

Aim: Infix to postfix conversion using stack

Algorithm:

Algorithm to convert an Infix notation into postfix notation

Step 1: Add ‘)’ to the end of the infix expression

Step 2: Push “(“ on to the stack

Step 3: Repeat until each character in the infix notation is scanned

>IF a “(“ is encountered, push it on the stack

>IF an operand (whether a digit or an alphabet) is encountered, add it to the postfix expression.

>IF a “)” is encountered, then;

a. Repeatedly pop from stack and add it to the postfix expression until a “(“ is encountered.

b. Discard the “(“. That is, remove the “(“ from stack and do not add it to the postfix expression

>IF an operator X is encountered, then;

Repeatedly pop from stack and add each operator (popped from the stack which has the same precedence or a higher precedence than X) to the postfix expression.

If precedence of popped operator is less than that of x, push popped operator back to stack.

b. Push the operator X to the stack.

Step 4: Repeatedly pop from the stack and add it to the postfix expression until the stack is empty

Step 5: END

Enter infix Expression : $1+2*(3+5)$

Corresponding postfix expression is : $1235++$

Process returned 0 (0x0) execution time : 8.945 s
Press any key to continue.

Enter infix Expression : $5-2*6+6/2$

Corresponding postfix expression is : $526*-62/+$

Process returned 0 (0x0) execution time : 27.093 s
Press any key to continue.