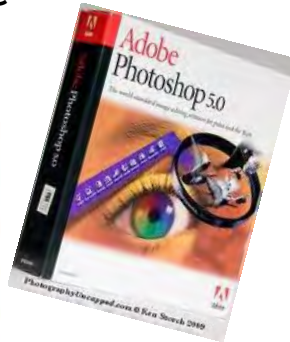


ICT systems comprise hardware and software. Hardware is anything you can touch such as the mouse or keyboard. Software is the computer programme.

Component parts of an ICT system 16.1



Input devices allow us to enter data in to a computer such as a scanner or graphics tablet.



How many input/output devices can you think of?

Output devices

An output device is one that allows information to be downloaded in the form of a hard copy such as a laser printer or vinyl cutter machine



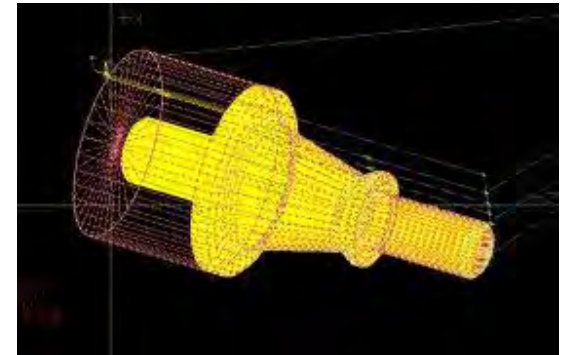
Input and output devices can enhance your work.

Photographic evidence

When completing coursework it is important to keep a record of what you have done to provide assessment evidence.



CAD or computer aided design is the process of producing designs using a computer. Once the designs are complete complex orthographic drawings can be produced.



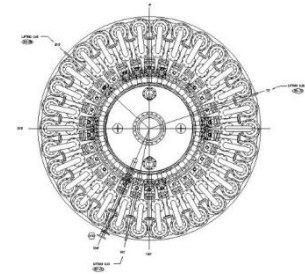
CAD

Advantages

- Fast once you know how
- Easy to modify drawings
- Standard components can be added without re-drawing
- Designs can be seen in 3D from any angle
- A standard orthographic drawing can be produced easily
- Presentation drawings can look as good as photographs
- Designs can be uploaded to a 3rd party

Disadvantages

- Very expensive to set up
- Cost of training
- Software will need updating



CAM

Once you have completed a design in CAD you can output it in CAM using a CNC machine.

Advantages

- Components are made exactly the same every time
- Very accurate
- Machines do not get tired, like humans, and can work non-stop
- Produces flexible productions as the machines can produce a range of products

Disadvantages

- Very expensive to set up
- Repairs are very expensive too and may need specialist engineers
- If the design is incorrect the component produced will be incorrect too!
- Without regular checks any mistakes will be produced in large numbers



CNC

describes the machines that can be controlled by a number system. They are a type of CAM. They are driven using G- and M- codes . These codes tell the machine what to do.

Advantages

- CNC has all the advantages of CAM
- CNC can be continually updated by downloading new software
- There is no need for a prototype or model. This save time and money.

Disadvantages

- CNC machines are more expensive than manually operated machines
- If a CNC machine breaks down production has to stop until a specialist engineer can fix it.

