CS480
Translators
Top-down Parsing
Chap. 4
Milestone 3

• What is the purpose of this milestone?
• What does this mean?
  – The parser produces a list encoding the input.
• What is accepted/not accepted by the grammar thus far? Why/Why not?

()  
(()
assign b 2  
(1 2 3)  
(1) (2)  
(1) ()
Example Input/Output

```
Testing stutest0.in:
--------------------------------------------------
Result:
--------------------------------------------------
Testing stutest1a.in:
(--------------------------------------------------
Result:
stutest1a.in:1,1: syntax error near '(': missing ')' at end of file
--------------------------------------------------
Testing stutest1b.in:
)
--------------------------------------------------
Result:
stutest1b.in:1,1: syntax error near ')': extra ')
--------------------------------------------------
```
Example Input/Output

```plaintext
Testing stutest6d.in:
((1 2))

------

Result:
(
  (1
   2)
)

Testing stutest6e.in:
(1(2))

------

Result:
(
  1
    (2)
)```
Quiz #6

• For each grammar below, calculate First and Follow sets for each nonterminal and construct a parsing table.
  (a) $S \rightarrow 0 \ S'$
      $S' \rightarrow S \ 1 \ | \ 1$
  (b) $S \rightarrow ( \ S \ ) \ S \ | \ \varepsilon$

• What do we need to do to our grammar to use top-down parsing? Is it LL(1)?

Delimitate left rec.
A left factor