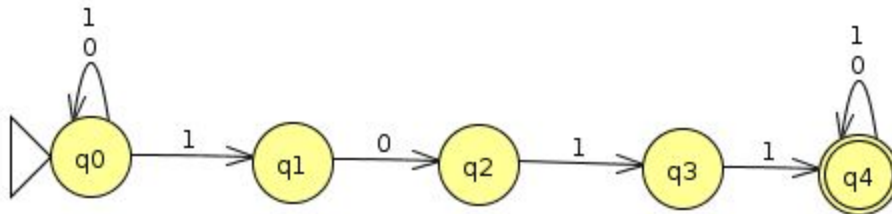
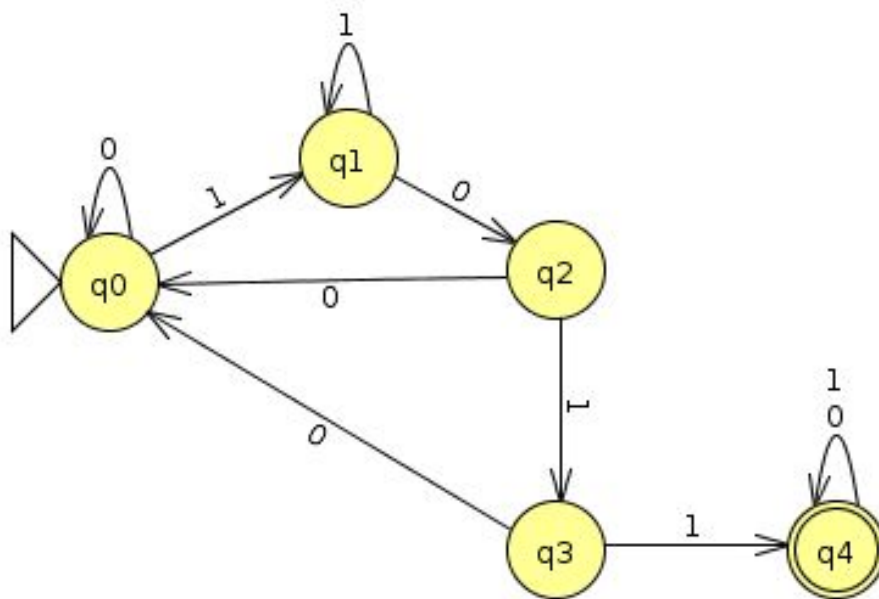


#1:



#2:



State	0	1
q0	q0	q1
q1	q2	q1

Shruti Iyer
FOCS HW6
09/21/2016

q2	q0	q3
q3	q0	q4
q4	q4	q4

#3:

It will be more complex because it contains more states and can process more inputs.

Let us say m_1 contains the alphabets = $\{0, 1\}$

And m_2 contains alphabets = $\{a, b, c, d\}$

If one machine can process more different kinds of alphabet, it is said to be more powerful.

Number of subsets for $m_1 = 4$

Number of subsets for $m_2 = 2^4 = 16$

As there are more alphabet strings that m_2 can process. Therefore, it is more powerful

#5

Done

#6

0^*10^*