%{

/\*

\* ========================================================================

\*

\* parse.y - Bison parser for Slic.

\*

\* Programmer --- Patrick Fischer

\*

\* ========================================================================

\*/

#include <stdio.h>

%}

%union {

char \*sval;

}

%token RWMAIN

%token RWEXIT

%token RWIF

%token RWELSE

%token RWWHILE

%token RWCOUNTING

%token RWEND

%token RWDATA

%token RWALG

%token LITINT

%token LITREAL

%token RWINT

%token RWREAL

%token RWUPWARD

%token RWDOWNWARD

%token RWTO

%token RWREAD

%token RWPRINT

%token CHARSTRING

%token CARRETURN

%token ASSIGNOP

%token COMMA

%token SEMICOLON

%token COLON

%token LPAREN

%token RPAREN

%token LBRACK

%token RBRACK

%token ADD

%token MINUS

%token MULT

%token DIV

%token LESS

%token GREATER

%token LESSEQU

%token GREATEQU

%token EQUAL

%token NOTEQUAL

%token AND

%token OR

%token NOT

%token VAR

%token NEWLINE

%token <sval> VARIABLE

%%

program : headingstmt datasection algsection endmainstmt;

headingstmt: RWMAIN SEMICOLON NEWLINE;

datasection: RWDATA COLON NEWLINE

|RWDATA COLON NEWLINE decstmtlist

; // decstmtlist is a listing of the variables used by this Slic program.

decstmtlist: decstmtlist decstmt

|decstmt

; // decstmt is just a variable declaration.

decstmt: RWINT COLON varlist

|RWREAL COLON varlist

; // The reserved word is followed by a list because any number of variables can be declared on a single line.

varlist: varref COMMA varlist

|varref SEMICOLON NEWLINE

|varref SEMICOLON

;

varref: VAR

|VAR LBRACK LITINT RBRACK

; // varref refers to the VAR token or an array.

algsection: RWALG COLON NEWLINE;

endmainstmt: RWEND RWMAIN SEMICOLON NEWLINE;

%%

int yyerror() {

printf("Called yyerror()\n");

return 0;

}