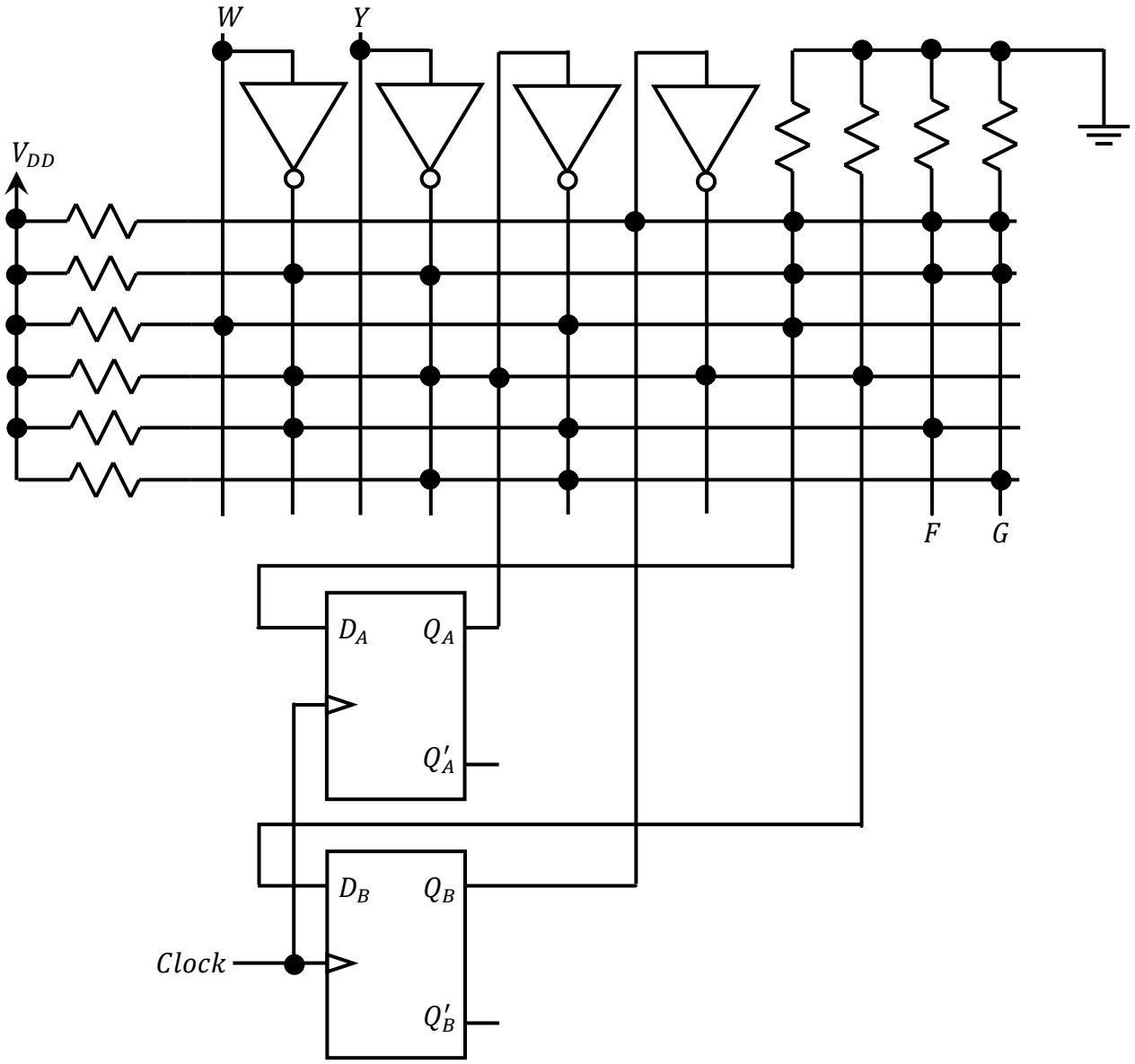
This is a 15 point problem



a) What type of state machine is this? Moore Machine? Mealy Machine?

b) Determine the Boolean expressions implemented by the PLA for the flip-flop inputs (D_A and D_B) and circuit outputs (F and G). All expressions should be in terms of the circuit inputs (W and Y) and flip-flop outputs ($A = Q_A$, $B = Q_B$). [For example, $D_A(W, Y, A, B) = \ldots$]

c) Determine the Next-State Maps for both flip-flops and the Output Maps for both outputs. [total of four maps].

d) Determine the Transition Table for the state machine.

e) Using the following state definitions, determine the State Table.
S_0 $(AB = 00)$, S_1 $(AB = 01)$, S_2 $(AB = 10)$, S_3 $(AB = 11)$

f) Draw the properly formatted State Graph.

g) Comment on what is unusual about state S_1.

b) $D_A(W, Y, A, B) =$