



# Live Coding

# Demo: What They've Learnt So Far...



- Unix Shell
  - Editing files, filesystem, basic commands, grep, find
- Introduction to Python
  - Variables, lists, conditionals, loops, functions, writing and importing libraries, docstrings
  - We've run into some errors in our code along the way!
- Ignore my call out for green and red stickies!

# Why Live Coding?

*“Teaching is theatre, not cinema.”*

– Neal Davis

- A cornerstone of the Carpentries
  - Not a lot of slides
  - Work through lesson material, typing in code
  - Workshop participants follow along

# Advantages to Live Coding



- More compelling to watch code being written
- Instructors can do more ‘what if?’
- Slows instructor down
- Allows *instructor* to follow *learners*
- Facilitates lateral knowledge transfer
- Learners get to see instructor’s mistakes
  - And **how they diagnose and correct them**

# Live Coding: Top 10 Tips



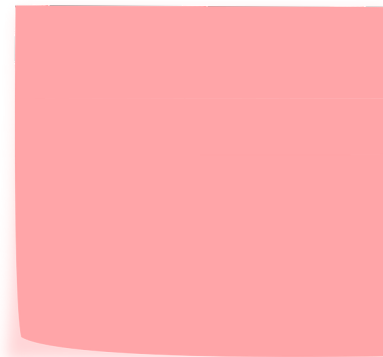
1. Be seen and heard
2. Take it slow, explain everything
3. Mirror learner's environment
4. Use the screen wisely
5. Use illustrations
6. Avoid being disturbed
7. Stick to the lesson material
8. Embrace mistakes
9. Have fun
10. Leave no learner behind...

# The Sticky Notes

- Each learner has a green and red sticky note
- Put on top of laptop screen
- Very, very useful
  - It's more discreet
  - They can keep working
  - Instructor can scan state of room quickly



Green – I've completed exercise



Red – I've run into a problem

# The Bad and the Good



Could be better

Done right

# Try it Yourself...

**Organise** into different groups than last time

**Teach** 3-4 minutes of your chosen lesson episode (or any you wish) using live coding to a fellow trainee

- No need to record the live coding sessions

**Swap** over!

**Give feedback** the same way you have previously (positive and negative, content and presentation)

**If you teach something from the lesson episode you selected in preparation for this workshop, explain in advance to your fellow trainee**

- What you will be teaching
- What the learners are expected to be familiar with