

# Secondary Storage

**Secondary storage** is any non-volatile memory which can't be accessed directly by the CPU.

- stores data and instructions when the computer is switched off
- can be changed, deleted and reused - unlike ROM

This is the **slow external memory** from the von Neumann architecture

# Secondary Storage

**Secondary storage** includes:

- hard drives (magnetic and solid state)
- memory sticks
- CD and DVDs
- floppy disks
- backup tapes
- paper tape/punched cards etc...

# Secondary Storage

These allow:

- data and instructions to be stored when the computer is turned off
- a large amount of data to be stored where it can be accessed to be moved in to main memory when required
- data to be portable