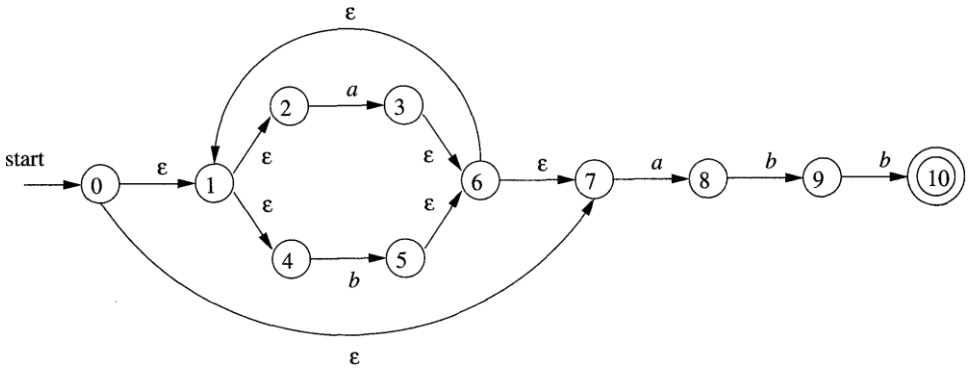
Preparation Activity PA05 – REs

1. Write a regular expression representing the language consisting of the strings over {a,b,c} with at least one substring *aa* and at least one substring *bb*;
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.