Lecture: 1-3

- Prerequisites for this lecture are: 1-1 and .

Installing the USW Raspberry Pi-4 image

- the USW Raspberry Pi-4 image ⟨`http://floppsie.comp.glam.ac.uk/download/bootimages/student-rpi4-22-09-2020-shrink.img`⟩ is a 32bit arm7 for the Raspberry Pi-4 (either 8GB or 4GB variety).

- the image is just over 6GB and needs to be etched or dd'd to a micro USB card
  - the image contains a self inflating filesystem which will expand when the machine first boots and it will utilise the whole micro USB card
  - it has been tested successfully with a 32GB card

Placing the contents of the image onto the micro USB card

- if you are on a Windows or OSX or Raspberry-Pi machine you should install etcher ⟨`https://www.balena.io/etcher`⟩ and use this tool to prepare the card
- you need to run the `etcher` program, locate the `.img` file and write the image file to the micro USB card
- notice that the USW Raspberry Pi-4 image is not zipped
- the user account is: `student` and the password is `a`
- the `student` user account can `sudo` to `root` and the password for `root/sudo` is `a`
  - you might want to change this (see the command line program

`passwd`)

Placing the contents of the image onto the micro USB card

- when your Raspberry Pi-4 boots for the first time you need to be patient as the self expansion can take 3-4 minutes, during this time the screen is pretty near blank.
  - thankfully this only occurs once and thereafter it boots in seconds

About this USW Raspberry Pi-4 image

- it is based on the Raspbian 32bit Buster distribution
- as far as known it has all the tools necessary to complete the courseworks for Game Engine Design, Game Tool Development and Operating Systems
  - caveat, there maybe additional packages, necessary, but these should be a single command line instruction away
- it comes with `gcc`, `g++`, `gdb`, `vi`, `emacs`, `python3`, `python2`, `pge`, `chisel`, `gm2`, `openconnect` (a vpn client) and thousands of other packages
  - `C++-17` is also installed as an extra, the `gcc-10` is also installed which contains detailed semantic analysis of your C programs!