#include <stdio.h>

#include <stdlib.h>

#include <ctype.h>

#include <string.h>

#define MAX 100

char stack[MAX];

int top = -1;

// Stack operations

void push(char c) {

if (top >= MAX - 1)

printf("Stack 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];

}

// Precedence function

int precedence(char op) {

if (op == '^')

return 3;

else if (op == '\*' || op == '/')

return 2;

else if (op == '+' || op == '-')

return 1;

else

return 0;

}

// Infix to Postfix conversion

void infixToPostfix(char\* infix) {

char postfix[MAX];

int i = 0, j = 0;

char ch;

while ((ch = infix[i++]) != '\0') {

if (isalnum(ch)) {

postfix[j++] = ch;

} else if (ch == '(') {

push(ch);

} else if (ch == ')') {

while (peek() != '(')

postfix[j++] = pop();

pop(); // Remove '('

} else {

while (precedence(peek()) >= precedence(ch))

postfix[j++] = pop();

push(ch);

}

}

while (top != -1)

postfix[j++] = pop();

postfix[j] = '\0';

printf("Postfix Expression: %s\n", postfix);

}

// Main function

int main() {

char infix[MAX];

printf("Enter an infix expression (e.g., A+B\*C): ");

scanf("%s", infix);

infixToPostfix(infix);

return 0;

}