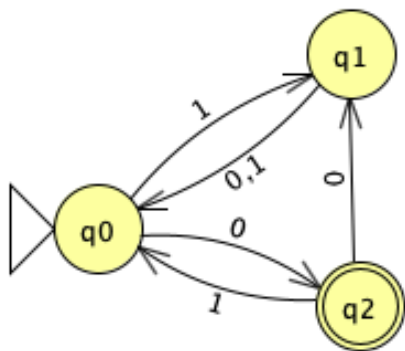1. Consider L_1 = {ab, ba} and L_2 = {bb, ac, aa}.

What is $L_1 L_2$?

What is $L_2 L_1$?

What is $L_1{}^2$

2. Consider the following DFA (built with JFLAP):
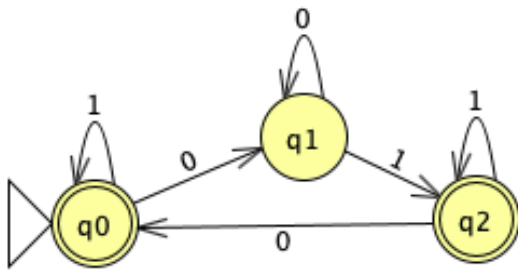

List three strings accepted by the DFA.

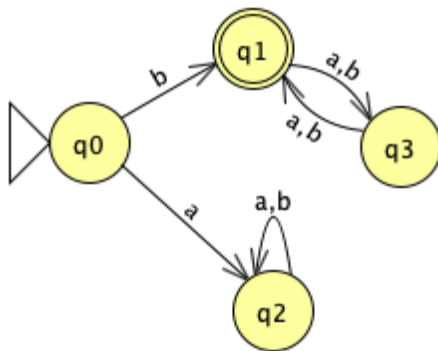List three strings not accepted by the DFA.

3. Consider the following DFA (built with JFLAP) - note there are two accepting states

List three strings accepted by the DFA.

List three strings not accepted by the DFA.

4. Describe the language represented by the following DFA (built with JFLAP):

5. Construct DFAs to represent the following languages:
   a. The set of all strings in {a,b,c}* that do not end in a

   b. The set of all strings in {a,b,c}* - {aaa}

   c. The set of all binary strings with exactly one or three 1s.

   d. The set of all binary strings of length at least two that begin and end with the different bits