

LAB PROGRAM 2

```
#include<stdio.h>
#include<string.h>
int F(char symbol){
    switch(symbol){
        case '+':
        case '-':return 2;
        case '*':
        case '/':return 4;
        case '^':
        case '$':return 5;
        case '(':return 0;
        case '#':return -1;
        default :return 8;
    }
}
int G(char symbol)
{
    switch (symbol)
    {
        case '+':
        case '-':
            return 1;
        case '*':
```

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    case '/':
        return 3;
    case '^':
    case '$':
        return 6;
    case '(':
        return 9;
    case ')':
        return 0;
    default:
        return 7;
}
}

void infix_postfix(char infix[], char postfix[]){
    int top, j, i;
    char s[30], symbol;
    top = -1;
    s[++top] = '#';
    j = 0;
    for(i = 0; i < strlen(infix); i++){
        symbol = infix[i];
        while(F(s[top]) > G(symbol)){
            postfix[j] = s[top--];
            j++;
        }
        if (F(s[top]) != G(symbol)){

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        s[++top] = symbol;
    }
    else{
        top--;
    }
}
while(s[top] != '#'){
    postfix[j++] = s[top--];
}
postfix[j] = '\0';
puts(postfix);
}

int main(){
    char infixE[] = "", postfixE[] = "";
    printf("Enter the infix expression:\n");
    printf("-----\n");
    gets(infixE);
    infix_postfix(infixE, postfixE);
    return 0;
}

```



C:\Windows\SYSTEM32\cmd.exe

Enter the infix expression:

$x^y z - M + N + P/Q$

$xyz^{M-N+PQ/+}$



C:\Windows\SYSTEM32\cmd.exe


Enter the infix expression:

$((a+b)*c-(d-e))^{(f+g)}$

$ab+c*de--fg+^$

(program exited with code: -1073741819)

Press any key to continue . . .

 C:\Windows\SYSTEM32\cmd.exe

Enter the infix expression:

$(A+(B-C)*D)$

$ABC-D*+$

Enter the infix expression:

$a^b*c-d+e/f/(g+h)$

$ab^c*d-ef/gh+/+$