Using Microsoft Access

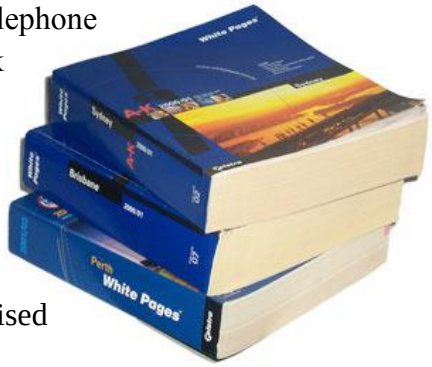
Getting Started

Microsoft Access is a computer application used to create and work with databases. In computer jargon that means it's a **Relational Database Management System** or **RDBMS**.

So what is a database? A database is basically a collection of data or pieces of information. Whether you know it or not, you probably use databases all of the time. Some examples of commonly used databases might be:

- Address book
- Library catalogue
- Telephone directory
- Stock list

A database isn't necessarily contained on a computer. A telephone directory is still a database even if it's in the form of a huge book sitting next to your phone. However, for the purpose of these exercises, we will assume that the term database refers to an organised collection of information stored on a computer. Telephone books have largely been replaced these days with computer based searches anyway (such as on the white pages website). And those searches use – you guessed it – a computerised database.



Databases are intended for storing and maintaining large amounts of information. The following are examples of the sort of information that can be kept in a database:

- Inventory control
- Payroll systems
- Personnel records
- Music collection catalogue
- Phone and address lists

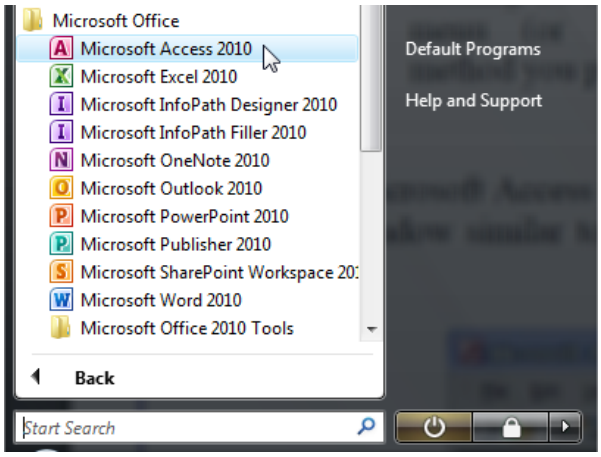
In the exercises that will follow you will create a simple database while you learn the basic features of Access. Later on, you will create a more complex database as you learn more advanced features in addition to some of the principles of database theory. In these exercises it is assumed that you are familiar with Windows use and have experience in using other applications such as Word or Excel. Access can be a little tougher for beginners so if you're new to computers, you might want to start with one of those.

Note Much of what is taught in these exercises will work fine in most versions of Access up to Access 2010. However, some features may be missing or slightly different in older versions. Also, databases created in newer versions of Access won't work in some older versions. Examples shown in these exercises are from the 2010 version (also known as Access 14 which is the 9th version of Access).

Getting to Know the Program

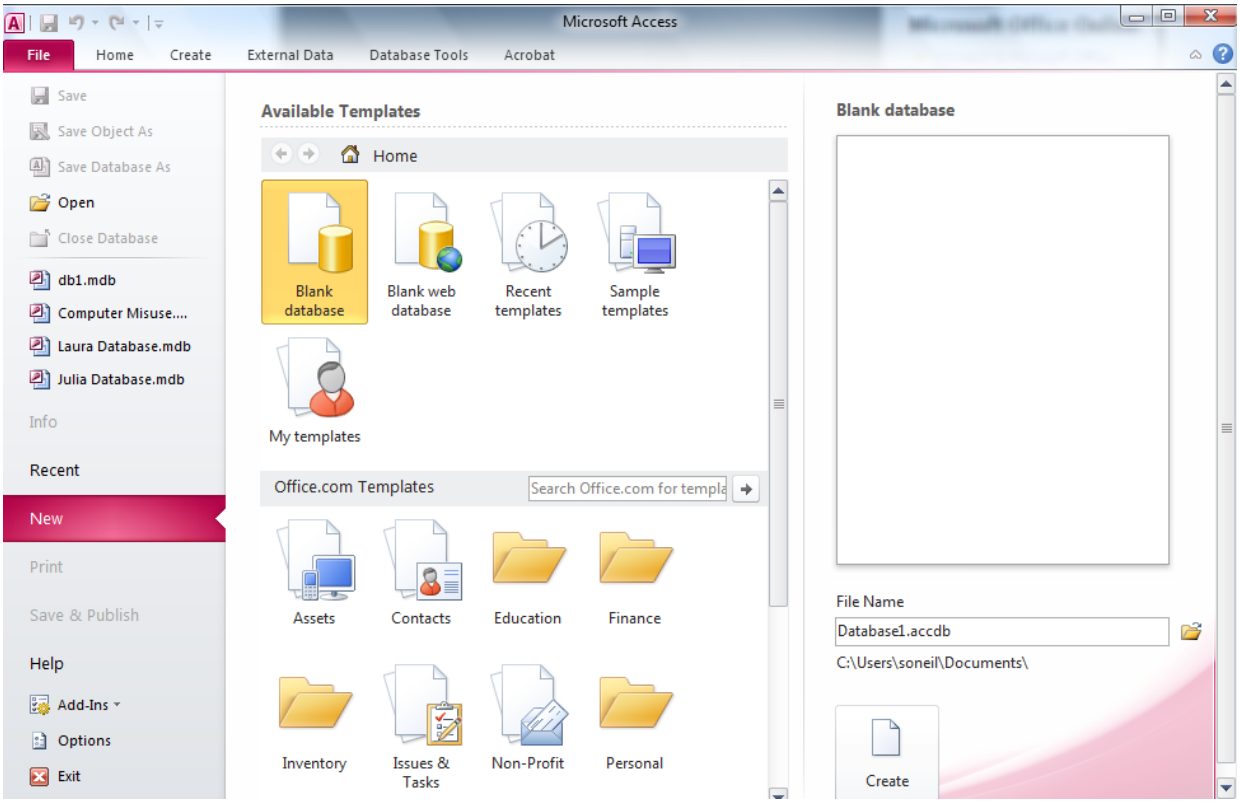
Exercise 1. Starting Microsoft Access

Like most applications, Access can be started in several ways, such as clicking the **Microsoft Access** shortcut in the **Windows Start Menu** as shown. The location on the start menu will vary on different computers.



1. Start **Microsoft Access** by clicking its icon on the **Start Menu** (or by any other method you prefer such as an icon on the desktop).

When Microsoft Access begins, you will see a window similar to the one shown below. This screen is referred to as the **Backstage View**.

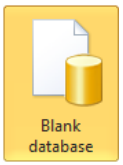


On the left you can see the **File Pane** with a list which includes options to Open a recent database or create a new one. When you first open Access the new database option will usually be selected. The main screen area will show options depending on what is selected in the **File Pane**. At the moment, the **New File** options will be displayed allowing you to create a new blank database, or create one using one of the built-in templates.

Creating a New Database

Once big difference between Access and other Applications such as Word and Excel is that in other applications, you can often start working with a blank document as soon as you have created one. In Access, however, you often need to spend a lot of time planning and setting up the structure of a database before you can begin using it.

The first step is to create and save a blank database file. In other programs, you usually don't save a file until you've done something with it but in Access, saving the file is the first step. This is because in Access, many things are automatically saved as you work so Access needs to know where to save it all right at the start.

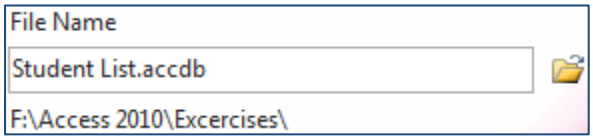


Exercise 2. Creating a Database File

1. Make sure **Blank database** is selected in the options available.

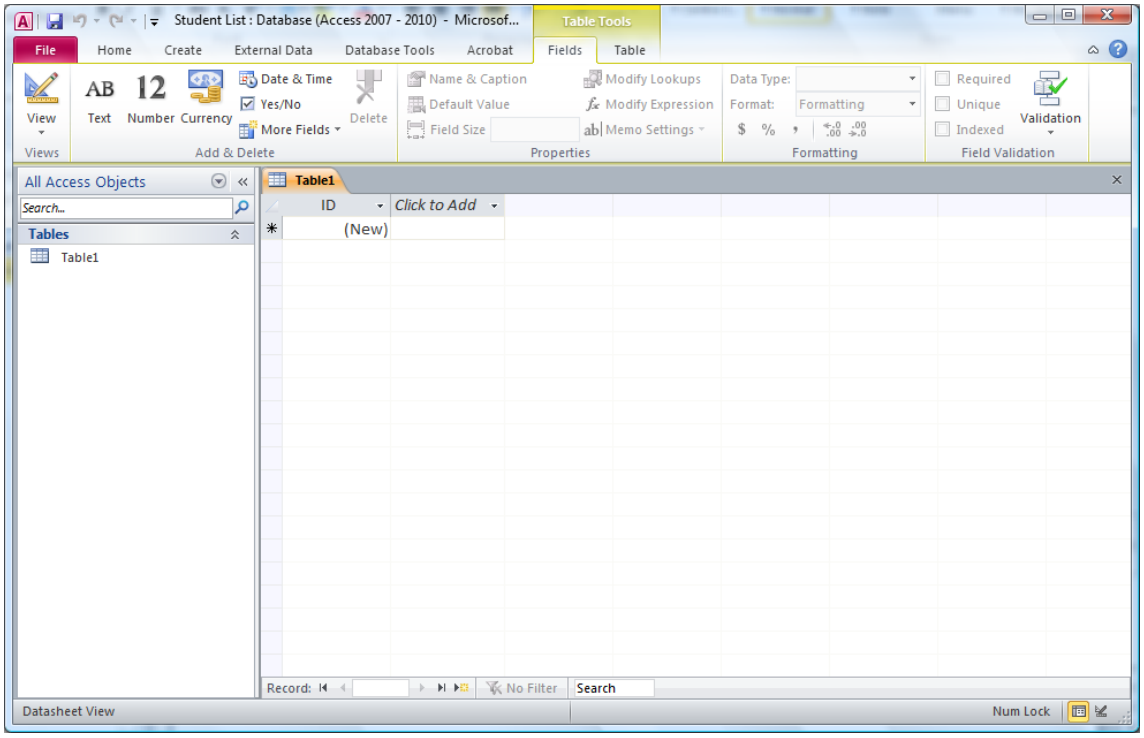
Options for saving your file are in the bottom right section of the screen.

2. Click the Browse icon and then select a folder to save your database in.
3. Type *Student List* for the filename. Access will add a .accdb file extension on the end of the filename when you create it so you don't need to type that yourself.



4. When you have selected the location and specified the filename, click the **Create** button that is below the file location options.

Note Unlike the files you might create in another application such as Word, Access databases can be opened by more than one person at the same time. It is common for Access databases to be saved on a network where many people can access the information (hence the name). While you are setting up the database though, it is usually best to keep it in a location that is not open for others to modify.



Databases are made up of various **objects** such as **tables**, **queries** and **forms**. When you have created some of these in your database, they will be listed on the left so that you can quickly get to them. Some older database management systems required you to create a separate file for each object in the database. In Access, all of these database objects are contained in the same database file. The first database object we will look at is tables.

Tables

Tables are the most important component of an Access database because tables are where all of your information is stored. Tables in an access database are similar in many ways to Excel tables. Most Access databases will consist of more than one related table, but the first database we will create will be a simple, single-table database. Each table is made up of columns referred to as **Fields** and rows referred to as **Records**.

Example: A telephone book is made up of several related tables. There is the main table which contains all of the phone listings. There are also related tables containing information such as area codes and post codes. The following is an example of how a telephone listing may appear in a phone book.

				Field	
	Name	Initials	Address	Suburb	Phone
	Smith	A J	12 Smith St	Kalgoorlie	90911234
Record	Smith	A L	18 Invisible Ave	Kalgoorlie	90914321
	Smith	A R	4 My Street	Boulder	90910987
	Smith	B D	912 Long Rd	Kalgoorlie	90917890

Each category of data (Name, Initials, Address etc) is a **field**.

Each individual item of information (such as the information for A L Smith) is a **record**.

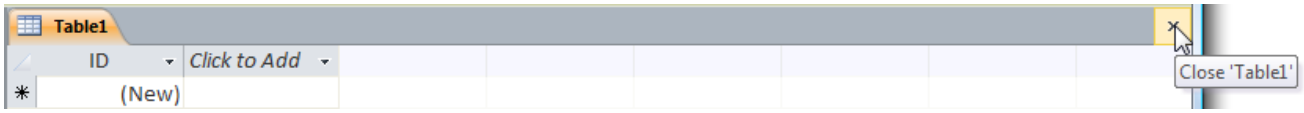
Fields and Primary Keys

When you create a new table, one of your first tasks is to create the fields that will make up the table. One of the fields should be a primary key. A **Primary Key** is a field which is unique to each record. In the example above, **Name** is not unique for each record, since more than one record can contain the same name as shown. The same is true for **Initials** and **Suburb**. It is even possible that there may be more than one phone listing for people at the same **Address**. Therefore the only field which would be unique to each record is **Phone**, since each phone number would only have one listing in the table. This would make Phone a good choice for a primary key. The importance of primary keys will be explained more later on.

Exercise 3. Creating a Table

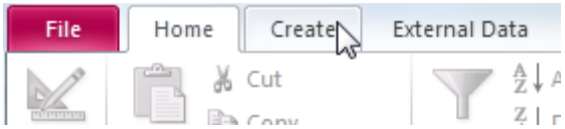
When you have created a new database, a new blank table is already created. You could create this table as you go by simply entering data. It is generally recommended that you plan a database before working on it though. Making it up as you go along doesn't always work quite as well as it does in other applications so we will close the existing table without saving any changes, and then create a new one using the design view.

1. Click the **Close** button to close the table. Unless you've made changes you won't be prompted to save anything.



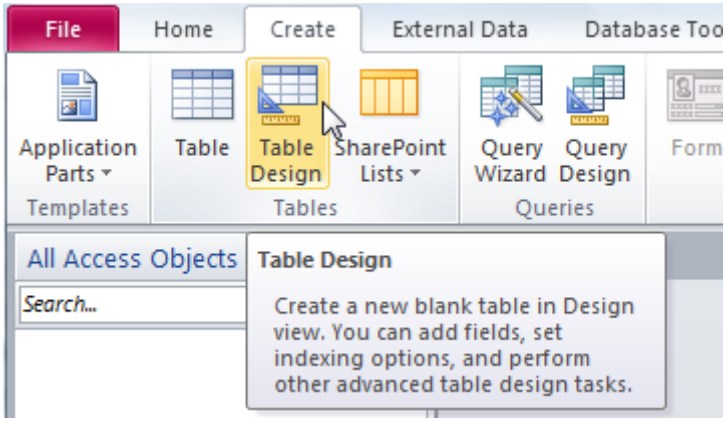
Now we will use the **Ribbon** to create a new table. Users of earlier versions of Microsoft Office applications may be familiar with **Menus** and **Toolbars**. *Office 2007* and now *2010* merged them in to the Ribbon. This can be confusing at first but works well when you're familiar with it.

2. Click the **Create** tab on the **Ribbon**.

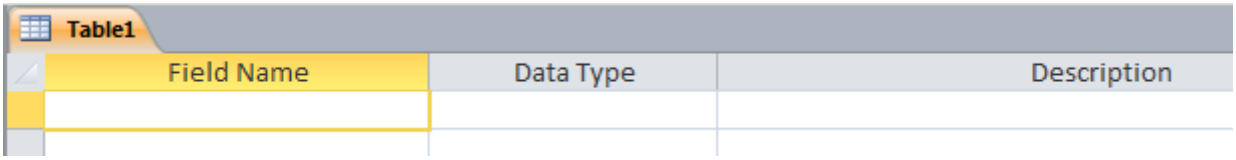


In the create tab we can see some options for creating new content in your database including Tables. You can create a new table in the **Datasheet** View which is the view you use for entering data in to the table. We will use the **Table Design** view which is well suited for setting up the structure of a table.

3. Click the **Table Design** button beneath the **Create** tab.



A new table will now be created and displayed in **Table Design** view.



The top section of the window is where you enter the names of the fields in your table along with the data type for each field. When you have a field name selected in the top section, the bottom section will display properties which allow you to customise the selected field.

Field Data Types

Each field in a table can be one of several available field types. When you enter a field name in the design view, the next column will allow you to choose a field type. The following field types are available to choose from. You will use several of these in later exercises.

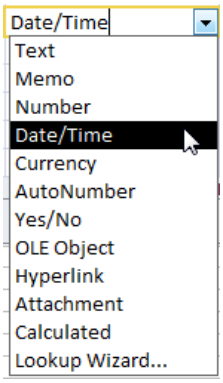
Text	This is the default field type since it is the most commonly used. Text fields can store any kind of text/numeric characters with a maximum of 255 characters. This field is best suited for text or numbers that don't require calculations (such as phone numbers).
Memo	Stores large amounts of text or numbers – up to 63,999 characters. Uses more memory on your computer than a text field.
Number	Stores only numbers. Useful for fields that may require calculations. For numbers that don't require calculations (such as phone numbers) you are better off sticking with Text fields which use less space.
Date/Time	For fields that will be used to store dates or times.
Currency	Used for storing monetary amounts.
AutoNumber	Automatically generates a unique number for each new record. Useful for primary key fields.
Yes/No	Fields that contain only one of two values (such as yes/no, true/false, on/off).
OLE Object	This is used for fields that need to link to an external object, such as a picture or document.
Hyperlink	Used or fields that will store links, such as web URLs, email addresses and network locations.
Attachment	You can attach images, spreadsheet files, documents, charts, and other types of supported files to the records in your database, much like you attach files to e-mail messages.
Lookup Wizard	This allows you to create a drop down list so that a user of the database can choose from a list of options rather than typing data.

Exercise 4. Creating Fields

1. Make sure the first row in the **Field Name** column is selected.
2. Type *Last Name* and press **[Tab]** or **[Enter]**. This will move you to the **Data Type** column.

Notice that the bottom part of the window now changes to show properties for the selected field. We will look at Field properties later on.

3. Leave the Data Type as *Text* and press **[Tab]** or **[Enter]** to move to the **Description** column.
4. In the **Description** column type *Last name of the student* and press **[Tab]** or **[Enter]** to move on to the next line.
5. For the next field enter *First Name* as **Field Name**, Text as **Data Type** and *First name of the student* as the **Description**.
6. For the next field enter *Date of Birth* as **Field Name**.
7. In the **Data Type** column we want to change it to **Date/Time**. An easy way of selecting Data Types is to press the first letter of the one you want. Press the letter D and Date/Time will become selected. Enter *Birth date of the student* for the **Description** and move to the next line.



8. Complete the remainder of the fields so that they are the same as the ones shown below.

Table1

Field Name	Data Type	Description
Last Name	Text	Last name of the student
First Name	Text	First name of the student
Date of Birth	Date/Time	Birth date of the student
Address	Text	Student's street address
Suburb	Text	Suburb the student lives in
Postcode	Text	Postcode of the Student's address
State	Text	State the student lives in
Phone	Text	Student's telephone number
Gender	Text	Is the student Male or Female
Mark	Number	Mark the student got on the test
Comment	Memo	Additional information about the student

Note it is not essential to provide a description for each field but it is a good idea. These descriptions can be used for certain features in other parts of your database.

Tip Notice that instead of just having one field for the student name we have separate fields for last name and first name. This enables us to search and sort the table by last and first names separately. We have separated the address in to separate fields for the same reason so that information in the table can be searched/sorted by suburb, postcode etc.

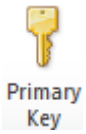
Exercise 5. Creating a Primary Key

At the moment the table has no primary key specified. None of the fields would contain information that would be unique to each student. For instance, the same last name could be shared by more than one student so last name could not be used to identify a specific student record. The same is true for each other field. In cases like this where there is no field unique to each record, a new field can be created and used as a primary key.

1. Click on the first field (Last Name).
2. Use one of the following methods to insert a new Field before *Last Name*.
   - Right-click on the Last Name field and select Insert Rows
   - Make sure the **Table Tools Design** tab is selected on the **Ribbon** and click the Insert Rows icon
   - Select the field by clicking the small blank button to the left of the field name and then press the **[Ins]** key on your keyboard.

3. Enter *Student No* as the new **Field Name**.
4. Choose *AutoNumber* as the **Data Type**.
5. For the new field **Description** enter - *Unique identification number*.

An AutoNumber field is the only type where you don't need to enter anything in to a record. For each new record entered, Access will automatically place a new number in the AutoNumber field. It is useful as a primary key field as it ensures that each record will have a number that is different from every other record.



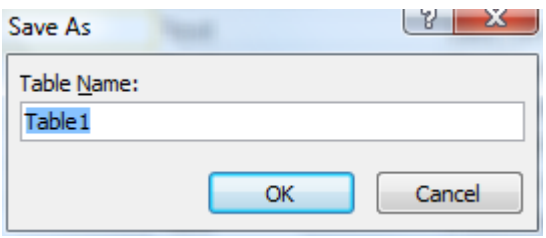
6. Make sure the **Student No** field is still selected.
7. Click the **Primary Key** icon on the **Ribbon**. You can also right-click on the **Student No** field and select **Primary Key**.

If you accidentally set the wrong field as a primary key, then simply select the intended field and choose the primary key option once again to set it as the new primary key.

Exercise 6. Saving a Table

It is usually best to specify a primary key for a table before saving it as we have done. Otherwise, Access will want to create an extra field as a primary key. When a table is saved, it doesn't become a new file. It becomes an object within the database file you have already created. In all other ways though, it is similar to saving a file.

1. Click the **Save** icon in the top left corner of the Access window (it looks like a small disk as in most other applications). You can also use the [Ctrl] [S] shortcut that is common to many applications.
2. For the table name type *STUDENTS*.
3. Click **OK** to finish saving the table.



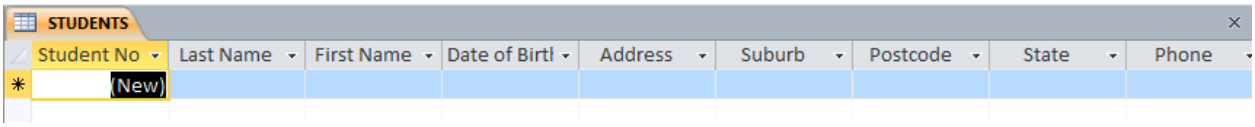
Tip You should give the table a name describing the data it will contain. Also, some developers like to use names that will distinguish tables from queries, such as using uppercase letters or name prefixes.

Exercise 7. Entering a Record

While a table is open, you can quickly switch between the **Design View** (used for modifying the design of the table) and the **Datasheet View** (used for working with the actual data in the table).

1. Click the **View** icon on the **Ribbon**. This icon allows you to switch between **Design** and **Datasheet** Views.

When you are in Datasheet view (as you should be now) the icon will change to a Design icon.



Notice that the first column is for the **Student Number** field and it is filled with the text (New). We don't need to enter anything in this field since a student number will be generated automatically (remember that's what an AutoNumber field's for) so press **[Tab]** to move to the Last Name field.

2. Type *Robbins* as the **Last Name**. Notice that as soon as you enter information, a number will appear in the **Student Number** column. Every record will be given a unique number. If you delete a record, that number won't be used again.
3. Press **[Enter]** or **[Tab]** to move on to the next field.
4. Complete the rest of the fields as shown below.

Student No	Last Name	First Name	Date of Birth	Address	Suburb	Postcode	State	Phone	Gender	Mark	Comment
1	Robbins	Mark	17/06/95	124 Kensington Ave	Dianella	6059	WA	(08)93751234	Male	78	

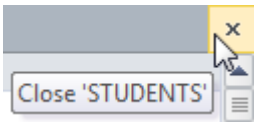
5. When you reach the last field (**Comments**) press **[Enter]** again to move to the next line.

As soon as you move off that row, the record will be saved. Changes to table data are saved automatically in Access. The only time you need to save any changes yourself is when you've modified the structure of a database by adding or modifying the design of objects (such as tables). Changes to data are saved for you.

6. Click the **View** icon to return to the **Table Design** view.

Exercise 8. Closing a Table and Closing a Database

You can close a table the same way you would close an open document in another program. These methods include:



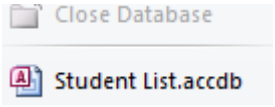
- Clicking the **Close** button in the corner of the window as shown.
- Pressing **[Ctrl] [F4]** or **[Ctrl] [W]**.

1. Use one of the above methods to close the table.

If there have been any changes to the design of the table since you last saved you will be prompted to save the changes.

2. To close the database without exiting **Microsoft Access**, select the **File Tab** from the **Ribbon** and then choose Close Database. You will be returned to the **Backstage View**.

Exercise 9. Opening a Database



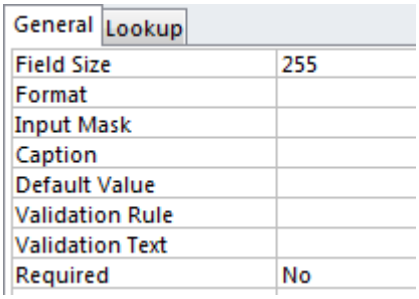
Opening a database in Access is similar to opening a file in another program. When you have no database open, the **Backstage View** will be displayed. Any recently used database will be listed on the left side.

You can also open a database by clicking Open or pressing **[Ctrl] [O]**.

1. Use one of the above methods to open the *Student List* database.

Table Properties

A database will often be used by a lot of different people and the person designing it will not always be one of those users. For that reason, it is important to ensure that the database is designed to be easy to use. A table's fields each have several properties that can be changed to make the table easier to use. The properties available for each field will vary depending on data type. The following table provides a summary of the purpose of each field property.

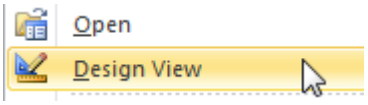


Exercise 10. The Field Size Property

With your database open, the objects within the database will be listed to the left. Currently the only item in the list will be your *STUDENTS* table.

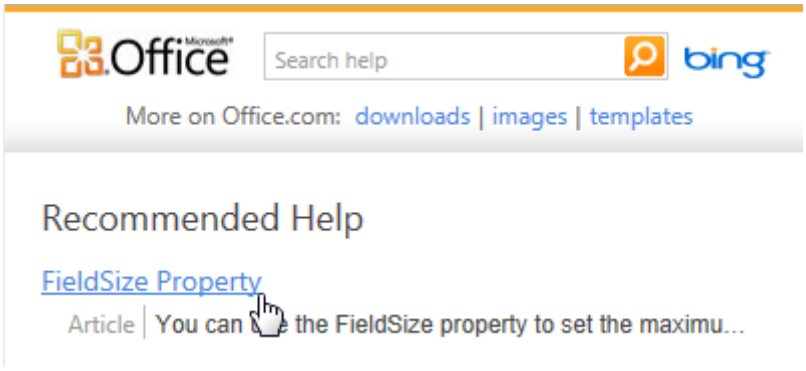
To open an existing database you can double click its name in the list, and then click the **View** icon to change to **Design View**.

You can also go straight to **Design View** by **right-clicking** the name of the table and then selecting **Design View**.



1. Use one of the above methods to open the *STUDENTS* table in **Design View**. We will limit how many characters can be typed in some of the fields by changing the Field Size property.
2. Click on the *Postcode* field. At the bottom of the window you will see a list of properties for the selected field. 

3. Since we will only use this field for Australian postcodes, we will limit the field size to *4* characters. Click in the **Field Size** property and change the number from *255* to *4*.
4. In the top part of the window, click in the **State** field.
5. This field will only be used to store 2 and 3 letter abbreviations for state names such as *WA* and *NSW*. Change the **Field Size** property to 3.
6. In the top part of the window, click in the **Mark** field.
7. For number fields, you have a range of **Field Size** options to choose from (such as byte, single and integer). To find out more about any property you want to modify, you can use the **[F1]** key to go straight to help about the selected property. Press **[F1]** now to find out more about the options for the **Field Size** property.



8. Click the **FieldSize Property** link to go to that help topic and have a quick read through its contents.

Tip Help in access isn't just for beginners. The help within Access is often an ideal reference when you want to know what different options you have for a certain property, often with examples.

9. Close the help window.
10. For our marks field we want an option that allows for decimal places but doesn't have a large number range. *Single* would be a suitable option so choose that for **Field Size**.
11. Click or press **[Ctrl] [S]** to save the changes to the design of the table.

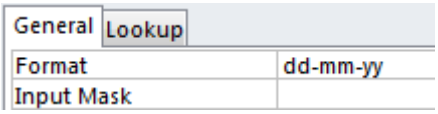
Exercise 11. The Format Property

The format property is used to control how information from a field will display. This allows you to ensure that all of the information in a table will have a neat and consistent look.

1. Select the **Date of Birth** field from the top section of the window.
2. Click in the **Format** property at the bottom. An arrow to the right of the property indicates that there are some built-in formats that can be chosen from a list.
3. Click the arrow to display the list and choose the Short Date option. This will mean that any dates in this field will be displayed as dd/mm/yyyy so that the 1st of January 2008 would display as 01/01/2008, even if the dates are typed in a different format.

You can also create your own custom formats for any field. Remember that you can use the **[F1]** key for help on creating custom formats.

4. In the **Format** property for the date, delete *Short Date* and change it to *dd-mm-yy*. This will mean that the date from the example in step 3 would appear as 01-01-04.



5. Save the changes to the table design.

Exercise 12. The Default Value Property

This property is used to specify that a certain field will be filled in automatically. This is useful if most of the values in that field will be the same, since the user will only have to type information that is different from the specified default value.

1. Select the **Default Value** property for the **State** field. We will assume that most of the addresses will be in WA so we will make that the default value.
2. Enter *WA* for the default value. When you click on a different property you will notice that Access has placed quotation marks around WA. This is a normal way for Access to indicate it is a text value rather than a numerical value.
3. Save changes to the table design (**[Ctrl] [S]**).

Tip If you have a field where you want the default value to be the current date, you can use the **=Date()** function. Whenever you enter a record, Access will enter the current date in that field. We won't be doing that with our date field though since we won't be assuming that all our students were born today.

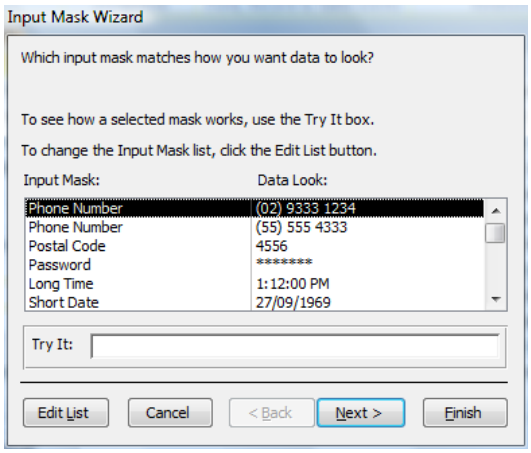
Exercise 13. The Input Mask Property

Input masks are a way of ensuring that information is entered in to a database in a consistent way. They are often used with things like Dates and Phone numbers to assist with data entry. This can prevent problems with data being entered different ways by different users of the database. For example, different people using the database might enter the same phone number in different ways such as:

- +61 08 0000 0000
- 0000 0000
- (08) 0000 0000

In this instance, an input mask could be used as an entry guide to ensure that everyone enters phone numbers the same way.

1. Select the *Phone* field from the top section of the window and then click in the **Input Mask** property at the bottom.
2. A button will appear to the right of the property . Click on this button to begin the **Input Mask Wizard** (you may be prompted to save changes to the table first).



3. In the first step of the wizard, make sure the first phone number option is selected.
4. Press **[Tab]** to move to the **Try It:** box.
5. Type in your own phone number to see a sample of how the input mask will work. Notice that the brackets and spaces are put in for you so you only need to enter the numbers.
6. Click **Next** to move to the next step of the wizard.
7. The top part of this step will show the code for the input mask as *!\(999) 9900\ 0000*. We only want a 2 digit area code so change it to *!\(99) 9900\ 0000*. Leave the placeholder character as it is and click **Next**.
8. For the final step, choose the first option, *With the symbols in the mask*, and click **Finish**.
9. The **Input Mask** property will now contain *!\(99) 9900\ 0000;0;_* (remember you can press **[F1]** for an explanation of what the input mask code means).
10. Enter **Input Masks** for the following fields as shown below.

Date of Birth	99/90/00;;_
Postcode	0000;;_
State	>aaa

11. Save the changes to the table design.

Exercise 14. Creating Validation Rules

A **Validation Rule** is a property which places a restriction on what can be entered in to a particular field. This can be used to make sure that only certain types of information are entered in to a field and prevent incorrect data entry. If the user of a database tries to enter information which is not allowed by the validation rule, an error message will appear. The **Validation Text** property allows you to specify what the error message will say.

First we will create a validation rule which limits the **State** field to Australian states.

1. Select the **State** field in the top section of the window and then select the **Validation Rule** property in the bottom section.
2. For the **Validation Rule** enter *ACT or NSW or NT or QLD or SA or TAS or VIC or WA*. When you press the **[Enter]** key after typing the rule, Access will place " "s around each entry. This rule will mean that the user of the database can only enter information that matches one of the entries in the rule.

Validation Rule	"ACT" Or "NSW" Or "NT" Or "QLD"

Now we will enter **Validation Text** in the next property.

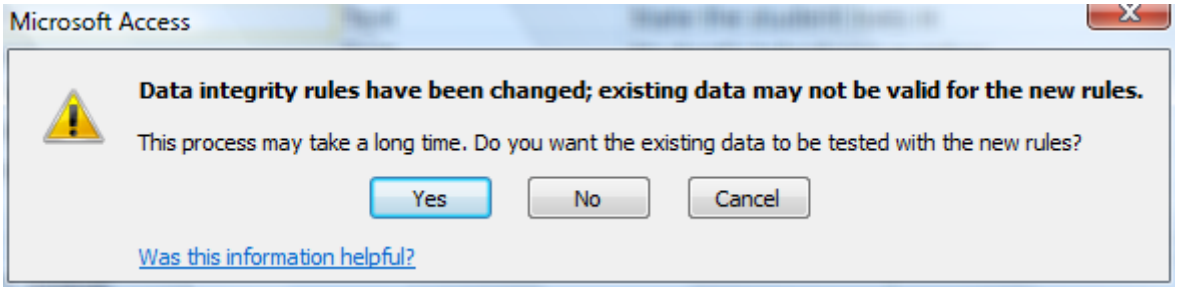
3. For the **Validation Text** property enter, *Must be an Australian state*. This means that if someone enters something that is not allowed by the rule, this text will appear as an error message.
4. Enter the following Validation Rule and Validation Text for the Date of Birth field.

Validation Rule	<Date()
Validation Text	Must be earlier than today's date

This rule will only accept dates that are earlier than *Date()* (which means the current date in Access). Obviously we won't have any students that haven't been born yet, so any future dates entered would be an error. Validation rules and text can let a user know when they have made an error such as that.

5. Save the changes to the table design.

You may see a message like the following:



This simply means that access wants to check and make sure that none of the data that's already in the table breaks the new rules you have just added.

Note If you create a validation rule, make sure you also provide a clear validation text message. If a user gets an error message, they'll want to know why there's an error.

Exercise 15. Other Field Properties

Some of the other field properties may also be useful in table design.

1. Select the **Last Name** field. We want to set the field properties so that the user has to make an entry in this field. Leaving it blank will not be permitted.
2. Change the **Required** property to *Yes* (wherever you have a drop-down list for a property you can double click on the "No" to quickly change it to the next available option which would be *Yes* in this case).

When the Required property is set to *Yes*, the user must enter something in this field or they will get an error.

3. Change the **Allow Zero Length** property to *No*.

When the **Allow Zero Length** property is set to *No*, entering a blank space and nothing else in the field will not be accepted as a valid entry.

4. Change the **Indexed** property to *Yes (Duplicates OK).*

When a field is indexed, it means that Access will keep track of what has been entered in to that field. That means that Access will be able to find information in that field a lot quicker which speeds up operations such as sorting, searching and querying. It is similar to the way an index in a book allows you to find information quicker without you have to search one page at a time. It is a good idea to index any field that is likely to be used a lot in searches and sorting.

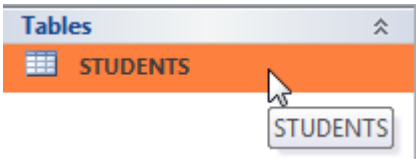
The *Duplicates OK* part simply means that it will be OK to have more than one record with the same last name in the field.

5. Change the **Indexed** property to *Yes (Duplicates OK)* for the following fields.
    - First Name
    - Date of Birth
    - Suburb
    - State
    - Gender
    - Mark

Note You can't index Memo, Hyperlink, or OLE Object data type fields.

6. Save the changes to the table design.
7. Close the table to return to the Database window.

Exercise 16. Record Entry with Properties

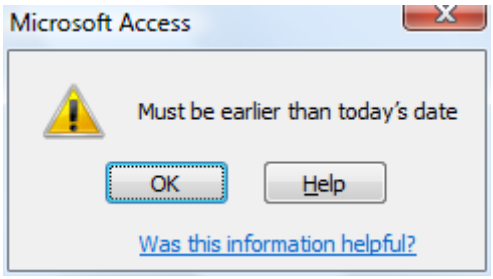


Now that we have modified field properties for the table, we will enter another record to see the effects of the changes.

1. **Double click** the *STUDENTS* table to open it in **Datasheet** view.
2. The student record you entered before will be displayed. Click in the **Last Name** field underneath *Robbins*.
3. Type *Stevens* for the **Last Name** and press **[Enter]**.
4. Type *Sarah* for the **First Name** and press **[Enter]**.

As soon as you begin entering a date in the **Date of Birth** field, the **Input Mask** will appear. 

5. We will test the Validation Rule by deliberately entering a date that's not accepted. Enter a future date such as 020815 (remember you won't need to enter the / since the input mask puts them in there for you). As soon as you press **[Enter]**, the **Validation Rule** will recognise that the entry is invalid and the **Validation Text** will appear.



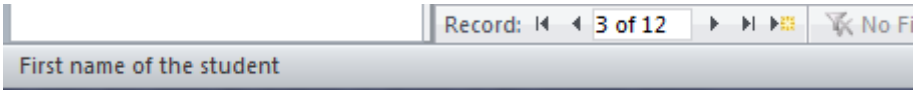
6. Click **OK** to clear the message. You won't be able to proceed until you enter a valid date or press **[Esc]** to cancel the entry. Press backspace to delete the incorrect date and enter 100495 (10/04/95) for the date. Press **[Enter]** to proceed to the next field.
7. Enter *240 Browne Ave* for the **Address** Field and *Yokine* for the **Suburb** field.
8. Enter *6060* for the **Postcode** field (notice the input mask in this field).
9. Notice that the **Default Value** for the State field (WA) has already been entered. To test the **Validation Rule**, enter *NY* as the State. The **Validation Text** will tell you that only Australian states can be entered.
10. Type *WA* for the **State** and press **[Enter]** (The **Input Mask** used for this field automatically converts entered text to uppercase).
11. For the final four fields, enter the information shown below.

Phone	Gender	Mark	Comment
(08)92498127	Female	62	New Student

12. Close the table when complete.

The new data will be saved automatically in the Database.

Note When you are editing a record in a Table or a Form, the description for the selected field will be visible in the status bar along the bottom as shown in the example below.

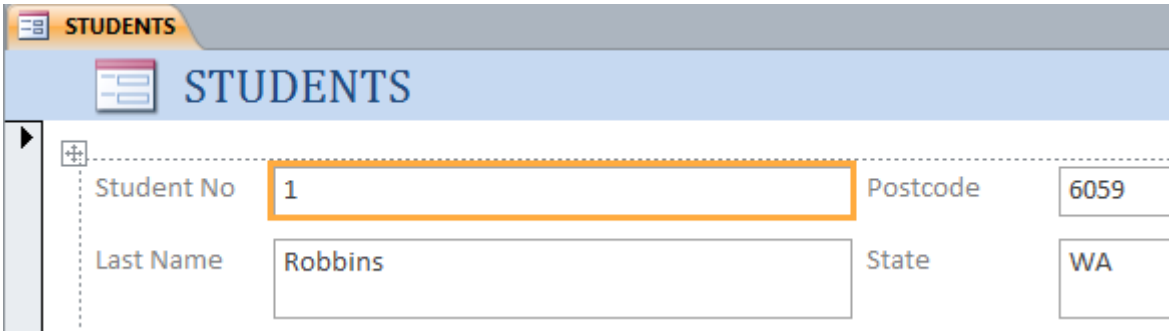


Exercise 17. Data Entry Using a Form

Many people find it easier to enter data with the help of a form. Especially since we tend to fill out a lot of forms in real life more often than adding details to the bottom of a list.

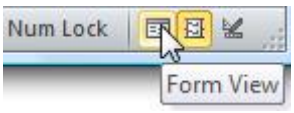
1. From the Database Window, make sure the *STUDENTS* table is selected.
2. Select the **Create** tab on the **Ribbon**.
3. Click the **Form** icon on the **Ribbon**.

A form will automatically be created based on the selected STUDENTS table.



When the form is first created you will be in **Layout View**.

4. Look in the bottom right corner of the form and click the first icon to switch to **Form View**.

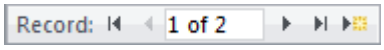


You can move from one record or Field to another using your mouse or the keyboard.

To use your keyboard:

- Press **[Tab]** to move to the next field and **[Shift][Tab]** to move to the previous field.
- Press **[Page Down]** to move to the next record and **[Page Up]** to move to the previous record.
- Press **[Ctrl][End]** to move to the last record and **[Ctrl][Home]** to move to the first record.
- If you are already on the last record, moving to the next one will give you a blank record.

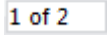
To use your mouse, click the icons at the bottom of the form.



 Previous record and Next record

 First record and Last record

 New record



Enter a number to be taken to that record

5. Use any of the above methods to move to a new, blank record.

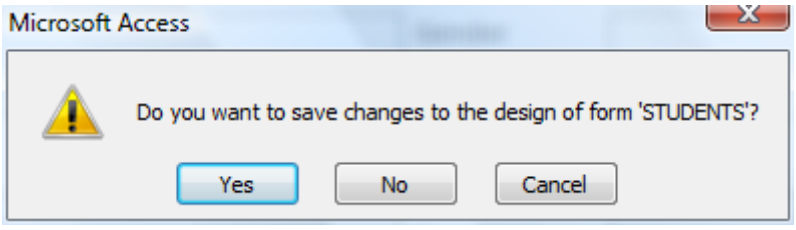
6. Enter the following student details as a new record.

You will notice that the table's properties such as Formats and Input Masks also work in the Form which is based on the table. Later on we will learn more about customising forms to make them easier to use and then saving them for regular use.

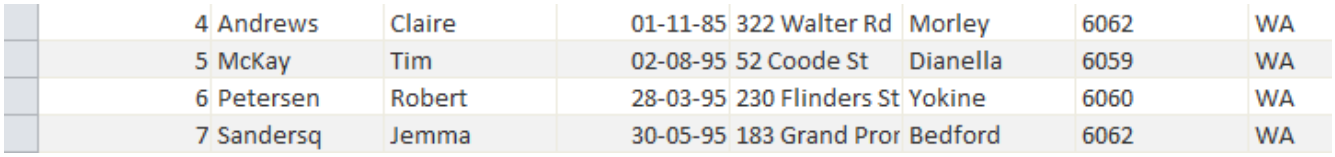
7. Use the form to add the following 3 records (note that your student numbers might not be the same. That's not important, as long as the AutoNumber is making sure that no 2 students have the same number).

Student Number	Last Name	First Name	Date of Birth	Address	Suburb	Postcode	State	Phone	Gender	Mark	Comment
Auto	McKay	Tim	02-08-95	54 Coode St	Dianella	6059	WA	(08) 9375 5610	Male	34	Need to try harder
Auto	Petersen	Robert	28-03-95	230 Flinders St	Yokine	6060	WA	(08) 9249 7128	Male	83	
Auto	Sanders	Jemma	30-05-95	183 Grand Prom	Bedford	6062	WA	(08) 9273 9182	Female	91	

8. After you have entered the last record, close the form. You will be prompted to save. Since this was only a temporary table to use for data entry, click **No**.



9. Open the table and you will see the new records listed.



4	Andrews	Claire	01-11-85	322 Walter Rd	Morley	6062	WA
5	McKay	Tim	02-08-95	52 Coode St	Dianella	6059	WA
6	Petersen	Robert	28-03-95	230 Flinders St	Yokine	6060	WA
7	Sandersq	Jemma	30-05-95	183 Grand Pror	Bedford	6062	WA

10. Use any of the methods learned to add these additional records.

Hutch	Ian	28-09-95	18 Croft Ave	Dianella	6059	WA	(08) 9275 7219	Male	67
Springer	Louise	18-10-95	56 Surry St	Dianella	6059	WA	(08) 9375 9182	Female	72
Davies	Laura	09-07-94	14 Halvorsen Rd	Morley	6062	WA	(08) 9276 8291	Female	54
Carey	Ivan	27-12-95	287 Light St	Dianella	6059	WA	(08) 9375 2839	Male	67
Chang	Paul	14-03-95	89 Wellington Rd	Morley	6062	WA	(08) 9276 2983	Male	76
Sheppard	Larissa	12-08-95	14 Chelsea Crt	Dianella	6059	WA	(08) 9375 8127	Female	83

11. Close the table (There won't be any need to save anything unless you changed the design of the table by doing something like adjusting column widths).

Tip A quick way of entering information in a field that is the same as information from the previous record is to use the **[Ctrl] ['']** (Control apostrophe) shortcut. For example, in the above exercise, if you wanted to add a thirteenth record that had Dianella for the suburb, you could use the shortcut since the precious record also had Dianella for the suburb. When you were in the Suburb field, you could press **[Ctrl] ['']** to enter the information from the previous record in the same field.