

```
%{
```

```
#include <stdio.h>
```

```
#include <stdlib.h>
```

```
#define YYDEBUG 1
```

```
%}
```

```
%token ID
```

```
%token CONSTANT
```

```
%token IF
```

```
%token WHILE
```

```
%token LET
```

```
%token WRITE
```

```
%token READ
```

```
%token COLON
```

```
%token SEMICOLON
```

```
%token DOT
```

```
%token MULTIPLY
```

```
%token DIVISION
```

```
%token PLUS
```

```
%token MINUS
```

```
%token COMMA
```

```
%token EQUAL
```

```
%token LESS_THAN
```

```
%token GREATER_THAN
```

%token ASSIGNMENT

%token LEFT_ROUND_PARENTHESIS

%token RIGHT_ROUND_PARENTHESIS

%token LEFT_SQUARE_PARENTHESIS

%token RIGHT_SQUARE_PARENTHESIS

%token LEFT_CURLY_BRACKET

%token RIGHT_CURLY_BRACKET

%token INTEGER

%token STRING

%start program

%%

program : declaration_list

declaration_list : declaration decl_opt | stmt_list

declaration : decl1 const_opt ;

decl1 : LET ID COLON type

type : INTEGER | STRING

const_opt : LEFT_SQUARE_PARENTHESIS CONSTANT RIGHT_SQUARE_PARENTHESIS

decl_opt : declaration_list

stmt_list : stmt stmt_opt

stmt : assign_stmt | IO_stmt | struct_stmt

stmt_opt : stmt_list

assign_stmt : ID EQUAL expression ;

expression : B A

A : + B A

B : D C

C : * D C

D : F E

E : / F E

F : H G

G : - H G

H : LEFT_ROUND_PARANTHESIS expression RIGHT_ROUND_PARANTHESIS | term

term : CONSTANT | ID

struct_stmt : compd_stmt | if_stmt | while_stmt

compd_stmt : LEFT_CURLY_BRACKET stmt_list RIGHT_CURLY_BRACKET

if_stmt : IF condition compd_stmt

condition : expression relation expression

relation : LESS_THAN | EQUAL | GREATER_THAN

%%