

Lab Four

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1 CRAFTING A COMPILER

EXERCISES 4.9 (FIRST AND FOLLOW SET)

$\text{FIRST}(S) = \{a, b, c, d\}$

$\text{FOLLOW}(S) = \{e\}$

$\text{FIRST}(B) = \{b, c, d\}$

$\text{FOLLOW}(B) = \{e\}$

$\text{FIRST}(C) = \{c, d\}$

$\text{FOLLOW}(C) = \{e\}$

EXERCISES 5.10 (DANGLING ELSE PARSE TREES) a)

In the parse tree, first place "if expr then "Stmt" else "Stmt". Here, do the left first, then the right, because the following Stmt always points to "other." After that, the next "if expr then Stmt" will be followed.

b)

In this parse tree, if "expr" then "Stmt" else "Stmt" is placed in the second place. We need to execute the first "expr" in it and then move to the next one. Otherwise, proceed to another one. We can put it "else" in the first place, One or second place because it has tail.

I will hand-paint parse trees on blank pages.

2 DRAGON

EXERCISES 4.4.3 (FIRST AND FOLLOW SET)

$\text{FIRST}(S) = \{a\}$

$\text{FOLLOW}(S) = \{a, +, *\}$



