Below is the DFA M_1 defined on Page 36 of the ITC textbook.

$Q = \{q_0, q_1, q_2\}$

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

$F = \{q_2\}$

$q_0 = q_1$

$\delta = \{((q_0, 0), q_1), ((q_0, 1), q_0), ((q_1, 0), q_2), ((q_1, 1), q_1)\}$

Transition Function in Table form:

	0	1
q_1	q_2	q_3
q_2	q_3	q_2
q_3	q_2	q_2

DFA in Pictorial form: