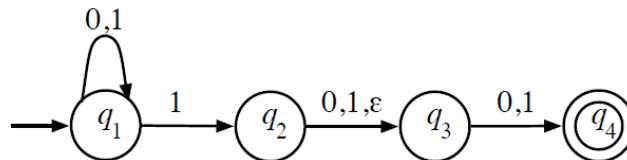


Preparation Activity PA05 – REs

1. Write a regular expression representing the language consisting of the strings over $\{a,b,c\}$ with at least one substring abc and at least one substring cba (consider that the two substrings can overlap);
2. Consider the following ϵ -NFA:



- (a) Convert this ϵ -NFA to a regular expression using the state elimination method.
- (b) Use the DFA resultant of the translation of this ϵ -NFA (asked in PA04) and show a regular expression obtained using the state elimination method.
- (c) Are the two regular expressions equivalent? Justify your answer.