

# Méthodes Formelles pour XML : évaluation

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<http://www.lif.univ-mrs.fr/~preynier/XML/>

# Automates encore

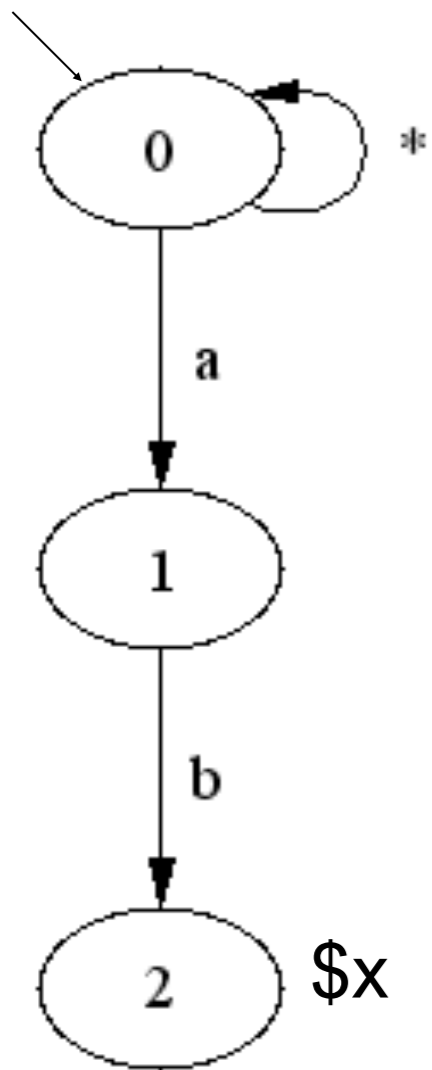
- Nous avons vu le lien entre automates et DTDs, Schémas XML...
- Les automates peuvent aussi être utilisés pour décrire des opérations de sélection comme XPath
- On peut aussi étendre les automates avec une sortie (transducteurs) et modéliser ainsi des transformations (XSLT/XQuery)

# Automates pour XPath

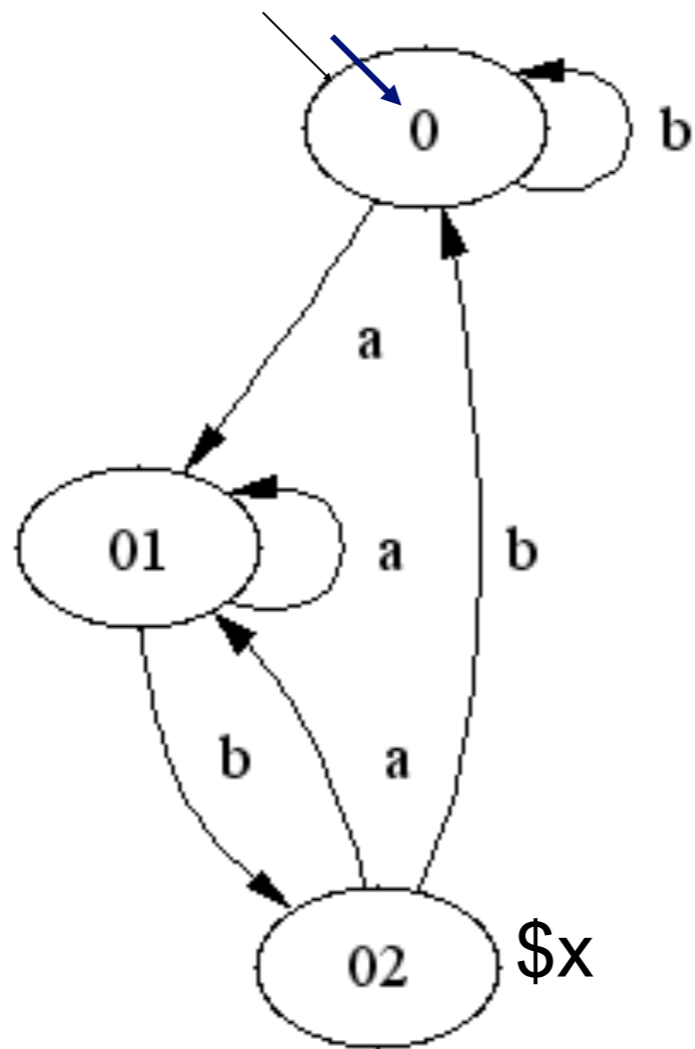
- Nous avons vu le lien entre automates et DTDs
- Nous avons vu comment valider une DTD à l'aide d'une pile
- Pour le fragment «descendant» de XPath, une approche similaire peut être utilisée

# Automates pour XPATH

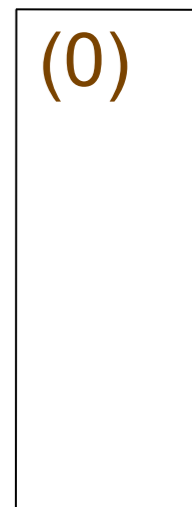
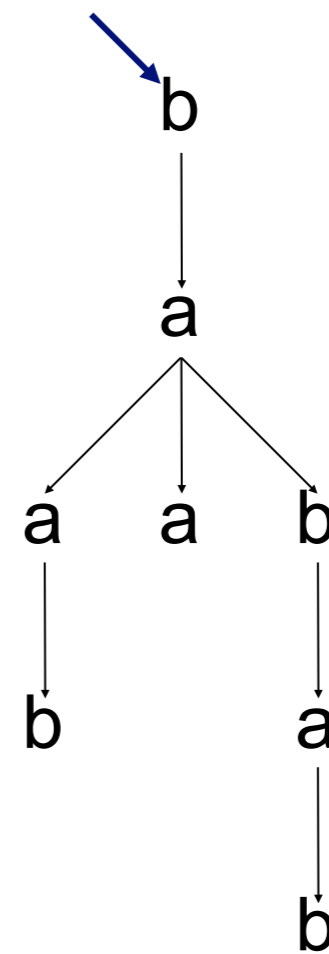
\$x in //a/b



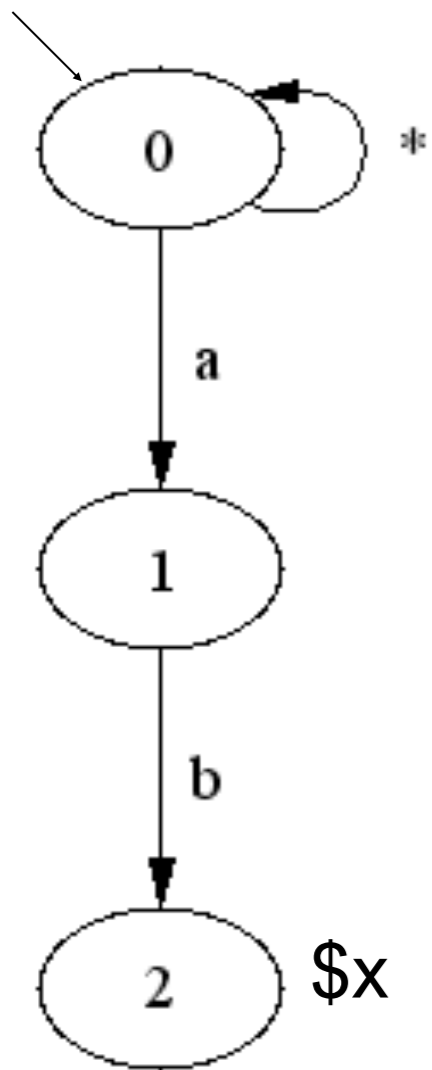
NFA



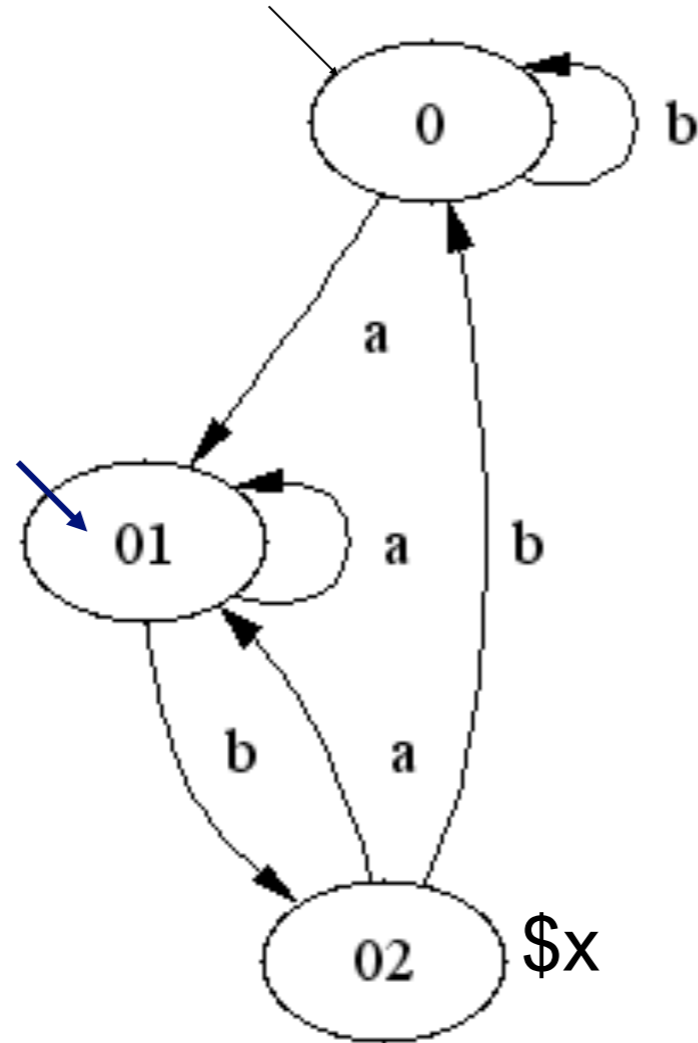
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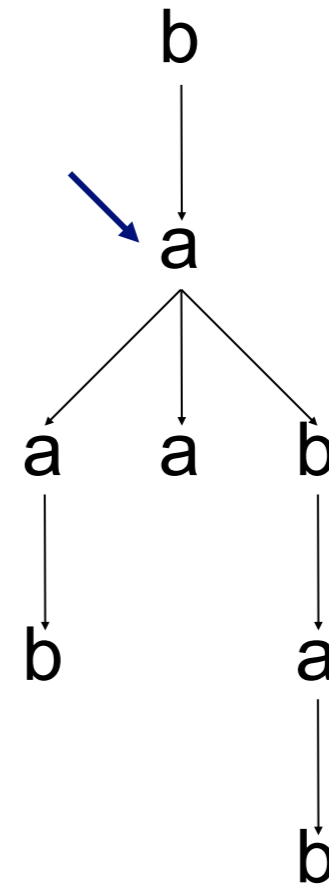
# Example: //a/b



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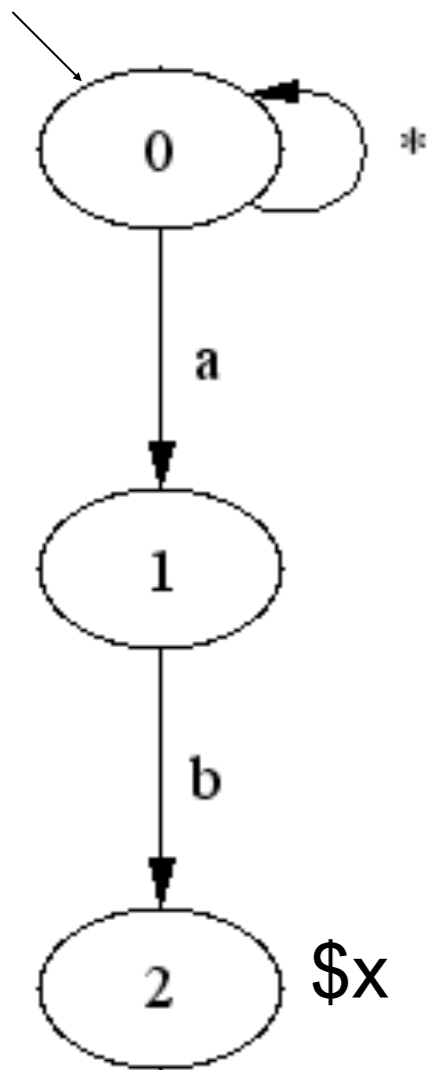


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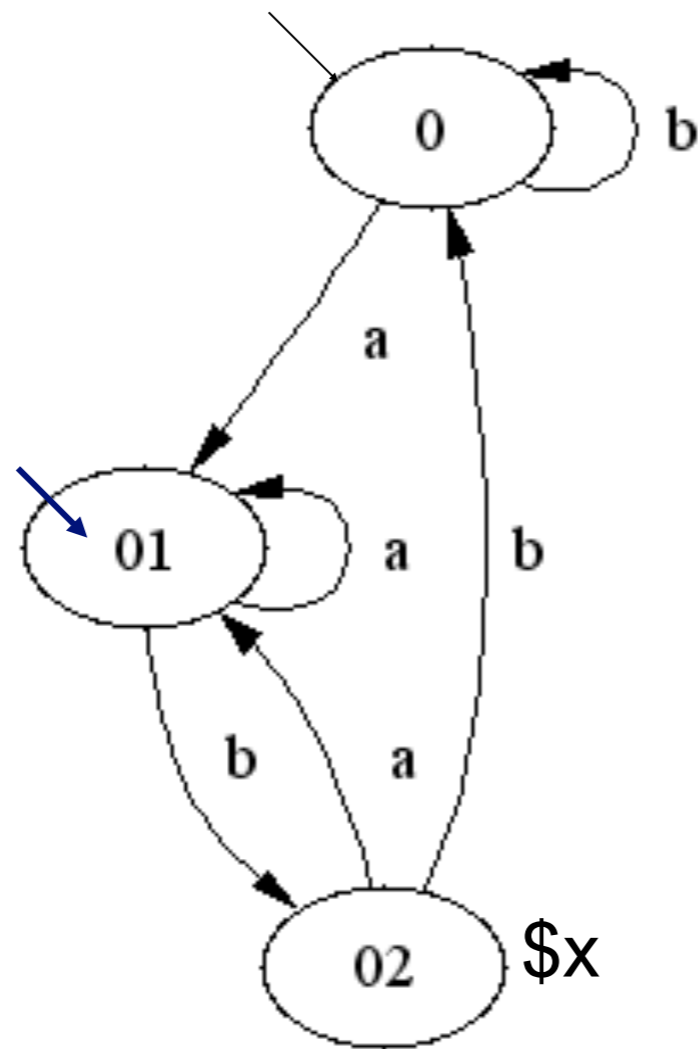


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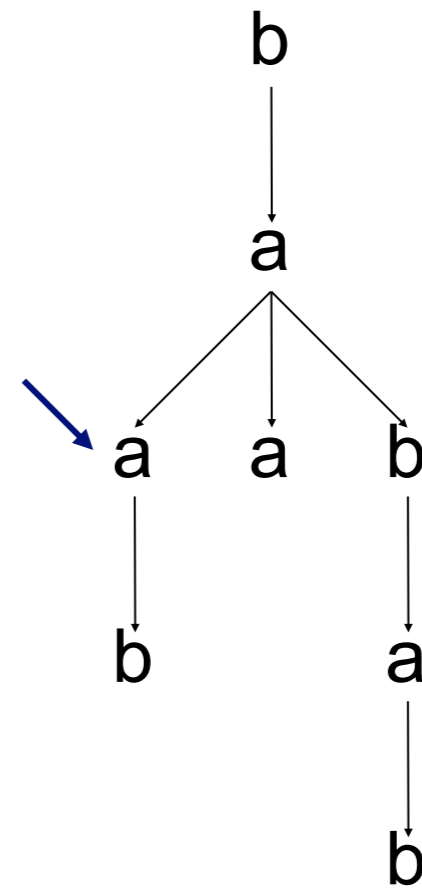
# Example: //a/b



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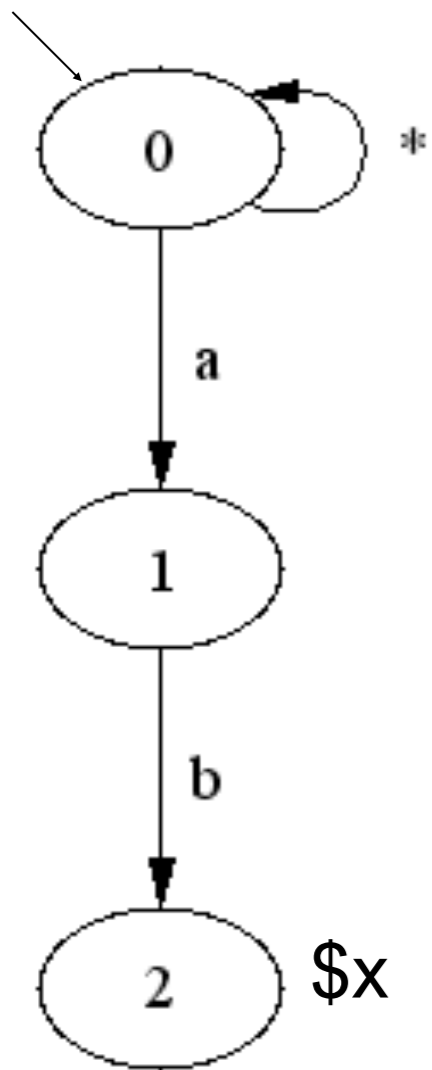


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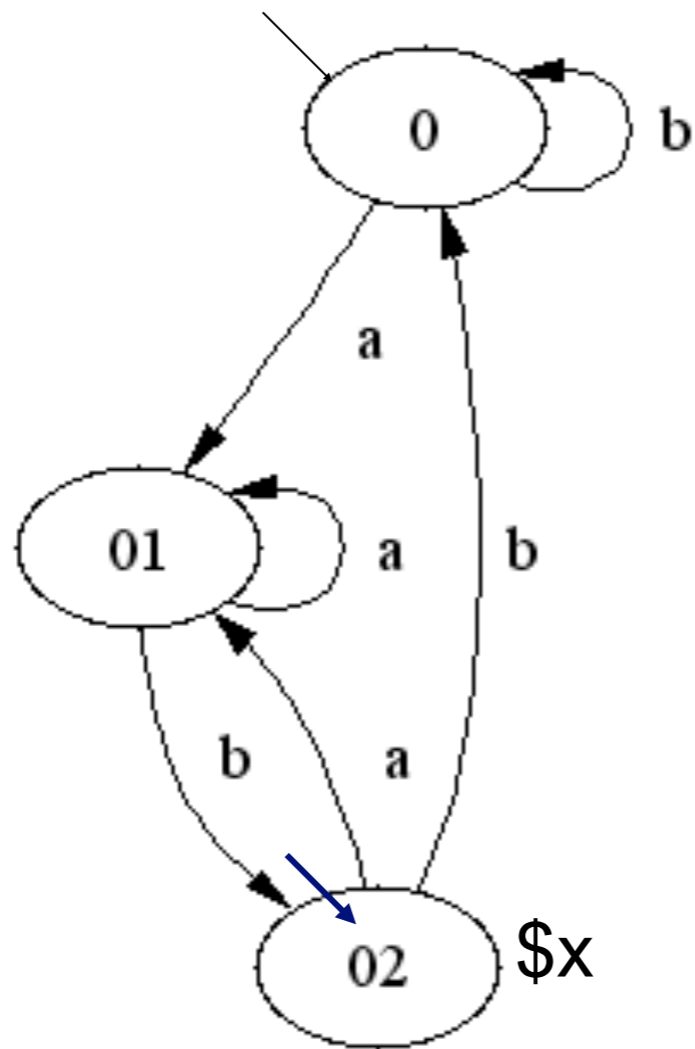


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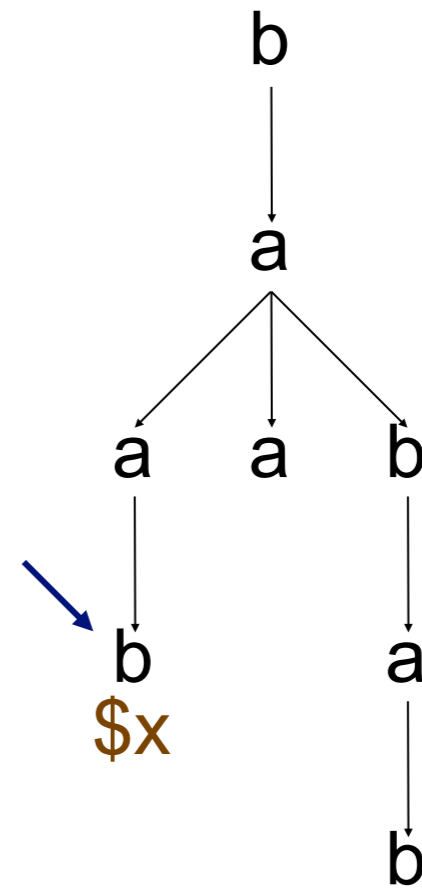
# Example: //a/b



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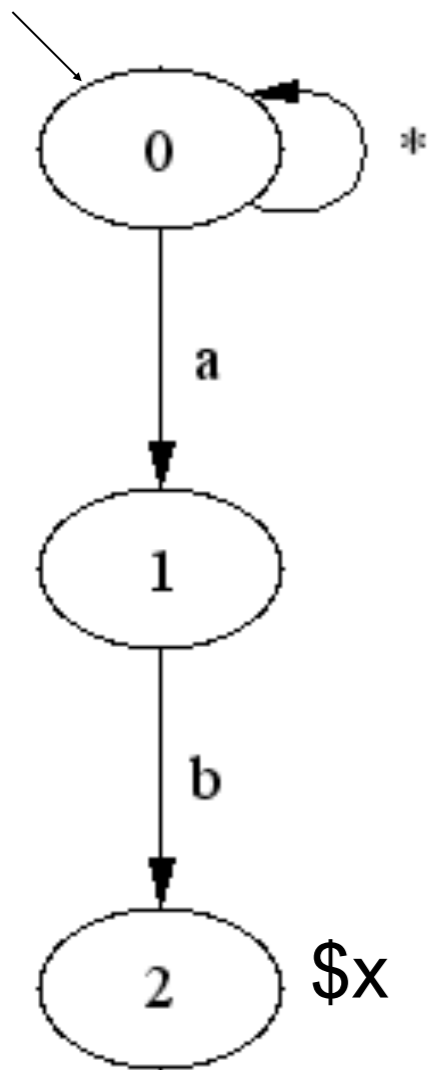


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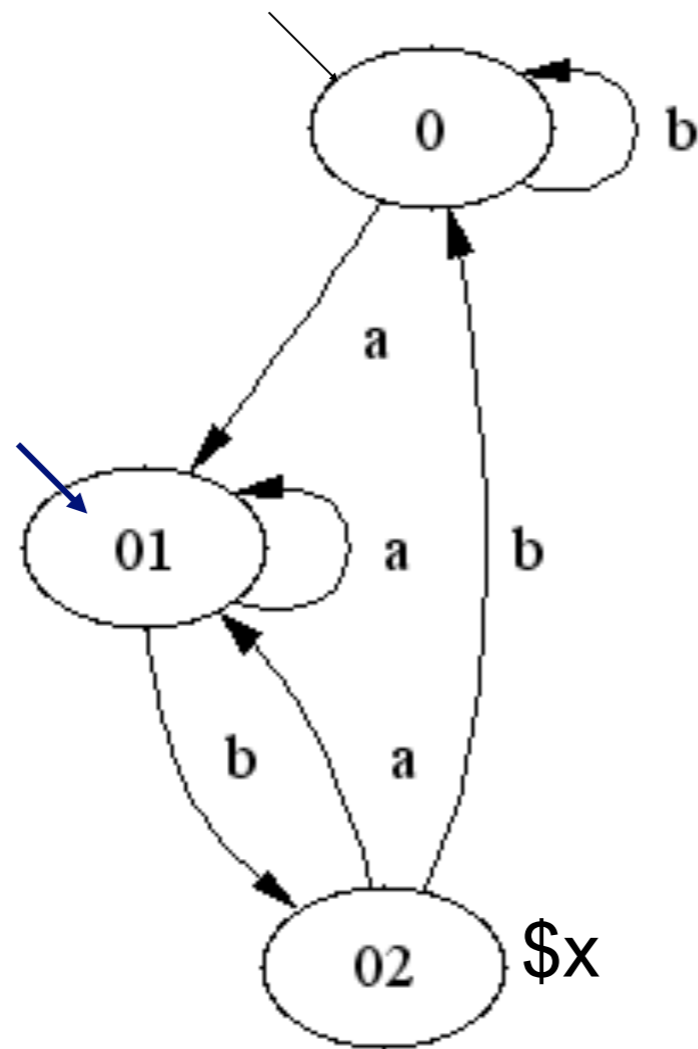


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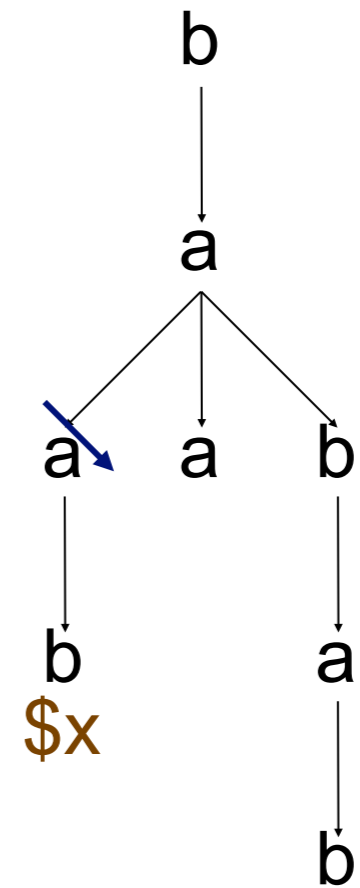
# Example: //a/b



NFA



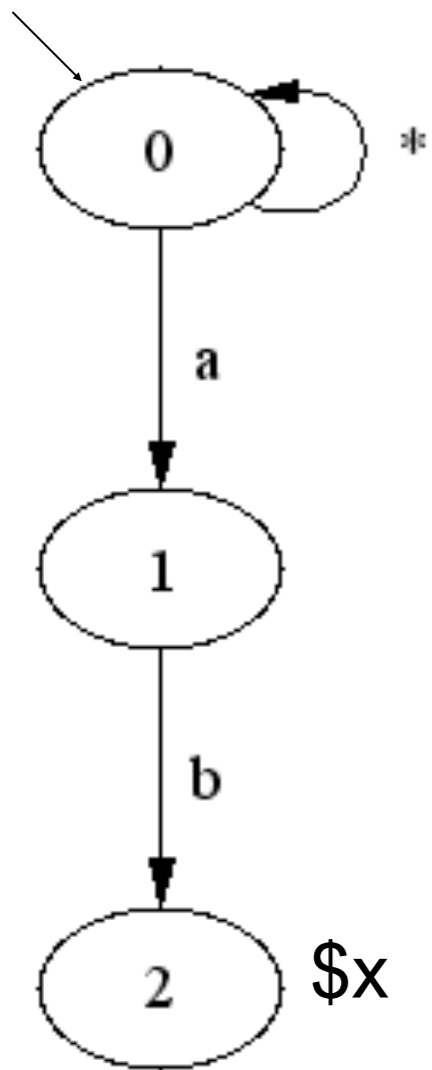
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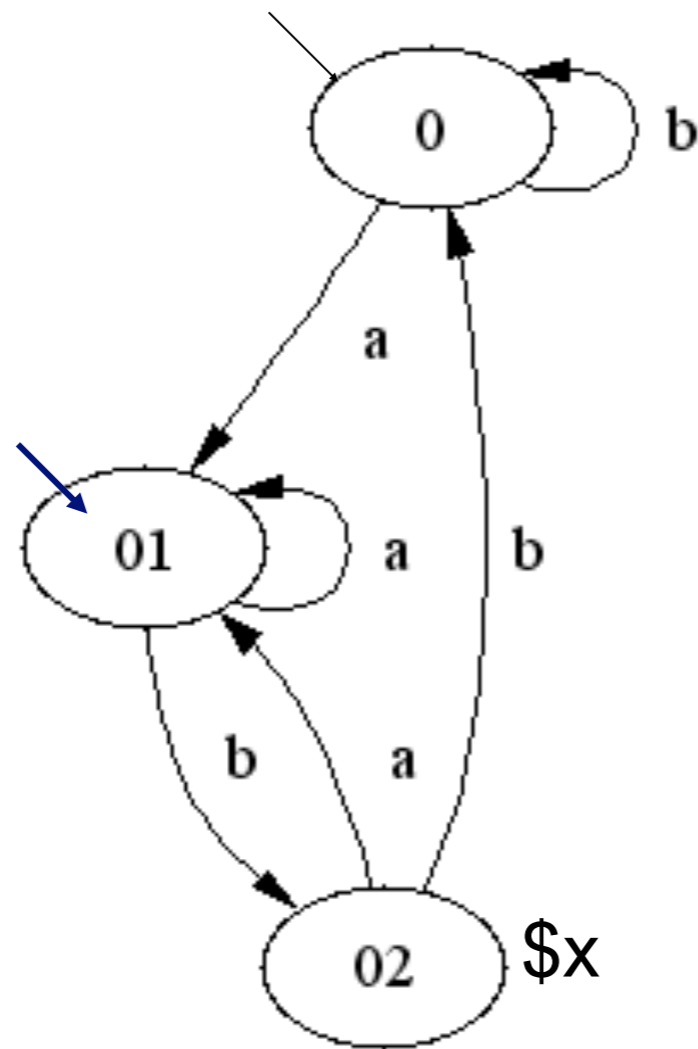
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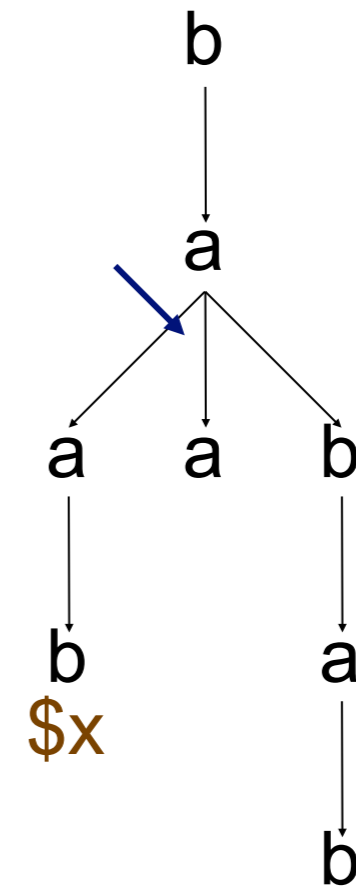
# Example: //a/b



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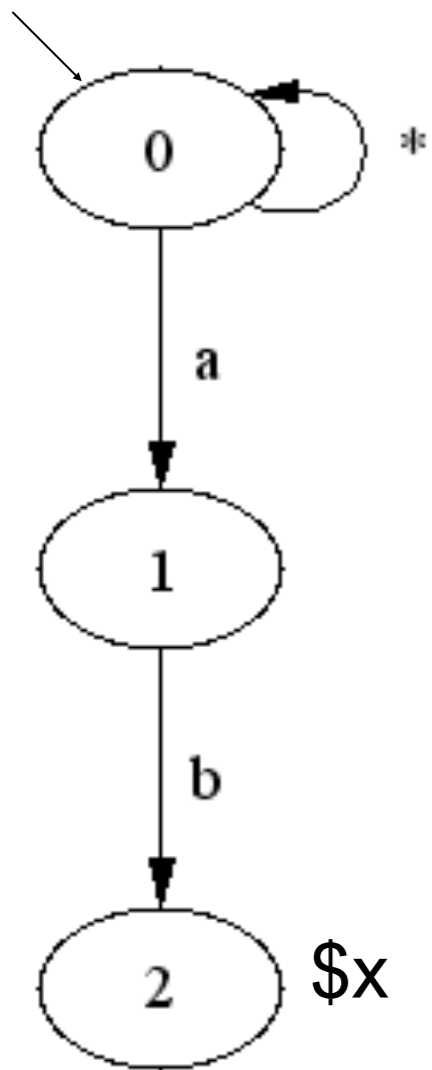


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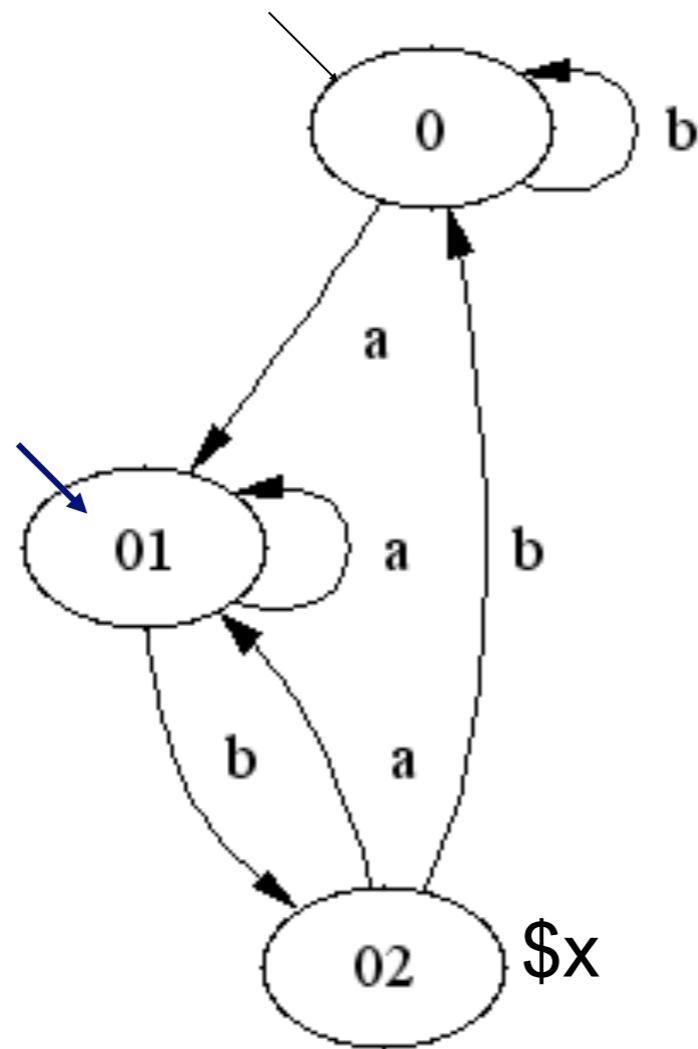


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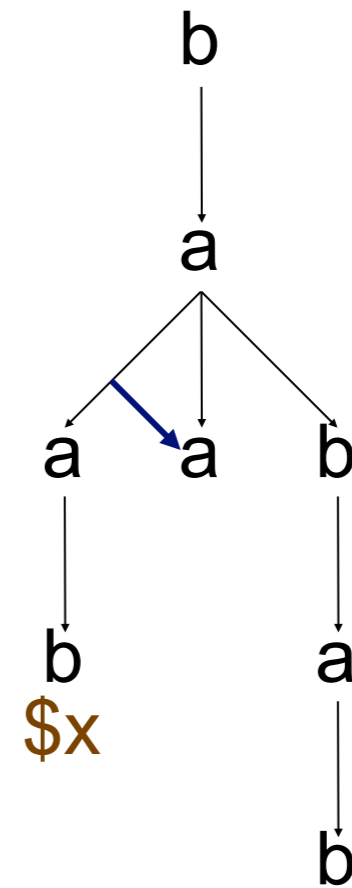
# Example: //a/b



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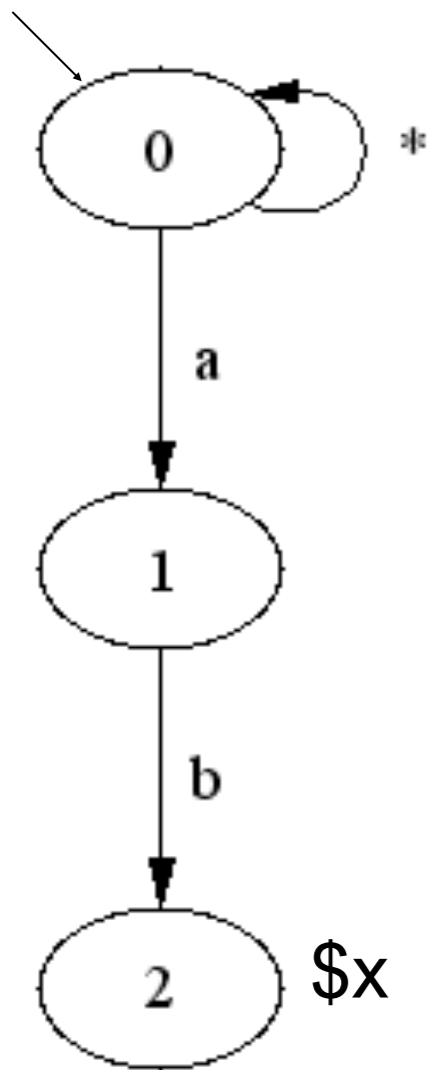


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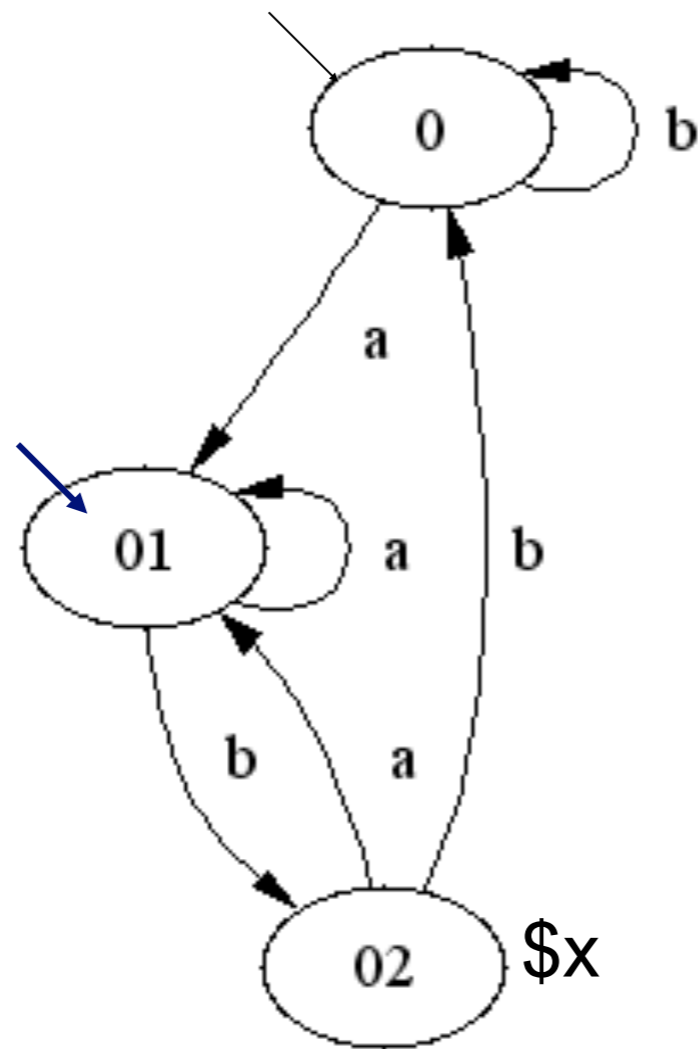


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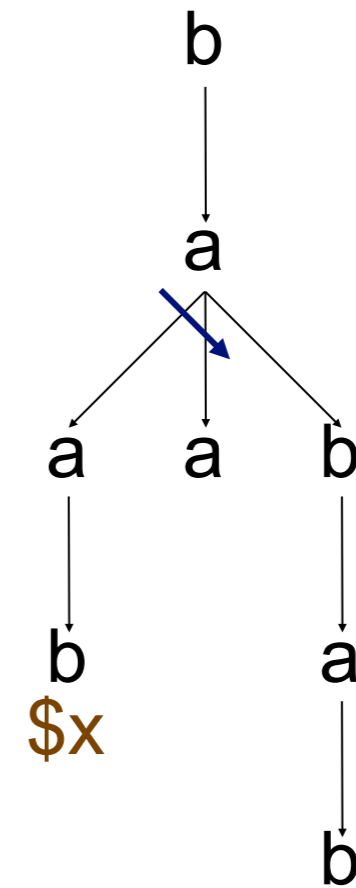
# Example: //a/b



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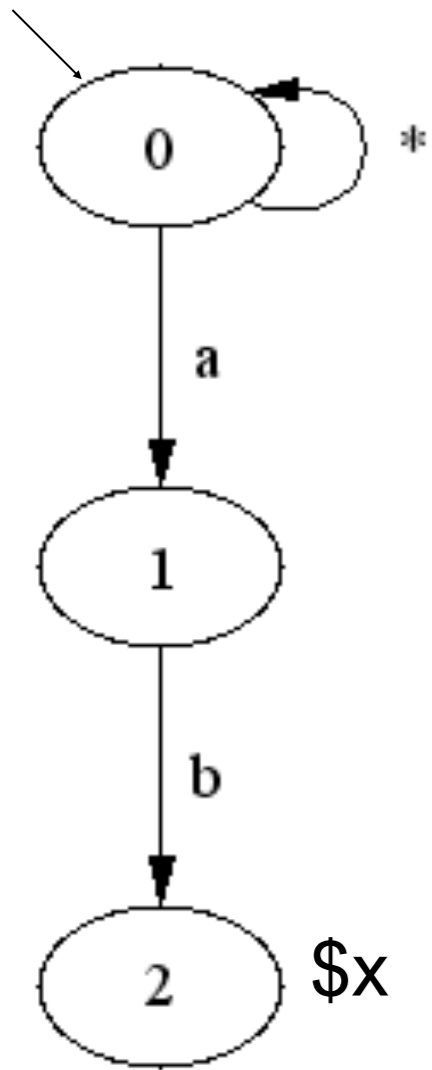


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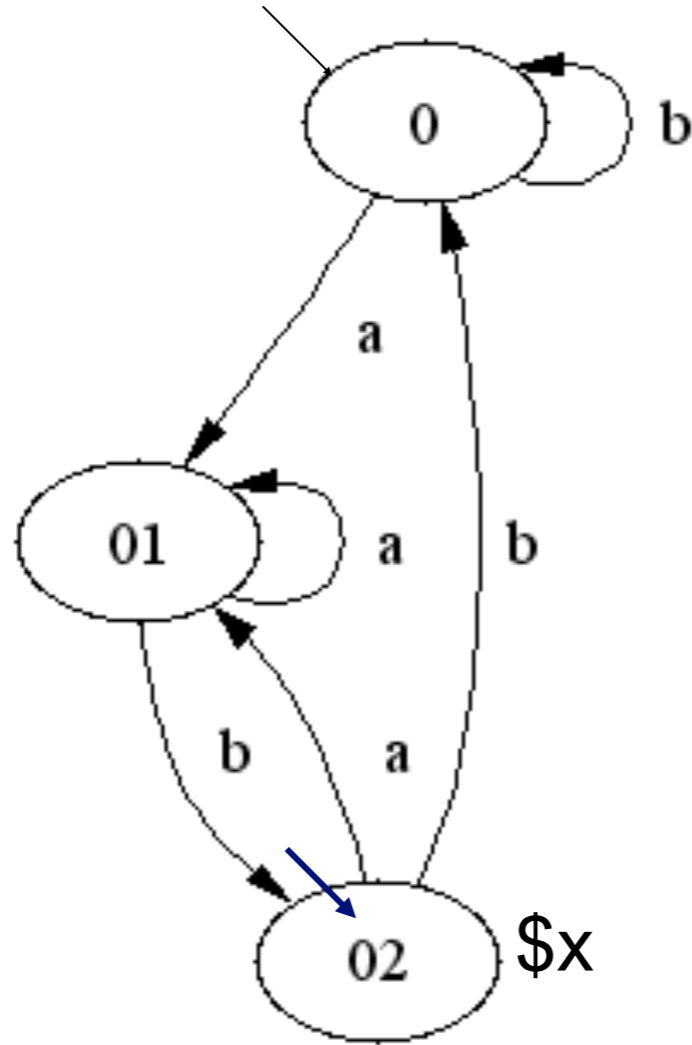


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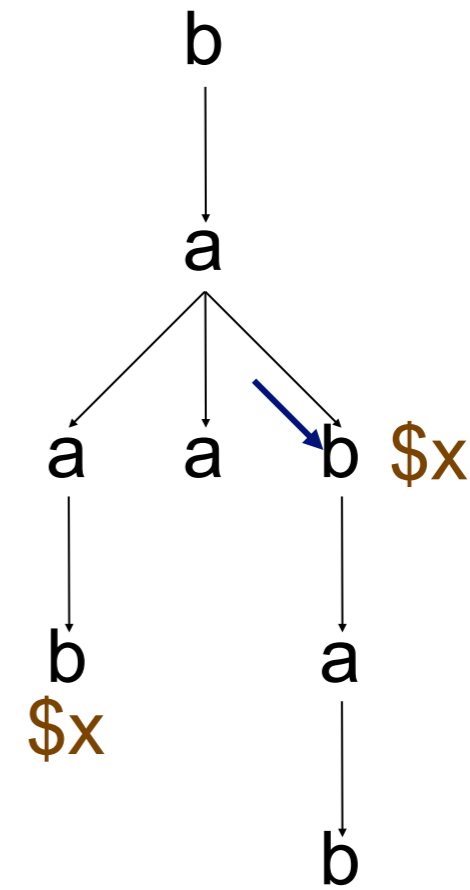
# Example: //a/b



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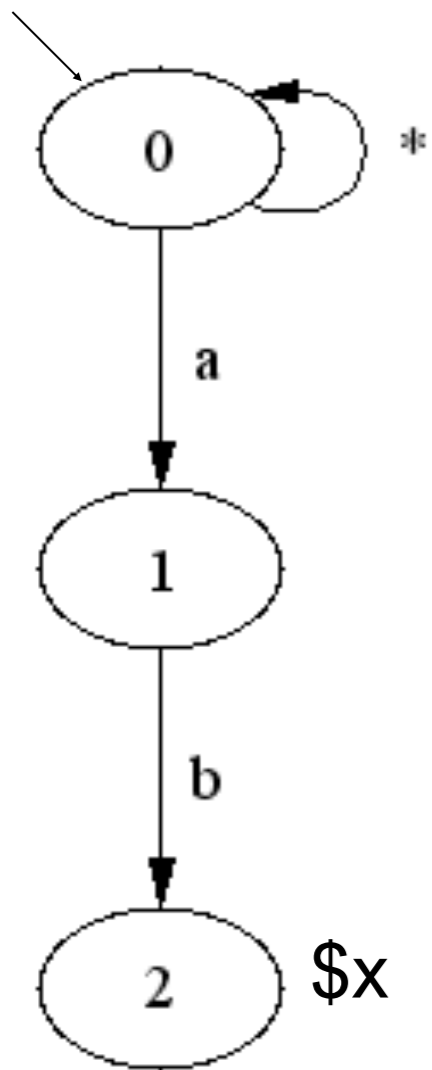


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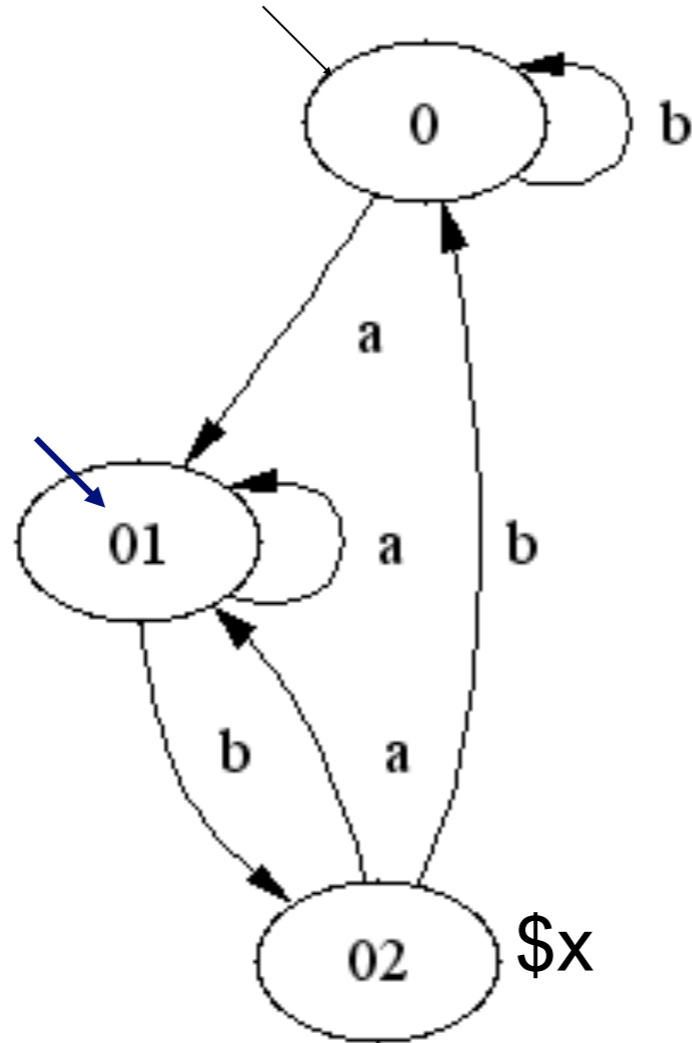


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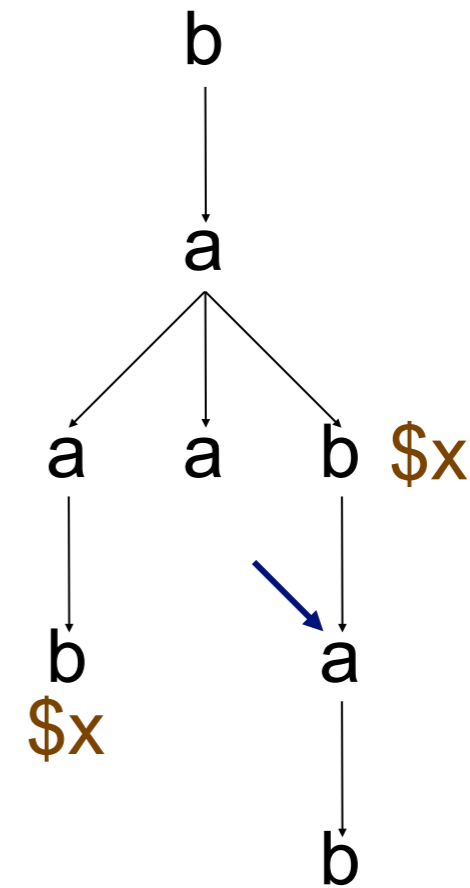
# Example: //a/b



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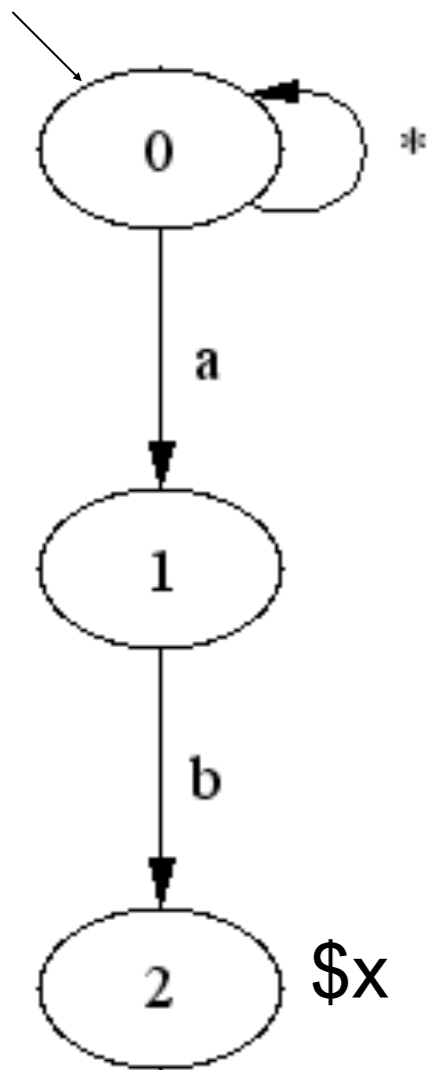


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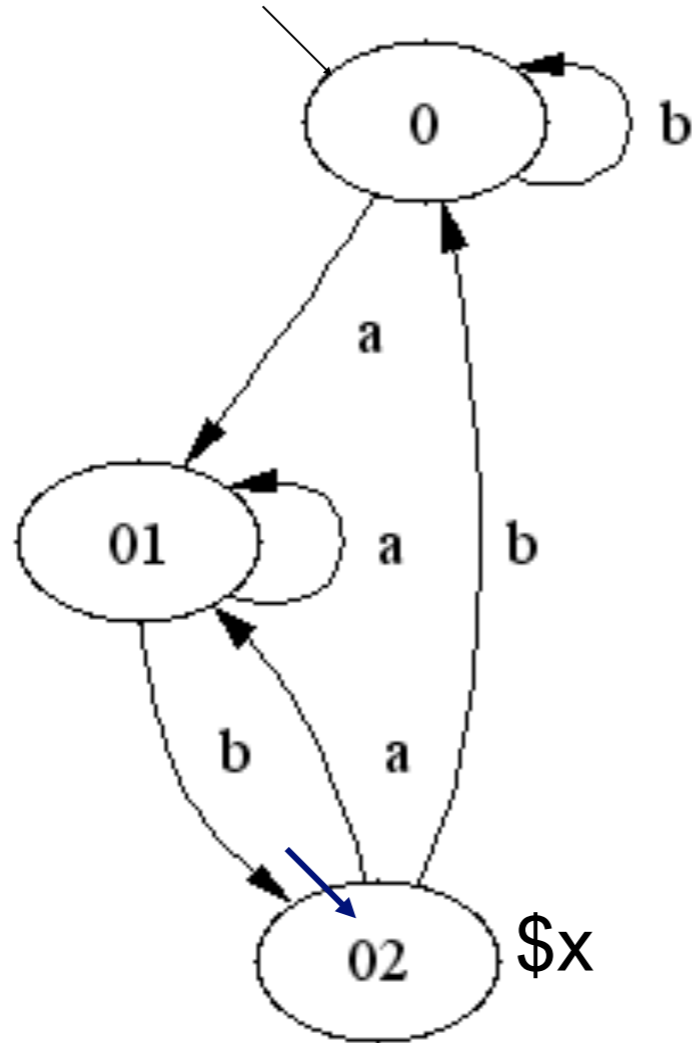


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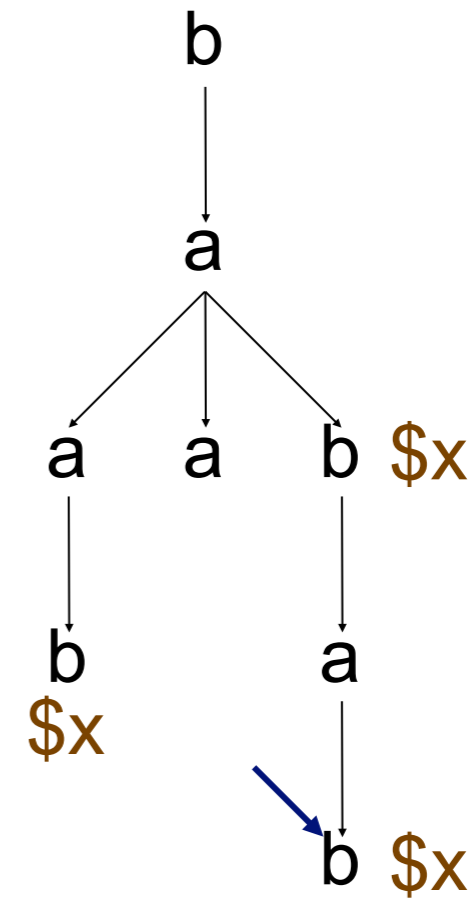
# Example: //a/b



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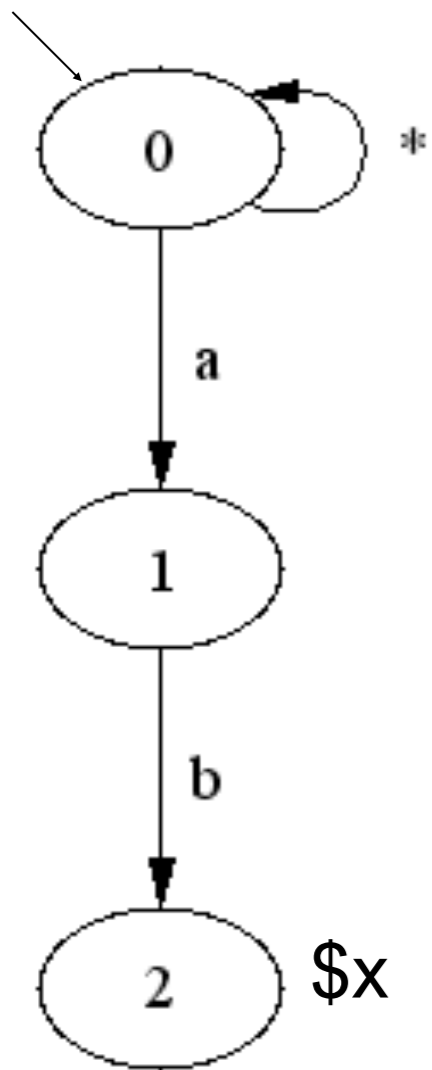


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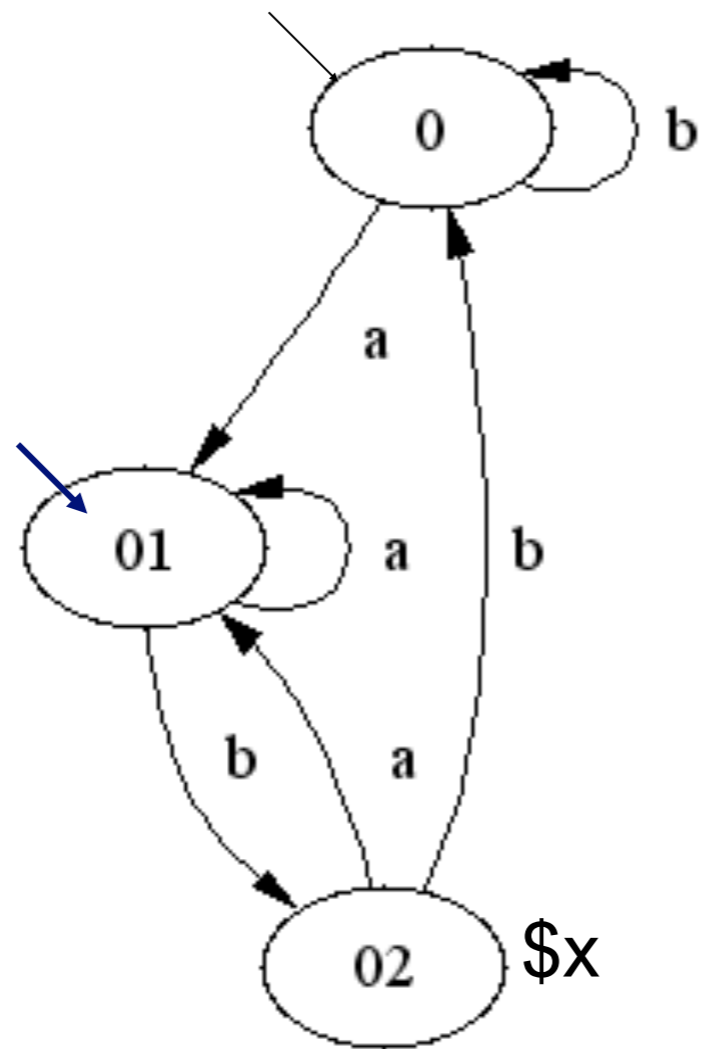


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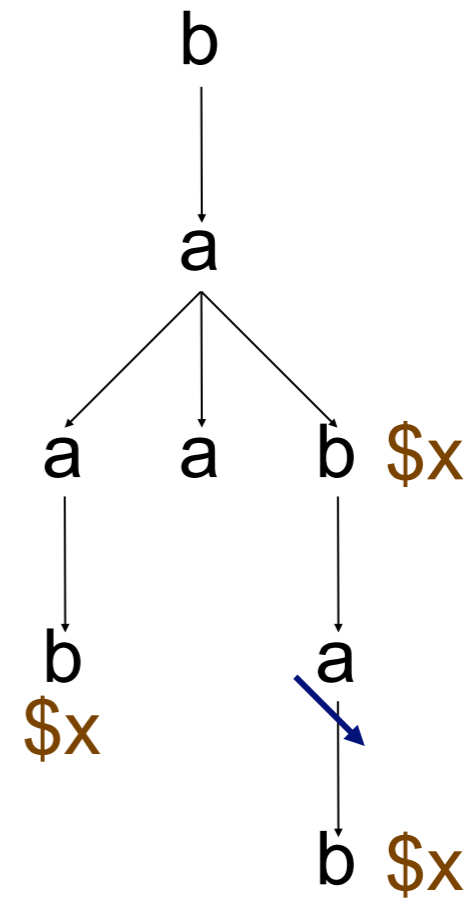
# Example: //a/b



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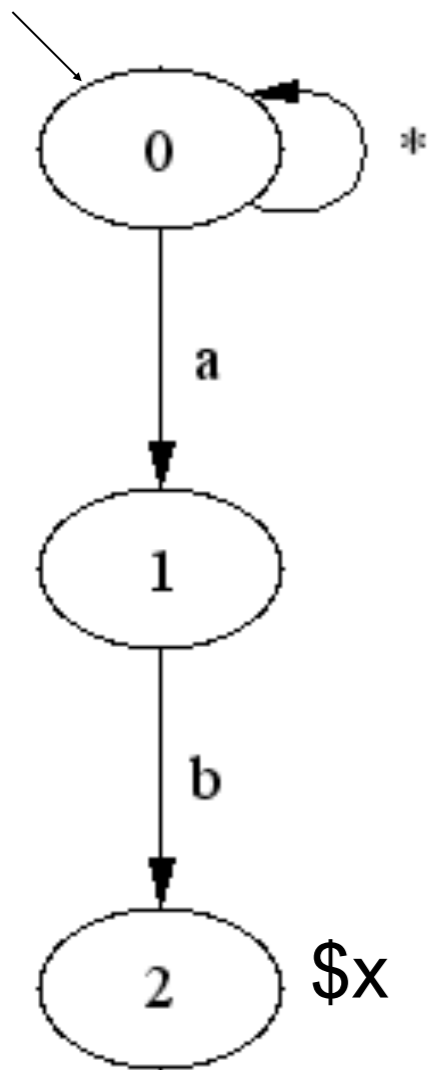


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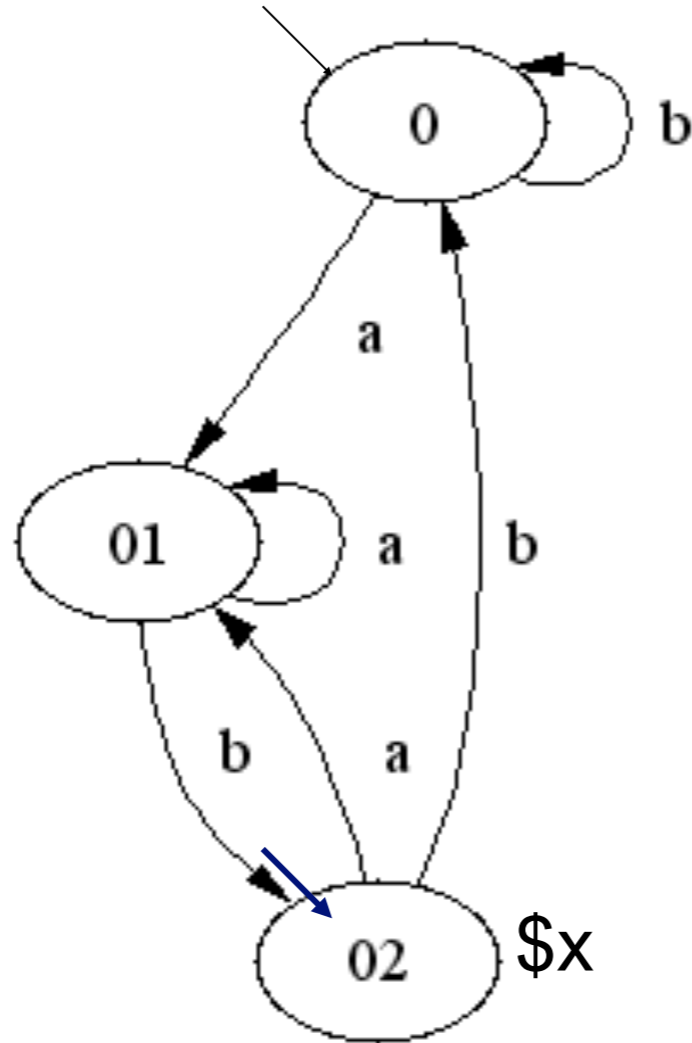


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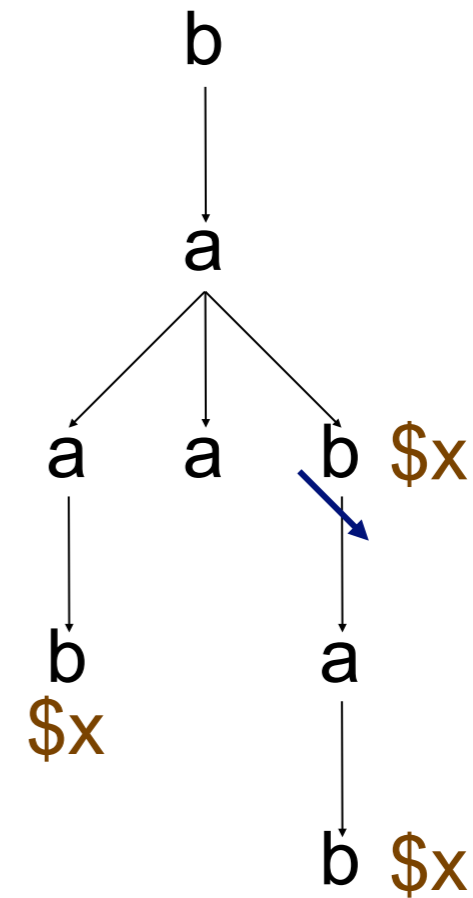
# Example: //a/b



NFA



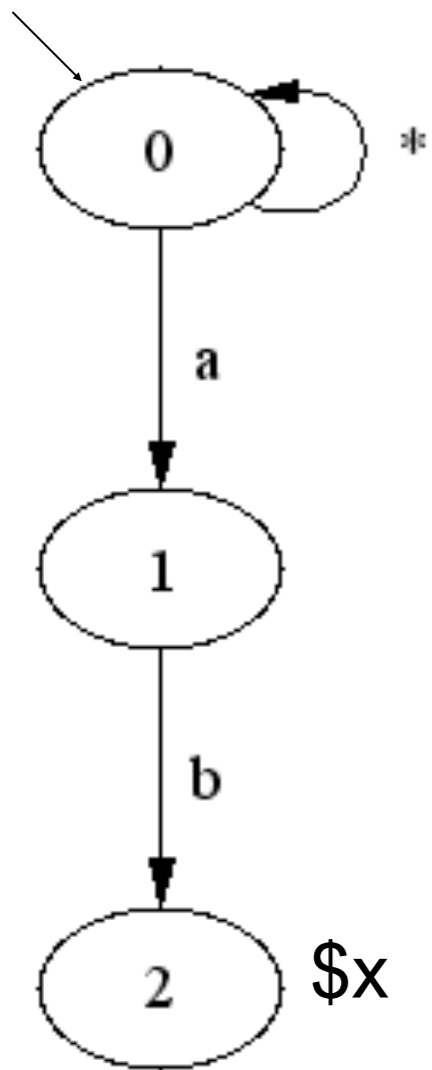
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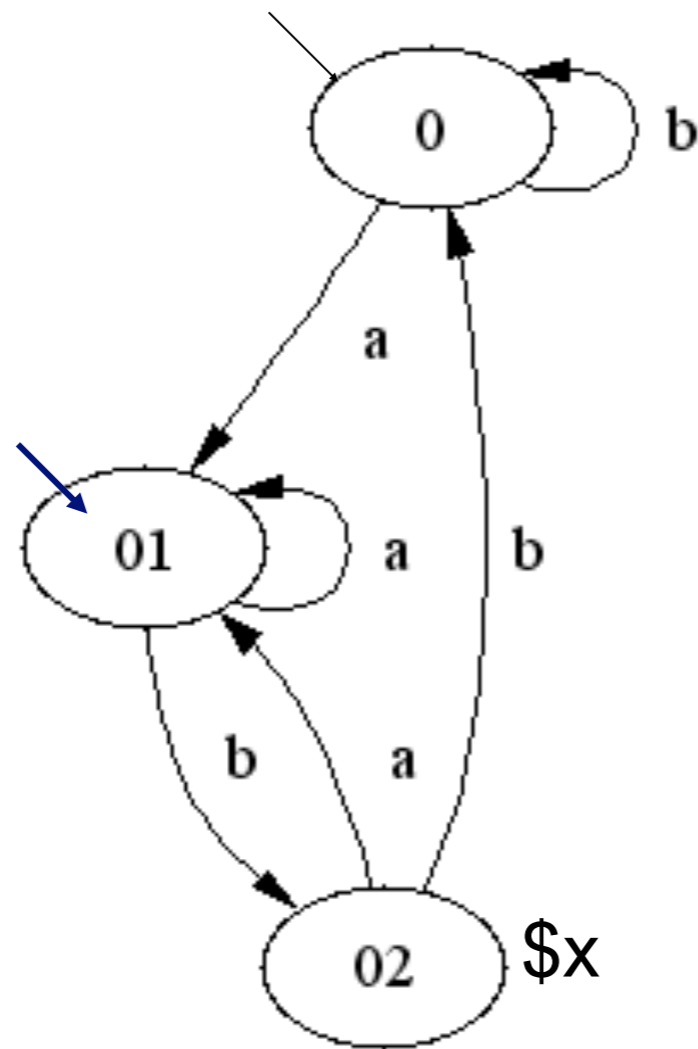
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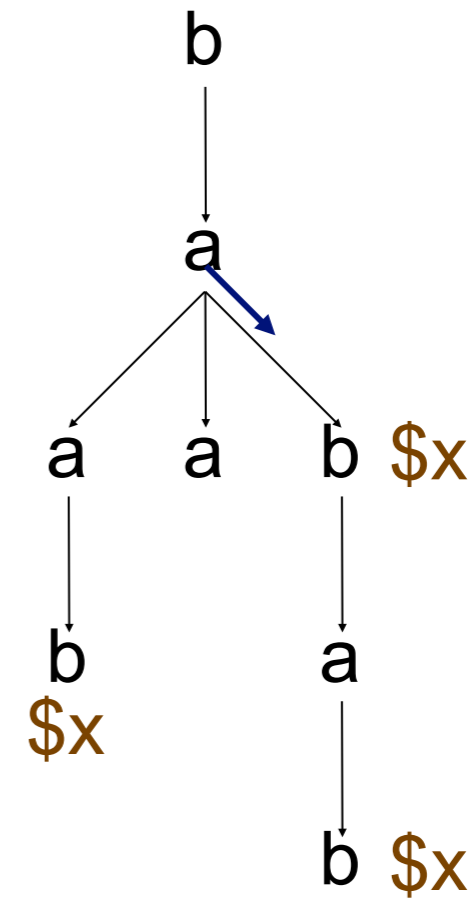
# Example: //a/b



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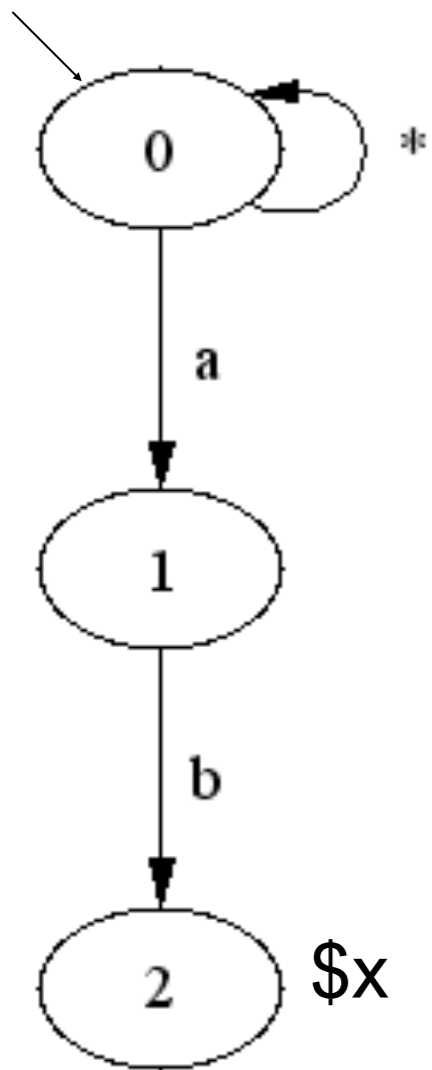


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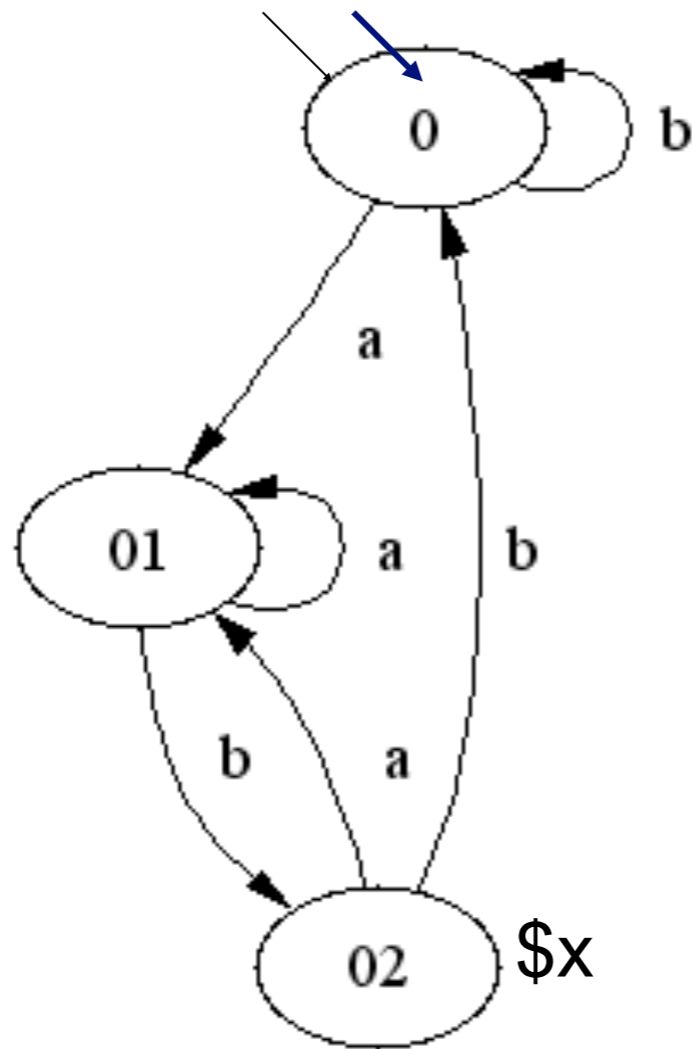


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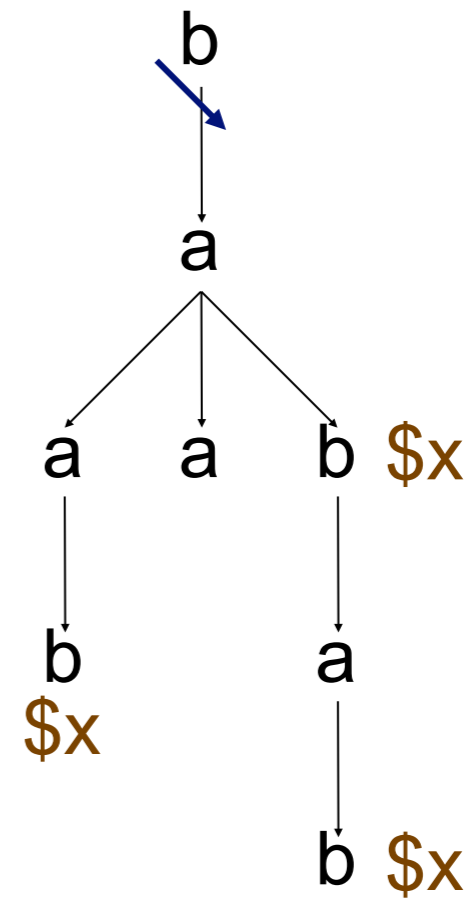
# Example: //a/b



NFA



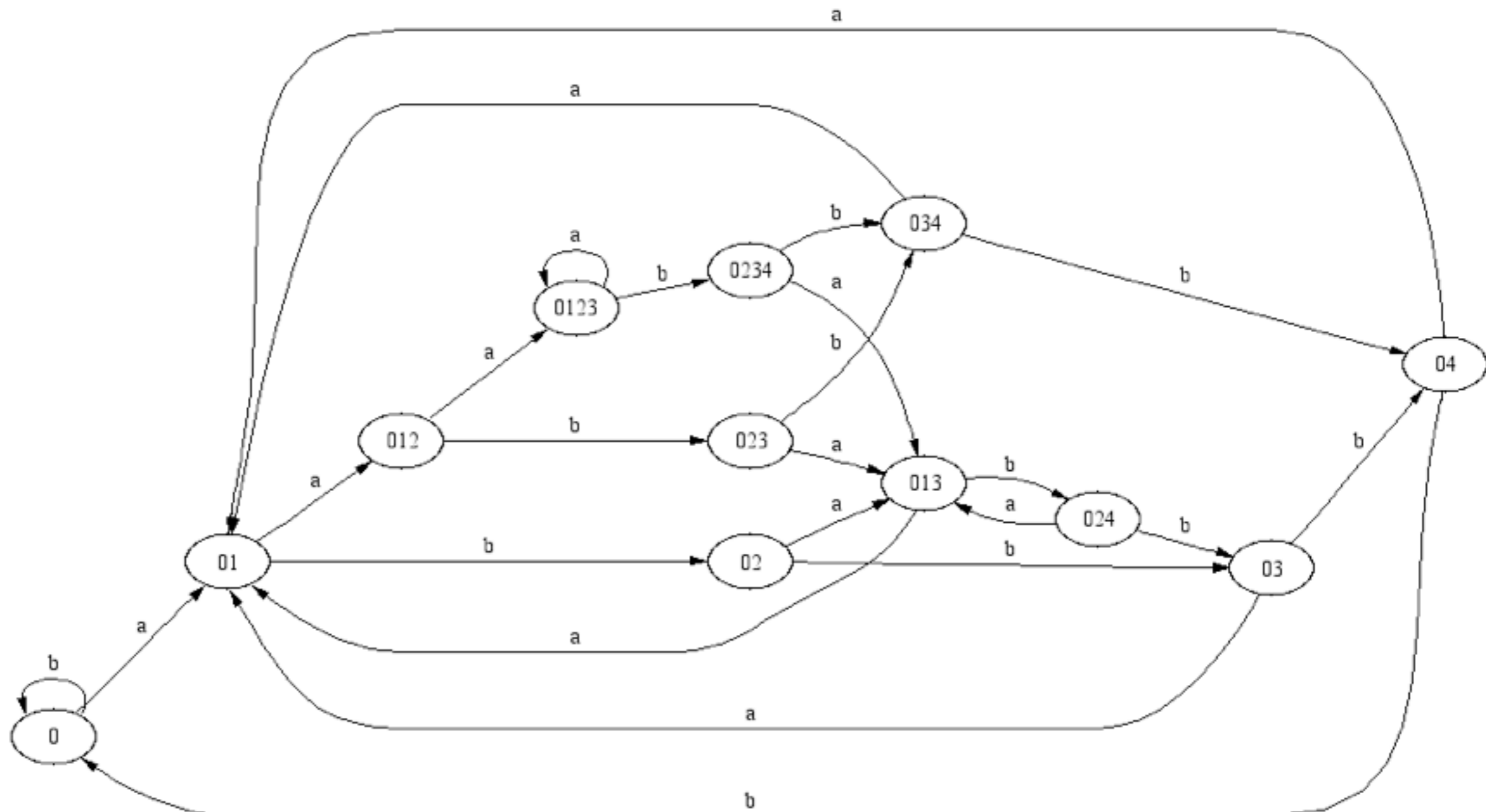
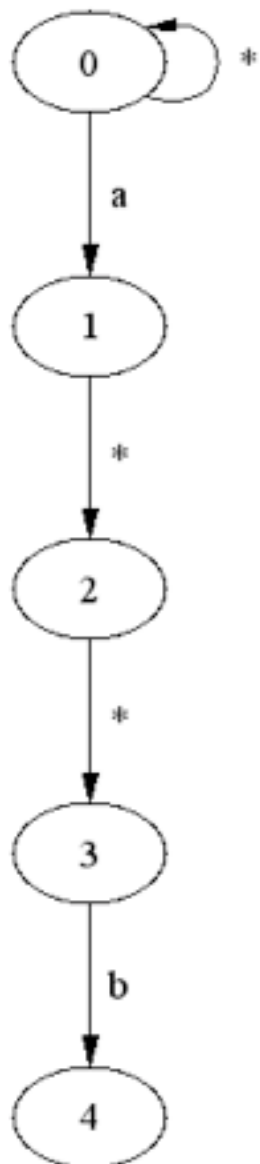
DFA



(0)

# Determinisation: saut exponentiel

$//a^*/b$



# Automates pour XPath

D'une manière générale, étant donné une expression XPath et un modèle de contenu (DTD/Schéma XML...), on peut transformer la requête XPath pour améliorer son traitement

- Réduire les indéterminées de l'expression
- Eliminer des parties inutiles