

```
L1
void infixToPostfix(char* infix, char* postfix) {
    int i, j = 0;
    char item, x;

    for (i = 0; infix[i] != '\0'; i++) {
        item = infix[i];

        if (item == ' ' || item == '\t') {
            continue;
        }

        if (isalnum(item)) {
            postfix[j++] = item;
        }

        else if (item == '(') {
            push(item);
        }

        else if (item == ')') {
            while ((x = pop()) != '(' && x != -1) {
                postfix[j++] = x;
            }
        }

        else if (isOperator(item)) {
            while (top != -1 && precedence(peek()) >= precedence(item)) {
                postfix[j++] = pop();
            }
            push(item);
        }
    }

    while (top != -1) {
        postfix[j++] = pop();
    }

    postfix[j] = '\0';
}

int main() {
    char infix[MAX], postfix[MAX];

    printf("Enter valid parenthesized infix expression: ");
    fgets(infix, sizeof(infix), stdin);

    infixToPostfix(infix, postfix);
}
```



```
C:\Users\BMSCCESE-L3-38\Dr X + ▾
Enter valid parenthesized infix expression: (A+B)*(C-D)
Postfix Expression: AB+CD-*  

Process returned 0 (0x0) execution time : 2.773 s
Press any key to continue.
```

```
87
88     printf("Enter valid parenthesized infix expression: ");
89     fgets(infix, sizeof(infix), stdin);
90
91     infixToPostfix(infix, postfix);
92
93     printf("Postfix Expression: %s\n", postfix);
94
95     return 0;
96
97 }
```



```

item = infix[i];
if (item == ' ' || item == '\n')
    continue;
if (isalnum(item)) {
    postfix[j++] = item;
}
else if (item == '(') {
    push(item);
}
else if (item == ')') {
    while ((x = pop()) != '(' && x != -1) {
        postfix[j++] = x;
    }
}
else if (isOperator(item)) {
    while (top != -1 && precedence(peek()) >= precedence(item)) {
        postfix[j++] = pop();
    }
    push(item);
}
while (top != -1) {
    postfix[j++] = pop();
}
postfix[j] = '\0';
}

int main() {
char infix[MAX], postfix[MAX];
printf("Enter valid parenthesized infix expression: ");
fgets(infix, sizeof(infix), stdin);
infixToPostfix(infix, postfix);
printf("Postfix Expression: %s\n", postfix);
return 0;
}

```



```

#include <stdio.h>
#include <cstring.h>
#include <ctype.h>

#define MAX 100

char stack[MAX];
int top = -1;

void push(char c) {
    if (top == MAX - 1)
        printf("\nStack Overflow\n");
    else
        stack[++top] = c;
}

char pop() {
    if (top == -1)
        return -1;
    else
        return stack[top--];
}

char peek() {
    if (top == -1)
        return -1;
    else
        return stack[top];
}

int precedence(char op) {
    if (op == '+') || op == '-')
        return 1;
    if (op == '*' || op == '/')
        return 2;
    return 0;
}

int isOperator(char c) {
    return (c=='+' || c=='-' || c=='*' || c=='/');
}

void infixToPostfix(char* infix, char* postfix) {
    int i, j = 0;
    char item, x;

    for (i = 0; infix[i] != '\0'; i++) {

```

