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1/29/2018
CS 370 lab 2.1

PURPOSE:

Our task was to implement a variable to count the number of lines in the input, and print the line in the input where a possible error occurred in the form of nested comments.

MODIFICATIONS:

The first change that was made to this code was the addition of a variable named `linesOfText` to count the number of lines in the input. We set this equal to one since the input has to start at line 1.

Next we added a condition to lexical part of the code saying that every time a new line is executed in the input, increment the `linesOfText` variable indicating a new line has occurred.

Finally we set the debug flag to 1 so the code will execute a printed statement for the output indicating that a possible error with the nested statements have occurred.

CODE WITH MODIFICATIONS HIGHLIGHTED:

```
/* simple lex program which removes comments from a source program
The main key is that a variable "comment" is set when the start of a comment
is seen and then unset when the ending set is seen. It is possible to have
two starts closed by on end.

Shaun Cooper
January 2015

*/
/* CODE MODIFICATIONS 1/26/2018 made by Andrew Baca */

int linesOfText = 1; //ADDED VARIABLE TO COUNT LINES OF TEXT
int comment = 0;
int debug=1; /* prints out debug statements if desired */
%%
"/*" {
    if (comment && debug) fprintf(stderr, //SET DEBUG TO TRUE TO PRINT
ERROR MESSAGES
    " >>>>>>>> line %d: Possible Nested comment <<<<<<<<<\n", linesOfText);
    comment = 1;
}
"*/" {
    if (!comment) printf("%s",yytext); /*print out if it is not in a comment */
    comment = 0;
}
. { if (!comment) printf("%s",yytext);}
\n { linesOfText++; //INCREMENT LINESOFTEXT
    printf("\n");
}
```

```
%%
```

```
int yywrap(void)
{ return 1;
}
```

```
main()
{
    yylex();
}
```

OUTPUT:

```
lab2/lab2.1> make
lex lab2remove.l
gcc -o remove lex.yy.c
lab2/lab2.1> ./remove < comment.tst

    and this represents lines of code.

>>>>>> line 4: Possible Nested comment <<<<<<<<<

>>>>>> line 5: Possible Nested comment <<<<<<<<<

    */ second termination

    see how it works

*/
```

Makefile:

```
all:    lab2remove.l    lex.yy.c
        lex lab2remove.l
        gcc -o remove lex.yy.c
```