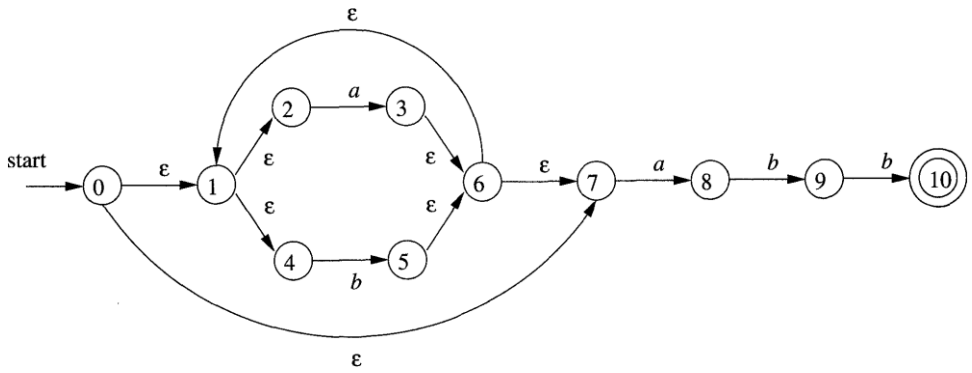
Challenge Activity 4 – ε-NFAs

In order to diminish the size and to speedup the processing of ε-NFAs, we intend to remove ε transitions of the ε-NFAs.

1. Devise a scheme that you think can work to remove ε transitions. Describe the steps of your scheme.
2. Apply your scheme to the following ε-NFA and draw the resultant automaton. Is the new automaton equivalent to the ε-NFA below?



3. If you think that your scheme cannot be applied to every input ε-NFAs, describe possible cases where your scheme cannot be applied.