#include <iostream>

#include <conio.h>

#include <ctype.h> // library use for isalnum function

using namespace std;

char stack[20];

int top = -1;

void Push(char x)

{

stack[++top] = x;

}

char Pop()

{

if(top == -1)

return -1;

else

return stack[top--];

}

int Priority(char x)

{

if(x == '(')

return 0;

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

return 1;

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

return 2;

}

void main()

{

char exp[20];

char \*e,x;

cout << "Enter the expression :: ";

cin >> exp;

e = exp;

while(\*e != '\0')

{

if(isalnum(\*e)) // int isalnum ( int c ); function to verify whether c is either a decimal digit or an uppercase or lowercase letter.

{

cout << \*e;

}

else if(\*e == '(')

{

Push(\*e);

}

else if(\*e == ')')

{

while((x = Pop()) != '(')

{

cout << x;

}

}

else

{

while(Priority(stack[top]) >= Priority(\*e)) // if in top of stack there is operator whose priority is equal and greater then the other so we pop the stack

{

cout << Pop(); // suppose in stack top = \* new = +

}

Push(\*e);

}

e++;

}

while(top != -1)

{

cout << Pop();

}

getch();

}