

Visual Basic Assignment
Dr. John Abraham
Postfix notation

In a conventional arithmetic expression, the operator is between the operands (2 + 3); this is called infix notation. Computers prefer postfix notation in which the operator is written to the right of its operands. A compiler would have to convert the infix to a postfix. Consider the following problems:

Infix	Postfix
$(6.2 + 3) * 5 - 8 / 4$	6.2 3 + 5 * 8 4 / -
$(3 + 4) * 5$	3 4 + 5 *
$3 + 4 * 5$	3 4 5 * +

Write a program to

- Accept a Postfix problem as a string.
- Parse the string to find the operands and opcodes
- Opcodes allowed are: +, -, *, /, \, M
- (M is for mod)

- Using a stack data structure (that you create) do the calculation.
- Display all activities in a dialog box.
- Display the result in a label box.

Explanation:

We evaluate the expression by scanning from left to right. Consider the problem $6 2 / 5 +$. Look for the first operator beginning from left. The division operator is applied to the immediate previous operands. The divisor would be the later one, in this case 2. Now the problem has been reduced to $3 5 +$. Continue processing until the end of the problem statement.

Here are some problems with results.

postfix expression	result
4 5 7 2 + - *	-16
3 4 + 2 * 7 /	2
5 7 + 6 2 - *	48

* this description and the samples are taken from Nell Dale's Book.

