**Compiler Design (Lab 1)**

**Problem:**

1. Write a program which input a C statement and removes extra space, or comments.

2. Write a program which reads a line supposed to be a C assignment statement without extra space

or comments or brackets and identifies different logical units in it. Assume single character identifiers and numbers. Categories: identifier, operator, delimiter, number.

Input: A C statement in a line example a=b+c\*2;

Output: A line with a list of valid logical unit: followed by a table showing value of each logical unit and its category

Example:

<lu1><lu2><lu3><lu4><lu5><lu6><lu7><lu8>

lu1 a identifier

lu2 = operator

lu3 b identifier

lu4 + operator

lu5 c identifier

lu6 \* operator

lu7 2 number

lu8 ; delimiter

3. Rewrite the program replacing the logical units by a name given for each class. Example:

<id1><op1><id2><op2><id3><op3><num1><delim>

id1 a

id2 b

id3 c

op1 =

op2 +

op3 \*

num1 2

delim ;

**Input-Output:**

1. The program requires a C statement as an input which is then displayed back with removed whitespaces and comments as an output.

2. The program requires a C assignment statement as an input which provides the output as shown in the example.

3. The program requires a C assignment statement as an input which provides the output as shown in the example.