**PRACTICAL # 07**

**OBJECT:**

Recognizing punctuations and operators.

**THEORY:**

Operators perform different types of arithmetic and logic operations in a programming language. The punctuations in a programming language have various uses, from organizing program text to defining the tasks that the compiler carries out. They do not specify an operation to be performed.

**Program:**

This program recognizes operators and punctuations.

*using System;*

*class LexicalAnalysis {*

*public static Token recognizePunctuations(string src, ref int i, int lineNum) {*

*char peek ;*

*Token t = null;*

*peek = src[i];*

*if( peek == ';' ||*

*peek == ',' ||*

*peek == '{' ||*

*peek == '}' ||*

*peek == '(' ||*

*peek == ')'*

*){*

*t = new Token(peek.ToString(),*

*peek.ToString(),*

*lineNum);*

*Console.WriteLine(t.toString());*

*System.IO.File.AppendAllText("tokens.txt", t.toString() + "\n");*

*}*

*if (peek == '>' || peek == '<' )*

*{*

*t = new Token("relop",*

*peek.ToString(),*

*lineNum);*

*Console.WriteLine(t.toString());*

*System.IO.File.AppendAllText("tokens.txt", t.toString() + "\n");*

*}*

*return t;*

*}*

*public static Token recognizeOperators(string src, ref int i, int lineNum)*

*{*

*char peek ;*

*Token t = null;*

*peek = src[i];*

*if( peek == '+' ||*

*peek == '-' ||*

*peek == '\*' ||*

*peek == '/' ||*

*peek == '='*

*){*

*t = new Token(peek.ToString(), peek.ToString(), lineNum);*

*Console.WriteLine(t.toString());*

*System.IO.File.AppendAllText("tokens.txt", t.toString() + "\n");*

*}*

*return t;*

*}*

*}*

Execute the program to observe the output.

**ACTIVITIES**

**Activity 1**

Write a program in C# that recognizes and outputs punctuations from the code “int 234=dsf, +, 43,54a;”.

**REVIEW QUESTIONS**

1. What are operators?
2. What are punctuations?
3. How are multi character operators tokenized from source code?