Name: AYUSH KUSHWAHA

Reg No.: CH.EN.U4CSE22077

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 LAB – 2  
  
Aim: To implement Lexical Analyzer Using Lex Tool  
Code:  
*Scanner.l*  
  
%{ #include <stdio.h> int COMMENT = 0; %}

identifier [a-zA-Z\_][a-zA-Z0-9\_]\* %%

#.\* { printf("\n%s is a preprocessor directive", yytext); }

"/\*" { COMMENT = 1; printf("\n%s is a COMMENT", yytext); }

"\*/" { COMMENT = 0; printf("\n%s is a COMMENT", yytext); }

"int" | "float" | "char" | "double" | "while" | "for" | "struct" | "typedef" | "do" | "if" | "break" | "continue" | "void" | "switch" | "return" | "else" | "goto" { if (!COMMENT) printf("\n%s is a keyword", yytext); }

{identifier}( { if (!COMMENT) printf("\nFUNCTION\n\t%s", yytext); }

{ { if (!COMMENT) printf("\nBLOCK BEGINS"); }

} { if (!COMMENT) printf("\nBLOCK ENDS"); }

{identifier}([[0-9]\*])? { if (!COMMENT) printf("\n%s is an IDENTIFIER", yytext); }

"([^\"]|\.)\*" { if (!COMMENT) printf("\n%s is a STRING", yytext); }

[0-9]+ { if (!COMMENT) printf("\n%s is a NUMBER", yytext); }

= { if (!COMMENT) printf("\n%s is an ASSIGNMENT OPERATOR", yytext); }

"<=" | ">=" | "<" | ">" | "==" { if (!COMMENT) printf("\n%s is a RELATIONAL OPERATOR", yytext); }

( { if (!COMMENT) ECHO; }

) { if (!COMMENT) ECHO; }

[ \t\n]+ { /\* skip whitespace \*/ }

. { if (!COMMENT) printf("\nUnrecognized character: %s", yytext); }

%%

int main(int argc, char \*\*argv) { FILE \*file; file = fopen("var.c", "r");

if (!file) {  
 printf("Could not open the file\n");  
 return 1;  
}  
  
yyin = file;  
yylex();  
fclose(file);  
return 0;}  
int yywrap() { return 1; }

Output:

