1073. Scientific Notation (20)

时间限制

100 ms

内存限制

65536 kB

代码长度限制

16000 B

判题程序

Standard

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Scientific notation is the way that scientists easily handle very large numbers or very small numbers. The notation matches the regular expression [+-][1-9]"."[0-9]+E[+-][0-9]+ which means that the integer portion has exactly one digit, there is at least one digit in the fractional portion, and the number and its exponent's signs are always provided even when they are positive.

Now given a real number A in scientific notation, you are supposed to print A in the conventional notation while keeping all the significant figures.

**Input Specification:**

Each input file contains one test case. For each case, there is one line containing the real number A in scientific notation. The number is no more than 9999 bytes in length and the exponent's absolute value is no more than 9999.

**Output Specification:**

For each test case, print in one line the input number A in the conventional notation, with all the significant figures kept, including trailing zeros,

**Sample Input 1:**

+1.23400E-03

**Sample Output 1:**

0.00123400

**Sample Input 2:**

-1.2E+10

**Sample Output 2:**

-12000000000

这道题比较水，本质上来说就是几个判断条件的问题而已，仔细点都能做出来。

[提交代码](https://www.patest.cn/contests/pat-a-practise/1073)

#include<iostream>

#include<string>

#include<algorithm>

#include<queue>

#include<vector>

#include<sstream>

#include<stack>

using namespace std;

void output(char nota)

{

if (nota == '+')

return;

else

{

cout << nota;

return;

}

}

int main()

{

char nota;

int exp;

string all;

getline(cin, all);

nota = all[0];

int E\_pos = all.find\_first\_of('E');

string num = all.substr(1,E\_pos-1);

/\*for (int i = E\_pos + 2; i < all.size() - 1; i++)

{

if (all[i] != '0')

break;

else

{

all.erase(i, 1);

i--;

}

}\*/

sscanf(all.substr(E\_pos + 1, all.size() - 1).c\_str(),"%d",&exp);

num.erase(num.find\_first\_of('.'), 1);

//output

if (exp == 0)

{

output(nota);

cout << num;

}

if (exp < 0)

{

output(nota);

cout << "0.";

for (int i = 1; i < fabs(exp); i++)

cout << "0";

cout << num;

}

if (exp > 0)

{

exp++;

output(nota);

int i;

for (i = 0; i < exp; i++)

{

if (i > num.size()-1)

cout << '0';

else

cout << num[i];

}

if (exp < num.size())

{

cout << ".";

for (; i < num.size(); i++)

cout << num[i];

}

}

return 0;

}