

语法分析

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Expression:

```
Expression ( "&&" | "<" | "+" | "-" | "*" ) Expression
Expression "[" Expression "]"
Expression "." "length"
Expression "." Identifier "(" [ Expression { "," Expression } ] ")"
IntegerLiteral
"true"
"false"
Identifier
"this"
"new" "int" "[" Expression "]"
"new" Identifier "(" ")"
"!" Expression
"(" Expression ")"
```

Statement:

```
"{" { Statement } "}"
"if" "(" Expression ")" Statement "else" Statement
"while" "(" Expression ")" Statement
"System.out.println" "(" Expression ")" ";"
Identifier "=" Expression ";"
Identifier "[" Expression "]" "=" Expression ";"
```

Type:

```
"int" "[" "]"
"boolean"
"int"
Identifier
```

MethodDeclaration:

```
"public" Type Identifier "(" [ Type Identifier { "," Type Identifier } ]
")" "{" { VarDeclaration } { Statement } "return" Expression ";" "}"
```

VarDeclaration:

```
Type Identifier ";"
```

ClassDeclaration:

```
"class" Identifier [ "extends" Identifier ] "{" { VarDeclaration }
{ MethodDeclaration } "}"
```

MainClass:

```
"class" Identifier "{" "public" "static" "void" "main" "(" "String" "[" "]"
Identifier ")" "{" Statement "}" "}"
```

Goal:

```
MainClass { ClassDeclaration } EOF
```