Assignment 8 : Three Address Code Generator

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Input :

1. The program takes input in the form of expressions which are defined in the code as an array of variables.
2. We have to take care that the expression that we use for generation of Three Address Code should follow postfix notation.

Output:

1. The output will be in the form of a list of quadruples, where each quadruple is a tuple in this form: (operation, operand1, operand2, result).

```
sgubuntu@sgubuntu:~/CC/Lab/Assn8$ python3 ICG.py
Expression : (a + b) * c - d

Quadruples (Operation, Arg1, Arg2, Result):
(+, a, b, T1)
(*, T1, c, T2)
(-, T2, d, T3)
sgubuntu@sgubuntu:~/CC/Lab/Assn8$
```

Description:

1. The Intermediate Code Generation follows these 4 steps of parsing the input Expression,Generating Quadruples,Maintaining temporary variables and Storing results in a table.
2. Parse the Input Expression: The expression is parsed and broken down into simple operations.
3. Generate Quadruples: Each parsed operation is represented as a quadruple.
4. Maintain Temporary Variables: Use temporary variables for intermediate results and push each result into a temporary variable and use it for further operations as needed.
5. Store Results in a Table: Keep a list of quadruples where each row contains the operation, the two operands, and the result.

6. Each quadruple represents a single operation in the expression.