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/*Implement stack as an ADT. Use this ADT to
perform expression conversion and evaluation. (Infix
to Postfix).
*/
#include <iostream>
#include <stack>
using namespace std;

int priority (char alpha){
    if(alpha == '+' || alpha == '-')
        return 1;

    if(alpha == '*' || alpha == '/')
        return 2;

    if(alpha == '^')
        return 3;

    return 0;
}
string convert(string infix)
{
    int i = 0;
    string postfix = "";
    // using inbuilt stack< > from C++ stack library
    stack <int>s;

    while(infix[i]!='\0')
    {
        // if operand add to the postfix expression
        if(infix[i]>='a' && infix[i]<='z' || infix[i]>='A'&& infix[i]<='Z')
        {
            postfix += infix[i];
            i++;
        }
        // if opening bracket then push the stack
        else if(infix[i]=='(')
        {
            s.push(infix[i]);
            i++;
        }
        // if closing bracket encountered then keep popping from stack until
        // closing a pair opening bracket is not encountered
        else if(infix[i]==')')
        {
            while(s.top()!='('){
                postfix += s.top();
                s.pop();
            }
            s.pop();
            i++;
        }
        else
        {
            while (!s.empty() && priority(infix[i]) <= priority(s.top())){
                postfix += s.top();
                s.pop();
            }
        }
    }
}

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        }
        s.push(infix[i]);
        i++;
    }
}
while(!s.empty()){
    postfix += s.top();
    s.pop();
}

cout << "Postfix is : " << postfix; //it will print postfix conversion
return postfix;
}

int main()
{
    string infix = "((a+(b*c))-d)";
    string postfix;
    postfix = convert(infix);

    return 0;
}

```