

# Linux

What even is Linux?

Why Linux?

What's a command-line prompt??

# Practicals

- Ask questions in chat or just try to make yourself heard by voice.
- This will be short, practical issues with hands-on will be handled later.

# What is Linux, and why do we like it

- Linux is:
  - an operating system
  - made of many *composable* small (and large) bits and pieces
  - a multi-user environment
    - Easy to share, easy to care, easy to dare
  - the industry standard
  - reliant on the **command line**

# Bash

- The command-line interface: the Bash **prompt**
- A program finds and runs other programs
- A scripting language

# The Bash prompt

- `[info]$ program word1 word2 word3`
- `info` is configurable, and usually tells you who you are, on what system, and where in the file system
- The `program` to run is the first word
- All `words` are separated by spaces

# Program, flags, and files

- Output:
  - Most Linux programs output to the terminal
  - Some also write to files
- Input:
  - Flags: single letters or words that change the behaviour of a program, e.g. '-i' to ignore case or '-n 10' to set a number to 10.
  - Arguments: text given to the program when started, e.g. file names.
  - Terminal input: text given to the program while it runs

# Example bash command

```
$ mv -v inbox/* outbox/
```

```
`inbox/data1.dat' -> `outbox/data1.dat'  
`inbox/data2.dat' -> `outbox/data2.dat'  
`inbox/data3.dat' -> `outbox/data3.dat'
```

Program

Flags

Argument 1

Argument 2

Output

Question: How does Bash know what is what on the command line?

# Sources of error

- **Capitalisation matters** in file names and program names
- **Spaces matter.** *Always* have a space after the program name. *Don't* add spaces in file names.
- **Check that you are in the right place** in the file system.



# Tab Completion

- Whenever you're writing a path or filename on the bash prompt, you can strike the 'tab' key to ask Bash to complete what you're writing
- Get in the habit of this — it will save you many hours