Goal = MainClass Class <EOF>

Classes = ClassDeclaration Classes | e

MainClass = "class" Identifier "{"

"public" "static" "void" "main" "(" "String" "[" "]" Identifier ")"

"{" Stms "}""}"

ClassDeclaration = "class" Identifier Inheritance "{" Variables Constructors

Methods "}"

Inheritance = "extends" Identifier | e

Constructors = ConstructorDeclaration Constructors | e

Methods = MethodDeclaration Methods | e

ConstructorDeclaration = ("public" | "private" | "protected") Identifier "(" MethodParameters ")" "{" Variables Stms "}"

MethodDeclaration = VoidMethodDeclaration | TypeMethodDeclaration | e

VoidMethodDeclaration = ("public" | "private" | "protected") Static "void" Identifier "(" MethodsParameters ")" "{" Variables Stms "}"

TypeMethodDeclaration = ("public" | "private" | "protected") Static Type Identifier "(" Parameters ")" "{" Variables Stms "return" Expression ";" "}"

Parameters = Type Identifier MoreParameters | e

MoreParameters = "," Type Identifier MoreParameters | e

Static = "static" | e

Variables = VarDeclaration Variables | e

VarDeclaration = Type Identifier Assignment Vars ";"

Vars = “,” Identifier Assignment Vars | e

Assignment = “=” Expression | e

Type = "boolean" Pren

| "int" Pren

| "float" Pren

| "String" Pren

| "char" Pren

Pren = “[]” | e

Statement = "{" Statments "}"

| IfCondition

| While

| "System.out.println" "(" Expression ")" ";"

| Identifier SquareEx "=" Expression ";"

SquareEx = “[“ Expression “]” | e

Statments = Statement Statments | e

IfCondition = "if" "("Expression")" Statment elseOption

ElseOption = “else” Statement | e

While = “while" "(" Expression ")" Statement

Expression = Term LaLa OperatorSide

LaLa = "." AfterDot | "[" Expression "]" | e

OperatorSide = Operators Expression | e

Term = "(" Expression ")"

| "new" AfterNew

| Identifier

| <INTEGER\_LITERAL>

| <FLOAT\_LITERAL>

| "true"

| "false"

| "this"

Operstors = "&&" | "||" | "!" | "==" | "!=" | ">" | "<" | "<=" | ">="| "+" | "-" | "\*" | "/"

AfterNew = Type "[" Expression "]" | Identifier "(" ArgumentParameter ")"

AfterDot = "length” | Identifier "(" ArgumentParameter ")"

ArgumentParameter = Expression More | e

More = "," Expression More | e

Identifier = <ID>