# BITMinicc文法规则说明

BTIMinicc文法规则

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 非终结符 | 产生式1 | 产生式2 | 产生式3 | 产生式4 |
| PROGRAM | FUNCTIONS |  |  |  |
| FUNCTIONS | FUNCTION FUNLIST |  |  |  |
| FUNLIST | FUNCTIONS | ε |  |  |
| FUNCTION | TYPE TKN\_ID TKN\_LP ARGS TKN\_RP FUNC\_BODY |  |  |  |
| ARGS | FARGS ALIST | ε |  |  |
| ALIST | TKN\_COMMA FARGS ALIST | ε |  |  |
| FARGS | TYPE TKN\_ID |  |  |  |
|  |  |  |  |  |
| FUNC\_BODY | TKN\_LB STMTS TKN\_RB |  |  |  |
| STMTS | STMT STMTS | ε |  |  |
| STMT | EXPR\_STMT | RET\_STMT | FOR\_STMT | IF\_STMT |
|  |  |  |  |  |
| EXPR\_STMT | EXPR TKN\_SEMICOLON |  |  |  |
| EXPR | FACTOR FLIST | EARGS |  |  |
| FACTOR | TKN\_LP EXPR TKN\_RP | TKN\_ID | TKN\_CONST\_I |  |
| FLIST | TKN\_ASN FACTOR FLIST | TKN\_PLUS FACTOR FLIST | TKN\_LESS FACTOR FLIST | ε |
| EARGS | FARGS EALIST | ε |  |  |
| EALIST | TKN\_COMMA TKN\_ID EALIST | ε |  |  |
|  |  |  |  |  |
| RET\_STMT | TKN\_KW\_RET EXPR\_STMT |  |  |  |
|  |  |  |  |  |
| FOR\_STMT | TKN\_FOR TKN\_LP EXPR\_STMT EXPR\_STMT EXPR TKN\_RP TKN\_LB STMTS TKN\_RB |  |  |  |
|  |  |  |  |  |
| 非终结符 | 产生式1 | 产生式2 | 产生式3 | 产生式4 |
| IF\_STMT | TKN\_IF TKN\_LP EXPR TKN\_RP TKN\_LB STMTS TKN\_RB ELSEIF |  |  |  |
| ELSEIF | TKN\_ELSE ILIST | ε |  |  |
| ILIST | IF\_STMT | TKN\_LB STMTS TKN\_RB |  |  |
| TYPE | TKN\_INT | TKN\_FLOAT |  |  |

### 文法符号说明：

#### 1.非终结符

PROGRAM：程序

FUNCTIONS：函数集

FUNLIST：函数列表

FUNCTION：函数

ARGS：函数参数

ALIST：函数参数列表

FARGS：函数参数实现

FUNC\_BODY：函数体

STMTS：语句集

STMT：语句

EXPR\_STMT：表达式语句

EXPR：表达式

FACTOR：表达式实现

FLIST：表达式列表

EARGS：变量定义

EALIST：变量定义列表

RET\_STMT：返回语句

FOR\_STMT：for循环语句

IF\_STMT：if条件判断语句

ELSEIF：else if型判断语句

ILIST：if列表

TYPE：变量类型

#### 2.终结符

TKN\_ID：标识符

TKN\_CONST\_I：整型常量

TKN\_LP：左括号”(”

TKN\_RP：右括号”)”

TKN\_COMMA：逗号”,”

TKN\_LB：左大括号”{”

TKN\_RB：右大括号”}”

TKN\_SEMICOLON：分号”;”

TKN\_KW\_RET：返回关键字”return”

TKN\_FOR：for关键字”for”

TKN\_IF：if关键字”if”

TKN\_ELSE：else关键字”else”

TKN\_INT：int关键字”int”

TKN\_FLOAT：float关键字”float”

TKN\_ASN：赋值号”=”

TKN\_PLUS：加法运算符”+”

TKN\_LESS：小于号运算符”<”

ε：空