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/* cs152-fall08 */
/* A flex scanner specification for the calculator language */
/* Written by Dennis Jeffrey */

%{
    int currLine = 1, currPos = 1;
}%

DIGIT      [0-9]

%%

"-"         {printf("MINUS\n"); currPos += yyleng;}
"+"         {printf("PLUS\n"); currPos += yyleng;}
"*"         {printf("MULT\n"); currPos += yyleng;}
"/"         {printf("DIV\n"); currPos += yyleng;}
"="         {printf("EQUAL\n"); currPos += yyleng;}
"("         {printf("L_PAREN\n"); currPos += yyleng;}
")"         {printf("R_PAREN\n"); currPos += yyleng;}

{DIGIT}+    {printf("NUMBER %s\n", yytext); currPos += yyleng;}

[ \t]+      {/* ignore spaces */ currPos += yyleng;}

"\n"        {currLine++; currPos = 1;}

.           {printf("Error at line %d, column %d: unrecognized symbol \"%s\"\n",
currLine, currPos, yytext); exit(0);}

%%

int main(int argc, char ** argv)
{
    if(argc >= 2)
    {
        yyin = fopen(argv[1], "r");
        if(yyin == NULL)
        {
            yyin = stdin;
        }
    }
    else
    {
        yyin = stdin;
    }
    yylex();
}
```