

1 Grammar

$\langle expr \rangle ::= \langle mulExpr \rangle \langle + \rangle '+'$

$\langle number \rangle ::= r'[0-9]^+$

$\langle mulExpr \rangle ::= \langle simpleExpr \rangle \langle + \rangle '*'$

$\langle ifStatement \rangle ::= 'if' '(' \langle expr \rangle ')' \{' \langle expr \rangle '\}' ('else' \{' \langle expr \rangle '\})?$

$\langle simpleExpr \rangle ::= \langle number \rangle$
 $\quad | '(' \langle expr \rangle ')'$

$\langle exprStatement \rangle ::= \langle expr \rangle$

$\langle statement \rangle ::= \langle whileStatement \rangle$
 $\quad | \langle ifStatement \rangle$
 $\quad | \langle exprStatement \rangle$

$\langle program \rangle ::= \langle statement \rangle \langle + \rangle ';;'$

$\langle whileStatement \rangle ::= 'while' '(' \langle expr \rangle ')' \{' \langle expr \rangle '\}'$