

Experiment 16: Infix to Postfix

Code:

```
#include <stdio.h>
#include <ctype.h>
char stack[100];
int top = -1;
void push(char x) {
    stack[++top] = x;
}
char pop() {
    if (top == -1)
        return -1;
    else
        return stack[top--];
}
int priority(char x) {
    if (x == '(')
        return 0;
    if (x == '+' || x == '-')
        return 1;
    if (x == '*' || x == '/')
        return 2;
    return 0;
}
int main() {
    char exp[100];
    char *e, x;
```

```
printf("Enter the infix expression: ");
scanf("%s", exp);
e = exp;
printf("The postfix is: ");
while (*e != '\0') {
    if(isalnum(*e))
        printf("%c", *e);
    else if(*e == '(')
        push(*e);
    else if(*e == ')') {
        while((x = pop()) != '(')
            printf("%c", x);
    }
    else {
        while(priority(stack[top]) >= priority(*e))
            printf("%c", pop());
        push(*e);
    }
    e++;
}
while(top != -1)
    printf("%c", pop());
return 0;
}
```

Output:

```
Enter the infix expression: A+B*C
```

```
The postfix is: ABC*+
```

```
==== Code Execution Successful ===
```