

Data Base Introduction

A great deal of computing power is spent on sorting data in some sort of order. This is not really surprising since data that is unsorted is virtually useless. Imagine trying to find a word in a dictionary that wasn't sorted into alphabetical order. Or imagine trying to find someone's phone number in a telephone book that wasn't in order.

Examples of sorted data in a school include things like form list, exam entries, the school library catalogue, etc. In the world of work, banks keep customer data sorted by account number. The gas and electricity companies do the same. A mail order firm might keep its customer data base sorted by postcode. The world of information handling is indeed a well -ordered place.

Common database terms, which are general to all types of database applications, include:

File A file is collection of related records.

Record Each collection of information for each item in a file is called a record.

Field A record is divided into separate categories, known as fields.

There are different types of field. The common ones are:

Alphabetic (in Access called TEXT) fields. These contain text which is manipulated alphabetically.

Numeric (in Access called NUMBER) fields. These recognise numbers and sort in ascending or descending numerical order. In Access CURRENCY and DATE/TIME fields can also be used as number fields where appropriate.

Alphanumeric (in Access called TEXT) fields. These contain numbers and text that do not need to be sorted in number order. For example, telephone numbers.

Elements of an Access database

The various elements that you will be working with in Access are referred to as objects. These include

Table	for holding information;
Queries	for asking questions about your data or making changes to it;
Forms	for editing and viewing information;
Report	for summarising and printing information.

**Database
Assignment one**

Mr **V. Honest** the manager of **Dodgy Deal Motor** has asked you to create a database for his stock of cars in his show room listed below.

Make	Model	Engine cc	Doors	Miles	Price
Rover	97	1.8	5	20000	£11,495
Mini	76	1	2	59000	£2,495
Ford	93	1.8	5	60000	£2,499
Rover	93	1.4	5	20000	£15,795
Honda	95	1.6	3	80000	£6,590
Nissan	98	1.5	3	22000	£5,999
Peug.	00	1.4	5	3000	£6,999
Metro	90	1.1	3	90000	£1,495
Renau.	97	1.4	3	43000	£4,950
Escort	98	1.6	5	30000	£5,150
Fiat	95	1.2	5	55000	£3,300
Rover	96	1.8	5	45,000	£5,999
Toyota	98	1.5	5	14000	£11,995
Fiat	96	1.2	3	10000	£5,999
Golf	90	1.3	5	75000	£11,00
Polo	93	1.3	3	70000	£2,250
BMW	97	2	5	20000	£7,750

Rover	99	1.8	5	10000	£14,495
Citroen	97	1.6	5	40000	£1,995
Audi	99	1.6	5	2000	£12,995
Mini	93	1.0	2	40000	£1,999
Ferrari	99	1.8	3	20000	£22,900
RR.	98	2.5	5	21000	£39,990

Creating a new database

1. Load Access
2. Click the option Blank database, in order to create a new one, and click OK.
3. Type “cars” for your file name
4. Click on “table”
5. Double click on “ Create table in Design View”. The table is usually chosen by default.
6. Define each field in the table. There are six fields **Make, Model, Engine, Doors, Miles** and **Price**. Type “ Make” in the “ Fields Name” and the then select “Text” under the “Data Type”. Follow the same procedure for each field. Remember to select “Number” or “Currency” for other fields. As those fields contain numbers.
7. Close the page and save it “**carstable**”.
8. Close the database design window by clicking on the x at the top right of the window.

Entering data

1. Click the table’s tab, if not already selected. The table window appears.
2. Key in the data from page two in the appropriate fields.
3. Close your table by clicking x at the top right of the table window.

Queries

Queries are one of the most important tools in a database for converting raw data into useful information. A query can be thought of as a request to find all records satisfying certain criteria so that they can be displayed in a form or record.

Create a query

1. In the database window click the **Queries tab**, and then click **New**.
2. Double click design view.
3. Select **carstable**, click **Add** and then **Close**.

4. The next step is to select the fields that you want to see in the query. Click the Down arrow in the field cell and select each field as you go along.
5. Click in the Sort row and select **Ascending**
6. In the Show row click to each square as we want to see them all.
7. Save the query, naming it **Query1**
8. Run your query to see the result.

Create the following queries

Using the above procedure

- | | | | | | |
|----|---------------|-------|-----------------|--------------|------------------|
| 1. | query2 | Model | Descending | use sort row | |
| 2. | query3 | Doors | Ascending | use sort row | |
| 3. | query4 | Miles | Descending | use sort row | |
| 4. | query5 | Miles | less than 40000 | <40000 | use criteria row |
| 5. | query6 | Price | Descending | use sort row | |
| 6. | query7 | Price | Ascending | use sort row | |
| 7. | query8 | Price | More than £5000 | >£5000 | use criteria row |
| 8. | query9 | Price | Less than £8000 | <£8000 | use criteria row |