Practical 1:Implement a C program to detect tokens in a C program

Concept:

- Lexical Analysis is the first phase of compiler also known as scanner. It converts the input program into a sequence of Tokens.
- A C program consists of various tokens and a token is either a keyword, an identifier, a constant, a string literal, or a symbol.

Example of Tokens

1) Keywords:
Examples- for, while, if etc.

2) Identifier
Examples- Variable name, function name etc.

3) Operators:
Examples- '+', '++', '-' etc.

4) Separators:
Examples- ', ' ';' etc

Prelab what you should learn

1) What is token
2) Lexeme
3) What is lexical analysis
4) Tokens used in C program

Expected Input to Token Generation Program

Enter the expression:
Example 1:
a=b+c;
Example 2:
int a,b,c;

Expected Output to token generation program
Example1:
A is identifier
= is operator

B is identifier
+ is operator
C is identifier
; is operator

Pseudocode

1)Declare String Array which is used to store the expression entered by the user
2)Define a user defined function to generate a token i.e which will compare every character in the given string to identify whether it belongs to identifier,constant,operator.
3)Compare every character entered in the expression with a range of identifiers and numbers and operators and print the message accordingly.
3)Print the tokens