

Component 1: Hardware

Secondary storage

Functional characteristics	Devices	Capacity	Durability	Portability	Speed	Cost
<ul style="list-style-type: none"> A non-mechanical design of semiconductor chips It does not require defragmentation There are two types of solid state memory NOR and NAND Both contain cells (transistors) in a grid, but the wiring between the cells differs If a chain of transistors conducts current, it has the value of 1. If it doesn't conduct current, it's 0. 		2 GB – 512 GB	★★★★	✓	★★★★	££££
<ul style="list-style-type: none"> Each sector can be magnetised as 1 or demagnetised as 0 Data is read and written using a mechanical arm that has a head at the end In hard disc drives, a platter is divided into billions of tiny areas. As the disk spins, the arm travels across the disk Each sector of the platter can store data and the movement of both the disk and the read / write head means that every sector on the hard drive can be reached. 		128 GB – 4 TB	★★★★		★★★★	£££££
<ul style="list-style-type: none"> Each sector of the platter can store data and the movement of both the disk and the read / write head means that every sector on the hard drive can be reached. 		250 GB – 16 TB	★		★★★	£££
<ul style="list-style-type: none"> A pit is "burned" with a laser beam into the surface <ul style="list-style-type: none"> A pit represents 0 The lack of a pit (a flat, unburned area on the disc, called a land) represents the number 1 Data is stored in a continuous spiral. 			★★	✓	★	£
<ul style="list-style-type: none"> A technology that allows users to store their data on third-party servers. They can then access that data from many computing devices. 		CD: 700 MB DVD: 9 GB BD: 50 GB	★★★	✓	★★	££
<p>Cloud Storage</p>		Unlimited		✓		Free / subscription based

Embedded systems

An embedded system is a combination of software and hardware that performs a specific task whereas a general-purpose computer is designed to carry out multiple tasks.

Examples include - MP3 players, mobile phones, video game consoles, digital cameras, DVD players, and GPS. Household appliances, such as microwave ovens, washing machines and dishwashers.