

Conflicts in Bison

shift - keep reading input
reduce - I'm done

At every step, Bison
does a lookahead on
the next token, considering only valid moves

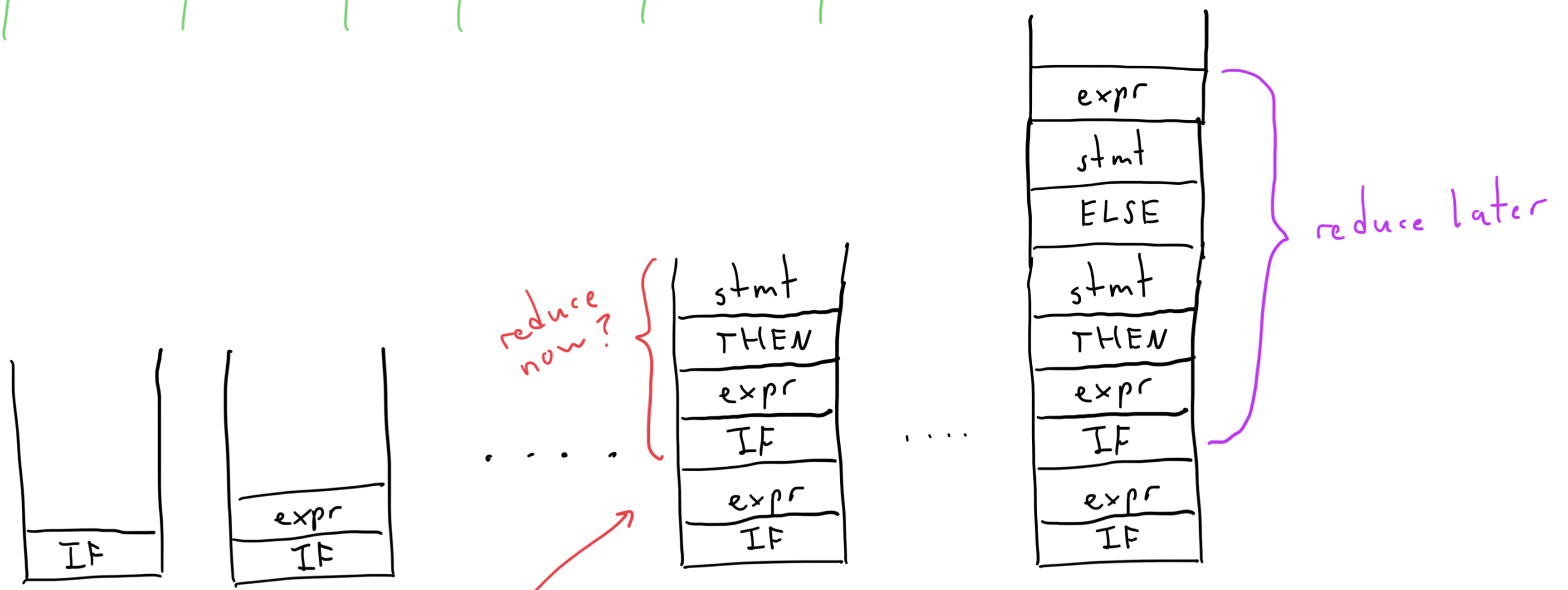
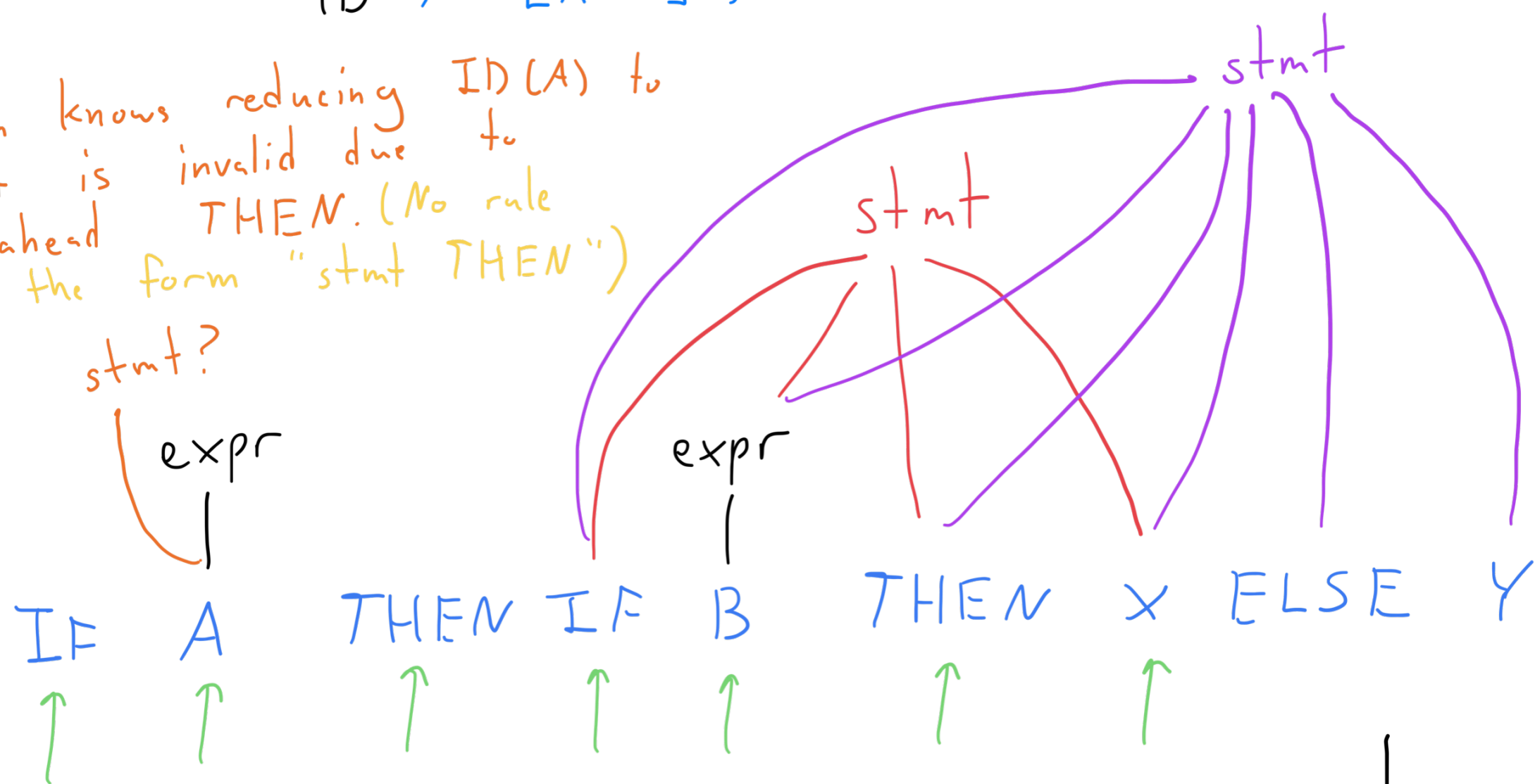
1. There are no valid moves. → Parsing stops. Syntax Error
2. There is one valid move. → Take it.
3. There are two or more valid moves.
 - a) A shift or reduce is possible (shift/reduce conflict)
→ Bison shifts by default
 - b) Two or more reduce moves are possible.
(reduce/reduce conflict) → choose the higher rule in the .y file.

Dangling Else

stmt:
IF expr THEN stmt
| IF expr THEN stmt ELSE stmt
| ID

expr:
ID /* [A-Z] */

Bison knows reducing ID(A) to
stmt is invalid due to
lookahead THEN. (No rule
has the form "stmt THEN")



There are two valid choices! Reduce
early or shift now and reduce later?
In a shift/reduce conflict, Bison chooses to
shift.