

Mehmet Beraat SAĞIN

URL : <https://www.spoj.com/problems/ONP/>

ONP - Transform the Expression

[#stack](#)

Transform the algebraic expression with brackets into RPN form (Reverse Polish Notation). Two-argument operators: +, -, *, /, ^ (priority from the lowest to the highest), brackets (). Operands: only letters: a,b,...,z. Assume that there is only one RPN form (no expressions like a*b*c).

Input

t [the number of expressions <= 100]

expression [length <= 400]

[other expressions]

Text grouped in [] does not appear in the input file.

Output

The *expressions* in RPN form, one per line.

Example

Input:

3

(a+(b*c))

((a+b)*(z+x))

((a+t)*((b+(a+c))^(c+d)))

Output:

abc*+

ab+zx+*

at+bac++cd+^*

SOURCE CODE :

```
#include <iostream>

#include <vector>

#include <stack>

using namespace std;

int main()
{
    vector <char> charVector;

    stack <char> charStack;

    char char1,char2;

    int charCount=0;

    int count=0;

    cin>>count;

    int x;

    while (count-->0)
    {
        charVector.clear();

        x=0;

        cin>>char1;

        x++;

        while (x != 0) {
            cin>>char2;

            if (char2=='(') {
                x++;
            }

            else {
                if (char2==')') {
                    x--;

                    charVector.push_back(charStack.top());charStack.pop();
                }else {
```

```

        if (char2=='+' || char2=='-' || char2=='*' || char2=='/' ||
            char2=='^') {

            charStack.push(char2);

        }else {

            charCount++;

            charVector.push_back(char2);

        }

    }

}

for (int i=0; i<charVector.size(); i++) {

    cout<<charVector.at(i);

}

cout<<endl;

}

return 0;

}

```

The screenshot shows the Sphere Online Judge (SPOJ) website. The user is viewing their submissions for the problem 'Transform the Expression'. The page displays a table with two submissions. The first submission (ID 22736753) is marked as 'accepted' with a time of 0.00 and memory of 16M, using C++ language. The second submission (ID 22736740) is marked as 'compilation error' with a time of '-' and memory of '-', also using C++ language. The page includes navigation links for Problems, Status, Ranks, Discuss, Contests, and Profile. At the bottom, there is a footer with copyright information for SPOJ.com and Sphere Research Labs.

ID	DATE	PROBLEM	RESULT	TIME	MEM	LANG
22736753	2018-11-20 15:57:43	Transform the Expression	accepted edit delete it	0.00	16M	C++
22736740	2018-11-20 15:55:15	Transform the Expression	compilation error edit delete it	-	-	C++

Selected submissions:

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