

R012 Cambridge Nationals Theory -Understand the tools and techniques that can be used to initiate and plan solutions

Data means raw facts. We live in a world where lots of data is collected about us. Data collected about us includes:

- Name
- Image
- Mobile number
- Geographical Location

Data can be text ,numeric, date/time, image, Boolean

Data
734723
Information Tel 734723

Information = data + structure

Data can be collected using:

- Barcodes
- QR codes
- Web based surveys
- Wearable technology such as a Fitbit.
- Mobile Technology

Data can be stored on:

- Flash memory devices such as:
- usb memory stick
- External hard drive
- Magnetic Hard Drive(old fashioned)
- Data can be stored in a “cloud”. Stored by a company such as Google or Dropbox.



Big Data

There is so much data collected now we talk about big data.

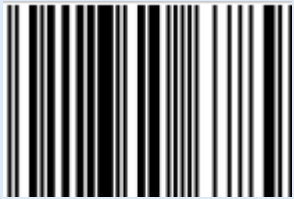
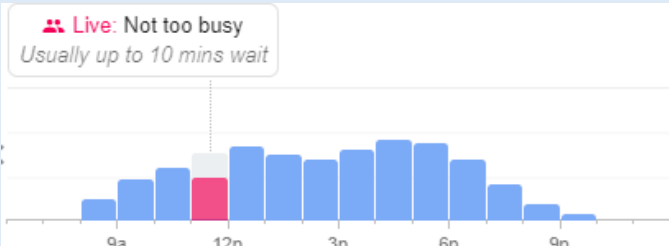
Computers can be used to spot patterns in big data.

Examples

- Most likely place for accidents on the road to happen
- Most likely place for pickpocketing to happen
- The number of calories we burn per minute when exercising.
- Products that might appeal to us based on previous purchases.
- Programmes and music we are likely to like base on previous purchases

Other methods to collect and store data:

- Questionnaire/surveys online or in person
- Email – can contact multiple people quickly.
- Sensors – Fitbit collects data on your heartrate over time.
- Supermarket loyalty schemes. These schemes track our preferences.
- Secondary Research – Government Statistics



Barcode Readers and **QR code readers** have made data capture quick and accurate.

Stock Control Systems can be kept up to date.

Laws

There are laws about the way data can be used.

Under the **Data Protection Act** data must store your data securely. They must allow you to see it if you ask. Your data shouldn't be passed on without your permission.

Copyright, Designs and Patents Act

Most applications require a licence to use them.

Computer Misuse Act

It is illegal to deliberately pass on a virus.
It is illegal to hack into someone else's comp system.

