COMPILER DESIGN LAB

WEEK 3 - EXERCISE

1. Write the Lex Program to find the token and its count from the given input file for the following.

a. Identifier & Constant / Number
b. Assignment symbol (:=)
c. Operator Symbol (+ , - , *, /)
d. Whitespace (delimiter = space / tab / newline)
e. Translating all letter appearances into Capitalize each word
f. Append the next matched string to the current value of the yytext rather than replacing the contents of the yytext. Handle it for Uppercase and Lowercase

Input:

```
        int i, x;
        void f ( )  {
           int i;
           i : = 3;   }

          x := i + 1;

         void c () {

         int x := 1;
         a := a * 4;
         printf ( “%d \n” , a);

            }
         if (i , x ) = 3;
```

2. Write the Lex Program to find the token and its count from the given input file for the following.

a. Keyword (if, then, else, for, while, int, float, real)
b. Relational operator symbol (< , <=, > , >=, <>, =)
c. Uppercase and Lowercase letter
d. Special characters (! , @ , #, $, %, ^, &, * , (), ”, ;)
e. Characters, words and lines
f. Retain three initial characters in the yytext and returns the remaining characters to the input stream

Input :

```
 #define c 50
     {
         while ( (c = input()) != '*' && c != EOF )
             ;
         if ( c == '*' )
             {
             while ( (c = input()) == '*' )
                 ;
             if ( c == '/' )
                 break;    /* found the end */
             }
        if ( c == EOF )
             {
             error( "EOF in comment" );
             BREAK;
             }
         }
   while (c ! = eof)
        {
        if (c = =1 )
               return “YES”;
        else
               return “NO”;
        }
```