#include <stdio.h>

#include <ctype.h>

#include <string.h>

#define SIZE 100

char stack[SIZE];

int top = -1;

// Stack operations

void push(char ch) {

stack[++top] = ch;

}

char pop() {

return stack[top--];

}

char peek() {

return stack[top];

}

int precedence(char op) {

switch (op) {

case '^': return 3;

case '\*':

case '/': return 2;

case '+':

case '-': return 1;

default: return 0;

}

}

int isOperator(char ch) {

return ch == '+' || ch == '-' || ch == '\*' || ch == '/' || ch == '^';

}

void infixToPostfix(char\* infix, char\* postfix) {

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 (top != -1 && peek() != '(')

postfix[j++] = pop();

if (top != -1)

pop(); // remove '('

} else if (isOperator(ch)) {

while (top != -1 && precedence(peek()) >= precedence(ch))

postfix[j++] = pop();

push(ch);

}

}

while (top != -1)

postfix[j++] = pop();

postfix[j] = '\0';

}

int main() {

char infix[SIZE], postfix[SIZE];

printf("Enter infix expression: ");

scanf("%s", infix);

infixToPostfix(infix, postfix);

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

return 0;

}