

Can We Add Two Strings?

Here's another string.

What is it? "23"

Say that the **LC-3** executes:

R1 ← **x4012**

R2 ← **x7196**

R3 ← **R1 + R2**

What is R3? xB1A8

What is stored at xB1A8? Bits!

x4012	x0031	'1'
x4013	x0039	'9'
x4014	x0000	NUL
x7196	x0032	'2'
x7197	x0033	'3'
x7198	x0000	NUL

You Understand Why Adding Addresses Doesn't "Work"

Obviously, if we want to add two strings that represent numbers, we need to do more work.

People who have never seen representations using bits often cannot understand such failures.

Almost every bug you write will seem this dumb when you find it.

I've seen bugs take months.

People don't like to talk about them afterward.