

**COMSATS University Islamabad**

**(Attock Campus)**

Compiler Construction

(LAB)

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Lab Assignment: 3 .

Date: 30-11-2023 .

#include <iostream>

#include <stdlib.h>

using namespace std;

int count = 0;

void E();

void Ed();

void T();

void Td();

void F();

string expr;

int main() {

cin >> expr;

int l = expr.length();

expr += "$";

E();

if (l == count)

cout << "Accepted" << endl;

else

cout << "Rejected" << endl;

}

void E() {

T();

Ed();

}

void Ed() {

if (expr[count] == '+') {

count++;

T();

Ed();

cout << "+";

} else if (expr[count] == '-') {

count++;

T();

Ed();

cout << "-";

} else {

// E'->null

}

}

void T() {

F();

Td();

}

void Td() {

if (expr[count] == '\*') {

count++;

F();

Td();

cout << "\*";

} else if (expr[count] == '/') {

count++;

F();

Td();

cout << "/";

} else {

// T'->null

}

}

void F() {

if (isalpha(expr[count]) || isdigit(expr[count])) {

cout << expr[count];

count++;

} else if (expr[count] == '(') {

count++;

E();

if (expr[count] != ')') {

cout << "Rejected" << endl;

exit(0);

}

count++;

} else {

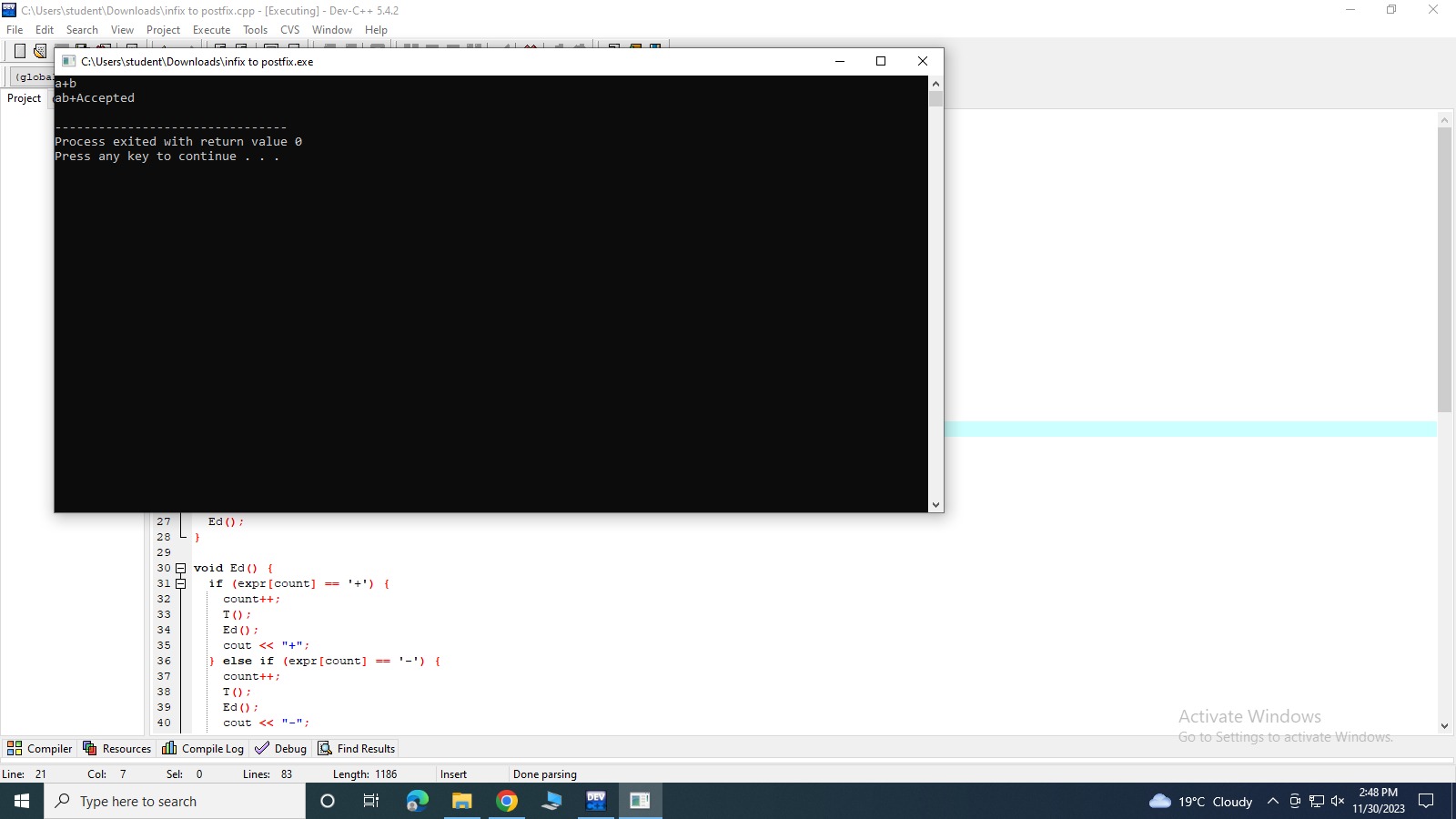
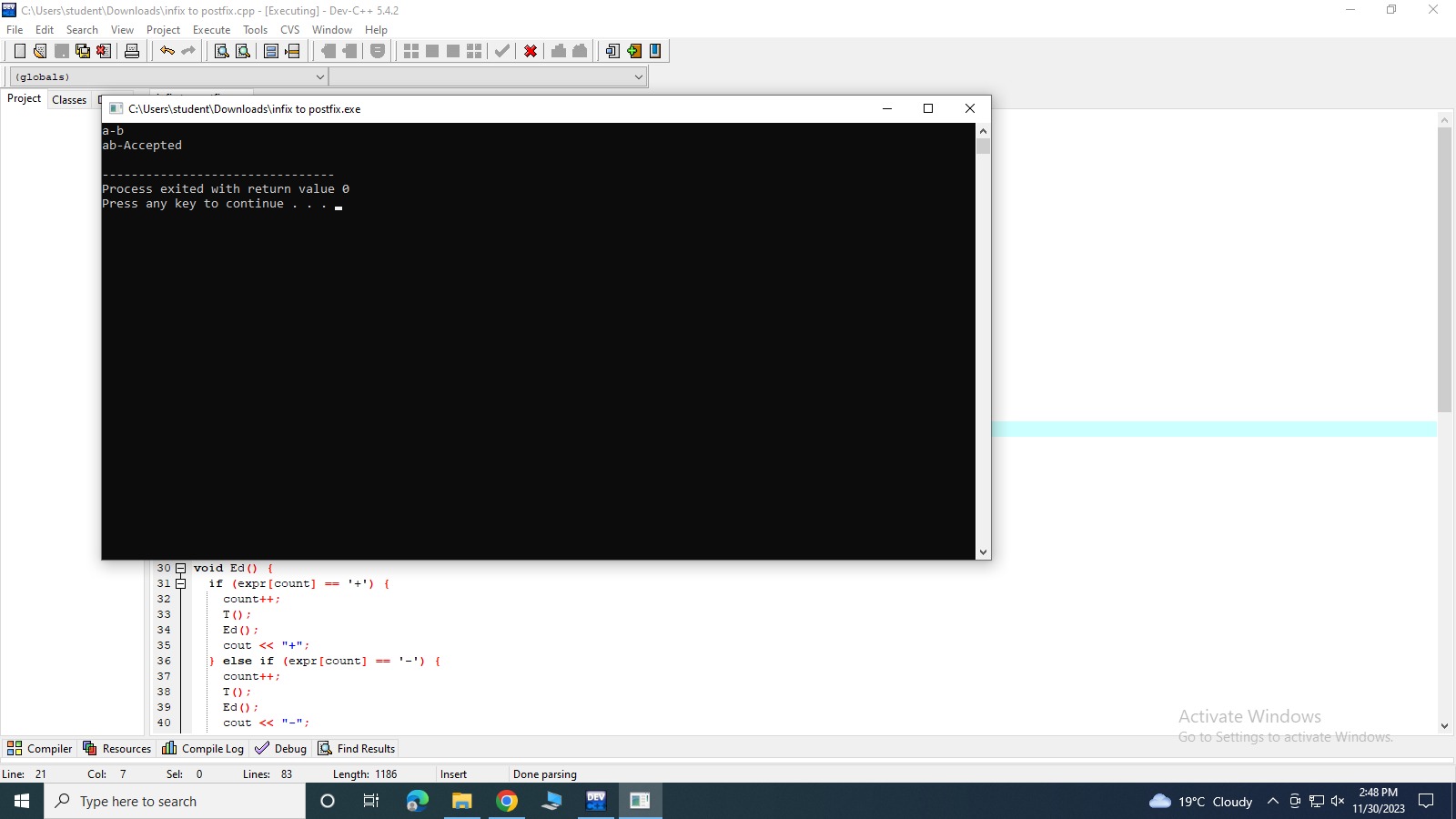
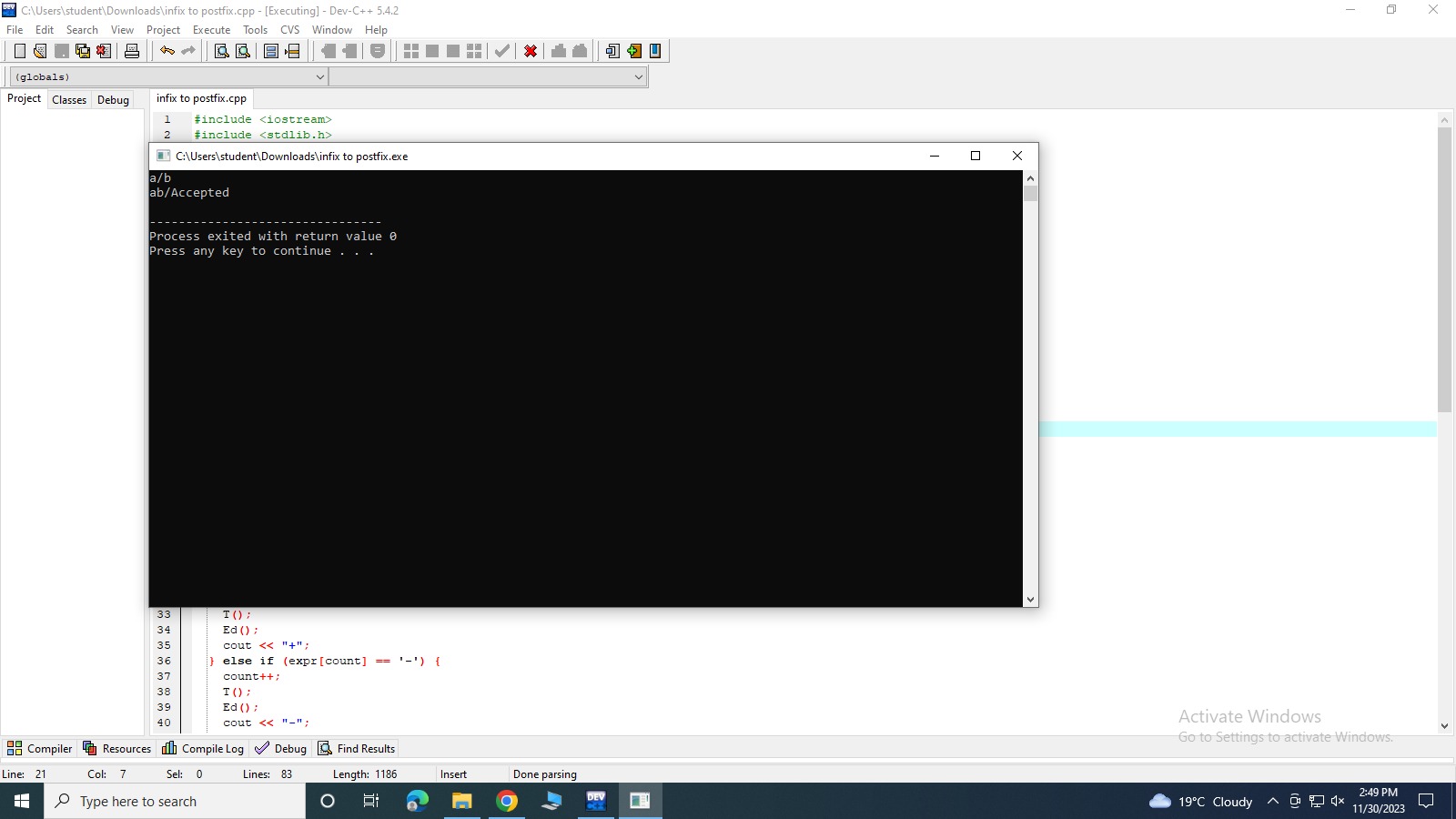
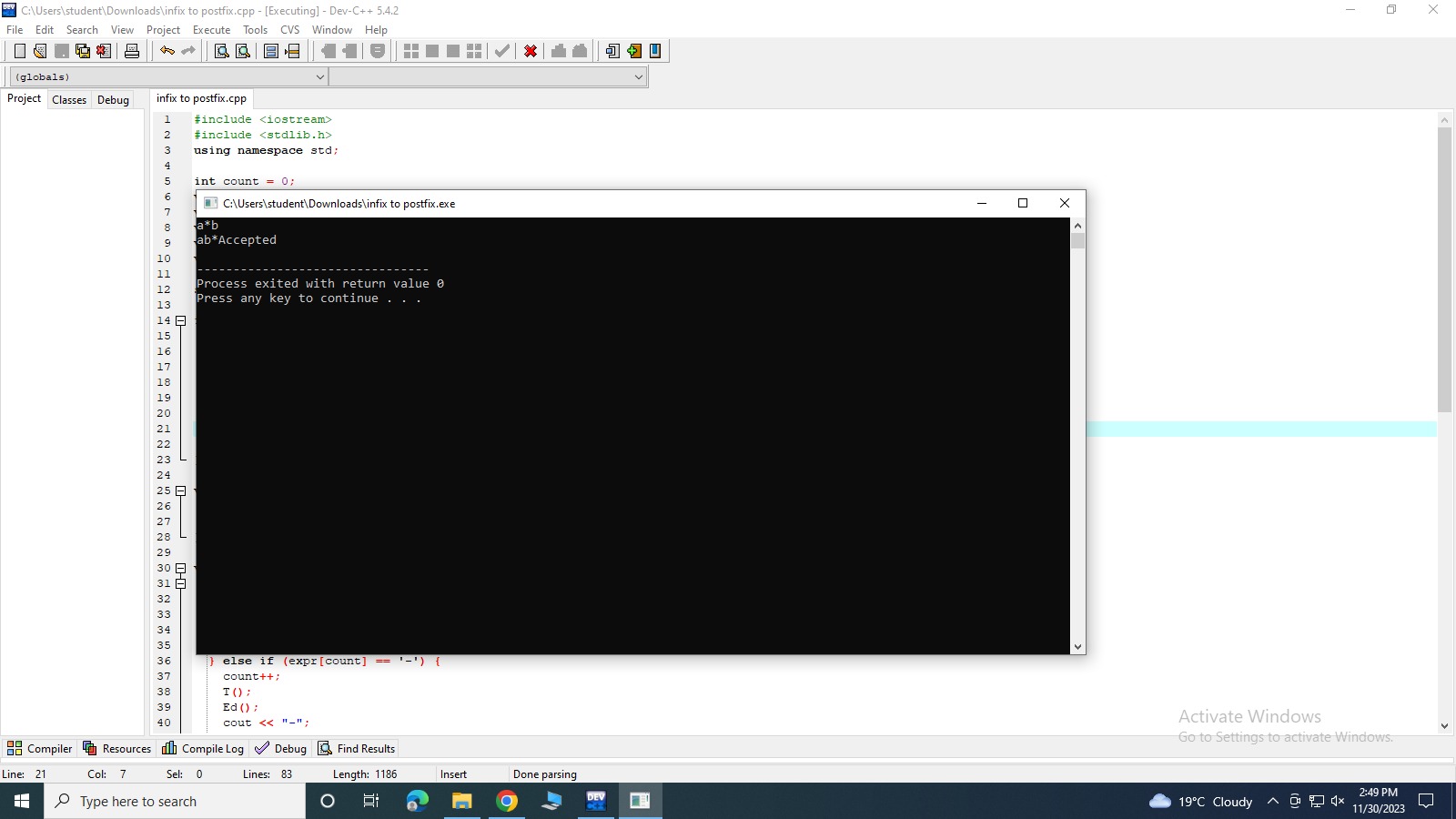
cout << "Rejected" << endl;

exit(0);

}

}

**Output:**

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