**Lex program to find how many integer, numbers arrays etc have been used in a program**

%{

#include <stdio.h>

int num\_integers = 0;

int num\_floats = 0;

int num\_arrays = 0;

int num\_other = 0;

%}

%%

int { num\_integers++; }

float { num\_floats++; }

[a-zA-Z]+[\[\d+\]]+ { num\_arrays++; }

[a-zA-Z]+ { num\_other++; }

%%

int main()

{

yylex();

printf("Number of integers: %d\n", num\_integers);

printf("Number of floating point numbers: %d\n", num\_floats);

printf("Number of arrays: %d\n", num\_arrays);

printf("Number of other variables: %d\n", num\_other);

return 0;

}

lex count\_variables.l

gcc lex.yy.c -o count\_variables -ll

**Program to calculate no. of comment lines in a given C program.**

**Also replace them with /\*This was a comment line\*/ and copy that**

**program into a separate file.**

**lex count\_comments.l**

**gcc lex.yy.c count\_comments.c -o count\_comments**

%{

#include <stdio.h>

int num\_comments = 0;

%}

%%

"//"(.\*) { num\_comments++; printf("/\*This was a comment line\*/%s\n", yytext); }

"/\*" { num\_comments++; printf("%s", yytext); }

.|\n { printf("%s", yytext); }

%%

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

{

if (argc < 3) {

printf("Usage: %s <input\_file> <output\_file>\n", argv[0]);

return 1;

}

FILE\* input = fopen(argv[1], "r");

if (!input) {

printf("Error opening input file %s\n", argv[1]);

return 1;

}

FILE\* output = fopen(argv[2], "w");

if (!output) {

printf("Error opening output file %s\n", argv[2]);

fclose(input);

return 1;

}

yyin = input;

yyout = output;

yylex();

printf("Number of comment lines: %d\n", num\_comments);

fclose(input);

fclose(output);

return 0;

}