Boilerplate latex document

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Computer Science, 4th semester

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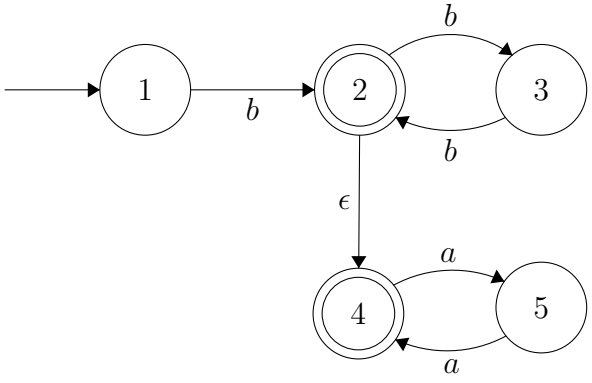
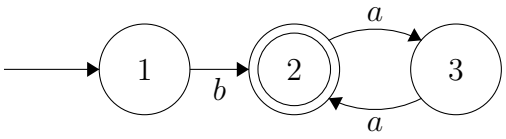
1.1



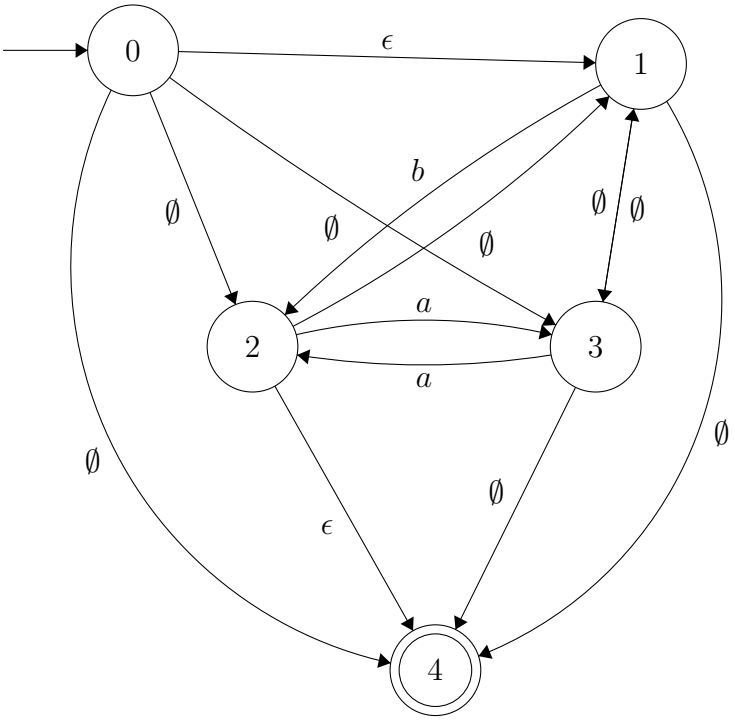
1.2

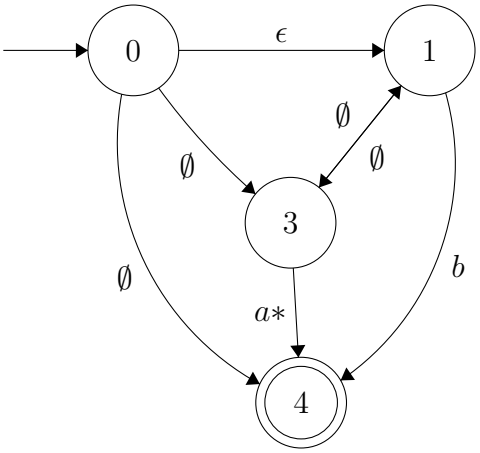
$L_1 \cap L_2 = \{w \mid$ w has one b an even number of a's and does not contain the substring ab$\}$



1.3

We will start be converting the NFA to a GNFA.





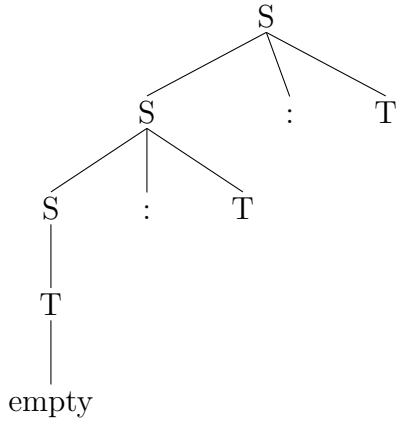
2

S –> T | S : T
T –> T * F * T | <empty>
F –> a | [S]

S –> S : T
–> T * F * T : T
–> T * F * T * F * T : T
–>

S –> T –>

S –> S : T
–> S : T : T
–> T : T : T
–> : T * F * T :
–> : * F * T :
–> : * a * T :
–> : * a * :



$$\frac{\begin{array}{cc} A & B \\ & C \end{array}}{D}\ \text{Foo} \qquad \frac{X}{Y}\ \textsc{Bar}$$

$$\dfrac{\dfrac{\dfrac{\dfrac{\dfrac{\dfrac{\dfrac{}{\vdash \diamond}\text{ by (Env)}}{\vdash K}\text{ by (Type Const)} \quad \dfrac{\dfrac{}{\vdash \diamond}\text{ by (Env)}}{\vdash K}\text{ by (Type Const)}}{\vdash K \to K}\text{ by (Type Arrow)}}{, y : K \to K \vdash \diamond}\text{ by (Env } x\text{)}}{, y : K \to K \vdash K}\text{ by (Type Const)}}{, y : K \to K, z : K \vdash \diamond}\text{ by (Env } x\text{)}}{, y : K \to K, z : K \vdash y : K \to K}\text{ by (Val } x\text{)} \quad \dfrac{\dfrac{\dfrac{\dfrac{\dfrac{\dfrac{}{\vdash \diamond}\text{ by (Env)}}{\vdash K}\text{ by (Type Const)} \quad \dfrac{\dfrac{}{\vdash \diamond}\text{ by (Env)}}{\vdash K}\text{ by (Type}}{\vdash K \to K}\text{ by (Type}}{, y : K \to K \vdash \diamond}\text{ by (Env } x\text{)}}{, y : K \to K \vdash K}\text{ by (Type Const)}}{, y : K \to K, z : K \vdash \diamond}\text{ by (Env } x\text{)}}{, y : K \to K, z : K \vdash z : K \to K}\text{ by (Val } x$$

$$\dfrac{, y : K \to K, z : K \vdash y(z) : K \quad \text{by (Val A}}{, y : K \to K, z : K \vdash \lambda z : K.y(z) : K \to K}\text{ by (Val Fun)}$$