

Student Name: Karahan Sarıtaş

Student ID: 2018400174

## CMPE 240 2021 Experiment 4 Preliminary Work

*(For illustrations you can use any drawing tool that you want including Microsoft Word Shapes. Do not use scanned images of hand drawn state machines and architecture diagrams.)*

*(For tables please use insert table feature of Microsoft Word)*

**Step 1.1: State Register Inputs:  $n_1, n_0$**

**Step 1.2: State Register Outputs:  $s_1, s_0$**

**Step 2.1: Combinational Block Inputs:  $s_1, s_0, a, b$**

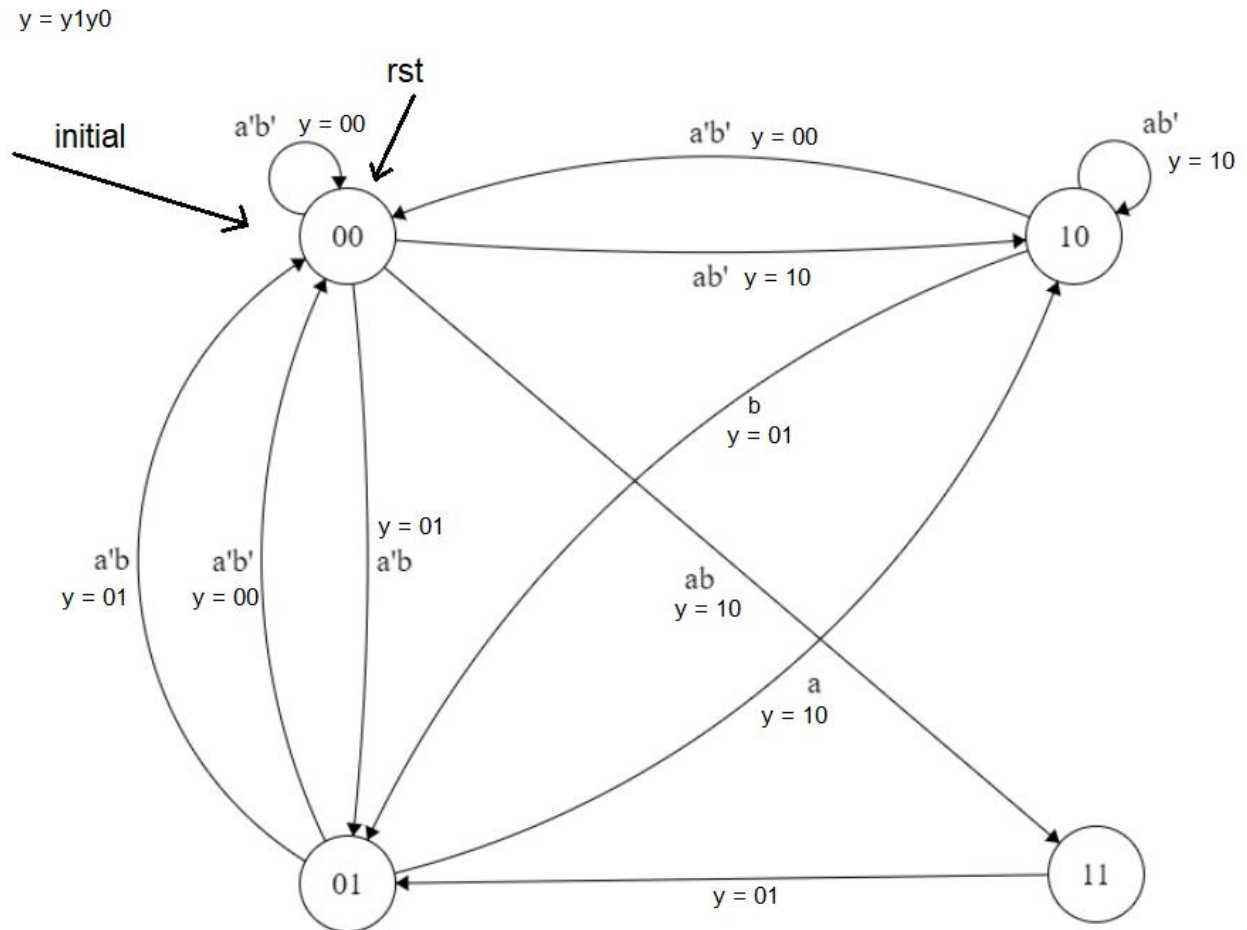
**Step 2.2: Combinational Block Outputs:  $n_1, n_0, y_1, y_0$**

**Step 3: Obtain the truth table:**

#	$s_1$	$s_0$	$a$	$b$	$n_1$	$n_0$	$y_1$	$y_0$
0	0	0	0	0	0	0	0	0
1	0	0	0	1	0	1	0	1
2	0	0	1	0	1	0	1	0
3	0	0	1	1	1	1	1	0
4	0	1	0	0	0	0	0	0
5	0	1	0	1	0	0	0	1
6	0	1	1	0	1	0	1	0
7	0	1	1	1	1	0	1	0
8	1	0	0	0	0	0	0	0
9	1	0	0	1	0	1	0	1
10	1	0	1	0	1	0	1	0
11	1	0	1	1	0	1	0	1
12	1	1	0	0	0	1	0	1
13	1	1	0	1	0	1	0	1
14	1	1	1	0	0	1	0	1
15	1	1	1	1	0	1	0	1

Student Name: Karahan Sarıtaş  
Student ID: 2018400174

Step 4: Draw the finite state machine:



Step 5: Is this a Moore or Mealy Machine? (No explanations, only short answer):

➤ Mealy Machine