1907031.l

```
digits [0-9]
Datatype "int"|"float"|"void"|"string"
Identifiers [a-zA-Z][a-zA-Z0-9]*
S_comment \/\/[^\n]*
M_comment \/\*([^*]|\*[^\/])*\*\/

%{
    #include "1907031.tab.h"
    #include <stdio.h>
    #include <stdlib.h>
    #include <string.h>
    int varindex(char *var);
    extern int yylex();
    extern int yyparse();
    extern FILE *yyin;
    extern FILE *yyout;
    int yyerror(char *s);
    //int lineNo = 1;
%}

%%

{S_comment} { printf("\nSingle Line Comment\n"); }
{M_comment} { printf("\nMultiple Line Comment\n"); }

"int" { return INT; }
"float" { return FLOAT; }
"string" { return STRING; }

"(" { return '('; }
")" { return ')'; }
"<" { return '<'; }
">" { return '>'; }
"{" { return '{'; }
"}" { return '}'; }
";" { return END; }
"," { return ','; }
"=" { return '='; }
":" { return ':'; }

"+" { return '+'; }
"-" { return '-'; }
"*" { return '*'; }
"/" { return '/'; }
"^" { return '^'; }
"mod" { return MOD; }

"less" { return LT; }
"great" { return GT; }
"equal" { return EQ; }
"great_eq" { return GEQ; }
"less_eq" { return LEQ; }
"not_eq" { return NEQ; }

"++" { return INC; }
"--" { return DEC; }
"!" { return NOT; }

"sin" { return SIN; }
```

```
"cos" { return COS; }
"tan" { return TAN; }
"ln" { return LN; }
"log" { return LOG; }
"isOddEven" { return ODDEVEN; }
"factorial" { return FACTORIAL; }
"max" { return MAX; }
"min" { return MIN; }
"isPrime" { return PRIME; }

"print" { return DISPLAY; }

"if" { return IF; }
"else_if" { return ELSE_IF; }
"else" { return ELSE; }

"for" { return FOR; }
"inc" { return FLINC; }
"dec" { return FLDEC; }
"while" { return WHILE; }

"case" { return CASE; }
"switch" { return SWITCH; }
"default" { return DEFAULT; }

"-"?{digits}+ {
    yylval.string = strdup(yytext);
    return NUMBER;
}

"-"?({digits}+)?"."{digits}+ {
    yylval.string = strdup(yytext);
    return NUMBER;
}

"\""[^"]*"\"" {
    yylval.string = strdup(yytext);
    return STR;
}

{Datatype}[ ]+"main" { return MAIN; }
"#include" { return IMPORT; }
{Identifiers}".h" { return HEADER; }

"function" { return DEF; }

{Identifiers} {
    yylval.string = strdup(yytext);
    return VARIABLE;
}

[ \t\n]*

. {yyerror("Unknown Character.\n");}

%%
```