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CLASS

Date

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Lab program - 2

```
#include <stdio.h>
#include <stdlib.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 '*':
        case '/': return 3;
        case '^':
        case '$': return 8;
        case '(': return 9;
        case ')': return 0;
        default: return 7;
    }
}
```



void infix-postfix (char infix [])

```
{
    int top, i, j;
    char s[30], postfix[30];
    char 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)) {
            s[++top] = symbol;
        }
        else
            top--;
    }
    while (s[top] != '#') {
        postfix[j++] = s[top--];
    }
    postfix[j] = '\0';
    puts(postfix);
}
```

```
int main () {
```

```
    char exp[30];
    printf("Enter an expression: \n");
```

```
gets(exp);  
infix_postfix(exp);  
return 0;
```

```
}
```