

This guide introduces simple data processing techniques using Microsoft Access. The following guide makes use of a database named “*PayMaster.mdb*” which should be used along with the exercises described below for a better understanding of simple data processing using Microsoft Access.

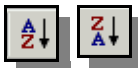
Four basic means of manipulating, getting data from a database are: Sorting, Filtering, Finding, and Counting.



Find

The most common request from a database is to find a specific set of information.

Sorting data organises the data according to a particular order. Microsoft Access allows ordering of data either alphabetically, numerically, or chronologically (according to date.)



Filtering allows the extraction (taking out) specific bits of data depending on some specific value (filter.) The filter can either specify information to be included, or specifies information for records to be rejected (omitted.)

Copy the file *PayMaster.mdb* into your own folder for further study.

The file *PayMaster.mdb* should be available on the server, check with your teacher the location of the file.

Open the file *PayMaster.mdb* by double-clicking on the file or opening it from Microsoft Access.

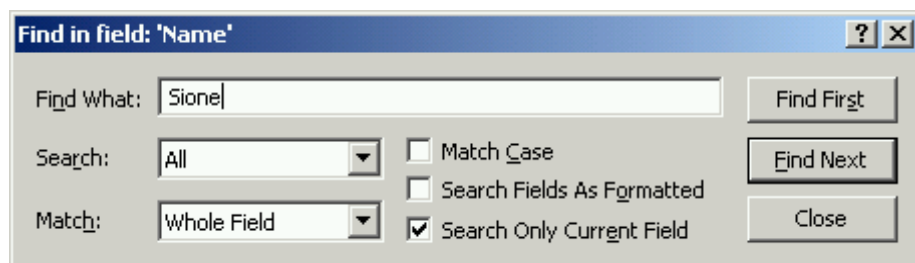
Finding Data

Let’s find out if anyone of the Employees has the First Name “Sione”

- 1 Open the table Employee and you will get a spreadsheet grid (DataView) with a list of all the records in the Employee table.
- 2 Click on the [Name] column (because this is the column we want to look at.)
- 3 Click on the Find Icon (pictured to the left) or you can use the short-cut key **Ctrl + F**
- 4 In the dialog box that shows up (such as the above) Enter the text that we



Find



want to look for: Sione

- 5 Make sure the tick mark is set for “Search Only Current Field.” This makes sure that we are only looking for Sione in the Name column and we are not

interested if Sione is in the [Surname] column, [Birthdate] or any other column.

- 6 Make Sure the “Search:” drop-down list is set to **ALL**, since we want to search all of the records in this column.
- 7 Click on “Find First” and Access will look for the first time it finds “Sione” in the Name column (field.)
- 8 If you continue with “Find Next” you should be able find that Sione is in the

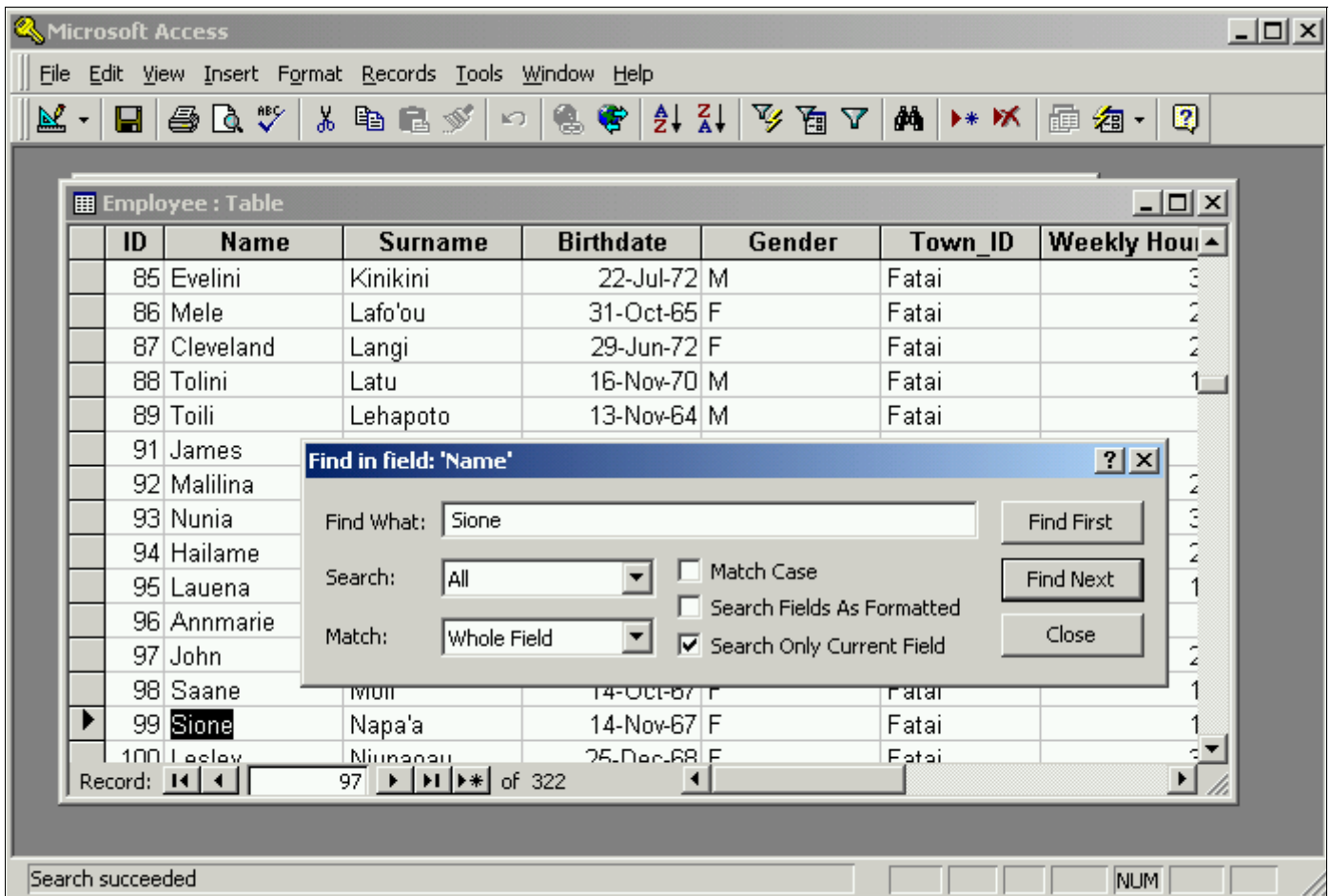


table in six records. Write down the ID numbers where you can find Sione.

Sorting Data

Sorting the Alphabet

Sorting data makes it easier for readers to quickly look for data they wish to find. Most of us, when looking at names, find it easier to look up names if the data is organised alphabetically either by first-name, or by last-name (surname.)

In this exercise we will 1st sort by the First Name [Name] and then by Last Name [Surname].

- 1 Open the Employee table.
- 2 Click on the Name column heading

- Click on the Sort Ascending button (A to Z) and the data will be arranged so that records are ordered alphabetically according to the first name.



Sort Ascending

- Try sorting the Surname's alphabetically in descending order and see if you

ID	Name	Surname	Birthdate	Gender	Town_ID	Weekly Hour
241	Aisake	Lalahi	05-Dec-64	M	Kolofo'ou	2
302	Alamita	Lei	16-Mar-73	M	Fasi-moe-A	3
66	Aleki	Fatai	09-Jan-71	F	Fatai	1
111	Aleki	Sapoi	25-Dec-65	M	Fatai	3
164	Alice Eugene	Tu'ipulotu	04-Jul-68	M	Sia-ko-Veir	



Sort Descending

can get something similar to the following diagram.

To perform more complicated sorting, such as sorting the Females by Last-name,

ID	Name	Surname	Birthdate	Gender	Town_ID	Weekly Hour
170	Catherine	Zhang	12-Apr-73	M	Kolomotu'a	2
138	Ken Jing Peng	Wu	27-Mar-68	M	Fatai	1
276	Peter	Wong	03-Jan-68	M	Kolofo'ou	2
169	Lokeen	Vuki	26-Jun-64	M	Kolomotu'a	
275	Ana	Vuki	03-Apr-67	M	Kolofo'ou	2

then by First-name requires using Queries, and we will take a look at that later.

Sorting Numbers

Fields containing numbers (data-type: Number) can be sorted in *ascending* order (lowest number to highest number) or *descending* order (highest number to lowest number.)

Sort the [Pay Rate] field in *descending* order and find who is getting paid the highest per hour.



Sort Descending

Name: _____ Pay Rate: _____

Sort the [Pay Rate] field in *ascending* order and find who is getting paid the least per hour.



Sort Ascending

Name: _____ Pay Rate: _____

Sorting Dates

Fields containing dates (data-type: Date/Time) can be sorted in ascending order (earlier date to later date) or descending order (later date to earlier date.)

Sort the [Birthdate] field in *ascending* order and find who is the oldest.

Name: _____ Birthdate: _____

Sort the [Birthdate] field in *descending* order and find who is the youngest.

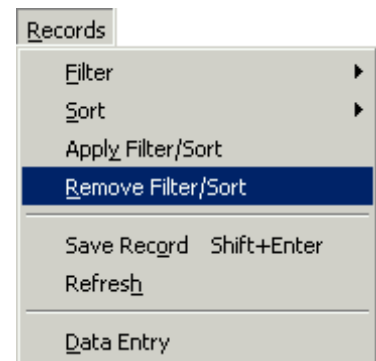
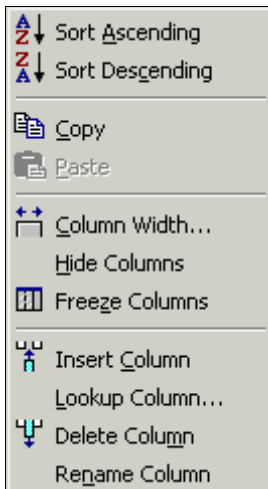
Name: _____ Birthdate: _____



Shortcuts and Clearing Sorts

Sorting can be achieved by either using the Toolbar icons, or when you right-click on a column header the Quick-Menus provide short-cuts for selecting the sorting sequence you can pick (as shown on the diagram to the left.)

To return the table to its original state (before all the playing around we have done with Sorting) you can use the Records menu and the Remove Filter/Sort command.

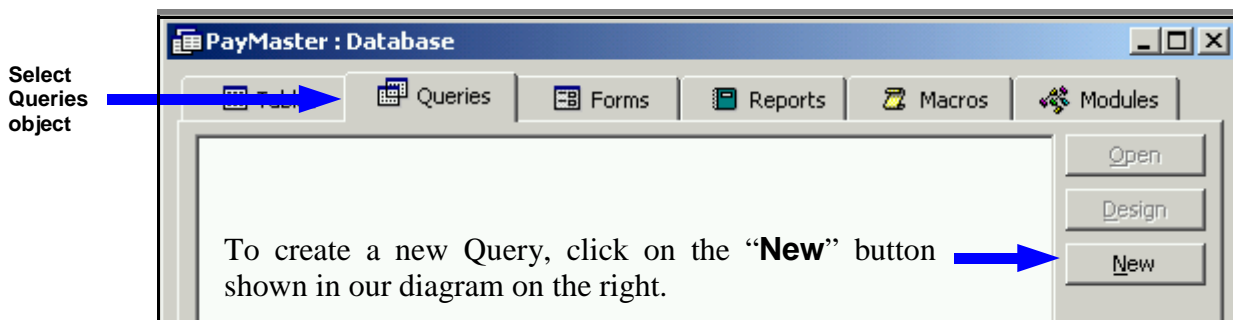


Sorting with a Query

Queries allow us to make more complicated sorting.

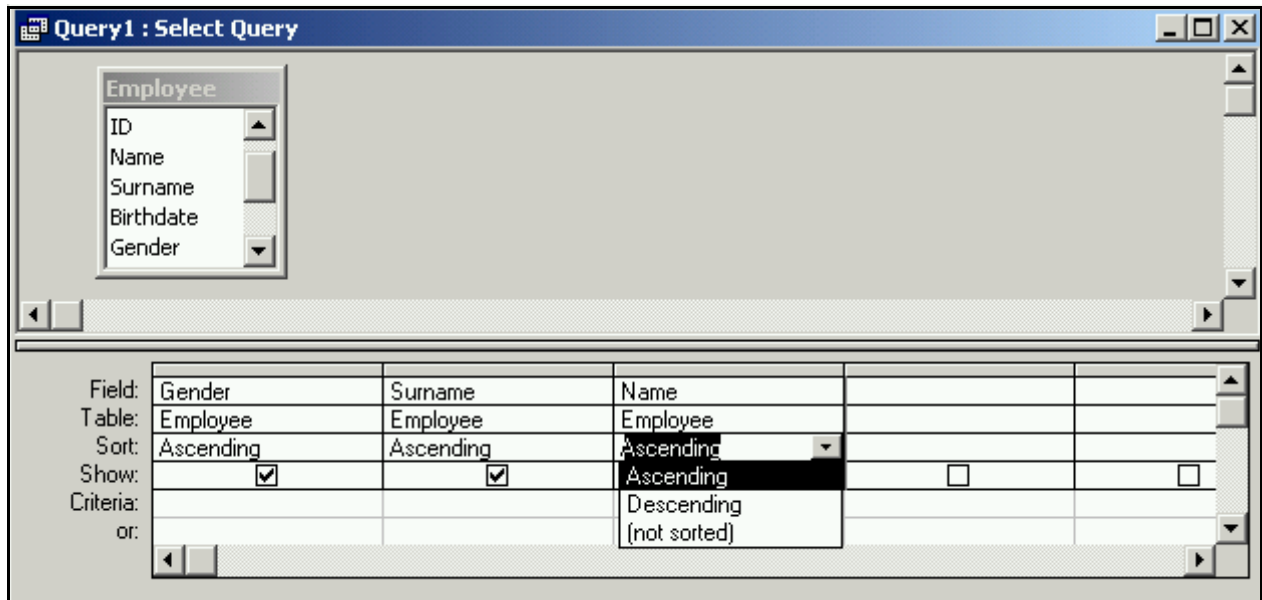
For example most high-schools list their roll books by different Genders, and within these genders sort in ascending order by Last Name [Surname] and ascending order by First Name [Name].

- 1 Start a New Query by going to the Queries object



- 2 Click on the New Button and select *Design View*.
- 3 When the "Show Table" dialog shows up, select the *Employee* table, add it and then close the dialog box.

- 4 We select the fields in the order that we want them sorted so we first select [Gender] (by double-clicking on Gender in the Table list) and then [Surname], [Name].
- 5 We can now use the Sort row to specify how we wish the field/column to be sorted before being displayed. A drop-down list box allows *ascending*, *descending*, or *not sorted*. We select ascending for each of the fields.



- 6 Click on the DataSheet View button to look at the results of our query.

SOURCES AND REFERENCES:

Bowden, Greg Guided Database Activities Using Microsoft Access (Cambridge, Cambridge University Press, 1998)

<http://www.tongatapu.net.to/compstud/> - Computer Studies Course Notes
<http://www.tongatapu.net.to> - **Tonga on the 'NET**

<http://www.tongatapu.net.to> is available on all networked computers at Queen Salote College.

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