

COSC 341 – Tutorial 7

1. Are the following languages automatic languages? If so, construct an NFA for that language. If not, prove that the language is not automatic.
 - (a) $L = \{w \mid \text{in } w \text{ every } a \text{ is followed by a } b\}$
 - (b) $L = \{w \mid \text{for every } a \text{ in } w \text{ there is a distinct } b \text{ following } a\}$

Homework

1. Are the following languages automatic languages? If so, construct an NFA for that language. If not, prove that the language is not automatic.
 - (a) $L = \{a^i \mid i = n^2, n \in \mathbb{N}\}$
 - (b) $L = \{w \mid w \in \{a, b\}^*, \text{ the total number of } a\text{'s and } b\text{'s in } w \text{ is divisible by } 3\}$