

Homework 1 – Problem #4

Assume:

There is some DFA that describes set L and accepts string $w|w=w_1,w_2,...,w_n$.

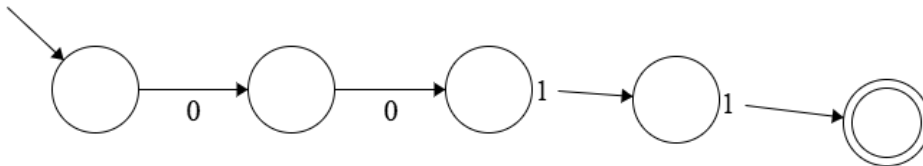
Given:

There exists $w^R|w^R=w_n,w_{n-1},w_{n-2},...,w_1$ there must also exist some set L^R that accepts w^R .

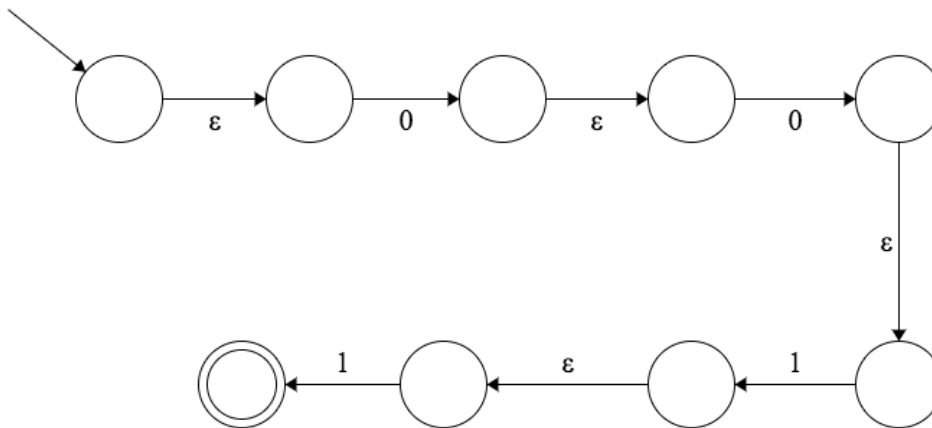
This can we shown by the following example:

Let, $w=0011$ and $w^R=1100$

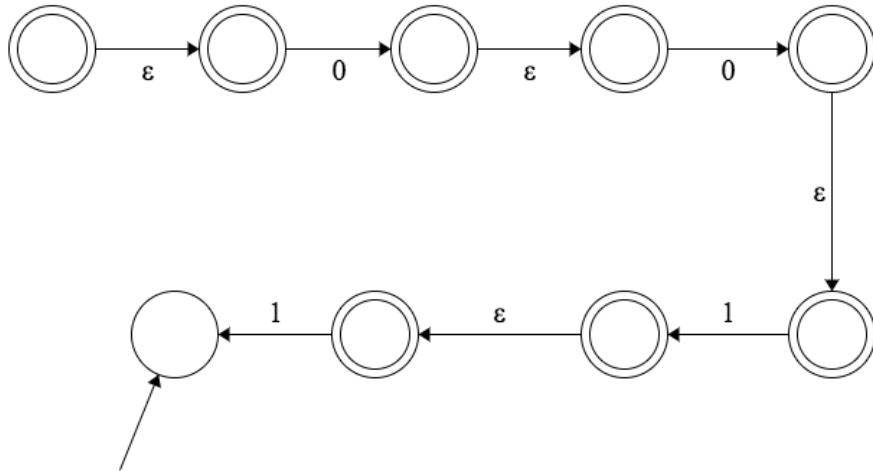
$L(\text{DFA})$:



$L(\text{NFA})$:



$L^R(\text{NFA})$:



$L^R(\text{DFA})$:

