

Slide 30 Jost Berthold SLR parser construction

Productions

$S \rightarrow AB$

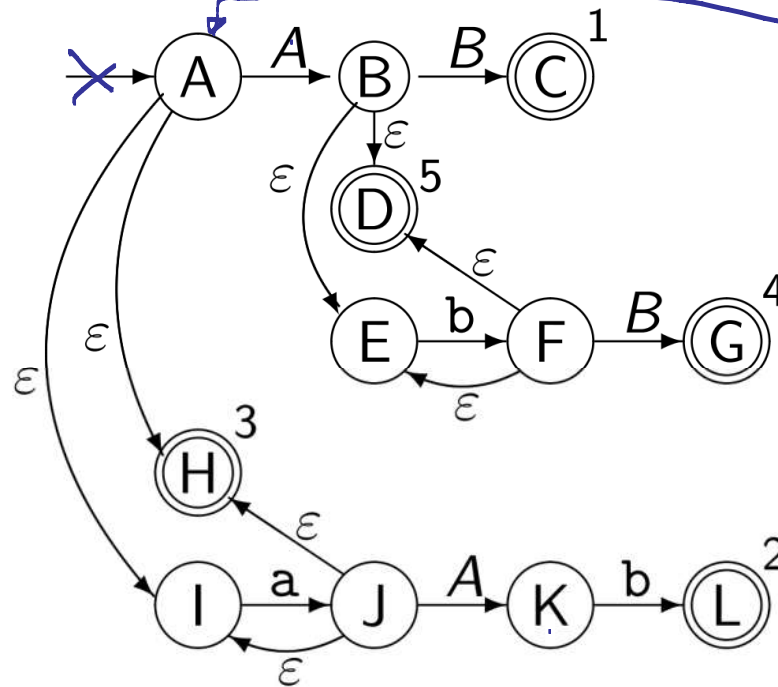
$B \rightarrow \epsilon$

$B \rightarrow bB$

$A \rightarrow \epsilon$

$A \rightarrow aAb$

NFA



Add:



Next step: Subset construction of a combined DFA.

(Alg. 1.3 p. 17 [M])

$$\varepsilon\text{-closure}(\{A'\}) = \{A', \underline{H}, I\} = \underline{0}$$

$$\text{move}(\underline{0}, a) = \varepsilon\text{-closure}(\{J\}) = \{\underline{H}, I, J\} = \underline{2}$$

$$\text{move}(\underline{0}, \underline{J}) = \varepsilon\text{-closure}(\{A''\}) = \{A''\} = \underline{1}$$

$$\text{move}(\underline{0}, b) = \varepsilon\text{-closure}(\{\}) = \{\}$$

$$\text{move}(\underline{0}, A) = \varepsilon\text{-closure}(\{B\}) = \{B, \underline{D}, E\} = \underline{3}$$

$$\text{move}(\underline{2}, a) = \varepsilon\text{-closure}(\{J\}) = \{\underline{H}, I, J\} = \underline{2}$$

$$\text{move}(\underline{2}, A) = \varepsilon\text{-closure}(\{K\}) = \{K\} = 4$$

$$\text{move}(\underline{3}, b) = \varepsilon\text{-closure}(\{F, \}) = \{\underline{D}, E, F\} = \underline{6}$$

$$\text{move}(\underline{3}, B) = \varepsilon\text{-closure}(\{C\}) = \{C\} = \underline{7}$$

$$\text{move}(\underline{4}, b) = \varepsilon\text{-closure}(\{K\}) = \{L\} = 5$$

$$\text{move}(\underline{6}, b) = \varepsilon\text{-closure}(\{F\}) = \{\underline{D}, E, F\} = \underline{6}$$

$$\text{move}(\underline{6}, B) = \varepsilon\text{-closure}(\{G\}) = \{G\} = \underline{8}$$

The internal DFA is therefore:

