$$program \Rightarrow body \;\; EOF \tag{1}$$

$$\begin{aligned} body \Rightarrow\; & stmt \\ & \mid stmt \;\; body \end{aligned} \tag{2}$$

$$\begin{aligned} stmt \Rightarrow\; & ID \;\; '=' \;\; expr \;\; ';' \\ & \mid ID \;\; '=' \;\; bexpr \;\; ';' \\ & \mid IF \;\; '(' \;\; bexp \;\; ')' \;\; '\{' \;\; stmt \;\; '\}' \end{aligned} \tag{3}$$

Notes - Continue down this route
TODO

- expr - arithmetic expressions. Make sure to get precedence (greater precedence last) and associativity correct. From `http://pages.cs.wisc.edu/~fischer/cs536.s08/course.hold/html/NOTES/3.CFG.html#assoc` Remove POW

```
exp      --> exp PLUS term        |  exp MINUS term      |  term
term     --> term TIMES factor    |  term DIVIDE factor  |  factor
factor   --> exponent POW factor  |  exponent
exponent --> MINUS exponent       |  final
final    --> INTLITERAL           |  LPAREN exp RPAREN
```

- bexpr - boolean expressions

```
bexp --> TRUE
bexp --> FALSE
bexp --> bexp OR bexp
bexp --> bexp AND bexp
bexp --> NOT bexp
bexp --> LPAREN bexp RPAREN
```

- stmt - add if and while loops to it. Need to make sure no ambiguity in control statements.