Secondary Storage Devices

This describes the types of storage devices that can be added to a computer to make it function more efficiently.

Magnetic Storage Devices

Hard Disk

- The hard disk in most computers is a magnetic storage device.
- It consists of a series of disks, called a platter stored on top of each other, each having its own read/write head. This increases both the volume of data that can be stored on it, as well as the speed it takes too access data.
- The data is stored as small amounts of magnetism on the surface, and can be interpreted as either a 1 or a 0. This has not changed much over the past 30 years, although now they need to store a lot more information, so there needs to be a way of finding all the data.
- The surface is divided into a series of concentric rings called tracks. And radiating out from the centre forming wedges are sectors. The central track is used as an index track, so the data can be found more easily. The division of the surface of the disk is different for each OS, so will need to be formatted using a disk formatter.

Magnetic Tape

- Magnetic tape is another form of magnetic storage, it is quite old fashioned now, although still used for archiving.
- The main difference is that it stores data linearly along the surface of the tape, which means that although loads of information can be stored on it, the accessing time to access it can be very long.

Optical Devices

- Optical devices like CDs or DVDs are similar to hard drives in the way that the surface is divided into sectors and a single track which is a spiral, and the data is stored in the sectors.
- Small indentations are made in the surface of the disk, and a laser light is focused in such a way that it will simply disperse if there is no indentation.
- This gives two states that can stand for 1 or 0.

Solid-State Storage

- For example USB Flash Drive. No moving Parts.
- The data is stored in a thin layer of oxide between two nonconductive layers, the data can be edited by sending pulses of power to different tiny areas in the layer.