

Team Assignment 3

Team Number and Initials _____

Construct an NFA which recognizes the following languages:

1. $\{w \mid w \text{ has at least one } 0 \text{ following each } 1\}$

2. $\{w \mid w \text{ starts with } 1 \text{ and ends with } 0\}$

3. $\{w \mid w \text{ contains } 001\}$

4. $\{w \mid w \text{ begins and ends with the same two symbols}\}$

5. $\{w \mid w \text{ contains either an even number of 0 symbols or an odd number of 1 symbols}\}$

6. $\{w \mid w \text{ contains 001, followed by 101, with any symbols in between}\}$

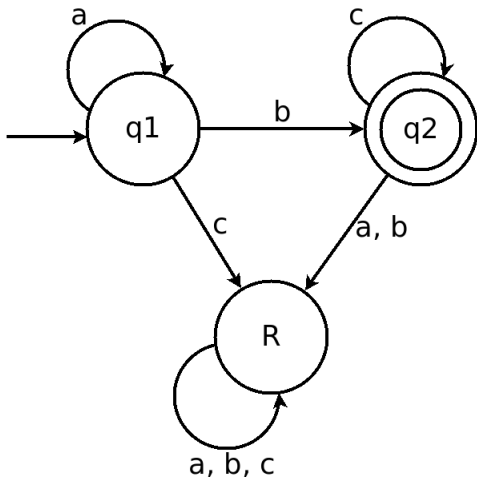


Figure 1: Machine M_1

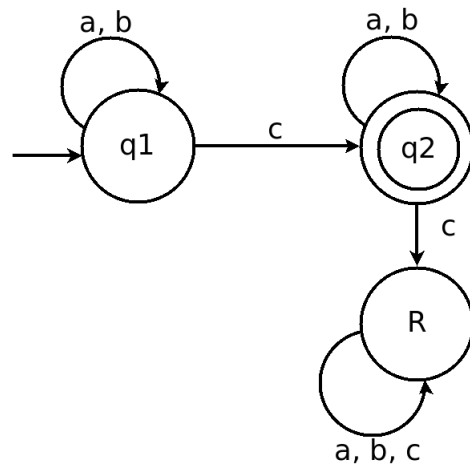


Figure 2: Machine M_2

7. Construct a NFA that recognizes the language $L(M_1) \circ L(M_2)$.

8. Construct a NFA that recognizes the language $L(M_2)^*$.