(S, a, e), (S, a))

((f, b, a), (f, e))

(S, b, a), (f, e))

abba

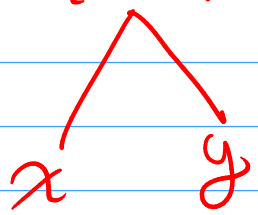
| | |
|---|---|
| Sae | Sa |
| Sbe | Sb |
| See | fe |
| faa | fe |
| fbb | fe |

→ either ⇒ nondeterministic

| | | | |
|---|---|---|---|
| S | abba | e | |
| S | bba | a | 1 |
| S | ba | ba | 2 |
| f | ba | ba | 3 |
| f | a | a | ~~5~~ |
| f | e | e | 4 |

$\Sigma = \{a, b\}$

$L = \{ w \mid w \in \Sigma^* \text{ and no. of As \& no. of Bs are same} \}$




abaaabab
bb

bbbbbaaaaaabaab

(S, b, ε) / L
(S, a, b), (S, ε)
(S, b, a), (S, ε)
(S, ε, ε) (f, ε)
(S, a, a) (S, aa)
(S, b, b) (S, bb)

| State | unread i/p | state | T |
|---|---|---|---|
| S | abbaab | ε | |
| q | abbaab | c | 1 |
| q | bbaab | ac | |

$(V, \Sigma, R, S)$

$L(M) = L(G)$

$K \quad \Sigma \quad \Gamma \quad \Delta \quad s \quad F$

$M = (\{p, q\}, \Sigma, V, \Delta, p, \{q\})$

(1) $((p, e, e), (q, S))$

(2) $((q, e, A), (q, x))$ $\forall A \to x$ in $R$

(3) $((q, a, a), (q, e))$ $\forall a \in \Sigma$

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$S \to aS$ $\quad V = \{B, S, a, b\}$

$S \to bS$ $\quad \Sigma = \{a, b\}$

$B \to e$ $\quad S = S$

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Eg $(\{p, q\}, \{a, b\}, \{S, B, a, b\}, \Delta, p, \{q\})$

$((p, e, e), (q, S))$ $\quad S \to aS$

$((q, e, S), (q, aS))$ $\quad A \quad X$

$((q, e, S), (q, bB))$

$((q, e, B), (q, e))$

$((q, aa), (q, e))$

$((q, b, b), (q, e))$

$S \to aB$

$B \to e$

$((q, e, S)(q, a))$

$((q, eB)(q, e))$

$((q, a, a)(q, e))$

Needn't be all NDPA