

MicroJava – Grammatik

Program = "program" ident
{ConstDecl | VarDecl | ClassDecl}
"{" {MethodDecl} "}".

ConstDecl = "final" Type ident "=" (number | charConst) ";".

VarDecl = Type ident {" , " ident} ";".

ClassDecl = "class" ident "{" {VarDecl} "}".

MethodDecl = (Type | "void") ident "(" [FormPars] ")"
{VarDecl} Block.

FormPars = Type ident {" , " Type ident}.

Type = ident ["[" "]"].

Block = "{" {Statement} "}".

Statement = Designator ("=" Expr
"(" [ActPars] ")")
"++"
"--"
";"
"if" "(" Condition ")" Statement
["else" Statement]
"while" "(" Condition ")" Statement
"do" Statement "while" "(" Condition ")" ";"
"break" ";"
"return" [Expr] ";"
"read" "(" Designator ")" ";"
"print" "(" Expr [" , " number] ")" ";"
Block
";".

ActPars = Expr {" , " Expr}.

Condition = CondTerm {" || " CondTerm}.

CondTerm = CondFact {" && " CondFact}.

CondFact = Expr Rel op Expr.

Rel op = "==" | "!=" | ">" | ">=" | "<" | "<=".

Expr = ["-"] Term {Addop Term}.

Term = Factor {Mul op Factor}.

Factor = Designator ["(" [ActPars] ")"]
number
charConst
"new" ident ["[" Expr "]"]
"(" Expr ")".

Designator = ident {" . " ident | "[" Expr "]" }.

Addop = "+" | "-".

Mul op = "*" | "/" | "%".