pushdown automata

wcw^R

a b bc bba

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

next symbol → top

State	unused Input	Stack	trans state
S	a b bc bba	e	
S	b bc bba	a	1
S	bc bba	ba	2
S	c bba	bba	2
f	bba	bba	3
f	ba	ba	5
f	a	a	5
f	e	e	

Top

((S, b, e) (S, b))

((S, c, e) (f, e))

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

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

Acceptance Criteria (f

acb

			Transition
S	acb	e	—
S	cb	a	1
f	b	a	3

RIP

no ambiguity in rules ⇒ DPDA

$a^n b^n$ $n \geq 1$ $\Sigma = \{a, b\}$

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

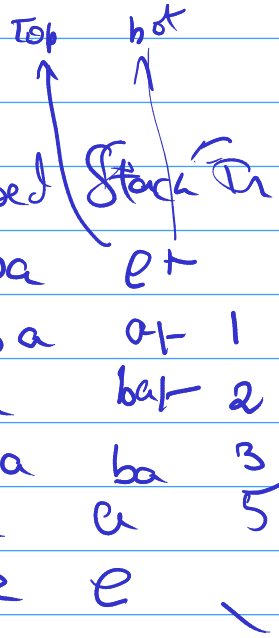
write transition

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

S	a a b b	e
S	a b b	a
S	b b	a a
f	b	a
f	e	e

$M = (k, \Sigma, \Gamma, \Delta, s, F)$

$((s, a, e), (s, a))$
$((s, b, e), (s, b))$
$((s, e, e), (f, e))$
$((f, a, a), (f, e))$



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

$L = \{w \mid w \in \Sigma^*$ and no. of a's & no. of b's are same$\}$

abbaba

abbbaaa

s a e s a
s b e s b
s a b s e
s b a s e
s e e f e

} non deterministic