

CSE 401 - LL Semantics - Week 5

Edit the following Grammars to make them LL(1). Then walk through the top down parse for the string given in the parenthesis.

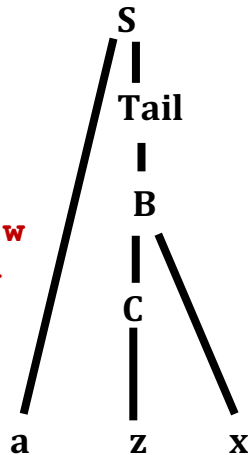
Grammar 1 (“azx”)

0. $S ::= a B \mid a w$

1. $B ::= C x \mid y$

2. $C ::= \epsilon \mid z$

0. $S ::= a \text{ Tail}$
1. $\text{Tail} ::= B \mid w$
2. $B ::= C x \mid y$
3. $C ::= \epsilon \mid z$



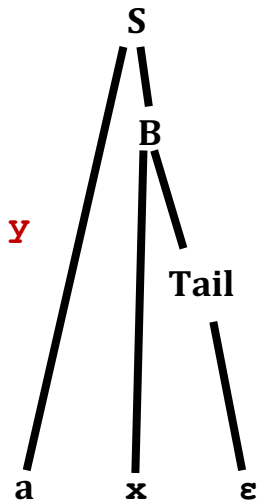
Grammar 2 (“ax”)

0. $S ::= a B$

1. $B ::= C x \mid y$

2. $C ::= \epsilon \mid x$

0. $S ::= a B$
2. $B ::= x \text{ Tail} \mid y$
3. $\text{Tail} ::= x \mid \epsilon$

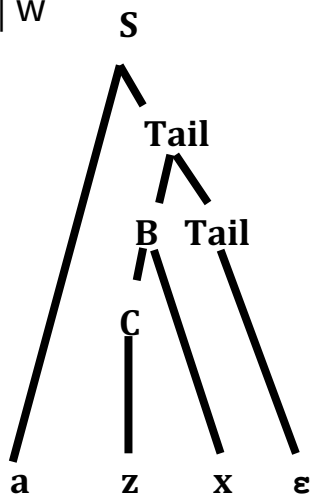


Grammar 3 (“azx”)

0. $S ::= S B \mid a \mid w$

1. $B ::= C x \mid y$

2. $C ::= \epsilon \mid z$



0. $S ::= a \text{ Tail} \mid w \text{ Tail}$
1. $\text{Tail} ::= B \text{ Tail} \mid \epsilon$
2. $B ::= C x \mid y$
3. $C ::= \epsilon \mid z$

Grammar 4 (“azx”)

0. $S ::= B w \mid a B$

1. $B ::= S \mid z x$

0. $S ::= z x w T \mid a a T$
1. $a T ::= z x T \mid a a T T$
2. $T ::= w T \mid \epsilon$

