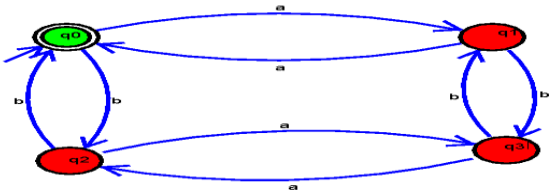
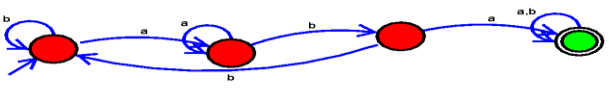
Design the DFA following below:

1.1.) Binary strings having odd no of 1's and any number of 0's

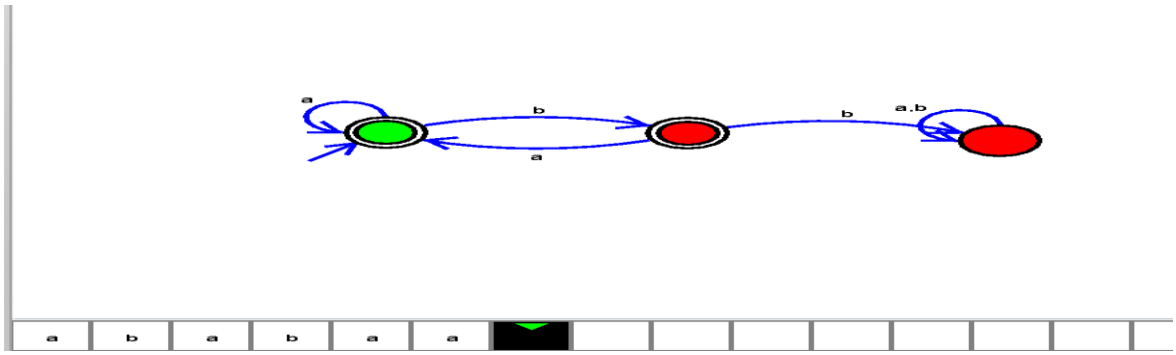
1.2. Binary strings having even no of 0's and even no of 1's



1.3. Binary strings having the substring 101

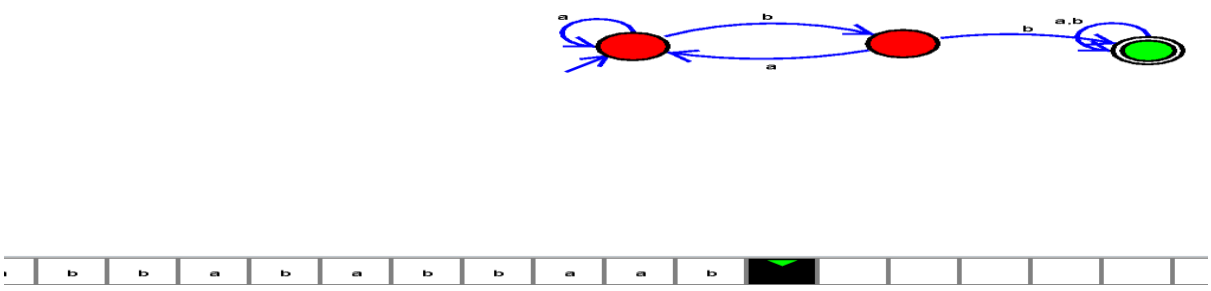


1.4. Binary strings having no consecutive 0’s

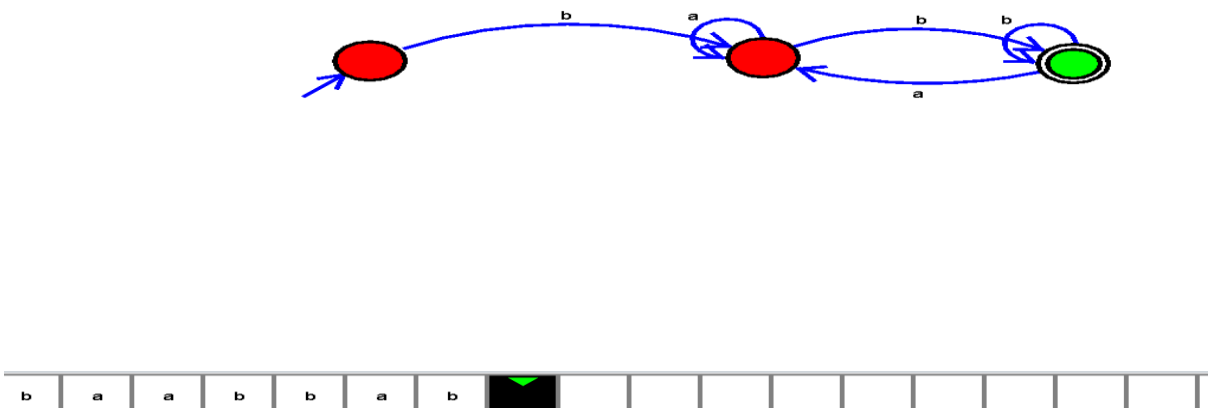


Design NFA for the following languages:

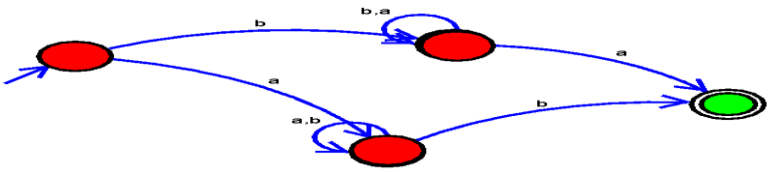
2.1 Binary strings having 00 as a substring



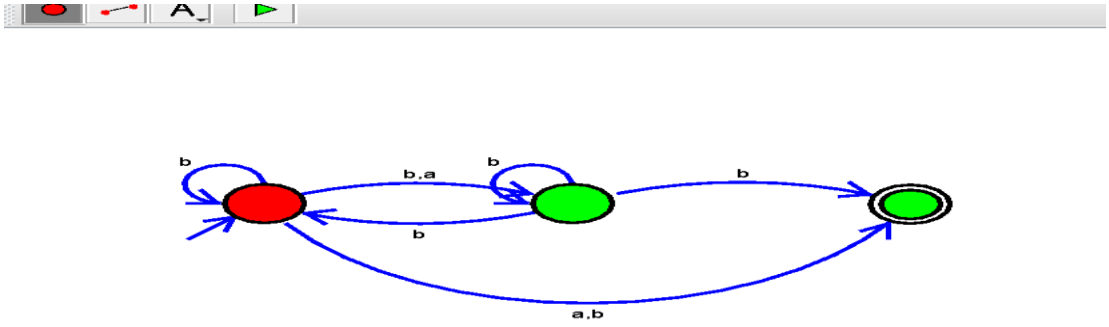
2.2)Binary strings that start and end with 0



2.3) Binary strings that start and end with different digits



3) Construct an NFA without ϵ-moves equivalent to the NFA with ϵ-moves given below:



4. **Construct a DFA equivalent to the NFA with ε-moves given below**: