

Check-In C12

Review: LR Parsers

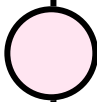
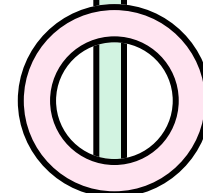
Describe the difference between an LL(1) and LR(1) parser. Which is more powerful?

Announcements

Housekeeping

Inclement Weather Imminent?

**FLIPPED
WEDNESDAY**



○ Written Work #3

Topics:

- LL(1)
- FIRST sets
- FOLLOW sets



Written Work #3: Question 1

Left-factor the following grammar

$$\begin{aligned} A ::= & yAAxxA \\ & | yAAxAy \\ & | yAy \\ & | \end{aligned}$$


Written Work #3: Question 2

Eliminate left-recursion in the following grammar:

$L ::= L L E$

$L ::= G$

$G ::= G b$

| a

$E ::= k$



Written Work #3: Question 3

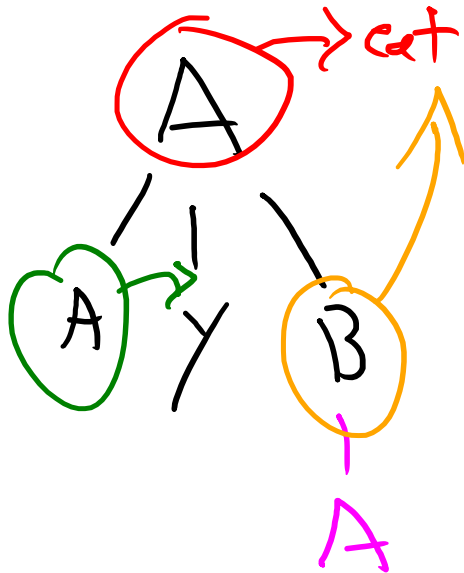
Calculate FIRST and FOLLOW sets for the following grammar:

$A ::= A y B$

$A ::= z$

$A ::= \epsilon$

$B ::= A$



$FOLLOW(A) ::= \text{cat}, y$

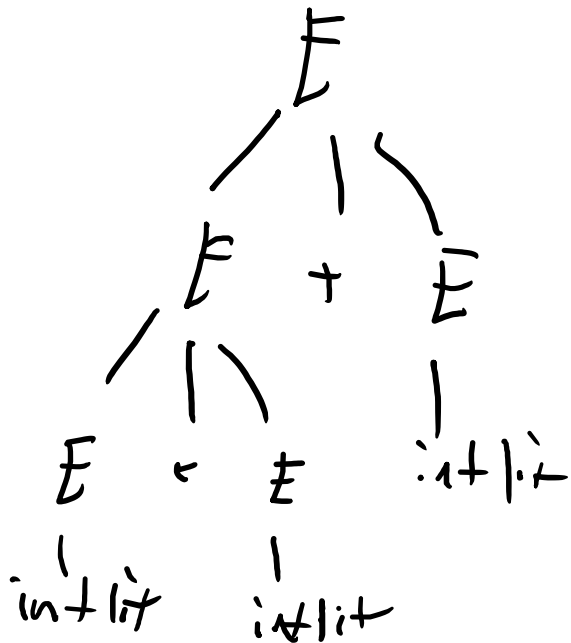
$FOLLOW(B) ::= \text{cat}, y$



Written Work #3: Question 4

Is it possible to generate FIRST sets for a grammar with syntactic ambiguity?
Explain your reasoning

yes, definition is agnostic to ambiguity



$$E ::= E + E$$

int, lit

