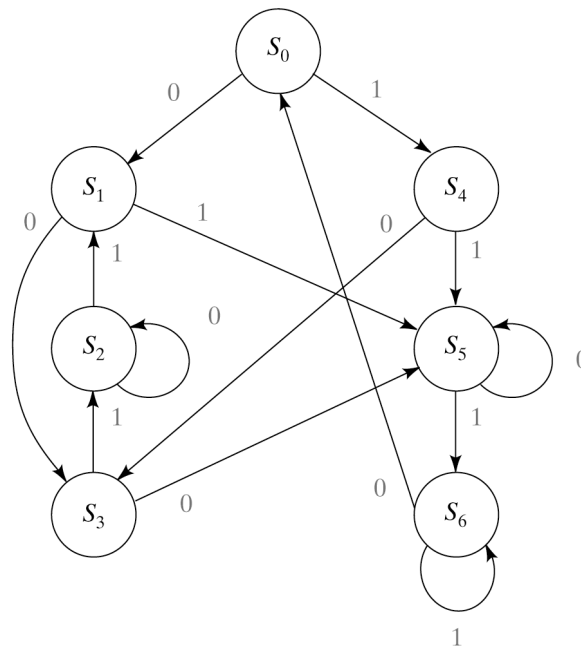
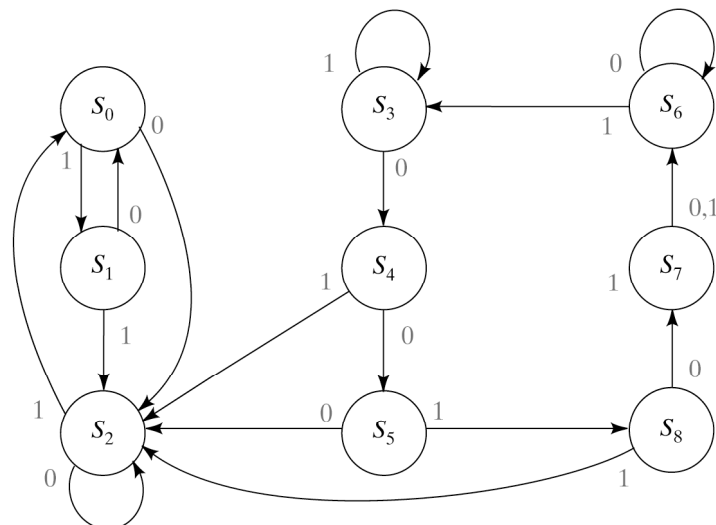


Problem Set # 9 (Assigned 8 April, Due 16 April)

- Given the next state function of the finite state machine shown below, use the implication chart method to find the most reduced state diagram.



- Given the following state diagram, partition the state machine into three communicating finite state machines, one containing the states S_0, S_1, S_2 ; one containing S_3, S_4, S_5 ; and the last containing S_6, S_7, S_8 .



3. Implement the following Boolean functions to be free of 0 and 1 static hazards:

(i) $F(A, B, C, D) = \Sigma m(0, 4, 5, 6, 7, 9, 11, 13, 14)$

(ii) $F(A, B, C, D) = \Pi M(0, 1, 3, 5, 7, 8, 9, 13, 15)$