q_7\}$

$\varepsilon(q_7) = \{q_7\}$

$\varepsilon(q_8) = \{q_8, q_9, q_{10}\}$

$\varepsilon(q_9) = \{q_9, q_{10}\}$

$\varepsilon(q_{10}) = \{q_{10}\}$

$\varepsilon(q_{11}) = \{q_{11}, q_{12}, q_{19}, q_2, q_3, q_4, q_5, q_{13}, q_{14}, q_{20}, q_{21}, q_{22}\}$

$\varepsilon(q_{12}) = \{q_{12}, q_{19}, q_2, q_3, q_4, q_5, q_{13}, q_{14}, q_{20}, q_{21}, q_{22}\}$

$\varepsilon(q_{13}) = \{q_{13}, q_{14}\}$

$\varepsilon(q_{14}) = \{q_{14}\}$

$\varepsilon(q_{15}) = \{q_{15}, q_{16}\}$

$\varepsilon(q_{16}) = \{q_{16}\}$

$\varepsilon(q_{17}) = \{q_{17}, q_{18}, q_{19}, q_2, q_3, q_4, q_5, q_{13}, q_{14}, q_{20}, q_{21}, q_{22}\}$

$\varepsilon(q_{18}) = \{q_{18}, q_{19}, q_2, q_3, q_4, q_5, q_{13}, q_{14}, q_{20}, q_{21}, q_{22}\}$

$\varepsilon(q_{19}) = \{q_{19}, q_2, q_3, q_4, q_5, q_{13}, q_{14}, q_{20}, q_{21}, q_{22}\}$

$\varepsilon(q_{20}) = \{q_{20}, q_{21}, q_{22}\}$

$\varepsilon(q_{21}) = \{q_{21}, q_{22}\}$

$\varepsilon(q_{22}) = \{q_{22}\}$

$\varepsilon(q_{23}) = \{q_{23}, q_{24}\}$

$\varepsilon(q_{24}) = \{q_{24}\}$

$\varepsilon(q_{25}) = \{q_{25}, q_{26}, q_{27}\}$

$\varepsilon(q_{26}) = \{q_{26}, q_{27}\}$

$\varepsilon(q_{27}) = \{q_{27}\}$

Escaneado con CamScanner

c)

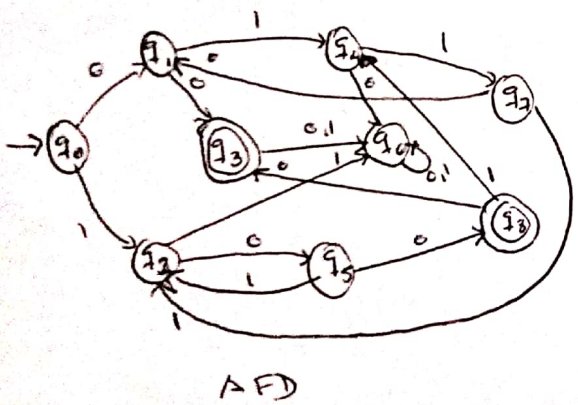
$\delta_M(q_0,0) = \{q_6, q_7, q_{23}, q_{24}\}$
$\delta_M(q_1,0) = \{q_6, q_7, q_{23}, q_{24}\}$
$\delta_M(q_2,0) = \{q_6, q_7, q_{23}, q_{24}\}$
$\delta_M(q_3,0) = \{q_6, q_7\}$
$\delta_M(q_4,0) = \{q_6, q_7\}$
$\delta_M(q_5,0) = \{q_6, q_7\}$
$\delta_M(q_6,0) = \emptyset$
$\delta_M(q_7,0) = \emptyset$
$\delta_M(q_8,0) = \emptyset$
$\delta_M(q_9,0) = \emptyset$
$\delta_M(q_{10},0) = \emptyset$
$\delta_M(q_{11},0) = \{q_6, q_7, q_{23}, q_{24}\}$
$\delta_M(q_{12},0) = \{q_6, q_7, q_{23}, q_{24}\}$
$\delta_M(q_{13},0) = \emptyset$
$\delta_M(q_{14},0) = \emptyset$
$\delta_M(q_{15},0) = \{q_{17}, q_{18}, q_{19}, q_2, q_3, q_4, q_5, q_{13}, q_{14}, q_{20}, q_{21}, q_{22}, q_{23}, q_{24}\}$
$\delta_M(q_{16},0) = \{q_{17}, q_{18}, q_{19}, q_2, q_3, q_4, q_5, q_{13}, q_{14}, q_{20}, q_{21}, q_{22}, q_{23}, q_{24}\}$
$\delta_M(q_{17},0) = \{q_6, q_7, q_{23}, q_{24}\}$
$\delta_M(q_{18},0) = \{q_6, q_7, q_{23}, q_{24}\}$
$\delta_M(q_{19},0) = \{q_6, q_7, q_{23}, q_{24}\}$
$\delta_M(q_{20},0) = \{q_{23}, q_{24}\}$
$\delta_M(q_{21},0) = \{q_{23}, q_{24}\}$
$\delta_M(q_{22},0) = \{q_{23}, q_{24}\}$
$\delta_M(q_{23},0) = \{q_{25}, q_{26}\} q_{27}\}$
$\delta_M(q_{24},0) = \{q_{25}, q_{26}\} q_{27}\}$
$\delta_M(q_{25},0) = \emptyset$
$\delta_M(q_{26},0) = \emptyset$
$\delta_M(q_{27},0) = \emptyset$

$\delta_M(q_0,1) = \{q_{15}, q_{16}\}$
$\delta_M(q_1,1) = \{q_{15}, q_{16}\}$
$\delta_M(q_2,1) = \{q_{15}, q_{16}\}$
$\delta_M(q_3,1) = \emptyset$
$\delta_M(q_4,1) = \emptyset$
$\delta_M(q_5,1) = \emptyset$
$\delta_M(q_6,1) = \{q_8, q_9, q_{10}\}$
$\delta_M(q_7,1) = \{q_8, q_9, q_{10}\}$
$\delta_M(q_8,1) = \{q_{11}, q_{12}, q_{19}, q_2, q_3, q_4, q_5, q_{13}, q_{14}, q_{20}, q_{21}, q_{22}\}$
$\delta_M(q_9,1) = \{q_{11}, q_{12}, q_{19}, q_2, q_3, q_4, q_5, q_{13}, q_{14}, q_{20}, q_{21}, q_{22}\}$
$\delta_M(q_{10},1) = \{q_{11}, q_{12}, q_{19}, q_2, q_3, q_4, q_5, q_{13}, q_{14}, q_{20}, q_{21}, q_{22}\}$
$\delta_M(q_{11},1) = \{q_{15}, q_{16}\}$
$\delta_M(q_{12},1) = \{q_{15}, q_{16}\}$
$\delta_M(q_{13},1) = \{q_{15}, q_{16}\}$
$\delta_M(q_{14},1) = \{q_{15}, q_{16}\}$
$\delta_M(q_{15},1) = \emptyset$
$\delta_M(q_{16},1) = \emptyset$
$\delta_M(q_{17},1) = \{q_{15}, q_{16}\}$
$\delta_M(q_{18},1) = \{q_{15}, q_{16}\}$
$\delta_M(q_{19},1) = \{q_{15}, q_{16}\}$
$\delta_M(q_{20},1) = \emptyset$
$\delta_M(q_{21},1) = \emptyset$
$\delta_M(q_{22},1) = \emptyset$
$\delta_M(q_{23},1) = \emptyset$
$\delta_M(q_{24},1) = \emptyset$
$\delta_M(q_{25},1) = \emptyset$
$\delta_M(q_{26},1) = \emptyset$
$\delta_M(q_{27},1) = \emptyset$

Escaneado con CamScanner

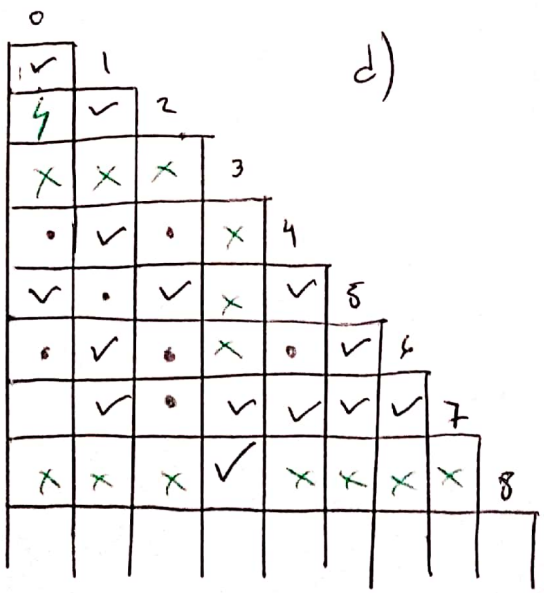
c)

		0	1
$\to \{q_0\}$	q_0	$\{q_6, q_7, q_{23}, q_{24}\}$ 1	$\{q_{15}, q_{16}\}$ 2
$\{q_6, q_7, q_{23}, q_{24}\}$	q_1	$\{q_{25}, q_{26}, q_{27}\}$ 3	$\{q_8, q_9, q_{10}\}$ 4
$\{q_{15}, q_{16}\}$	q_2	$q_1, q_3, q_4, q_5, q_{13}, q_{14}, q_{17}, q_{18}, q_{19}, q_{20}, q_{21}, q_{22}, q_{23}, q_{24}$ 5	$\emptyset$ 6
$F \{q_{25}, q_{26}, q_{27}\}$	q_3	$\emptyset$ 6	$\emptyset$ 6
$\{q_8, q_9, q_{10}\}$	q_4	$\emptyset$ 6	$\{q_2, q_3, q_4, q_5, q_{11}, q_{12}, q_{13}, q_{14}, q_{19}, q_{20}, q_{21}, q_{22}\}$ 7
$\{2,3,4,5,13,14,17,18,19,20,21,22,23,24\}$	q_5	$\{q_6, q_7, q_{23}, q_{24}, q_{25}, q_{26}, q_{27}\}$ 3	$\{q_{15}, q_{16}\}$ 2
$\emptyset$	q_6	$\emptyset$ 6	$\emptyset$ 6
$\{2,3,4,5,11,12,13,14,19,20,21,22\}$	q_7	$\{q_4, q_7, q_{23}, q_{24}\}$ 1	$\{q_{15}, q_{16}\}$ 2
$F \{q_6, q_7, q_{23}, q_{24}, q_{25}, q_{26}, q_{27}\}$	q_8	$\{q_{25}, q_{26}, q_{27}\}$ 3	$\{q_8, q_9, q_{10}\}$ 4

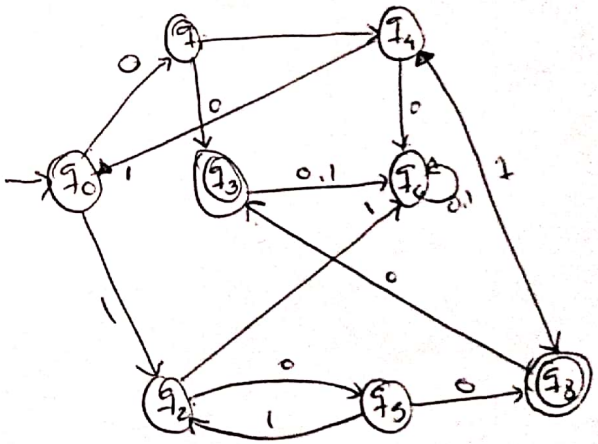


AFD

d)

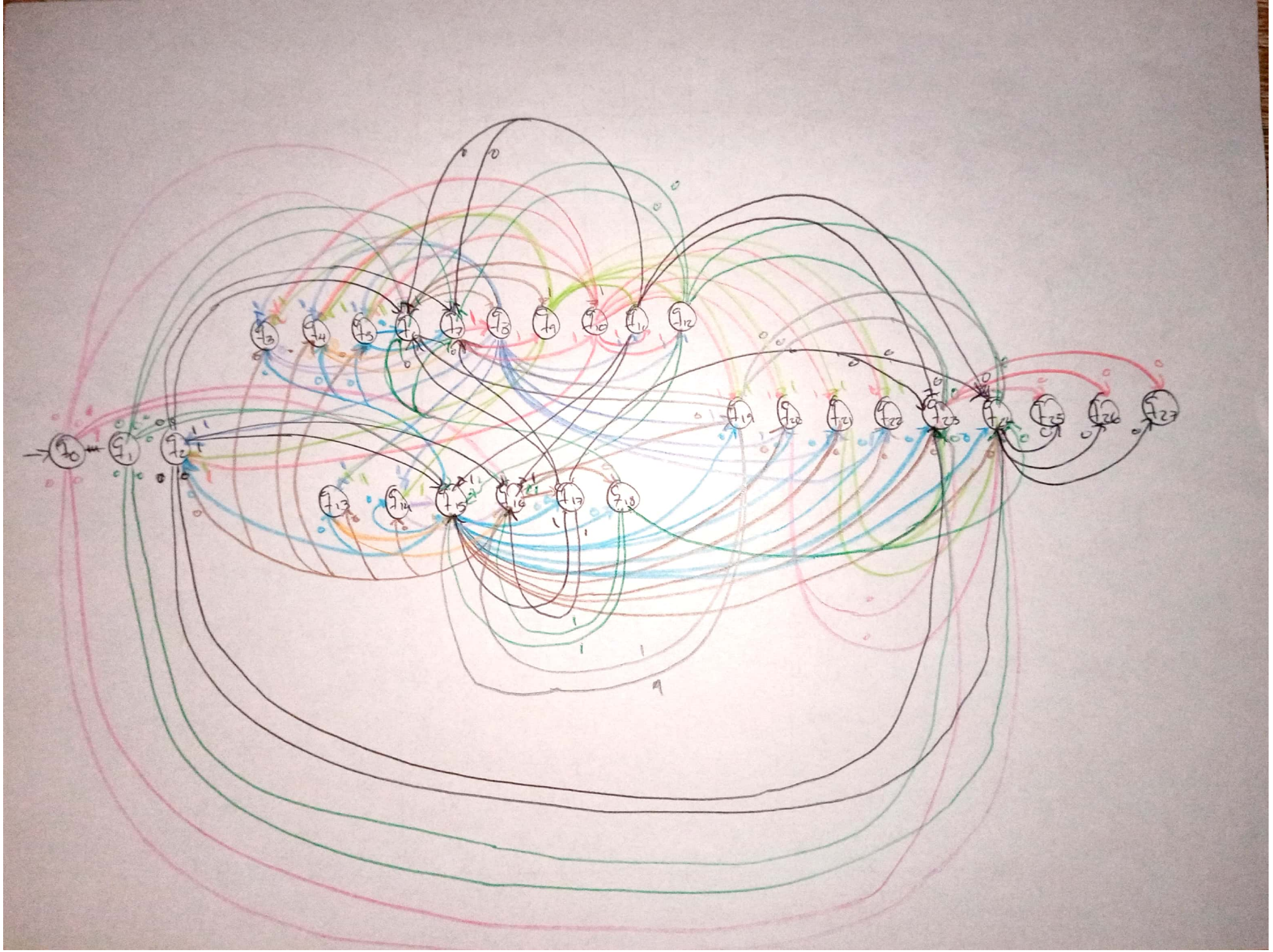


$\Rightarrow q_0 \simeq q_7$



AFD

Escaneado con CamScanner



Escaneado con CamScanner