

# Unit 8.2

## Superhero Database



# Key Word Vocabulary

During this unit you will hear the following key words. Make sure you listen carefully to each lesson as you may be asked questions at any time.

Database

Table

Record

Field

Data

Query

Form

Paper-Based

Report

Computerised

Primary Key

Data Types

# Lets create our folders!

- We need to create folders where we will save the work we do in this unit.
  1. Go into your student drive
  2. Open the Year 8 folder
  3. Open the ICT folder
  4. Create another folder called **Databases**

To create a new folder:

- Click in a **BLANK SPACE**
- Click **New → Folder**

All work for this unit  
should be saved in  
the **Databases** folder

# Definition of a Database

## Question!

What do you think a database is?

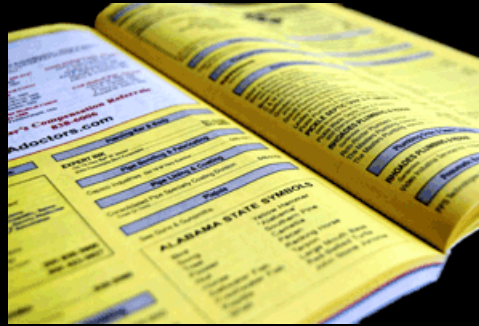
## Answer!

A database is a collection of data or information which is stored in an organised way (in some sort of order)

# Paper-Based Databases



Diary



Phone  
Directory



Calendar



Rolodex



Personal  
Organiser

# Paper-Based Databases

- Advantages of paper-based databases:
  1. Cheap to set up
  2. Don't need power supply so you can use them in a power cut
  3. Don't need to buy an expensive computer to use them
  4. Most can easily be carried around with you
  5. You don't need training to learn how to use them.
- Disadvantages of paper-based databases:
  1. They can be lost or misplaced
  2. Very hard to make copies
  3. Hard to correct mistakes made to data entries
  4. Order or data can get muddled up. This is difficult to re-sort
  5. Are hard to search and find specific data.

# Computer-Based Databases



Microsoft  
Access



Online Phone  
Directory



Internet Search  
Engines



Social Networking  
Sites



Flight Booking  
Websites

# Computer-Based Databases

- Advantages of computer-based databases:
  1. Very easy to make back-up copies
  2. Easy to update data and correct mistakes
  3. Easy to sort data into order (alphabetical for example)
  4. Very easy and quick to search for specific data
  5. They can be secured with passwords.
- Disadvantages of computer-based databases:
  1. They can be expensive to set up (especially if you hire an expert)
  2. They need power to run (won't work during power cuts)
  3. They need computers in order to run
  4. They are not portable (unless you take your computer with you)
  5. They can be difficult to use so you would need lots of training.



# What can databases store?

## Example

- Your school stores lots of data about every student.
- Think of some of the information they keep about you:

Name

Allergies

Parent's  
names

Address

Illnesses

D.o.B.

Doctor's name

Phone  
number

# Fields

- Fields are used as places to store information held in the database.
- Each of the pieces of information below is an example of a field:

**Name**

**Allergies**

**Parent's  
names**

**Address**

**Illnesses**

**D.o.B.**

**Doctor's name**

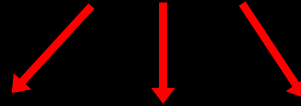
**Phone  
number**

# Fields on a Database Example

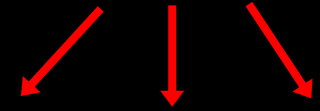
**Fields**



**Fields**



**Fields**



Student number	Surname	First name	D.O.B.	Address	Phone number	Illnesses	Allergies	Doctor
1042	Jones	Emma	05/04/95	123 High Street	01234 765555		Nuts	Dr. Brown
1043	Smith	Louise	12/08/95	45 Low Road	01234 688674	Diabetes		Dr. Green
1044	White	Simon	26/06/95	67 Middle Lane	01234 984532		Wasp stings	Dr. Yellow

# Quick Question about Fields

- A shop selling DVD's has a database.
- What could be the field names in their database?

**Title of DVD**

**Running  
time**

**Genre**

**Price**

**Actors**

**How many  
in stock**



# Records

- Records are stored within fields.
- A record is all the data about a person or an object.

## Record

Student number	Surname	First name	D.O.B.	Address	Phone number	Illnesses	Allergies	Doctor
1042	Jones	Emma	05/04/95	123 High Street	01234 765555		Nuts	Dr. Brown
1043	Smith	Louise	12/08/95	45 Low Road	01234 688674	Diabetes		Dr. Green
1044	White	Simon	26/06/95	67 Middle Lane	01234 984532		Wasp stings	Dr. Yellow

## Record

# Quick Question about Records

- What records could we store in each of the field names in our DVD shop database?

**Title of DVD**

Spiderman

**Running time**

120 minutes

**Genre**

Action

**Price**

£12.99

**How many  
in stock**

24

**Actors**

Tobey Maquire



# Fields and Records

## Fields

Student number	Surname	First name	D.O.B.	Address	Phone number	Illnesses	Allergies	Doctor
1042	Jones	Emma	05/04/95	123 High Street	01234 765555		Nuts	Dr. Brown
1043	Smith	Louise	12/08/95	45 Low Road	01234 688674	Diabetes		Dr. Green
1044	White	Simon	26/06/95	67 Middle Lane	01234 984532		Wasp stings	Dr. Yellow

## Record

# Tables

- All the fields and records are stored together in a table.

Student number	Surname	First name	D.O.B.	Address	Phone number	Illnesses	Allergies	Doctor
1042	Jones	Emma	05/04/95	123 High Street	01234 765555		Nuts	Dr. Brown
1043	Smith	Louise	12/08/95	45 Low Road	01234 688674	Diabetes		Dr. Green
1044	White	Simon	26/06/95	67 Middle Lane	01234 984532		Wasp stings	Dr. Yellow
1045	Wood	James	14/05/95	89 Uphill Drive	01234 927347			Dr. Black
1046	Wythe	Hannah	18/04/95	101 Down Avenue	01234 836475	Asthma	Plasters	Dr. Blue



# Database Key Words

**Database** - collection of data or information that has been stored in an organised way.

**Field** - one type or one piece of information.

**Record** - all the data about a person or an object.

**Table** - collection of all the database's fields and records.

# What have you remembered?

Your objectives for this part were:

- Understand what a database is.
- Know some of the **key words** associated with databases.
- To be able to discuss **advantages / disadvantages** of **paper** and **computerised** databases.