

Mini Quiz 8

Name: _____

Kerberos: _____

Consider the following grammar:

$P ::= [E] \$$
 $E ::= T \mid T , E$
 $T ::= a$

Q1: What issue will an LR(0) parser generator (i.e., a parser generator with no lookahead) have with this grammar?

Shift/reduce conflict (whether to reduce $E ::= T \bullet$ or shift at $E ::= T \bullet , E$)

Q2: Briefly describe two possible ways to fix this with parser generators:

1. Hack the grammar: make E left-recursive instead of right-recursive
2. Use a lookahead (e.g., SLR)

Consider the following grammar:

$P ::= [E] \$$
 $E ::= T \mid E , T$
 $T ::= a$

Q3: What issue will a hand-coded parser have with this grammar?

Infinite left recursion

Q4: Briefly describe one way to fix this when hand-coding a parser:

Hack the grammar to reduce left recursion.