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**F006A. Can you add up?****P55982\_en**

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Your task is to write a program that reads pairs of natural numbers and prints their sum.

Warning: the natural numbers that we consider in this problem can be very large (thousands of digits), you must store them in variables of `string` type. The main program is already done; do not modify it:

```
int main() {  
    string x, y;  
    while (cin >> x >> y) cout << sum(x, y) << endl;  
}
```

Implement the function

```
string sum(string x, string y);
```

that, given two strings of characters `x` and `y` that represent two natural numbers, returns a string of characters `z` that represents their sum.

To simplify the problem, suppose that neither `x` nor `y` start with '0'. Besides, suppose that `x` has, at least, the same number of digits than `y`. The number of digits of `z` must be equal to the number of digits of `z` plus one, although it causes that `z` starts with '0'.

**Observations**

- Remember that a string `s` with `n` characters `c` can be declared like this: `string s(n, c);`
- Remember also that the string operations like `s += '0';`, `s1 += s2;` or `s = s1 + s2;` are not allowed.

**Sample input 1**

```
2 2  
7 8  
1234 1  
9999 1  
1000000000000000000000 1000000000000000000000  
9999999999999999999999 9999999999999999999999  
1000000000000000000000 1  
1870 8428  
100000 1010
```

**Sample output 1**

```
04  
15  
01235  
10000  
0200000000000000000000  
1099999999999999999998  
0100000000000000000001  
10298  
0101010
```

### Sample input 2

[illegible]

### Sample output 2

[illegible]

### Problem information

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