#include <iostream>

#include<cstdio>

#include<cstdlib>

using namespace std;

#define SIZE 50

char s[SIZE];

int top=-1;

void push(char elem)

{

s[++top]=elem;

}

char pop()

{

return(s[top--]);

}

int pr(char elem)

{

switch(elem)

{

case '#': return 0;

case '(': return 1;

case '+':

case '-': return 2;

case '\*':

case '/': return 3;

}

}

int main()

{

char infx[50],postfx[50],ch,elem;

int i=0,k=0;

cout<<"\nEnter Infix Expression: ";

cin>>infx;

push('#');

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

{

if( ch == '(')

push(ch);

else

if(isalnum(ch))

postfx[k++]=ch;

else

if( ch == ')')

{

while( s[top] != '(')

postfx[k++]=pop();

elem=pop(); /\* Remove ( \*/

}

else

{ /\* Operator \*/

while( pr(s[top]) >= pr(ch) )

postfx[k++]=pop();

push(ch);

}

}

while( s[top] != '#')

postfx[k++]=pop();

postfx[k]='\0';

cout<<"\nPostfix Expression:\n"<<postfx;

return 0;

}