**LEX**

*%{*

*#include <math.h>*

*%}*

*%option noyywrap*

*DIGIT [0-9]*

*ID [a-z][a-z0-9]\**

*%%*

*{DIGIT}+ printf("An integer: %s (%d)\n", yytext, atoi( yytext ) );*

*{DIGIT}+"."{DIGIT}\* printf( "A float: %s (%g)\n", yytext, atof( yytext ) );*

*"if"|"readint"|"var"|"list"|"append"|"while"|"print" printf( "A reserved word: %s\n", yytext );*

*{ID} printf( "An identifier: %s\n", yytext );*

*"+"|"-"|"\*"|"/"|","|"="|"("|")"|"{"|"}"|";"|"<"|">"|"<="|">="|"=="|"!="|"."|"["|"]" printf( "An operator: %s\n", yytext );*

*"{"[^}\n]\*"}" /\* eat up one-line comments \*/*

*[ \t\n]+ /\* eat up whitespace \*/*

*. printf("Lexical Error: %s\n",yytext);*

*%%*

*int main(int argc, char \*\*argv )*

*{*

*++argv, --argc; /\* skip over program name \*/*

*if ( argc > 0 )*

*yyin = fopen( argv[0], "r" );*

*else*

*yyin = stdin;*

*yylex();*

*}*

