

Shorter version

This text (Word or Google-doc) document is an example of how to write out (type out, really) by hand when tracing through a program step by step. It's somewhat painstaking and tedious but it really helps in cementing important ideas about how programs execute. And it's critical to understanding loops.

This is what you will use when exercises ask you to submit program tracing, because the narrative version in the module is a bit too long.

For the shorter version, we'll use a table where each row indicates a step in time, as if one line of a program gets executed. The table has one column per variable in the program, and a comment column to explain (if needed).

The table below and what follows is what you would submit if asked to submit a trace of the program.

Program Trace			
Step#	j	i	Comment
1			print 1
2	2		j is initially set to 2
3		0	print 2
4		1	print 2
5			print() - which is a new line
6	3		j is incremented to 3
7		0	print 3
8		1	print 3
9		2	print 3
10			print() - which is a new line
11	4		j is incremented to 4
12		0	print 4
13		1	print 4
14		2	print 4
15		3	print 4
16			print() - which is a new line

The final output is:

```
1  
22  
333  
4444
```