

Queries are used to retrieve or manipulate the data in our database tables. At this stage, we will only be using SELECT queries, which are essentially customisable filters. Data can be retrieved based on criteria such as:

- Fields and Tables** The fields that should be displayed and the tables they are present in.
- Records** Records can be filtered by date, the text they contain, numbers over a set amount etc.
- Order** The records can be placed in a particular order.

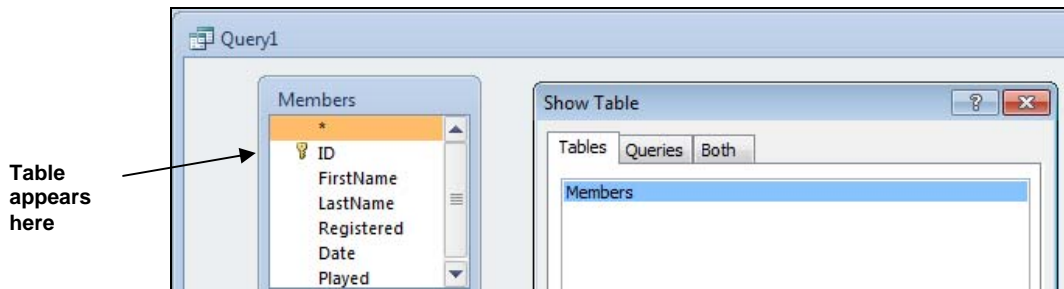
When a query is executed, the results appear in a datasheet. This is a filtered display of data – the actual tables have not been changed in any way. The tasks below use a query builder to produce a number of queries.

**Task 1 – Building a Query**

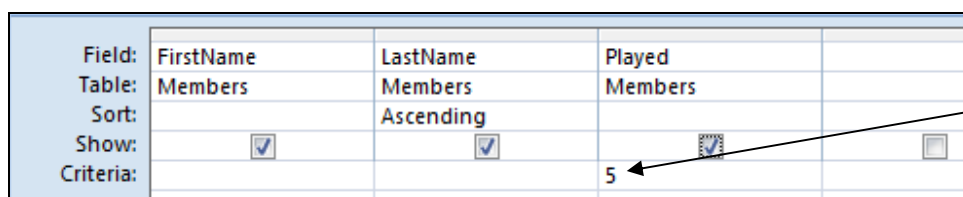
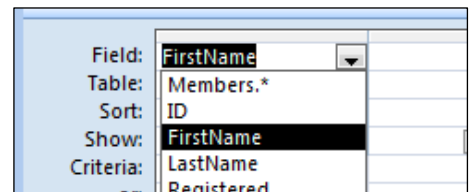
A database holding information about members of a bowling club was created in a previous task. Either copy and paste this file as your starting point, or create a new database and table for the data below. Name the database 'AS - Queries' and the table 'Members'.

ID	FirstName	LastName	Registered	Date	Played
1	Sarah	Johns	Yes	01-Mar-10	5
2	Charles	Collins	No		4
3	Richard	Chew	Yes	01-Mar-10	5
4	Paul	Logan	Yes	05-Apr-10	5
5	Gareth	Jones	No		4
6	Amelia	McDermott	Yes	01-Mar-10	3
7	Lisa	Beagley	Yes	05-Apr-10	5
8	Mark	Stone	Yes	08-Mar-10	4

- a. Open your database, click on the 'Create' tab in the ribbon and then select 'Query Design'.
- b. Make sure the 'Members' table is selected in the 'Show Table' window and click 'Add'. A small box showing the fields in your table will appear in the query builder window. Close the 'Show Table' window.

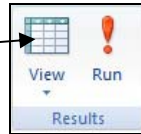


- c. Select 'FirstName' from the drop-down list in the first column. This field will be displayed first.
- d. Select 'LastName' in the second column. Click on 'Sort' box and select 'Ascending' from the choices (see the picture below).
- e. Select 'Played' in the third column. In the 'Criteria' box, type '=5'. This will return only records for the people who have played 5 games.



- f. Run the query by clicking on the 'Run' button (although clicking on the 'Datasheet view' icon will do the same thing in this case). How many records and fields are returned?

Use this icon to switch between 'Datasheet View' and 'Query Design View'.



- g. Return to 'Design view' and remove the tick from the 'Show' box in the 'Played' column. How many records and fields are returned now?

Field:	FirstName	LastName	Played	
Table:	Members	Members	Members	
Sort:		Ascending		
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Criteria:			5	

Remove the tick from the 'Show' box in the played column.

- h. Close the query and name it 'Played5'.

## Task 2 – Further Queries

Create the following queries and explain in plain English what results they return. In each case, mention the fields, the records and the sort order.

- a. Query name - Registered

Field:	FirstName	LastName	Registered	
Table:	Members	Members	Members	
Sort:		Ascending		
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Criteria:			Yes	

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- b. Query name – RegisteredLate

Field:	FirstName	Date	Played	
Table:	Members	Members	Members	
Sort:		Descending		
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Criteria:		>#1/03/2010#		

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- c. Query name – Played5or3

Field:	FirstName	LastName	Played	
Table:	Members	Members	Members	
Sort:			Descending	
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Criteria:			=5	
or:			=3	

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## Task 1 – Building a Query

FirstNam	LastName	Played
Lisa	Beagley	5
Richard	Chew	5
Sarah	Johns	5
Paul	Logan	5
*		0

FirstNam	LastName
Lisa	Beagley
Richard	Chew
Sarah	Johns
Paul	Logan
*	

## Task 2 – Further Queries

Create the following queries and explain in plain English what results they return. In each case, mention the fields, the records and the sort order.

### a. Query name - Registered

Field:	FirstName	LastName	Registered
Table:	Members	Members	Members
Sort:		Ascending	
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:			Yes

Display three fields in the following order: *FirstName, LastName, Registered*.  
 Display only records where the person has registered.  
 Sort by *LastName, Ascending*.

### b. Query name – RegisteredLate

Field:	FirstName	Date	Played
Table:	Members	Members	Members
Sort:		Descending	
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:		>#1/03/2010#	

Display three fields in the following order: *FirstName, Date, Played*.  
 Display only records dated after 1/3/10.  
 Sort by *Date, Descending*.

### c. Query name – Played5or3

Field:	FirstName	LastName	Played
Table:	Members	Members	Members
Sort:			Descending
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:			=5
or:			=3

Display three fields in the following order: *FirstName, LastName, Played*.  
 Display only records of players who have played either 5 or 3 games.  
 Sort by *Played, Descending*.