LR(0) Parsers

Input: aabb
Step 1: Append $ to the input: aabb$

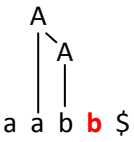
1. S → AA
2. A → aA
3. A → b

	Stack: 0
Input: **a**abb$	Stack: 0 a 3
Input: **aa**bb$	Stack: 0 a 3 a 3
Input: **aab**b$	Stack: 0 a 3 a 3 b 4
Input: **aabb**$	

4 b : r3	Reduce !!!	
Production #3: A → b	Length(RHS) = y = 1	Pop 2y=2*1=2 entries and Push the LHS
Input: **aabb**$	Stack: 0 a 3 a 3 ~~b 4~~ A	Stack: 0 a 3 a 3 A

3 A : 6	Stack: 0 a 3 a 3 A 6
Input: **aabb**$	

6 b : r2	Reduce !!!	
Production #2: A → aA	Length(RHS) = y = 2	Pop 2y=2*2=4 entries and Push the LHS
Input: **aabb**$	Stack: 0 a 3 ~~a 3 A 6~~ A	Stack: 0 a 3 A



3 A : 6	Stack: 0 a 3 A 6
Input: **aabb**$	

6 b : r2		
Production #2: A → aA	Length(RHS) = y = 2	Pop 2y=2*2=4 entries and Push the LHS
Input: **aabb**$	Stack: 0 ~~a 3 A 6~~ A	Stack: 0 A

0 A : 2 Stack: 0 A 2
Input: **aab**b$ Stack: 0 A 2 b 4
Input: **aab**b$

4 b : r3
Production #3: A → b Length(LHS) = y = 1 Pop 2y=2*1=2 entries and Push the LHR
Input: **aab**b$ Stack: 0 A 2 ~~b 4~~ A Stack: 0 A 2 A

2 A : 5 Stack: 0 A 2 A 5
Input: **aabb$**

5 $: r1
Production #1: S → AA Length(LHS) = y = 2 Pop 2y=2*2=4 entries and push the LHS
Stack: 0 ~~A 2 A 5~~ S Stack: 0 S

0 S : 1 Stack: 0 S 1
Input: **aabb$**
1 $: **Accept**