

Grammar for Compiler:

```
program          = block
block           = { statementlist }
statementlist   = emptystatementlist | realstatementlist
emptystatementlist = Ø
realstatementlist = statement ; statementlist
statement        = ifstatement | whilestatement |
                   printstatement | assignstatement | block
ifstatement      = if expression then statement
whilestatement  = while expression do statement
printstatement   = print expression
assignstatement  = identifier = expression
expression       = identifier | number | binaryexpression
binaryexpression = ( expression binaryoperator expression )
```