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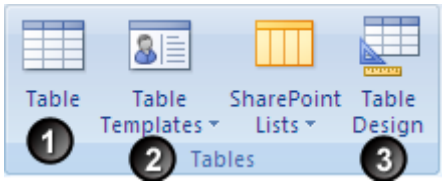
Creating Tables

There are many ways of creating tables; it depends on the fields required in the table and the complexity of the database to be set up as to how you create the tables.

If the database that is required is similar to a template then whole database can be generated by using a template that already exists.

We will look at three ways of creating a table:

1. A blank table.
2. A table based on a table.
3. A table in design view where you have total control as to how the data is displayed and entered into the table.



A Blank Table

When a blank database is set up a table is automatically created:

Otherwise to create a blank table

1. Click on the Create Tab of the Ribbon.
2. Click on the Table icon.

The table can be amended to contain the data required by:

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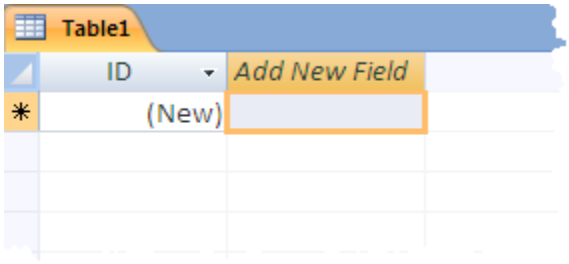
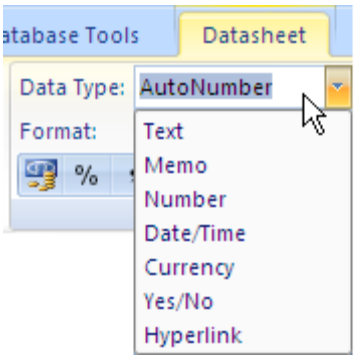


Clicking on the column headings and changing them as necessary. If you are not happy with the first field name of ID then it can be changed as necessary. Other field names can be changed by Clicking on the Add New Field column heading. As fields are added that heading just keeps moving along onto the next blank column.

The data can be added underneath the field names and as the data is added the fields will automatically get their data-types set from the information typed into the table. The ID field is set up to be AutoNumber as default and so cannot be typed into as the number is generated automatically when information is added elsewhere on the record If the data needs to be changed then the Data Type for the field needs to be changed. The data types for any of the fields can also be changed if necessary.

Changing the data type

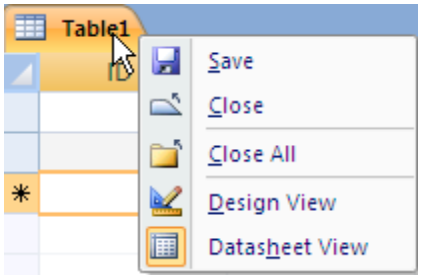
1. Select the field to be changed.
2. Click on Data Type (on the Datasheet ribbon selected automatically).
3. Select the Data Type required.



When a table has been created in this way when you close it the first time it must be saved, otherwise all the changes and data is lost.

Saving the table

1. Right Click on the table name.
2. Select Save or Close.



If Close has been chosen you will be asked whether you wish to save – answer yes!

3. Enter name of table.

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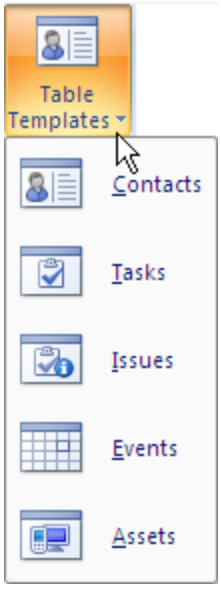
Creating a table based on a template

If the table that you need to create follows a standard pattern, then you do not need to start from scratch and build up the entire table. You can use a template and then use the table as it is or amend it as necessary.



To create a table from a template click on the Table Templates button and then select the template required. This creates a table with the appropriate fields already set up. At this point, more fields can be added or the existing fields amended.

The table will need to be saved otherwise all the data and setup will be lost.

Create a table in design view

When a table is created in design view, you have total control over the table. When you have gone through the design phase of planning the database this is probably how most people set up the database.

Before creating a table in this way not only do you need to know what fields are needed in the table, but also what sort of data they will hold, what rules the data has to follow and how the tables are going to be inter-connected.

Once a table has been set up, whether by design view, blank table or a template, it can then be changed by using the design view of the table. There are factors that have to be taken into consideration when amendments are being made.

The main considerations are:

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Data types.

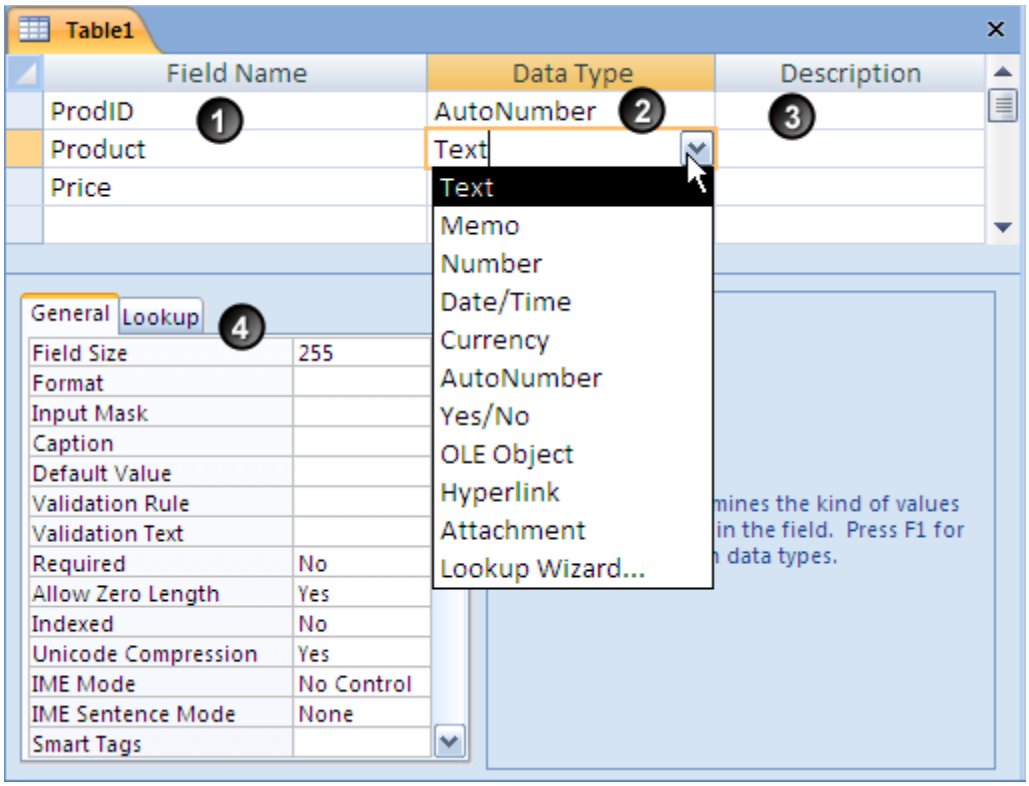
Relationships.

Validation rules.

The way of making the inter-connections between the tables is known as lookups. If Lookups are to be set up then the relationships cannot be set up prior to the lookups.

The purists amongst database designers do not think they should be done at this point of a database development.

To create a table in design view – click on the button on the create ribbon – this brings up the design view.



1. List the fields in this column.
2. Choose the data type for each field.

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3. Add a description of the field – this will appear on the status bar whenever the cursor is in this field where data can be entered. (Optional)

4. Set the properties of the selected field.

The field name can be up to 64 characters long. Spaces are allowed (though not advised if you are going to be using the more advanced features of Access.) The field name cannot start with a space and capital letters are allowed.

The data type controls what sort of data needs to be typed in. It is not dependent on the field name.

For instance, the field name might be telephone number but the data type needs to be text. When typing in the data there would be a space, it would start with a Zero which numerically has no value and you might even want to put in an extension number.

Setting	**Data type**	**Hard Disk Allocation**
Text	(Default) Text or combinations of text and numbers, as well as numbers that do not require calculations, such as phone numbers.	Up to 255 characters or the length set by the FieldSize property, whichever is less. Microsoft Access does not reserve space for unused portions of a text field.
Memo	Lengthy text or combinations of text and numbers.	Up to 63,999 characters.
Number	Numeric data used in mathematical calculations..	1, 2, 4, or 8 bytes (16 bytes if the FieldSize property is set to Replication ID).
Date/Time	Date and time values for the years 100 through 9999.	8 bytes.

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Setting	Data type	Hard Disk Allocation
Currency	Currency values and numeric data used in mathematical calculations involving data with one to four decimal places. Accurate to 15 digits on the left side of the decimal separator and to 4 digits on the right side.	8 bytes.
AutoNumber	A unique sequential (incremented by 1) number or random number assigned by Microsoft Access whenever a new record is added to a table. AutoNumber fields cannot be updated.	4 bytes (16 bytes if the FieldSize property is set to Replication ID).
Yes/No	Yes and No values and fields that contain only one of two values (Yes/No, True/False, or On/Off).	1 bit.
OLE Object	An object (such as a Microsoft Excel spreadsheet, a Microsoft Word document, graphics, sounds, or other binary data) in a Microsoft Access table.	Up to 1 gigabyte (limited by available disk space).
Hyperlink	Text or combinations of text and numbers stored as text and used as a hyperlink. A hyperlink address can have up to three parts:	Each part of the three parts of a Hyperlink data type can contain up to 2048 characters.

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Setting	Data type	Hard Disk Allocation
Attachment	Any supported type of file.	You can attach images, spreadsheet files, documents, charts, and other types of supported files to the records in your database, much as you attach files to e-mail messages. You can also view and edit attached files, depending on how the database designer sets up the Attachment field. Attachment fields provide greater flexibility than OLE Object fields, and they use storage space more efficiently because they do not create a bitmap image of the original file.
Lookup Wizard	Creates a field that allows you to choose a value from another table or from a list of values by using a list box or combo box. Clicking this option starts the Lookup Wizard, which creates a Lookup field. After you complete the wizard, Microsoft Access sets the data type based on the values selected in the wizard.	The same size as the primary key field used to perform the lookup, typically 4 bytes.

The description is optional does not have to be filled in, but if used can provide information displayed in the status bar when the cursor is on the field. It could be the type of data the field holds or the rule that the data has to follow.

The description will follow the field in tables, queries and forms though on the forms the description can be changed on a form by form basis.

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