

Group Size

- *3 or 4. Due date : at next week labs.*

Requirements

- *Using MS Access, implement an application for a students project groups and teachers.*

What should be covered:

- *Opening a Database*
- *The Database Window*
- *Opening a Database, Viewing Data and Closing a Database*
- *Getting Help using Microsoft Access*
- *Creating a New MS-Access Database (create tables, Plan Fields and Data Types, Set Field Properties, Set a primary key for a table).*
- *Add and Save Records.*
- *Delete, Insert, and Rearrange Fields in a Table.*
- *Create a Field that Looks up or Lists Values in Tables*
- *Setting Table Properties*
- *Creating Relationships between Tables*
- *Viewing and Editing Existing Relationships*
- *Relationship Types*
- *Referential Integrity*
- *Cascading Delete and Update Operations*

Problem Description:

Assume that you are responsible about arrange students projects. Create a database to manage all the data required to run the project system . Assume you have tables names like :

Student (fields)

Groups (fields.....)

Teachers(fields...)

Student status (fields.....)

.
.

Creating a New MS-Access Database

When you create a Microsoft Access database, you create one file that contains all the tables in your database as well as the queries, forms, reports and other objects that help you use the information in the database.

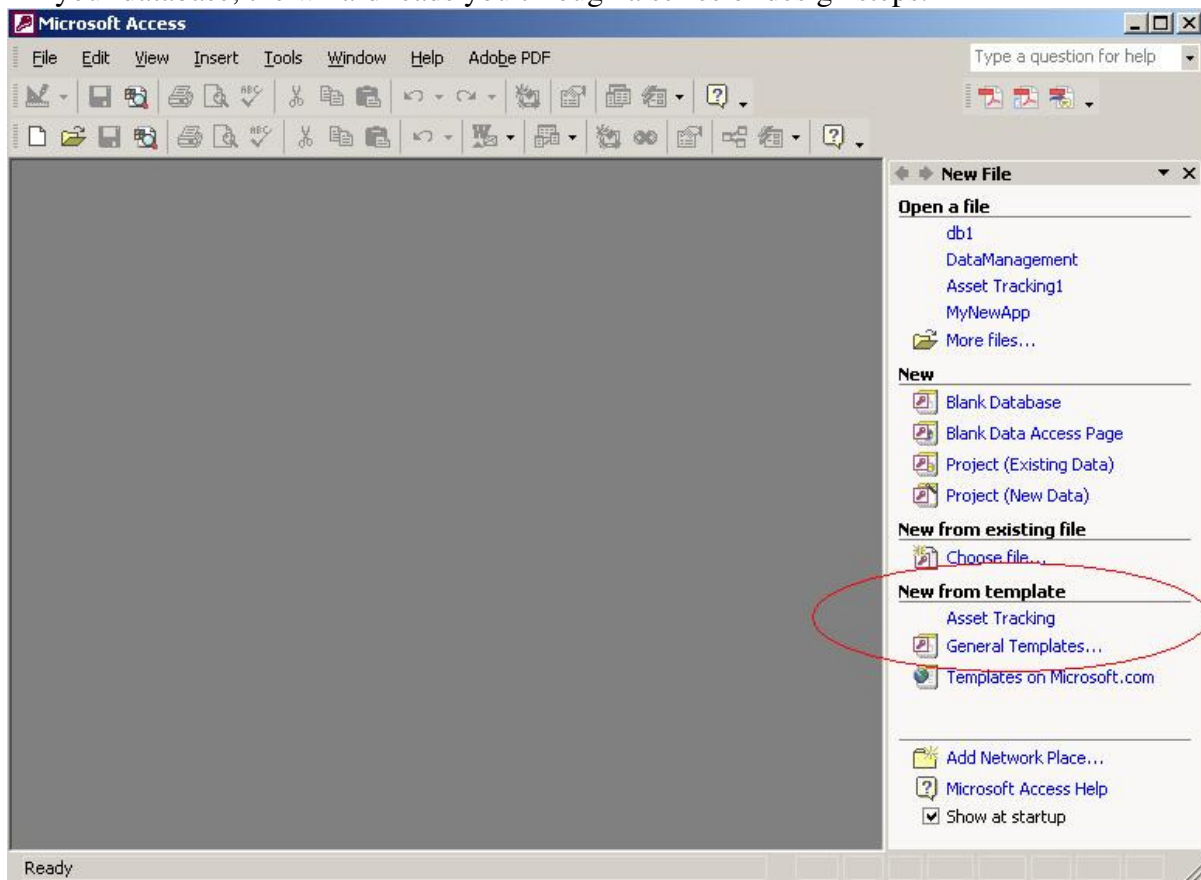
Microsoft Access provides two methods to create a database. You can create a blank database and then add the tables, forms, reports and other objects later and this is the most flexible method, but it requires you to define each database element separately. Or you can use a Database Wizard to create in one operation the required tables, forms and reports for the type of database you choose and this is the easiest way to start creating your database. Either way, you can modify and extend your database at any time after it has been created.

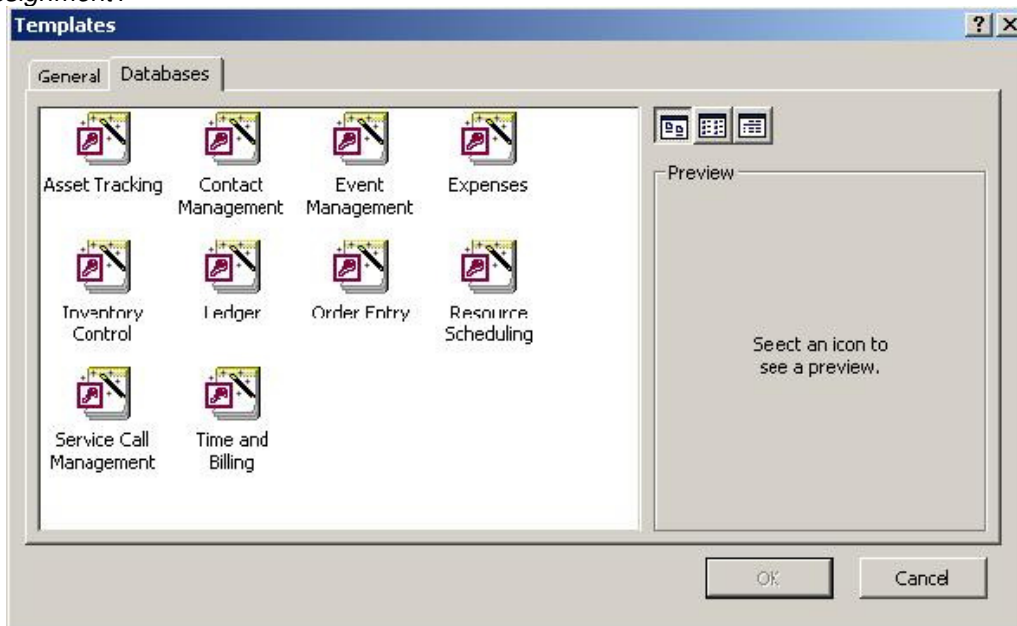
In the following sections, we describe how to create a database using a Database Wizard and then how to create a blank database.

Create a New Database

Use a Template to create a new Database

1. In the Microsoft Access startup window, choose **New** from the **File** menu.
2. The **New** dialog box is displayed on the right of the screen. Choose the **General Template** option to list the range of template databases (as in the following figures) that you can create with the Database Wizard. To select the database you need, double-click the icon. The wizard will create what you need to store, enter and summarise your data. Once you have selected the template for your database, the wizard leads you through a series of design steps.





To create a database (without Database Wizard)

1. In the Microsoft Access startup window, choose **New** from the **File** menu. Or click the New button on the toolbar.



Microsoft Access displays the New dialog box. The **General** option displays the File New dialog box that allows you to create a database from scratch and gives your new database a default name (e.g. db1), which you can replace with the name of your choice.

2. In the **File name** box, type the name of your database. A database name can contain up to 64 characters. Microsoft Access automatically appends a mdb extension to your database filename.
3. To store the database in a different directory or drive, select the location of the file you want in the **Save in** list.
4. Choose **Create**. Microsoft Access creates an empty database file and opens the Database window.

Activity

Create a new blank database called HomeVideo_Yourname.mdb (use the initial letters of all the group members in the database name, example Nada,Huda and Muna→HomeVideo_NHM)and save it to your folder. This database will hold the tables, forms, reports and other objects for a video rental shop.

Create a Table

Microsoft Access provides three ways to create a blank (empty) table:

- **Use the Database Wizard** to create in one operation all the tables, forms and reports required for an entire database.
- **Use Design view** to specify all of your table details from scratch. Use the Table Wizard to choose the fields for your table from a variety of predefined tables such as business contacts, household inventory or medical records.

- **Enter data directly into a blank datasheet.** When you save the new datasheet, Microsoft Access will analyse your data and automatically assign the appropriate data type and format for each field.

Regardless of which method you use to create a table, you can use table Design view at any time to customise your table further, such as adding new fields, setting default values or creating input masks.

In the following sections we will describe in more detail the process of creating a table using a Table Wizard and then how to create a table using design view.

To create a table using the Table Wizard

1. Start Microsoft Access, and open the database that is to contain the table.
2. In the Database window, click the **Tables** button, and then choose the **New** button. Or select the **Insert** menu and choose **Table**. Microsoft Access displays the New Table dialog box, as shown in Figure 3.

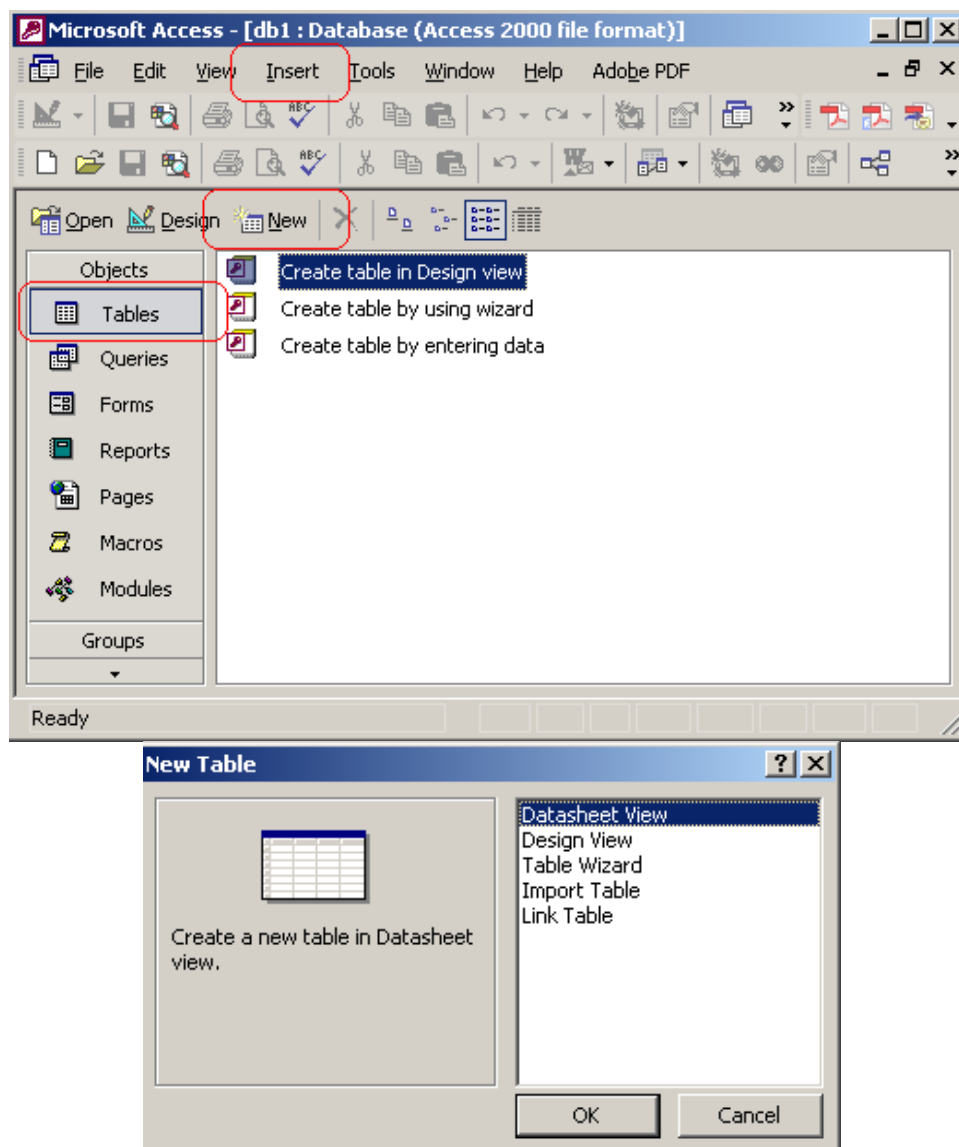


Figure 3: New Table dialog box.

3. Choose the **Table Wizard** option.

4. You are then prompted to make appropriate choices as you create your table using the Table Wizard. To display the next Table Wizard dialog box, choose the **Next** button. The final dialog box offers you the options to further modify your table, add rows to the table, create a form based on your table using the Table Wizard or finish.

To create a table using Design view

1. In the Database window, click the **Tables** button and choose the **New** button (or choose **Table** from the **Insert** menu).
2. The New Table dialog box is displayed (as shown in Figure P1-3).
3. Choose the **Design View** button to open a blank Table window in Design view, as shown in Figure 4. Type and table field name and choose the appropriate data type from the 'Data Type' drop-down box.

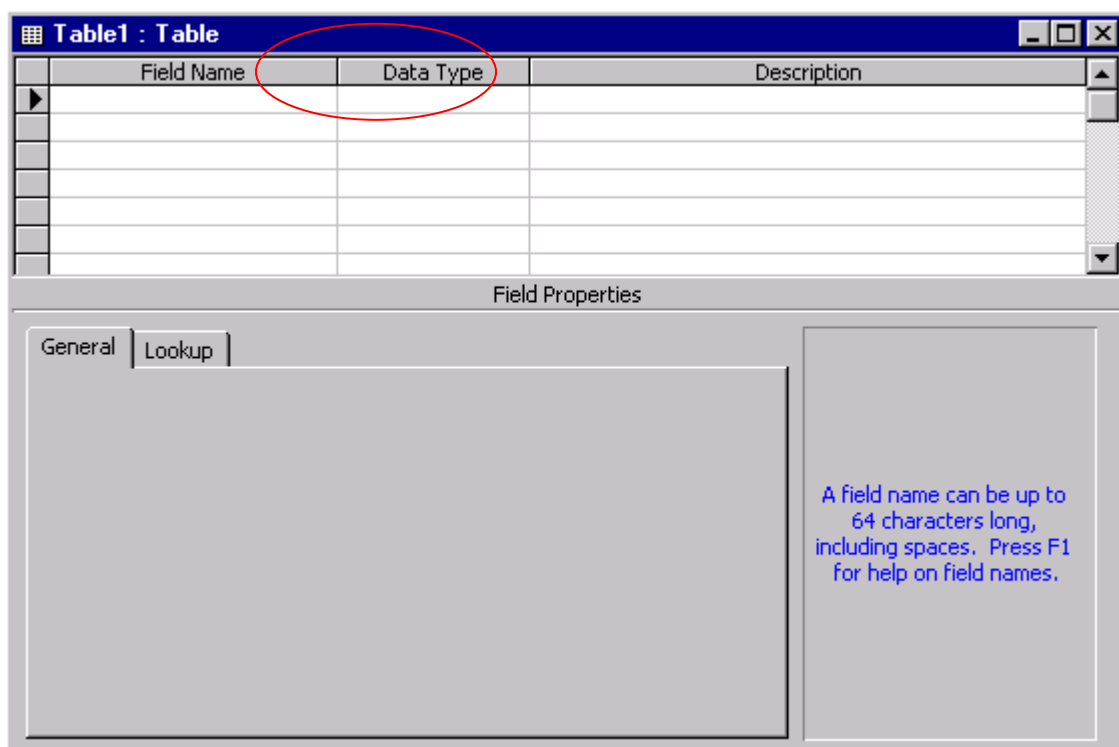


Figure 4: Table Design view.

Plan Fields and Data Types

The **Field Name** identifies the data stored in a field. A field name can contain up to 64 characters, including spaces. The **Data Type** tells Microsoft Access what kind of data goes in the field, such as text, numbers, dates or currency.

A brief description of the most commonly used data types is given below:

The **Text** data type is used for words (such as names), for combinations of words and numbers (such as addresses), and for numbers that are not used in mathematical calculations (such as telephone numbers).

The **AutoNumber** data type stores sequential numbers created by Microsoft Access.

The **Date/Time** data type is used for dates and times.

The **Number** data type is used for numbers that can be used in mathematical calculations, and also for fields that are related to other Number fields or to AutoNumber fields.

The **Currency** data type is used for currency values such as francs, dollars, or yen.

The **Yes/No** data type is used for yes or no, true or false values.

The **Memo** data type is used to store long textual descriptions up to a maximum size of 64,000 characters. Memo fields cannot be indexed.

The **Lookup Wizard** use to create a field that allows you to choose a value from another table or from a list of values using a combo box—choosing this option in the data type list starts a wizard to define this for you.

More Information For details about data types, click in the **Data Type** column and press F1.

Add Fields to the Table

To add a field

1. Type the name of the field to be added in the first empty box under **Field Name**.
2. Press **TAB** to move to the **Data Type** box. Microsoft Access gives the field a Text data type. However, if the field is not text, you'll need to select the appropriate data type.
3. To open the list of alternative data types, click the arrow or press ALT+ DOWN ARROW.
4. Press **TAB** to move to the **Description** box. If required, you may enter in a short description for each field to help you remember the purpose of the field.

Set Field Properties

Each field in a table has a set of properties. By changing a field's properties, you can control how Microsoft Access stores, handles, and displays data in a field. For example, you might want your data displayed in a particular format - numbers in scientific notation, perhaps, or dates with the month's name abbreviated. The Format property controls how data is displayed in datasheets, forms, and reports.

To set a field property

1. Click any box in the row that defines the field to be set.
2. Click the box of the required property, and then set or select the appropriate property setting.

Field Size: The size and type of numbers to enter in the field. For example, if the Data type of selected Field has been selected as 'Number', the field size can be set as 'Long integer' as the common choice. If the Date type of selected field is 'Text', the value of field size stands for the maximum number of characters you can enter in the field. The largest maximum you can set for the 'Text' data type is 255. **Note!!** If you need to store more than 255 characters, a 'Memo' field can store up to 65,536 characters. If you want to store formatted text or long documents, you should create an OLE object field instead of a Memo field.

Format: The display layout for the field. Select a pre-defined format or enter a custom format.

Decimal Places: The number of digits that are displayed to the right of the decimal separator.

Input Mask:

Caption: provided a customized label for the field when used on a form. If you don't enter a caption, the field name is used as the label.

Default Value: A value that is automatically entered in this field each time when creating a new record in the table.

Validation Rule: An expression that limits the values that can be entered in the field.

Validate Text: The error message that appears when you enter a value prohibited by the validation rule.

Required: Required data entry in this field. This property can be associated with 'Allow Zero length' together to make sure the data entry for the selected field is 'not null', especially useful for the primary key.

Allow Zero length:

Indexed: An index speeds up searches and sorting on the field, but may slow updates. Selecting "Yes – No Duplicates" prohibits duplicate values in the field.

To delete a property setting

Select the setting for the property of the field, and then press the **Delete** key

More information For more information about an individual field property, click the property and press F1.

To set a primary key for a table

Open the table in Design View and select the appropriate row(s) that form the primary key for the table. Then select the **Primary Key** button on the toolbar.



A key icon will appear in the column to the left-hand side of the field or fields selected to be the primary key. You can also set a primary key by selecting the **Edit** menu and then choosing **Primary Key**.

To save a table

1. From the **File** menu, choose **Save** (or click the Save button on the toolbar).



2. If you are saving the table for the first time, type a name for the table and choose **OK**.

To modify the design of an object

1. In the Database window, click the button for the type of object (e.g. Tables, Forms) that you want to modify.

2. In the list that is displayed, select the object you want to modify.

Choose the **Design** button. Microsoft Access opens a window for the object and displays it in Design view.

Activity

In this practical you will create four tables for the *HomeVideo_Yourname* database using Design view. The tables are **Member** to hold members details, **Video** to hold details of videos, **VideoForRent** to hold the details of copies of videos for rent, and **RentalAgreement** to hold the details of video rentals by members.

The **Member** table has the following fields (with the data type of each in brackets):
memberNo (AutoNumber), fName (Text), lName (Text), sex (Text), DOB (Date/Time), address (Text), dateJoined (Date/Time), comments (Memo)

The primary key is memberNo

(Also for this table, set the format property of the **Sex** field to a field size of 1 with an Input Mask >L. [You have to explain what this Input Mask means??])

Also, set this field with a Validation Rule =”M” or “F” and Validation Text **Please enter M or F**. If you do not understand the purpose of the properties associated with each field, remember to use the help facility using the F1 key).

The **Video** table has the following fields (with the data type of each in brackets):
catalogNo (Text), title (Text), certificate (Text), category (Text), dailyRental (Currency), price (Currency), directorNo (Text)

The primary key is catalogNo

The **VideoForRent** table has the following fields (with the data type of each in brackets):

videoNo (Text), available (Yes/No), catalogNo (Text)

The primary key is videoNo

The **RentalAgreement** table has the following fields (with the data type of each in brackets):
rentalNo (AutoNumber), dateOut (Date/Time), dateReturn (Date/Time), memberNo (Text), videoNo(Text)

The primary key is rentalNo

(Also for this table, set the format property for the **dateOut** and **dateReturn** fields to Medium Date format e.g. 10-Oct-00. If you do not understand the purpose of the properties associated with this field, remember to use the help facility using the F1 key).

Add and Save Records

Each table in your database has two views: Design view and Datasheet view. You add records to the Datasheet view.

To switch to Datasheet view

From the **View** menu, choose **Datasheet** or click on the Datasheet button. The arrow to the right of the button lists the alternative views of the table.



To add a record of data

Type in the data values and press TAB to the next field.

To save a record of data

Once you have entered all of the required records, press TAB to move to the first empty field below these records.

You do not require to do anything else to save your data. When you leave a record, either by moving to another record or by closing a table, Microsoft access automatically saves the data.

Edit Records and Close a Table

To edit records

There are various ways to edit records. For example:

To move to the next or the previous field, press **TAB** or **SHIFT+TAB**, respectively.

To select or deselect the current field, press **F2**.

To undo changes to the current field or record, press **ESC**.

To replace the value in a field with the value of the same field in the previous record, press **CTRL+'** .

To close a table

From the **File** menu, choose **Close**.

Activity

Add the records below into your Member, Video, VideoForRent and RentalAgreement. The VideoForRent table should hold details of copies of videos described in your Video table and the RentalAgreement table should record the members described in your Member Table renting copies of videos described in your VideoForRent table.

Reopen your tables and practise editing your records. Finally, save and close your table and exit from the *HomeVideo_Yourname* database.

Member						
memberNo	fName	lName	sex	DOB	address	dateJoined
1	Karen	Parker	F	22-1972- فيبر اير	22 Greenway Drive, Glasgow, G12 8DS	06-1991- يناير
2	Gillian	Peters	F	09-1954- مارس	89 Redmond Road, Glasgow, G11 9YR	19-1995- ابريل
3	Bob	Adams	M	15-1974- نوفمبر	57 Littleway Road, Glasgow, G3 6DS	06-1998- يناير
4	Don	Nelson	M	12-1951- ديسمبر	123 Suffolk Lane, Glasgow, G15 1RC	07-2000- ابريل
5	Lorna	Smith	F	01-1972- يناير	Flat 5A London Road, Glasgow, G3	11-1998- يناير
6	Dan	White	M	05-1960- مايو	200 Great Western Road, Glasgow, G11 9JJ	05-2001- مايو
7						



Video						
catalogNo	Title	certificate	category	dailyRental	price	directorNo
207132	Tomorrow Never Dies	12	Action	£5.00	£21.99	D1001
330553	Face/Off	12	Thriller	£5.00	£31.99	D4576
445624	The Rock	18	Action	£4.00	£29.99	D5743
634817	Independence Day	PG	Sci-Fi	£4.50	£32.99	D3765
781132	101 Dalmatians	U	Children	£4.00	£18.50	D0078
902355	Primary Colors	U	Comedy	£4.50	£14.50	D7834

RentalAgreement				
rentalNo	memberNo	videoNo	dateOut	dateReturn
1	1	178643	05-2000- فبراير	07-2000- فبراير
2	1	199004	05-2000- فبراير	07-2000- فبراير
3	1	245456	04-2000- فبراير	06-2000- فبراير
4	1	243431	04-2000- فبراير	06-2000- فبراير
5	3	199004	11-1999- نوفمبر	12-1999- نوفمبر
6	2	245456	11-1999- نوفمبر	13-1999- نوفمبر
7	4	178643	14-1999- نوفمبر	16-1999- نوفمبر
8	3	243431	11-1999- نوفمبر	13-1999- نوفمبر
9	1	245457	12-1999- نوفمبر	14-1999- نوفمبر
10	3	199004	10-2000- اغسطس	
11	2	199004	17-2000- اغسطس	20-2000- اغسطس

VideoForRent		
videoNo	Available	catalogNo
178643	No	634817
199004	Yes	207132
200900	Yes	330553
210087	Yes	902355
243431	Yes	634817
245456	Yes	207132
245457	Yes	207132
317411	Yes	781132

Delete, Insert, and Rearrange Fields in a Table

In a table's Design view, you can easily review and edit all the fields in the table. You can delete fields or insert new fields wherever you want them. You can also rearrange fields to whatever order you want. Rearranging the fields in Design view rearranges the order of columns, or fields, in Datasheet view.

Use the **View**  and  buttons on the toolbar to switch between Design view and Datasheet view.

To rearrange fields

1. Open the table in Design view and then select the row to be rearranged by clicking its row selector. The row selector is the first column (shaded) on the left-hand side of the table .
2. Click the row selector again, hold the mouse button down, and then drag the row to the required position in the table.
3. When the pointer is where you want the row placed, release the mouse button. Microsoft Access moves the field.


To delete a field

1. Open the table in Design view.
2. Select the row that defines the field you want to delete by clicking its row selector. From the **Edit** menu, choose **Delete** or **Delete Rows**. (Alternatively, you can press the Delete Rows button on the toolbar).



2. Microsoft Access deletes the field and all its data from your table.

To insert a new field above an existing field

1. Click the row above which you want the new row to appear.
2. From the **Insert** menu, choose **Rows** (or press the Insert Rows button  on the toolbar). Microsoft Access inserts an empty row above the current row.
3. Define your new field in the empty row.

Activity

Restructure the Member table by deleting the comments field.

Create a Field that Looks up or Lists Values in Tables

Using the Lookup Wizard, you can create a field that displays either of two kinds of lists to make data entry simpler:

- A lookup lists that displays values looked up from an existing table or query.
- A value list that displays a fixed set of values that you enter when you create the field.

The Lookup Wizard gives you the option to display the list as a combo box or a list box. The difference between these two types of boxes is in the way that the list of values is displayed to the user and whether it is possible to allow the user to add to the list of values. If you use the list from a table or query's datasheet, the list can only be displayed as a combo box.

The most common type of lookup list displays values looked up from a related table. For example, the SupplierID field in the Products table of the Northwind sample database. This list is created by looking up the SupplierID values in the Supplier table and displaying the corresponding Supplier names. Picking a value from a Lookup list sets the foreign key value in the current record (SupplierID in the Products table) to the primary key value of the corresponding record in the related table (SupplierID in the Supplier table).

A value list looks the same as a lookup list, but consists of a fixed set of values you type in when you create it. A value list should only be used for values that will not change very often and don't need to be stored in a table. For example, a list for a Salutation field may contain the following values, Mr, Mrs and Ms.

You can add a new lookup or value list field to a table in either design view or datasheet view. However, if the field you want to use as the foreign key for a Lookup table already exists, you must open that field's table in design view to define the Lookup field.

To create a field that looks up and displays data from another table *or* a value list in design view

1. Open the table in Design view.
2. Insert the new field *or* if the field you want to use already exist, click in that field's row.
3. In the data type column, select **Lookup Wizard**.

- To display data from another table; select option (1) *I want the lookup column to look up values in a table or query* .To display data from a value list; select option (2) *I will type in the values that I want* .
- Click **Next** and follow the instructions in the remaining Lookup Wizard dialog boxes.

To create a field in datasheet view that looks up and displays data from another table or value list

- In Datasheet view, click on the column to the right of where you want to insert the field, and then on the **Insert** menu, click **Lookup Column**.
- In the first dialog box described in part 4 above, select the option that indicates your choice.
- Click **Next** and follow the instructions in the remaining Lookup Wizard dialog boxes.

Activity

Convert the certification (e.g. U, PG, 12, 15, 18) field of the Video table into a Lookup field that uses a **value list**, as shown in Figure 5.

catalogNo	title	certificate	category	dailyRental	price	directorNo
207132	Tomorrow Never Dies	12	Action	£5.00	£21.99	D1001
330553	Face/Off	12	Thriller	£5.00	£31.99	D4576
445624	The Rock	U	Action	£4.00	£29.99	D5743
634817	Independence Day	PG	Sci-Fi	£4.50	£32.99	D3765
781132	101 Dalmatians	12	Children	£4.00	£18.50	D0078
902355	Primary Colors	15	Comedy	£4.50	£14.50	D7834
*		18		£0.00	£0.00	

Figure 5: Value list for certification field of Video table.

Activity

Convert the directorNo field of the Video table into a Lookup field that displays data from another table, as shown in Figure 6. To start this activity it is necessary for you to first create a table called Director that will hold the details of directors.

The Director table has the following fields (with the data type of each in brackets):

directorNo (Text), directorName (text)

The primary key is directorNo

When converting the directorNo field to a Lookup field select the option that hides the key column (directorNo) and only display the directorName field in the Video table.

Hint: Read about Row Source Type, Row Source, Bound Column, Column Count, and Column Widths in the help. Don't forget to add two fields in the lookup Row Source (directorNo, directorName), Check if the Column widths set to 0 for a field column?

Director	
directorNo	directorName

Director	
directorNo	directorName
D0078	Stephen Herek
D1001	Roger Spottiswoode
D3765	Jane Emmerick
D4576	John Woo
D5743	Michael Bay
D7834	Sally Nichols

	title	certificate	category	dailyRental	price	directorName
+	Tomorrow Never Dies	12	Action	£5.00	£21.99	Roger Spottiswoode
▶	Face/Off	12	Thriller	£5.00	£31.99	John Woo
+	The Rock	18	Action	£4.00	£29.99	Stephen Herek
+	Independence Day	PG	Sci-Fi	£4.50	£32.99	Roger Spottiswoode
+	101 Dalmatians	U	Children	£4.00	£18.50	Roland Emmerick
+	Primary Colors	U	Comedy	£4.50	£14.50	John Woo
*				£0.00	£0.00	Michael Bay
						Mike Nichols

Figure 6: The directorNo field of the Video table displaying data from the Director table.

Resize Columns and Rows and Move Columns in a Datasheet

In Datasheet view, you can resize columns and rows and move columns to fit your immediate needs, similar to the way you can edit a spreadsheet. In addition, you can save your layout so that Microsoft Access always displays the datasheet the way you want it.

To resize a column to fit the data it contains

1. Open the table in Datasheet view.
2. Double-click an edge of the fields selector (column heading) of the column. Microsoft Access resizes the column to fit the data.

To resize rows in a datasheet

1. Position the pointer on the border of any record selector. The pointer changed to \updownarrow to show that the border can be moved up or down.
2. Drag the border down to make all the rows taller. Drag it up to make all the rows narrower.
3. When the row is the size you want, release the mouse button. Microsoft Access resizes all the rows.

To reorder columns

1. Position the pointer on the field selector (column heading) of the column to be reordered. The pointer changes to \downarrow to show that you can select the column.
2. Click the field selector to select the column.

3. Click the field selector again, hold the mouse button down, and drag the column to the left or right, over the other column(s).
4. When the pointer is where you want the column placed, release the mouse button. Microsoft Access reorders the columns.

To save your datasheet layout

On closing the datasheet window you can choose whether you wish to save the current layout of the datasheet.

Activity

View any of your tables in Datasheet form and practise editing the layout by resizing columns and rows, and by reordering the columns. Do not save your rearranged datasheet.

Print, Minimize, Restore, and Close a Table


You use the same techniques to print, minimize, restore, and close a table that you use in any standard application for Windows. Use these techniques for any Microsoft Access object.

To print a table

With the table open in datasheet view, choose **Print** from the **File** menu (or click the Print button on the toolbar) and then choose **OK**.



To minimize a table

Click the **Minimize** button  in the upper-right corner of the table window. Microsoft Access minimizes the table to an icon and places the icon at the bottom of the Microsoft Access window. This moves a table out of the way without closing it.

To restore a table

Double-click the table icon in the Microsoft Access window.

To close a table

From the **File** menu, choose **Close**. If you've made changes to the table design or layout since last saving it, Microsoft Access prompts you to save the changes.

Activity

Print the datasheet for your Video table. Practise, minimising, restoring and closing your tables.

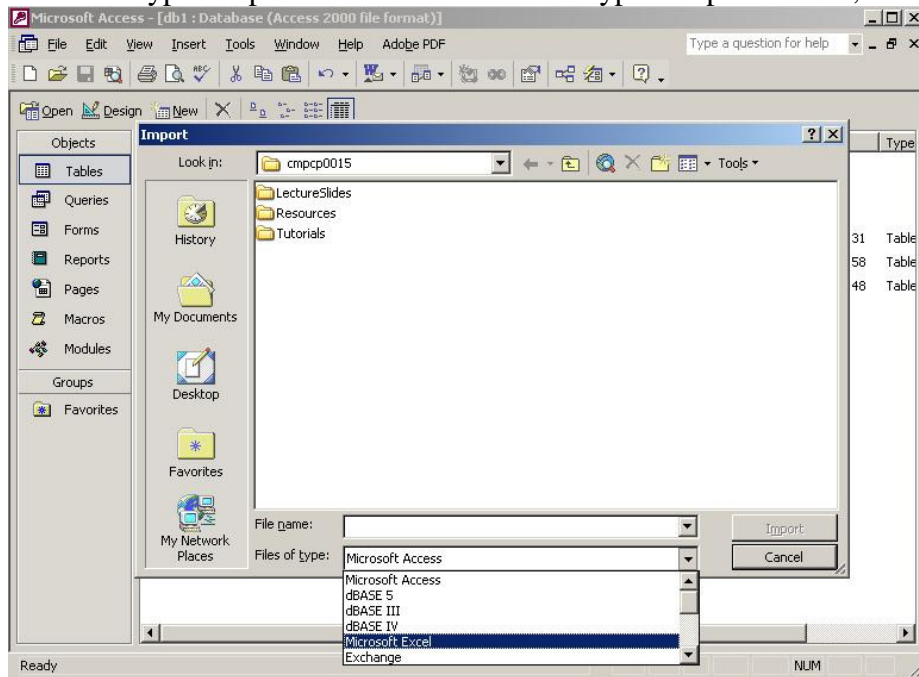
Import Data into MS-Access

To import a spreadsheet into MS-Access

1. Open the Access database you created in the last week.

- Switch to the Database window
2. Choose the 'File |Get External Data'
- Choose 'Import' from the submenu
3. Select the spreadsheet file for importing data

- Select type of spreadsheet from 'Files of Type' drop-down list;

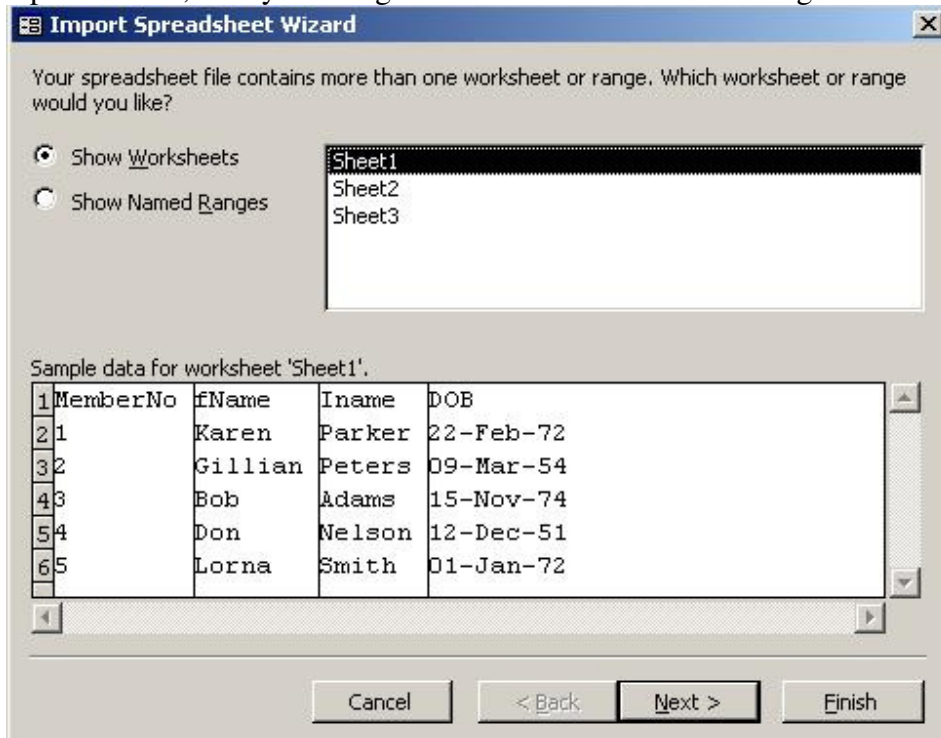


- Select the spreadsheet file via windows resource browser
 The sample of MS-Excel has been created and saved in the following path:
 "L:\cmppc0015\Resources\MemberNo.xls".

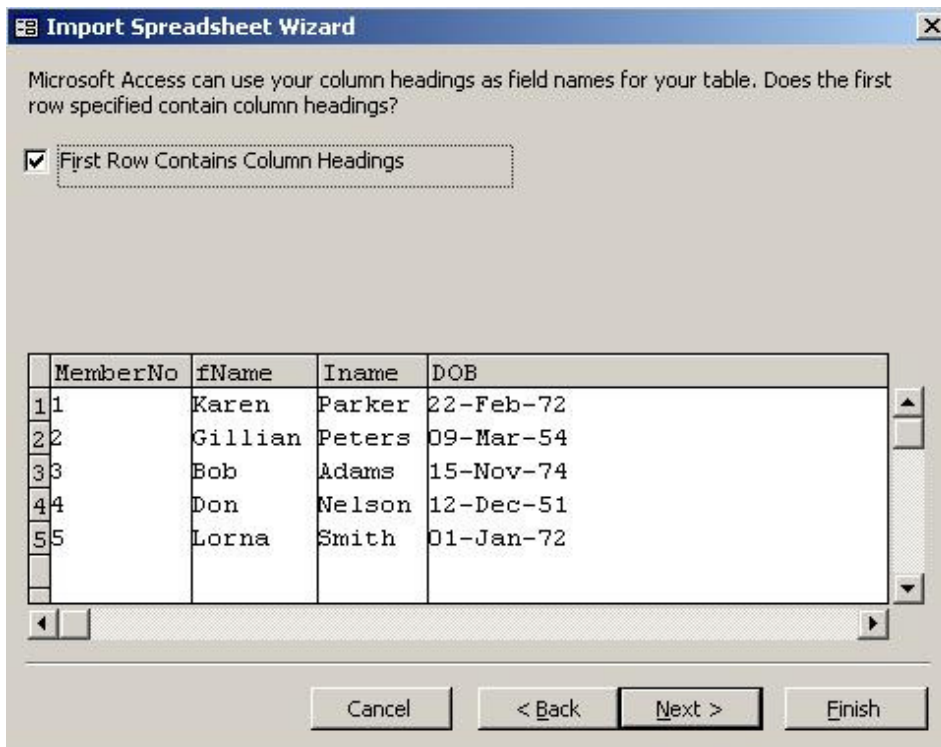
	A	B	C	D	E	F
1	MemberNo	fName	lname	DOB		
2	1	Karen	Parker	22-Feb-72		
3	2	Gillian	Peters	09-Mar-54		
4	3	Bob	Adams	15-Nov-74		
5	4	Don	Nelson	12-Dec-51		
6	5	Lorna	Smith	01-Jan-72		
7						
8						
9						
10						

This 'MemberNo.xls' MS-Excel file contains some sample data with the same columns / fields as the table you created in the last week.

4. Click the 'Import' button, then you will go to the window as the following

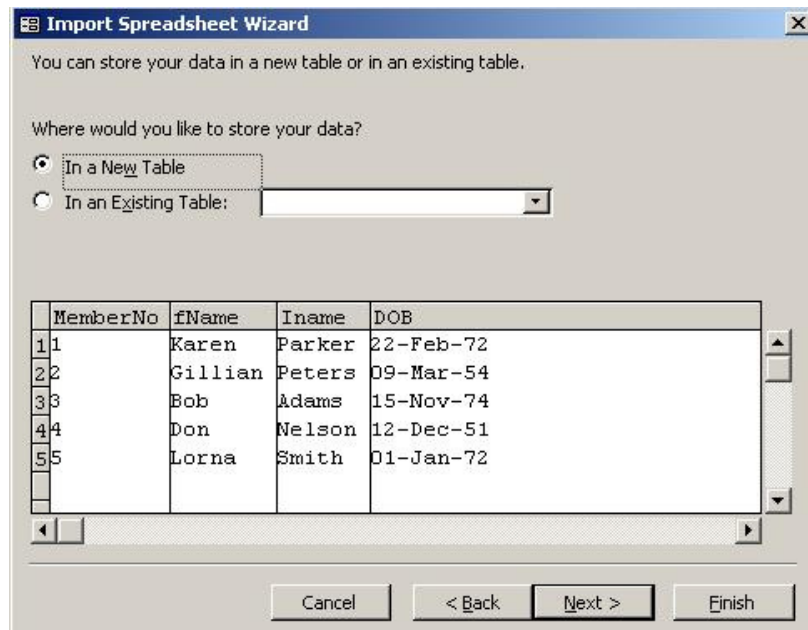


After you select a worksheet or a named range (in this case, stick with the show worksheets), choose the worksheet you want to import the data. As the 'MemberNo.xls' only has 'Sheet1' with sample data, so please select the 'sheet1'. Click Next to go to the next window.

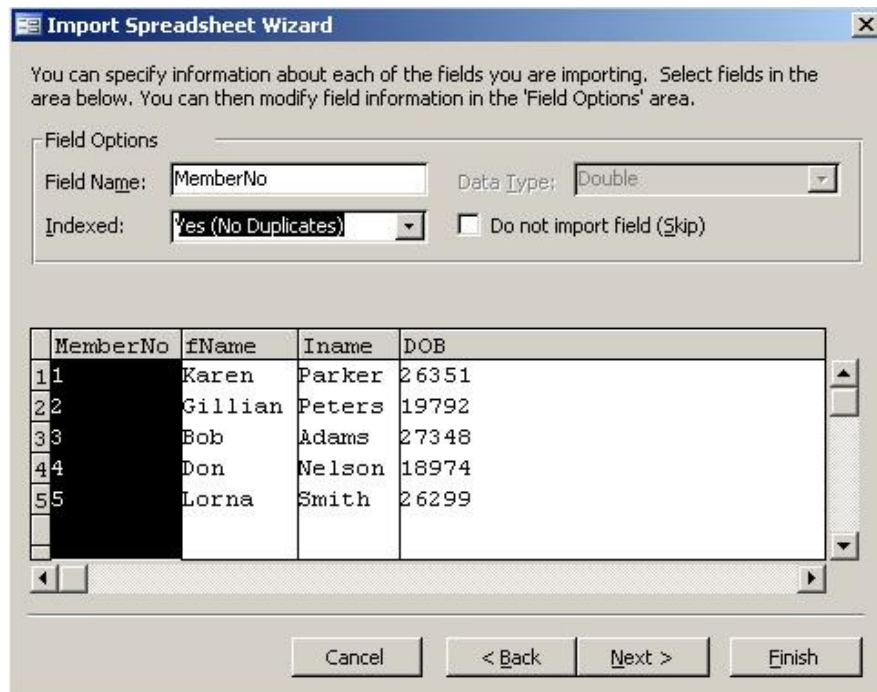


Select the First Row Contains Column Heading check box as the column heading has already been created in the 'sheet1'. Access will automatically convert the column heading in MS-Excel into the fields / columns in the target table. After importing data into MS-Access, you can remove that column

heading from the worksheet for keeping the consistence of original file. Click Next to go to the next step.



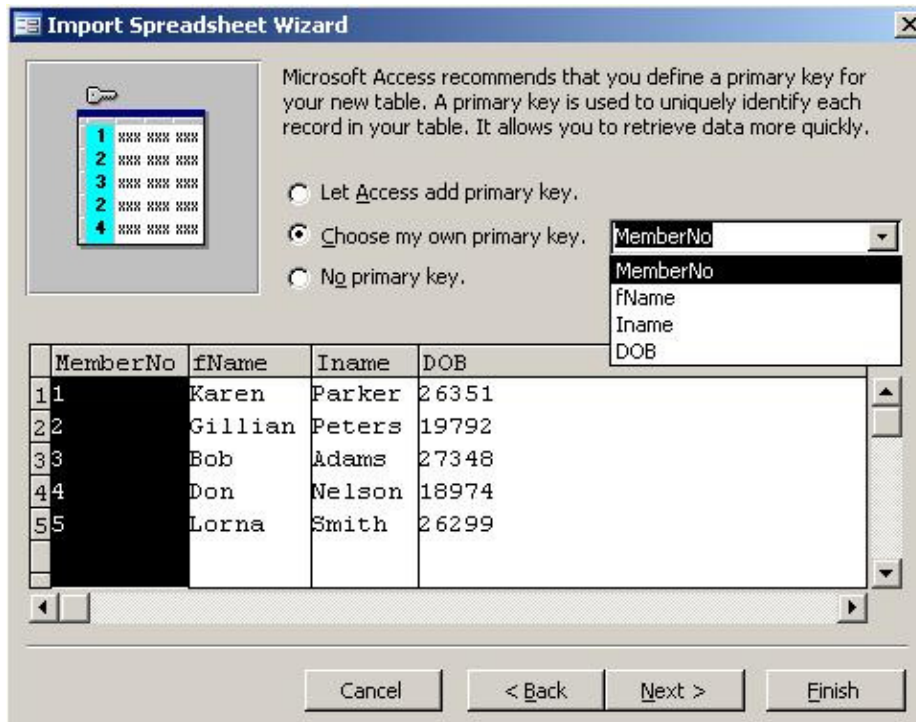
In the window that appears above, you can specify whether you want to import the data to a new table or append it to an existing one in the MS-Access. In this test, select 'In a New Table'. Click Next to go to the next window.



If you have chosen to create a new table, you can scroll left and right to the various fields and tell the wizard fields should be indexed in the new table. Your indexing choices are identical to the ones you'll find for the Indexed property of a table field in Design View. In this test, for the **MemberNo** field, select Yes (No Duplicates) from the 'Indexed' drop-down list box, shown in the following Figure.

Note: As the 'MemberNo' field will be chosen as the primary key in the next stage, we select 'Yes (No Duplicates)' for the 'Indexed property' as the value of primary key can't be duplicated.

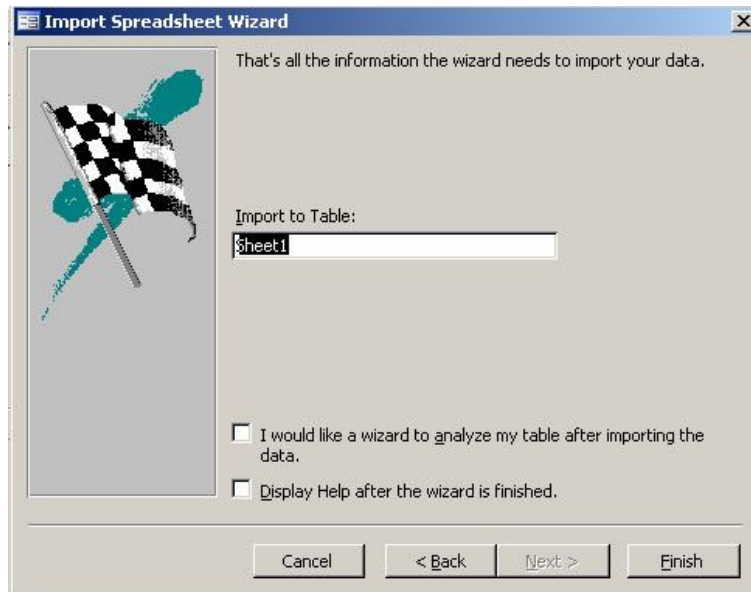
As you can move from field to field, the Data Type combo box displays the data type that the wizard picks for each field. Click 'Next' to the next window.



In the window above, you can designate a field as the primary key for the new table. If you want, you can tell the wizard to build an ID field for you that will use the AutoNumber data type by ticking the 'Let Access add primary key'. As the 'MemberNo' has already been chosen as the primary key, we tick the option 'Choose my own primary key' and select the 'MemberNo' from the list.

If multiple fields form a unique value as the composite primary key, you can tell the wizard not to create a primary key at this stage. Later, you can open the resulting table in the Design view to set the primary key manually.

Click Next to go to the final window of the wizard.



In this window, you can change the name of your new table. (The wizard chooses the name of the spreadsheet or the name range you picked in the previous step).

Click Finish in the last window to import your data. Access opens a message box that indicates the result of the import procedure. If the procedure is successful, the new table will have the name you entered in the last step. If you asked to append the data to an existing table and Access found errors. You can choose to complete the import with errors or go back to the wizard to attempt to fix the problem. You might need to exit the wizard and correct data in the original spreadsheet file.

Setting Table Properties

In addition to field properties, you can set properties that apply to an entire table and to entire records. You set these properties in the table's property sheet. The list shown below gives the table properties and their uses.

<u>Table Property</u>	<u>Uses</u>
Description	Store a description of a table's contents and purpose. For attached tables, Microsoft Access stores a description of the table's source.
Validation Rule	Limit data entered in a record to values that meet certain requirements. Microsoft Access checks to make sure the data follows this rule before it saves a record in the table.
Validation Text	Display a message when the record validation rule is violated.
Filter	Store a description of the filter for the table.
Order By	Store a description of the sort order for the records of the table.
Subdatasheet Name	Specify the <u>table</u> or <u>query</u> (subdatasheet) that is bound to the table. A subdatasheet is a datasheet that is nested within another datasheet that contains data related or joined to the first datasheet.
LinkChildFields / LinkMasterFields	Specify how Microsoft Access links <u>records</u> in the table to the subdatasheet. If set, Microsoft Access automatically updates the related record in subdatasheet when you change to a new record in <u>a</u> table.
Subdatasheet Height	Specify the display height of a <u>subdatasheet</u> when expanded.
Subdatasheet Expanded	Specify the saved state of all subdatasheets within a table.

To set a table property

1. Open the table in **Design** view.
2. From the **View** menu, choose **Properties** (or click the **Properties** button on the toolbar).



Microsoft Access displays the table's property sheet, as shown in Figure 8.

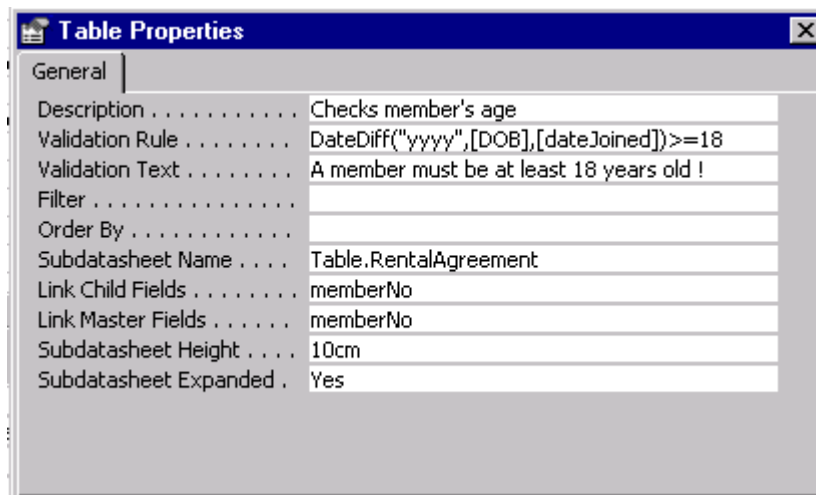


Figure 8: Table property sheet for the Member table.

3. Click the box for the property you want to set.
4. Type a setting for the property.

If you want more space to enter or edit a property setting, press **SHIFT+F2** to display the Zoom box. If you are setting the **Validation Rule** property to an expression and would like help building it, click the **Build** button to the right of the Validation Rule property box to display the Expression Builder.

5. To save your changes to the table, choose **Save** from the **File** menu.

Using Validation Rules for Records

Although you will usually set validation rules for individual fields, you may also want to set a rule that applies to a record as a whole. When you set a validation rule for a table, Microsoft Access checks for valid data when you save or leave a record, rather than when you leave a field. Unlike field validation rules, table validation rules can contain references to one or more fields in the table. This makes them useful when you want to compare values in different fields. For example, you can use a table validation rule to ensure that one field's value is always greater than that of another in the same record.

You create a table validation rule by setting the table's Validation Rule property to an expression. Each time you save a record, Microsoft Access evaluates the expression to make sure it's true.

Activity

- (a) Create a rule that all members must be at least 18 years old when they join the video shop. Set this rule as a table property for your **Member** table (as shown in the Figure 8). Please ensure that you understand how the validation expression works by accessing the online help.
- (b) Create a subdatasheet for the **Member** table to display the video rentals associated with each member (as shown in Figure 8). Save your **Member** table and examine the table in datasheet view.