

CSE 401 - Compilers

Section 5

2/14/2013

12:30 - MEB 238

1:30 - EE 037

Project 1 Comment Errors

Line comments: "//" {noneol}* {eol}

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Line comments: "//" {noneol}* {eol}
..."// this is a comment<EOF>"

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Block comments: "/*" ([^*]|[*][^/])* "*/"

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Block comments: "/*" ([^*]|[*][^/])* "*/"
... "*****/"
... "/****/*/"

Midterm Review

Questions?
(Previous Midterms, HWs)

Requests for Specific Topics?

Midterm Review:

CFG -> Parsing State Machines and Tables
LR(0)? SLR?

$S ::= N$

$N ::= N.id \mid id$

Using the table, show parses / errors for:

$id.id.id$

$id.$

Midterm Review:

Compute First / Follow / Nullable

$S ::= A C B$

$A ::= B C \mid B a A$

$B ::= b C$

$C ::= C b \mid C c \mid \varepsilon$

Midterm Review:

$S ::= A C B$

$A ::= B C \mid B a A$

$B ::= b C$

$C ::= C b \mid C c \mid \varepsilon$

	Nullable	First	Follow
S	F	b	\$
A	F	b	b, c
B	F	b	a, b, c
C	T	b, c	a, b, c

Midterm Review:

Ambiguous Grammars

Find an ambiguous string

Show multiple **rightmost** derivations

Fix ambiguity

$$S ::= AB \mid AC \mid BC$$
$$A ::= aA \mid a$$
$$B ::= aB \mid b$$
$$C ::= b \mid c$$

Midterm Review:

regex \rightarrow NFA

NFA \rightarrow DFA (via subset construction)

$1[01]^* \mid 0 \mid 0.[01]^*1$

Midterm Review:

regex | CFG

<-> English Descriptions

<-> Strings Generated / Not Generated

Strings of a's, b's, and c's where each a is immediately followed by at least two b's.

Strings of a's, b's, and c's where the string following each a contains at least two b's.