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ADVANCED WEB TECHNOLOGIES SET09103

LECTURE 01 (WEEK 1)

LEARNING ENVIRONMENT

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TL/DR

We will work in a stable learning environment (OS, language, & utility software) to build skills for working with remote servers, and building and deploying the web apps of the future.

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I. LEARNING ENVIRONMENT

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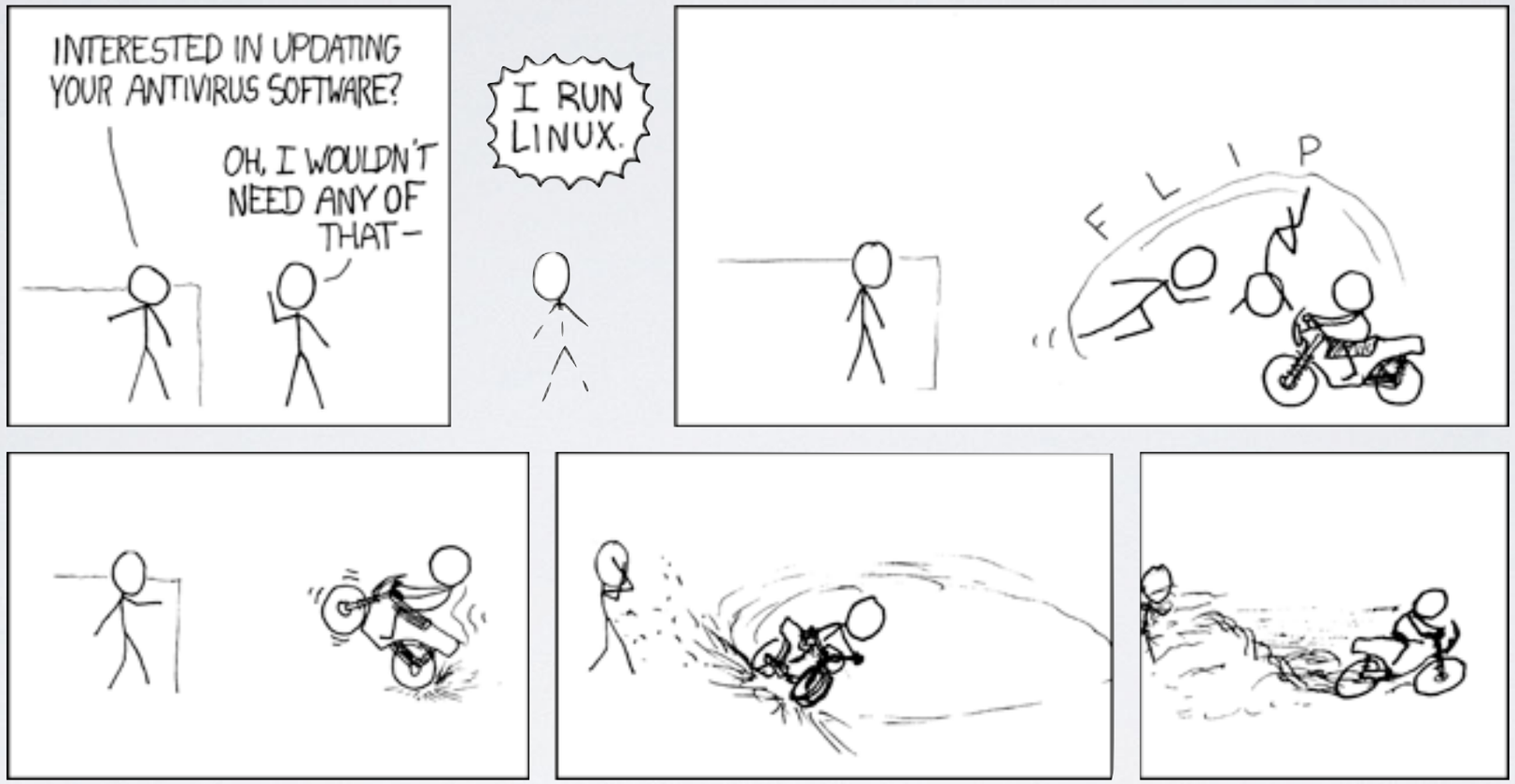

LINUX & UBUNTU

Linux that's perfect for our needs

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UBUNTU ON ENU VM INFRASTRUCTURE

- Our infrastructure has changed & been refined over the years
    - **Levinux (QEMU based VM runs locally on lab machines)** 2016/17 & 2017/18
    - **Shared Ubuntu Server** 2018/19
    - **Individual Ubuntu VM** 2019/20
- Individual VMs are new this year so bear with me, be charitable, give constructive feedback, &c.
- Base "Ubuntu Server" installation (+Python, Git, Vim)
- From your perspective, very similar to previous years
    - Access your VM via SSH, e.g. ssh to webtech-$$.napier.ac.uk using:
        - PuTTY, MobaXterm (or an SSH client of your choice)
- But with a little more flexibility (we can install regular software quite easily from standard APT repositories)

ROOT ACCESS

You are essentially a sysadmin of your own VM. You have all the power (& responsibility)

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ROOT ACCESS

- You each have root access to your own VM via the sudo command
- You won't normally need to use this
- Inappropriate use of sudo can completely wreck your VM
- Available in case you need to install additional software for your assignment (or in case we all decide to go off piste later in the trimester). Use the package manager (e.g. apt-get install *xyz*) rather than installing from source/downloads
- If you break your machine then tell me & I will get a replacement created (you will lose any work that you haven't backed up)
- DO NOT install any GUI software/Desktop Environment/Windowing System

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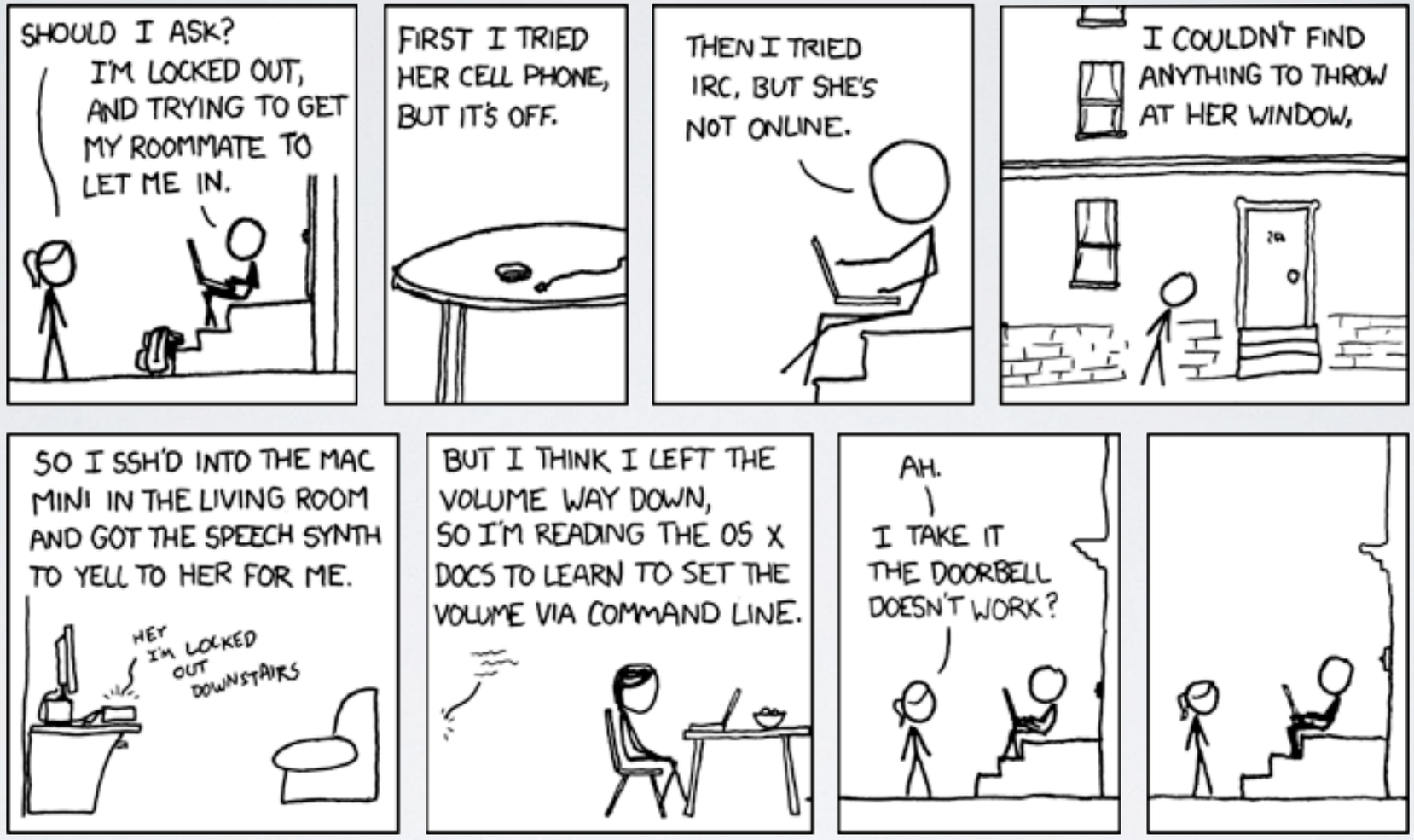
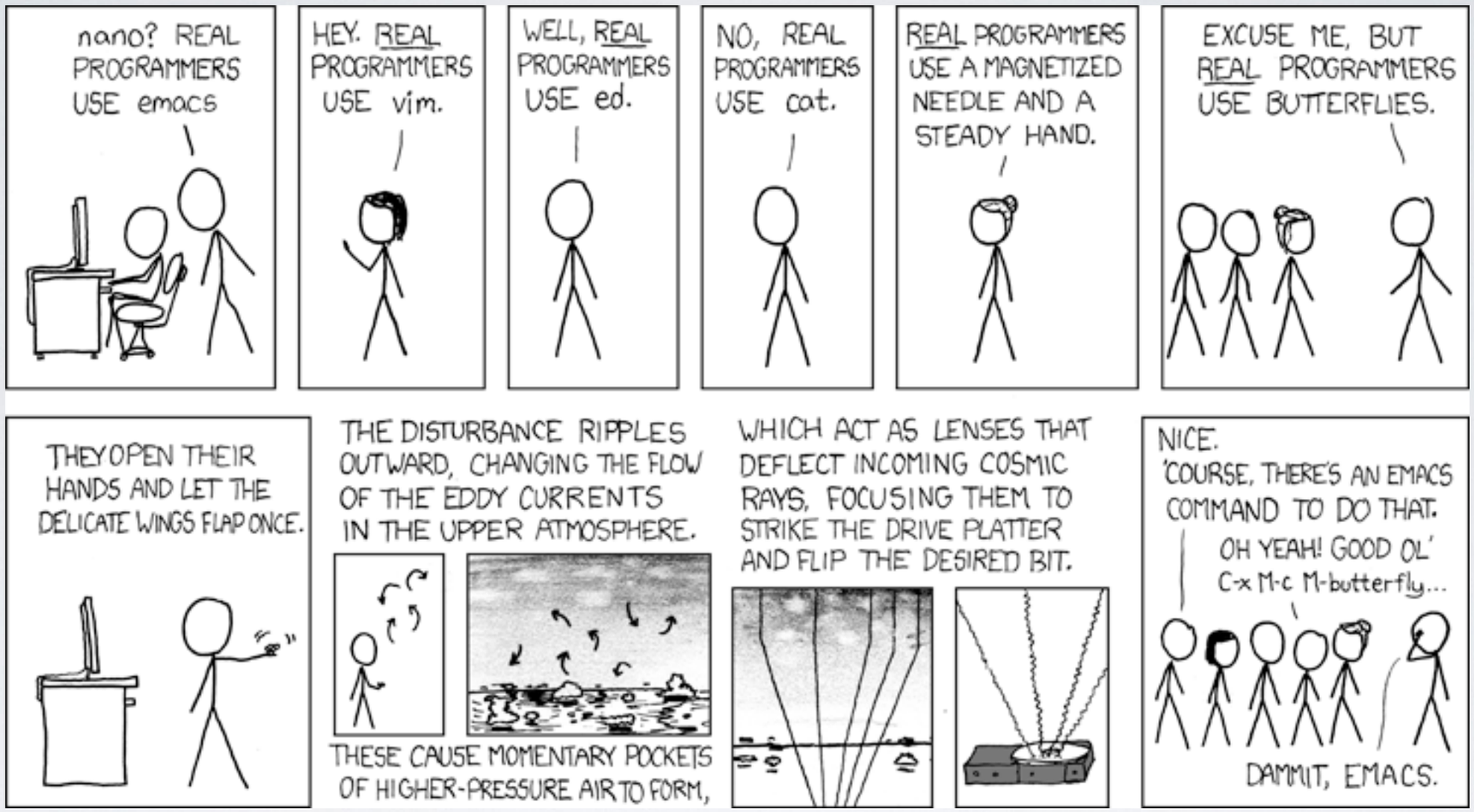
YOUR VM

- Is for **lab work**:
  - You can use Python & Flask wherever you like but the default expectation is that you will use the labs to become experienced with a Linux environment
- Is for the **hand-in**:
  - I will clone your repo from a specific location on your VM (details in assessment when released)
- Is for the **demo**:
  - I will view/interact with your running app by navigating to a specific location on your VM in my browser (details in assessment when released)



SSH

SecureShell - Gets us into the places we want to be in (like remote computers)



VIM

One really good text editor that you can find pretty much everywhere you'll need it by default (except on Windows)

GIT

Complicated. Difficult. But really really useful.

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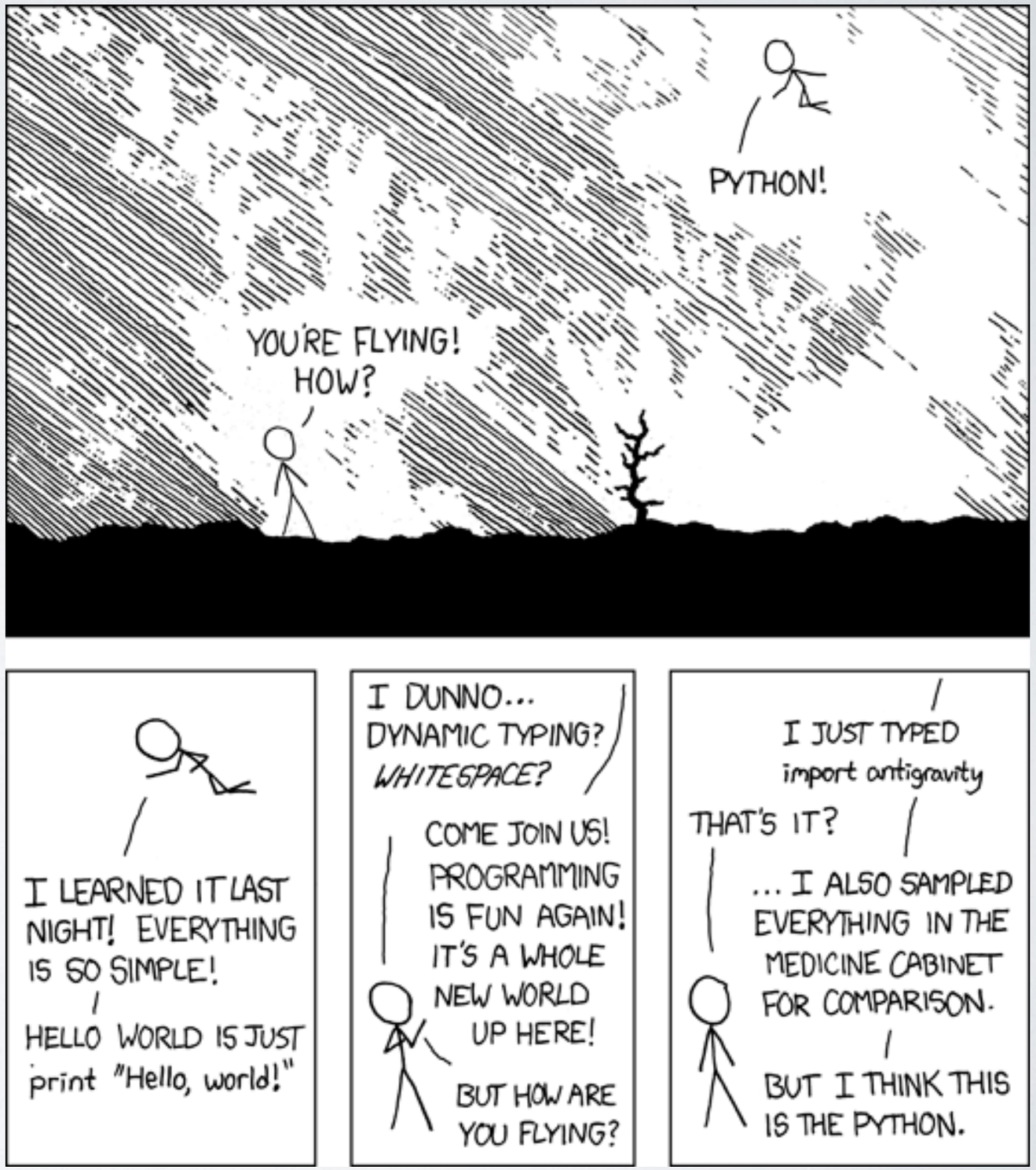
PYTHON

For when you just want
to get things done with
less typing.
Batteries included.
Loads of useful libraries
like **Python Flask**



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II. THE PAST, PRESENT, & FUTURE OF THE WEB

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THE WWW

(THE WEB, WEB 1.0, ETC.)

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WEB 2.0

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WEB 2.0+ (WEB 3.0, FUTURE WEB, SEMANTIC WEB, INTELLIGENT WEB, &C.)

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WRAPPING UP

- We will use a learning Environment & build useful practical skills in:
  - The OS that underpins the web (**Linux**)
  - Communicating between machines (**SSH**)
  - A good editor (**Vim**)
  - A good general purpose & Scripting language (**Python**)
  - Overview of module content:
    - We will explore the past, present, & future of the web from both **social** & **technological** perspectives