

STRATEGIES TO CONSIDER WHILE CREATING A RELATIONAL DATABASE

Creating a Database:

1. Ensure the Database is given a relevant name related to the nature of the Database. eg. ToyShop not SAC 1

Defining Fields:

1. Ensure the fields name are relevant but short. eg. Use DOB for Data Of Birth etc.
2. If a Field is used in more than one Table, ensure it has the same Field Type and Properties in both Tables. eg. Phone is Text Size 9 with 0000-0000 Mask in both tables OR Phone is Numerical, 0 Decimal Places and 00000000 Mask in both tables.
3. The 1st Field should be assigned as the Key Field but if data in the field is repeated, this 1st Field should be Indexed with Duplicates OK and not defined as a Key Field (click on No if asked to insert a key field).
4. Use Validation Rules and Input Masks only for fields that must contain data of a specific nature. eg. Use 0000 for Postcodes so only 4 digits are entered but don't use an Input Mask for the Address since there can be many types of addresses (units, flats in Streets, Avenues, Roads etc).
5. Ensure you choose the correct Field Properties as they are defined. If you need to alter the Validation Rules, Input Masks or Formats AFTER you have created Forms or Reports, you must CLOSE OFF the Forms or Reports, then open the Table and make the alterations and SAVE the Table. Then re-open the Forms or Reports and make the SAME changes to the PROPERTIES for that field in each Form or Report.
6. For any work done in Information Technology, you should not have to create an Auto Serial Key Field.

Creating, Formatting and Using Forms:

1. You should NEVER enter data in the Table View – since the sole purpose of using Forms is to Enter Data.
2. If the Database contains more than one Form, ensure ALL forms have the same Background, Field Text and Box Colour and Shadings and that the Font Size is consistent for all Fields and Headings.
3. Ensure a relevant Heading is used at the top of the Form and your name and SAC details (if applicable) are placed at the bottom of the Form.
4. Check all Field Data Formats and if any are wrong, display the Properties dialog box & change the Formats.
5. Ensure the left edge of the Field Name and Field Data boxes are aligned (vertically).
6. Text Fields should be Left Aligned and Numbers (even with – or spaces) & Dates should be Right Aligned.
7. Ensure the Field Data boxes are wide enough to show all of the Information.

Using Relationships:

1. Before any Queries and related Reports can be created, you MUST create a Relationship that joins the Key or Indexed Field in two or more Tables together in a One-to-One, One-to-Many or Many-to-Many relationship. The relationship must be saved.
2. If the Relationship is wrong, click on the link in the Relationship window and press the DEL key and click on YES to delete the Relationship and re-create the Relationship between the Key and Indexed Fields.

Creating and Running Queries:

1. Think about the Query and what Fields you would expect to be shown to communicate all of the required information for that Query. Do not include (tick) every field as it means you are providing superfluous data.
2. Be Careful when determining the Criteria for a Query.
 - If you need to locate a small part of information in a Field containing a lot of data, use the * (Wildcard). eg. Gr* will find Great, Grease, etc.
 - If you need to locate a range of numbers/dates in a Field, use > smallest number AND < largest number. eg. >20 AND <50
 - If you need to exclude data in a Field, use NOT followed by the data to be excluded. eg. NOT Warm

Creating, Formatting and Using Reports:

1. If the Database contains more than one Report, ensure ALL reports have the same Background, Field Text and Colour and that the Font Size is consistent for all Fields or Headings.
2. Ensure a relevant Heading is used at the top of the Report and your name and SAC details (if applicable) are placed at the bottom of the Report.
3. Check all Field Data Formats and if any are wrong, display the Properties dialog box and change the Formats.
4. Text Fields should be Left Aligned and Numbers (even if separated by – or spaces) and Dates should be Right Aligned BUT ALL Field Names should be Left Aligned.
5. Ensure the Field Data boxes are wide enough to show all of the Information when Previewing the Reports.
6. If the wrong data is displayed or you have altered the data in the Forms, you MUST close off the Table or Form, open and re-run the related Query and then open the Report. If you do not run the Query again, the correct data will NOT be shown.
7. When creating reports for linked Tables, ensure the “View By Table” is set to the table containing the repeated data values.

- To run Access, on the Desktop, double click on **OFFICE 2000** and then on **MICROSOFT ACCESS**. Microsoft Access is a Relational Database so data from 2 or more Database Tables can be linked together.

Creating a Database and Table

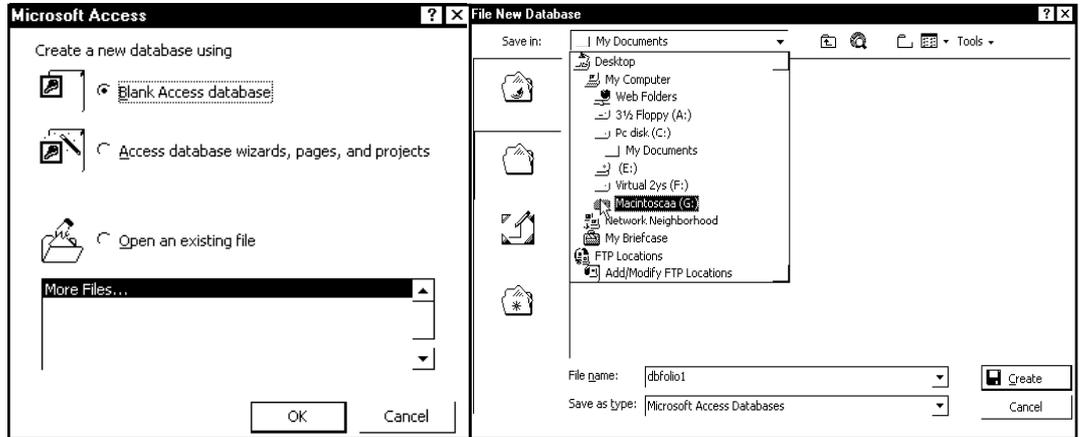
The **Microsoft Access** dialog box will be shown to create a new Database or Open an existing Database.

- To create a Database for this Folio click in the ring in front of **Blank Access Database** and click on **OK**.

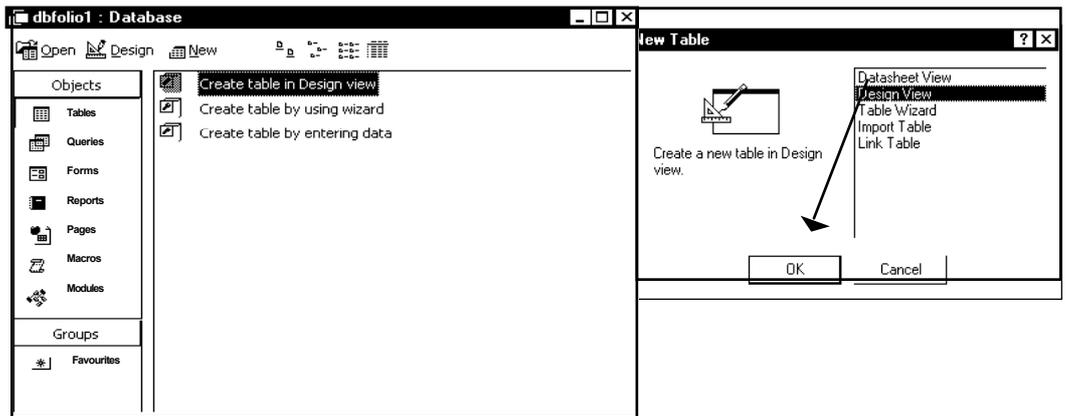
- The **Save** dialog box will appear so erase the file name shown in the **File Name:** box and type in **CompDB**

- Click on the **Save In:** and click on the **Users On MGSCFile (Z:)**.

- Double click on your Year Level directory and then on the **DB** directory and click on **CREATE**.



The **Database** dialog box will be shown to create new **Tables** (to create fields and enter properties), **Queries** (to search for information), **Forms** (to enter information into fields), **Reports** (to print out information), **Pages** (to view data on the Net or Excel files), **Macros** (to record common steps) and **Modules** (to write programs to perform tasks). A Database can contain one or more Tables, Forms, Queries, Reports, etc.



- Click on the **Tables** title and click on **NEW**.
- The **New Table** dialog box will be shown so click on **Design View** and click on **OK**.

Entering and Structuring the Database Table Fields

- The **Table1: Table** dialog box will be shown so enlarge its screen by clicking on the **maximize** button on the top right.

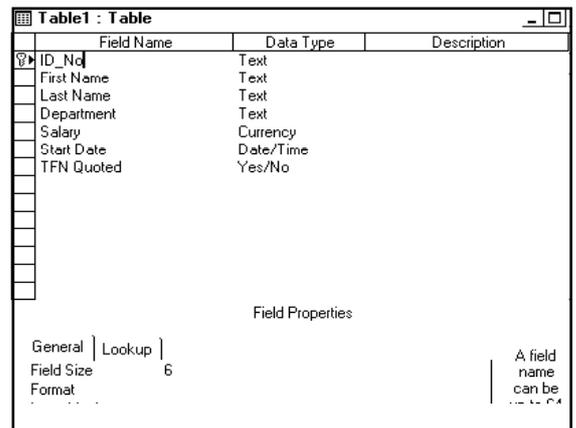
- In the 1st row of the **Field Names** column, type **ID_No** (the **_** is SHIFT -), press the **TAB** key and click on the **Text** in the **Data Type** column and select **Text**.

Text is for letters, *Numbers* is for numbers, *AutoNumber* is for Serial no, *Currency* is for \$, *Date/Time* is for the date or time, *Yes/No* shows Yes or No or *Memo* is for a list.

- The **Field Properties** area is shown below the field list so in the **Field Size** box, type in **6** and in the **Required** box, change No to **Yes** so the field cannot be blank.

The size of the field is only entered for **Text** fields.

- To alter the display of data entered, an **Input Mask** can be set so click on the **ID_No** row and in the **Input Mask** box, type in **>L>L00** (this means that 2 capital letters followed by 2 numbers must be typed in or an error will be produced).



When defining fields Input Masks should be used sparingly but consistently with specific fields.

Masks: Use *0/9* to force/optionally entry of a number. # to optionally enter a number or space.
L/? to force/optionally entry of a letter. A to force entry of a letter or number.
& to force entry of anything. > forces the next character to be in uppercase.
< forces the next character to be lowercase. eg. >A<A00 allows Cd11.

To link 2 or more Tables together so information from each can be shown together, a common Primary Key field is defined in each Table which is the first field listed and cannot contain repeated information otherwise an error will be produced. If information must be repeated (eg. For a 2nd order etc), then an Index is used and not a Primary Key.

- Click on the **ID_No** row (so a ► appears) and click on the  in the Toolbar or choose **EDIT -> PRIMARY KEY**. Only 1 Primary key can be created for a Table so it must be carefully chosen to avoid it containing repeated information.
- Add the following fields (starting on the 2nd row of the Field Names box with the properties stated below):

| Field Name | Data Type | Field Properties to be entered |
|------------|-----------|---|
| First Name | Text | Field Size=20 |
| Last Name | Text | Field Size=20 |
| Position | Text | Field Size=20 |
| Salary | Currency | Click in the Decimal Place box and click on the ▼ and choose 0 |
| Start Date | Date/Time | Click in the Format box and click on the ▼ and choose Short Date |
| TFN Quoted | Yes/No | Required, Click on the Default Value ... and type in Yes & click on OK . |

- To control the values entered for the Salary, click on the row containing **Salary** and in the Properties area, click in the box after **Validation Rule** and type in **>0 AND <100000** to ensure only values between \$0 and \$100,000 can be entered (you do not need to type in the \$ sign as it has been defined as Currency).
 If you need to insert a row so the fields are created in the correct order, place the cursor on the line above where the new field is to be placed and click on the  in the Toolbar or choose **INSERT -> FIELD**.
 If you need to delete a row so the fields are created in the correct order, place the cursor on the line and click on the  in the Toolbar or choose **EDIT -> DELETE**.
- To save the Table, choose **FILE -> SAVE** and in the **Table Name:** box, type in **Employees** and then click on **OK**. It is important to always choose filenames that relate to the contents of the file.
- Choose **FILE -> CLOSE** to close off the Table so that other parts of the Database can be created.

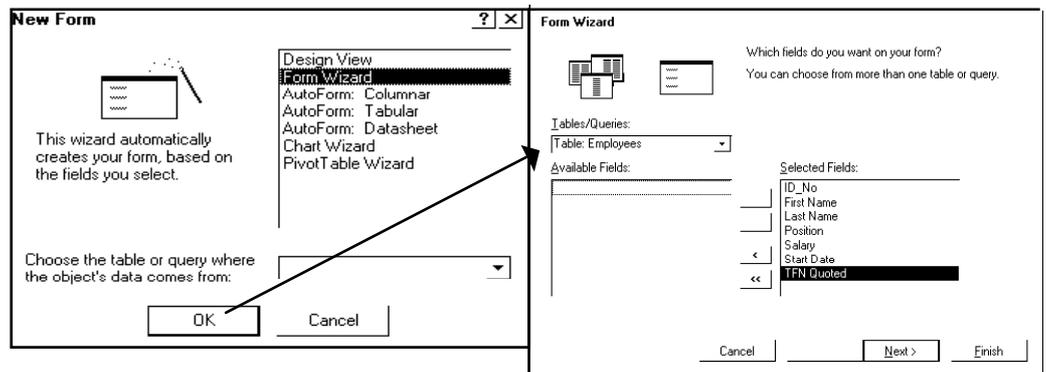
If you now needed to alter the Database design, choose **WINDOW -> COMPDB: Database**, click on the **Tables** title, click on **Employees** and click on **DESIGN**.

If you accidentally click on **OPEN** to show the Datasheet View, click on the  in the Toolbar or choose **VIEW -> DESIGN VIEW**. Make the necessary changes and choose **FILE -> SAVE** and choose **FILE -> CLOSE** to close off the Table. If messages appear to check Validity Rules/Input Masks, click on **OK**.

Creating a Form: This is used to enter data

- If the **CompDB** window is not shown, choose it from the **WINDOW** menu and click on the **Form** title.

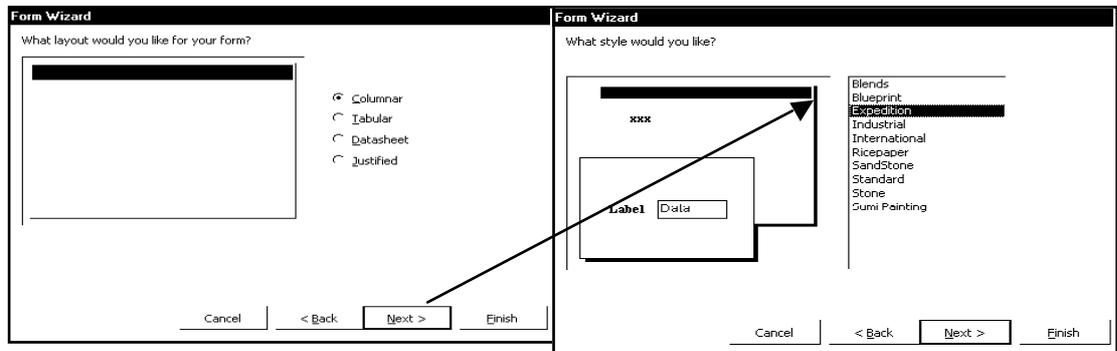
- Click on  **New** to create a new form and in the **New Form** dialog box, click on **Form Wizard** and click on **OK**.



- In the **Tables/Queries:** box, click on the ▼ and select **Employees** to list its fields in the **Available Fields:** box.

- Click on the >> to move all of the fields into the **Selected Fields:** box and then click on **NEXT>**.

21. Since the fields in a Form look better in columns, ensure there is a dot in the ring in front of the **Columnar** option and click on **NEXT>**.



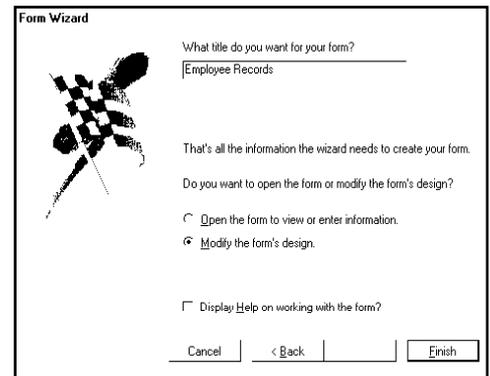
22. To change the appearance of the Form background and field boxes, click on **Expedition** and click on **NEXT>**.

23. To name the Form, erase the name in the top box and type in **EMPLOYEE RECORDS** and then click in the ring in front of **Modify the Form's Design** and click on **FINISH**.

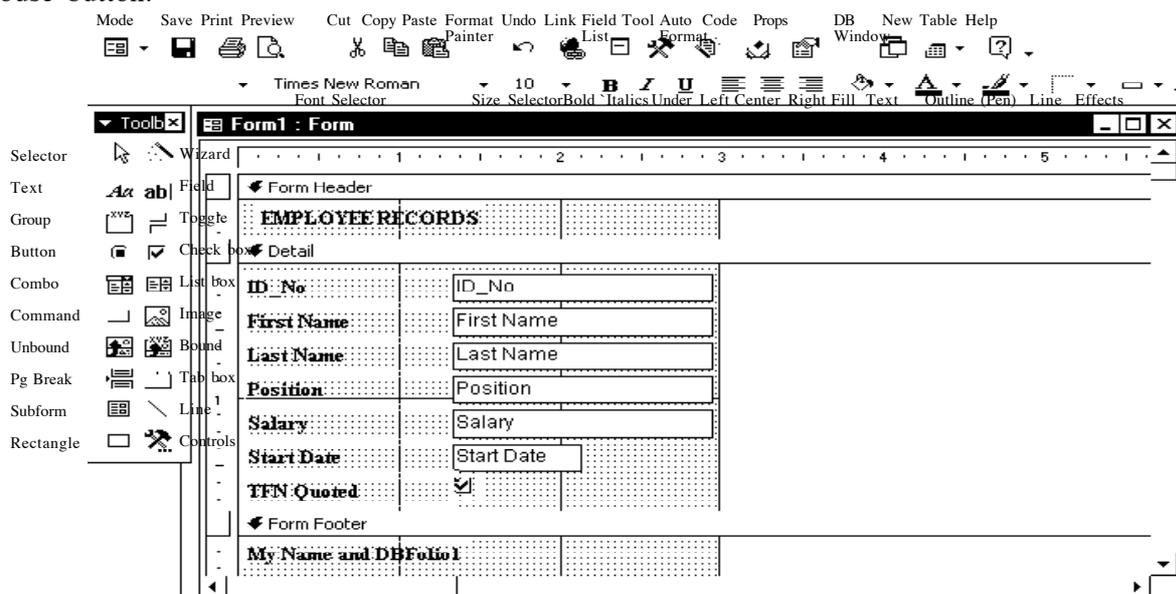
*If the Form tools are not shown, choose **VIEW -> TOOLBOX**.*

*If you need to move fields or their labels, select the **Arrow** tool and double click on the data and make the necessary changes.*

*If the Form Footer (and Header) are not shown, choose **VIEW -> FORM HEADER/FOOTER**.*



24. To insert a header, select the **Arrow** tool and hold the mouse button down between the **Form Header** and **Detail** areas so the cursor changes to a **+** and drag the mouse down approximately **1.0 cm** and release the mouse button.

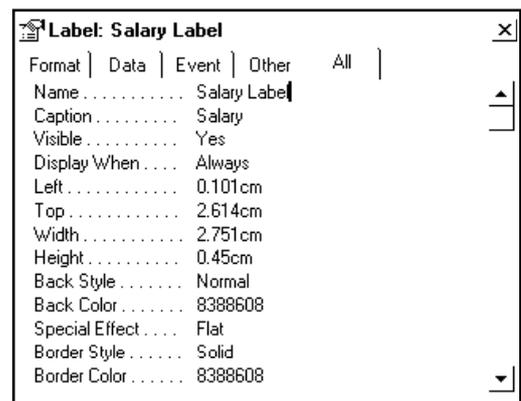


25. Select the **Text (Aa)** & click one-third across the form header area and type in **EMPLOYEE RECORDS**.

26. To insert your name, select the **Text (Aa)** tool and click below the **Form Footer** but close to its title and type in your Name and **CompDB**.

*To move a field or field name, select the **Arrow** tool, click on the desired field name or field to select it and then hold the mouse button down and drag it to relocate the item and release the mouse button.*

27. To check the field properties, select the **Arrow** tool and double click on any field or field name or click on a field or field name and choose **VIEW -> PROPERTIES** or click on  in the Toolbar.



28. Click on the **ALL** title to show all of the field properties.

If a field name is selected, the field name will be shown in the Field Caption area and if you click on a different field or field name, the Properties details will change to show the formats of the new item.

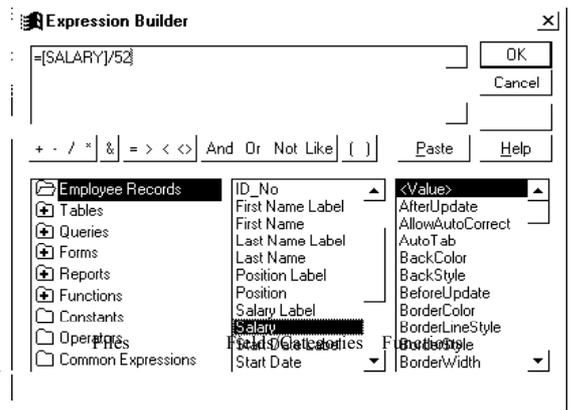
If you need to change the Field names or Headers, select the item so its details are shown in the Properties box and then click on the **All** title and click on the Caption line and change the name.

If you wish to change the **Text Colour/Fill Colour**, click on the Field Name or Field, then click on the **Text Colour/Fill Colour** ▼ in the Toolbar and select the desired colour. The Line colour can also be changed.

If the message "File Exclusively Locked" appears, choose the **Table** file from the **WINDOW** menu or choose **WINDOW -> DBFolio** and in the Table tab, view the design and save the file and then close it.

29. To insert a calculation field, select the  tool and drag the **Form Footer** area down 1 cm. Select the **abl** tool and click below the TFN Quoted field. A coloured field name (**Text:16?**) and an **Unbound** box (that holds the data) will be shown. If you need to delete an item, select the  tool, click on the item and press **Delete**.

30. Select the  tool, click on the box containing **Unbound** and hold the mouse button down on the top **left** large dot handle and drag it to the right so the left edge is aligned with a field above it. This will show the **Text:16?** field name so double click on this and change it to **Weekly Salary**.



31. Move this field name (using the top black left dot handle) so it is aligned with the other field names above it.
32. Click on **Unbound** and in the **Properties** box, click on the **All** title.
33. Click on the **Control Source** row and click on the ... and in the **Expression Builder** dialog box, type in **SALARY/52** and click on **OK**.

34. Click on the **Format** row and click on the ▼ and choose **Currency**.

35. Click on the **Decimal Places** row and click on the ▼ and choose **2**.

36. The Salary field data box (on the right side) may be too long so click on it and drag a dot handle on the right side to the left so it is about the same length as the **Start Date** field data box. If any fields (names or data boxes) are not aligned, click on them & drag the top left box to move them.

37. When ready, click on the **X** in the top right corner to hide the properties. *This same process can be applied to a report printout.*

38. To save the form, choose **FILE -> SAVE** or click on the  in the Toolbar.

Accessing Help

39. To access Help on using Microsoft Access, press **F1** or choose **HELP -> MICROSOFT ACCESS HELP** and in the **Microsoft Access Help** dialog box, click on the  to display the list of indexed help files in the **Contents** area.

40. Click on the **+** in front of **Working With Reports** to display a list of related items.

41. Click on the **? What they are and how they work** item to display its help information in the right side.

42. When ready, click on the **X** in the top right corner to close off the Help screen.

Creating Command Buttons as shortcuts to Menu commands

43. Ensure you are still in **Design** mode and select the  tool.

44. Drag the area below **Form Footer** down so there is approx **2** cm of extra space below your name and folio details.

45. Select the **Wizard** () tool and then the **Command Button** tool () from the Toolbox and click in the blank area below your name and folio details to create a command button. As you click in the blank area, a dialog box will appear so ensure the **Categories:** is set to **Record Navigation** and in the **Actions:** area, click on **Go To Next Record** and click on **NEXT>**.

46. In the next dialog box, ensure there is a dot in the ring for **Picture** and **Go To Next 2** is selected and click on **NEXT>**.

47. Change the name shown as **Command18?** to **NEXT** and click on **FINISH**.
48. Select the  tool and select this button and then move it to the left edge of the form under the last field.
49. Reselect the **Wizard** tool and then create another command button using the **Categories: Record Navigation**. Select the **Actions: Go To Previous Record** with any picture. Name the command **PREV**. Move this command button next to the NEXT button.
50. Create another command button using the **Categories: Record Operations**, select the **Actions: Add New Record** with a suitable picture. Name the command **NEW**. Move this command button next to the PREV button.
51. Create another command button using the **Categories: Record Operations**, select the **Actions: Delete Record** with a suitable picture. Name the command **DELETE**. Move this command button next to the NEW button.
52. Create another command button using the **Categories: Form Operations**, select the **Actions: Print A Form** and select the **Employees** form and name the command **PRINT**. Move this command button next to the DELETE button.
53. If there is a large amount of space between the row of command buttons and the Form Footer, drag the Form Footer up.

54. To save the form, choose **FILE -> SAVE** or click on the  in the Toolbar.

55. To show the data view of the form, click on **Form**  in the Toolbar or choose **VIEW -> FORM VIEW**. Note the text will be left aligned and the numbers/currency and dates will be right aligned once data has been entered.

*If you need to reshow the Form Design, choose **VIEW -> DESIGN VIEW** or click on the  in the Toolbar.*

Entering Data: Data should be entered into the FORM but not in the Table (Datasheet) view.

56. Press the **TAB** key to place the cursor in the first field and enter the information shown below.

*As you press **TAB** in the last field, a new record is created or choose **INSERT -> NEW RECORD**.*

57. Press the **TAB** key to move to the next field or hold down the **SHIFT** key and press **TAB** to move to the previous field.

*Note: If you have trouble entering data, the fields may be wrong so choose **FILE -> CLOSE** and confirm closing the form if dialog boxes are shown.*

*If the **ID_No** requires data, try **TT22** and choose **WINDOW -> CompDB** and click on the **Tables** title.*

*Click on **EMPLOYEES** and click on **DESIGN** and carefully change the Field Structure if there are mistakes. Then choose **FILE -> SAVE** and choose **FILE -> CLOSE**.*

*Choose **WINDOW -> CompDB** and click on the **Forms** title and click on **EMPLOYEES** and click on **DESIGN**. You will then need to double click on the field data box that was altered in the Table so the **Properties** dialog box is shown and make the same change.*

*Then choose **FILE -> SAVE** and then choose **VIEW -> FORM VIEW** and try to enter the data again.*

58. Do not type in the \$ or , in the **Salary** field as it is already formatted. Use only a / when typing in the dates. Since **TFN Quoted** is a Yes/No field and set to Yes by Default, it will automatically place a tick in a box.

59. To remove a tick from the **TFN Quoted** field (to show No tick), place the cursor in the box and press the **Spacebar**.



| ID No | First Name | Last Name | Position | Salary | Start Date | TFN Quoted |
|-------|------------|-----------|-------------|----------|------------|-------------------------------------|
| AA01 | Amy | Andrews | Sales | \$35,000 | 1/2/97 | <input checked="" type="checkbox"/> |
| BC01 | Ben | Campbell | Marketing | \$35,000 | 3/21/96 | <input checked="" type="checkbox"/> |
| DD01 | Diane | Drummond | Sales | \$41,000 | 11/28/98 | <input checked="" type="checkbox"/> |
| FD01 | Fiona | Davy | Advertising | \$23,000 | 1/3/97 | <input type="checkbox"/> |
| GG01 | Greg | Grines | Sales | \$38,500 | 9/16/95 | <input checked="" type="checkbox"/> |
| HH01 | Henry | House | Marketing | \$33,750 | 1/3/98 | <input checked="" type="checkbox"/> |
| JJ01 | Jenny | Jones | Manager | \$53,000 | 1/1/90 | <input checked="" type="checkbox"/> |
| JJ02 | Jack | Johns | Sales | \$33,000 | 6/25/96 | <input checked="" type="checkbox"/> |
| KL01 | Katie | Lyons | Marketing | \$39,900 | 7/23/96 | <input checked="" type="checkbox"/> |

60. At the bottom of the window, click on the **Record:**  to view the previous record,  to view the 1st record,  to view the next record,  to view the last record or on  to view a new record or use the command buttons you just created.

*To temporarily view data in a Table choose **VIEW -> DATASHEET VIEW**. Note that the **Datasheet view should not be used as the sole reason for creating a form was to enter data so choose **VIEW -> FORM VIEW** to view the Form.***

61. You must check the data very carefully. If there are mistakes in the Forms, they will appear in Folio 3, 4 and 5. If this happens, close off the Queries and Reports (in Folio 5), open the Form and correct the error. Then close off the Form for the Database to save the data and open the Queries to locate the correct data, open the Reports and print the new data.

Saving the Data

Since the data is saved automatically, there is no Save command in the FILE menu. Each record can be saved using **RECORDS -> SAVE RECORD** or automatically by closing off the Form.

Only the Design (of any forms, queries and reports) should be saved.

*If you need to open the Database, choose **FILE -> OPEN**, click on the **Look In:** , then on **Users On MGSCFile (Z:)** and double click on your Year Level directory, then on your Name and then on **DB**, then click on **COMPDB** and click on **OPEN**.*

*Click on the **Tables** title to alter the field structure or the **Form** title to alter the form properties and double click on **Employees**.*

Printing Records from a Form

62. Ensure the Form is shown and choose **FILE -> PAGE SETUP** and click on the **Page** title. Ensure the **Orientation:** is set to **Portrait** and the **Paper Size:** is set to **A4**. If you wish to print the forms in 2 columns, click on the **Column** title and change the number of Columns to **2** and then click on **OK**.

63. Choose **FILE -> PRINT** and click on **OK** or click on the **Print** command button or in the Toolbar.

Importing Data – This is just information so nothing needs to be done

*If you needed to insert data from another table which had the same number of fields (and in the same order), choose **FILE -> GET EXTERNAL DATA -> IMPORT** and then in the **Import** dialog box, click on the **Look In:**  and locate the desired file and then click on **IMPORT**. The new data could be viewed by using the Form you created.*

Produce a Flowchart summarising steps you followed to complete this folio.

1. To run Access, on the Desktop, double click on **OFFICE 2000** and then on **MICROSOFT ACCESS**. In this folio you will create another table and form in the CompDB Database and edit and sort information.

Opening the Database

2. If CompDB is not open, choose **FILE -> OPEN**, click on the **Look In:** ▼, then on **Users On MGSCFile (Z:)**, then double click on your Year Level directory, then on your Name and then on **DB**, then click on **COMPDB** and click on **OPEN**.
3. Click on the **Tables** title.

Creating a Table

4. Choose **WINDOW -> CompDB** and click on the **Table** title, click on **NEW**, click on **Design View** and click on **OK**.

Defining the Database Table Fields

5. In the first row, type in **ID_No** and select **Text** from the **Data Type** column ▼. In the **Field Properties** below the list of fields change the **Field Size** to **6** and in the **Required** box, delete **No** and type in **Yes**.
6. To alter the display of data entered, an **Input Mask** can be set so click on the **ID_No** row and in the **Input Mask** box, type in **>L>L00** (this means that 2 capital letters followed by 2 numbers must be typed in or an error will be produced).
7. Add the following fields (starting on the row below **ID_No**):

| Field Name | Data Type | Field Properties |
|-----------------|---------------|--|
| Address | Text | Field Size = 50 , Not Required and Not indexed. |
| Postcode | Number | Field = Long Integer , Format = General Number and Decimal Places = 0 |
| Phone | Number | Field = Long Integer , Format = General Number and Decimal Places = 0 |

*Note: If you need to use percentages the Field Properties must be set to Field = **Double Integer**, Format = % and **0** Dec. Places.*

8. The **ID_No** is used to link data in the Employees Table with this Table and since some data for the **ID_No** will be repeated (see AA01), a Primary Key cannot be used so in this table, an **INDEX** will be used. Click on the **ID_No** field and choose **VIEW -> INDEXES** or click on  in the Toolbar and in the **Indexes** dialog box, type in **ID1** in the 1st **Index Name** box.
9. Choose **ID_No** from the ▼ in the 1st **Field Name** box, ensure the **Sort Order** is set to **Ascending** & all Properties are set to **No**. Click on the **X** in the top right corner to close off the dialog box.
10. To allow multiple data for **ID_No**, click on **ID_No**, then click on the **Indexed** ▼ and choose **Yes (Duplicates OK)**.
11. Click on the **Postcode** row and in the **Input Mask** box, type in **0000** so only 4 digit postcodes can be entered.
12. To save the Table, choose **FILE -> SAVE** and in the Table Name: box, type in **Empldata** and click on **OK**.
13. If asked to create a Primary Key, click on **NO** so no Auto-numbering is added. Then choose **FILE -> CLOSE**.

Creating a Form

14. If the **CompDB** window is not shown, choose it from the **WINDOW** menu and click on the **Form** title.
15. Click on  **New** to create a new form and in the **New Form** dialog box, click on **Form Wizard** and click on **OK**.
16. Under the **Tables/Queries:** box click on the ▼ and choose **Empldata** to show its fields in the **Available Fields:** box.
17. Click on the **>>** to move all the fields into the **Selected Fields:** box and click on **NEXT>**.
18. Ensure there is a dot in the ring in front of the **Columnar** option and click on **NEXT>**.
19. To ensure this form matches the other form (for consistency), click on **Expedition** and click on **NEXT>**.

20. To set the Form name, erase the name in the top box and type in **EMPLOYEE DATA** and then click in the ring in front of **Modify the Form's Design** and click on **FINISH**.

*If the Form tools are not shown, choose **VIEW -> TOOLBOX**.*

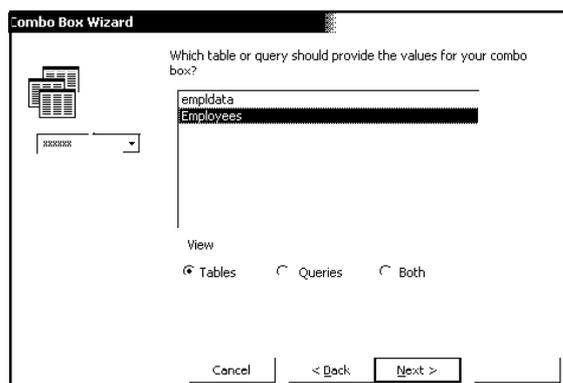
21. To insert a header, select the  tool and hold the mouse button down between the **Form Header** and **Detail** areas so the cursor changes to a  and drag this area down **1.0** cm and release the mouse button.

22. Select the **Text (Aa)** and click about one-third across the form in the Form Header area and type in **EMPLOYEE DATA**

23. Select the  tool and click on the heading and click on the 2nd icon (**Center align**) in the Toolbar.

24. To insert your name, select the **Text (Aa)** tool and click below the **Form Footer** but close to its title and type in your Name and **DBFolio2**.

25. To insert a Combo box that contains all of the ID_No data from the Employees table without having to enter it again, select the  tool and click on the **ID_No** field or field name to select it and then press **DELETE** to delete it.

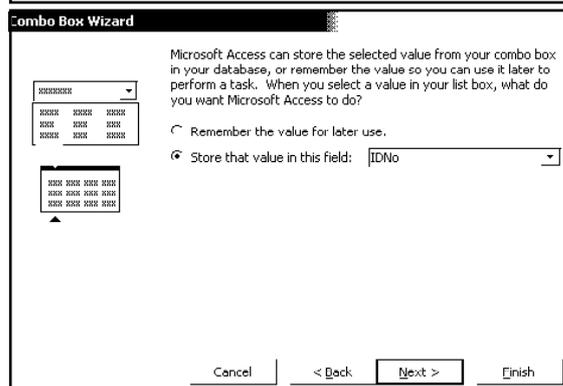


26. Select the **Combo** () tool from the Toolbar and click in the blank area where the ID_No field was on the form and in the Combo dialog box, ensure there is a dot in front of **“I want the Combo box to look up values....”** and click on **NEXT>**.

27. In the next dialog box, ensure there is a dot in front of **Tables** and click on **Employees** and click on **NEXT>**.

28. In the next dialog box, click on **ID_No** and click on **>** (and not **>>**) and then click on **NEXT>**.

29. In the next dialog box, the field box is already wide enough (but it can be dragged to alter its width), so click on **NEXT>**.



30. In the next dialog box, click in the ring in front of **“Store that value in this field”** and select **ID_No** from the  and click on **NEXT>**.

31. In the last dialog box, change the name shown in the **Label for the Combo box** to **ID_No** and click on **FINISH**.

32. **OPTIONAL:** Recreate the same 5 Command buttons as in **Folio 1 steps 42 to 52** in this form.

33. To save the form, choose **FILE -> SAVE**.

34. To show the data view of the form, click on **Form**  in the Toolbar or choose **VIEW -> FORM VIEW**. Note: text is left aligned and numbers/currency and dates are right aligned once data is entered.

Entering Data: Data should be entered into the FORM but not in the Table (Datasheet) view.

35. To enter the ID_No, click on the  and select the desired value.

36. Press the **TAB** key to move to the next field or hold down the **SHIFT** key and press **TAB** to move to the previous field. Another way to create a new record is to choose **INSERT -> NEW RECORD**.

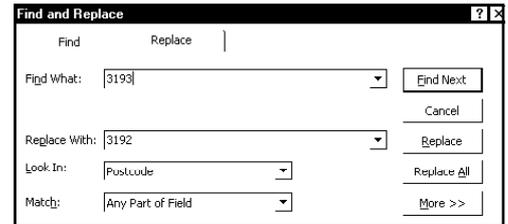
| ID_No | Address | Postcode | Phone |
|-------|--------------------------|----------|----------|
| AA01 | 12 Hero St. Cheltenham | 3193 | 95847070 |
| DD01 | 25 Dond Ave. Sandringham | 3190 | 95872344 |
| AA01 | 129 Jump Ave. | 3193 | 95845060 |
| HH01 | 18 Giveme St. Brighton | 3196 | 95967033 |
| JJ01 | 47 Humfe Rd. | 3193 | 95835404 |
| FD01 | 32 Betry Rd. Parkdale | 3195 | 95834500 |
| JJ02 | 88 Dofe St. Black Rock | 3191 | 95981211 |
| BC01 | 34 Jilk Ave. Parkdale | 3195 | 95834124 |
| FD01 | 52 Lomp Rd. Cheltenham | 3193 | 95843000 |

Copying and Pasting Data and Editing Data

37. Since the suburbs are missing for the records of **AA01** and **JJ01** and the postcodes are both 3193, the suburb can be copied and pasted so highlight **Cheltenham** in the **AA01** record and choose **EDIT -> COPY** or click on the  in the Toolbar and then click in a space after **Jump Ave.** in the **AA01** record and choose **EDIT -> PASTE** or click on the  in the Toolbar.
38. Then click in a space after **Humfe Rd.** in the **JJ01** record and choose **EDIT -> PASTE** again.
39. To alter the data in a record, click after the data and press the **BACKSPACE** key to erase it and then type in the correct data. Change **Dond Ave.** in the **DD01** record to **Patrick St.** and then change **3191** in the **JJ02** record to **3190**

Finding and Replacing Data

40. The Postcode for Cheltenham is wrong several times, so to replace it click in the **Postcode** field and choose **EDIT -> REPLACE**.
41. In the **Replace** dialog box, click in the **Find What:** box and type in **3193**. Press the **TAB** key and in the **Replace With:** box, type **3192**
42. Choose **Postcode** or **Empldata: Table** from the **Look In:**  and choose **Any Part of Field** in the **Match:**  box.
43. Click on **REPLACE ALL** and if a dialog box is shown to confirm the replacements are not undoable, click on **YES**.

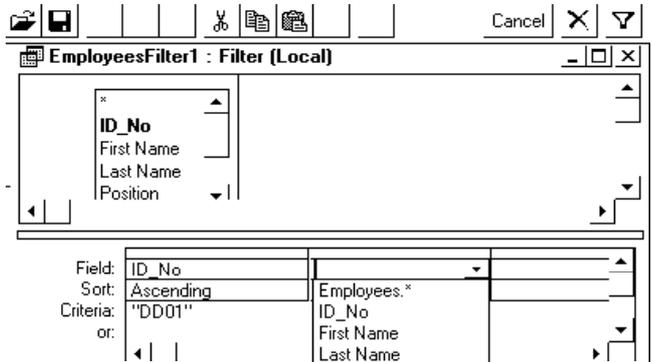


Sorting the Data

44. To sort the records into descending **ID_No** order, click in this field and then click on the  in the Toolbar or choose **RECORDS -> SORT -> SORT DESCENDING**.

To sort in Ascending order (A -> Z), you would click on  in the Toolbar or choose **RECORDS -> SORT -> SORT ASCENDING**.

To sort the records by 2 or more fields, choose **RECORDS -> FILTER -> ADVANCED FILTER/SORT**, select the 1st field in the 1st Field column , select **Ascending/Descending** from the **Sort**  but ensure nothing is in the **Criteria** area. Repeat this step for other sort fields. To perform the sort, click on the  in the Toolbar.



Deleting Records

45. Ben Campbell has retired so his information should be deleted so locate the record with **BC01** and choose **EDIT -> DELETE RECORD** and then click on **YES** to confirm the deletion.
46. Then choose **COMPDB** from the **WINDOW** menu and click on the **FORM** title and double click on the **Employee Records** form and locate **Ben Campbell's** form and delete this form so the entries for Ben are erased from both tables.
47. Then rechoose **COMPDB** from the **WINDOW** menu and open the **Empldata** Form again.

Printing Records from a Form

48. Choose **FILE -> PAGE SETUP**, click on the **Page** title and click in the ring in front of **Portrait** and click on **OK**.
49. Choose **FILE -> PRINT** and click on **OK** or click on the **Print** command button or in the Toolbar.

Importing Data – This is just information so nothing needs to be done

If you needed to insert data from another table which had the same number of fields (and in the same order), choose **FILE -> GET EXTERNAL DATA -> IMPORT** and then in the **Import** dialog box, click on the **Look In:**  and locate the desired file and then click on **IMPORT**.

Produce a Flowchart summarising steps you followed to complete this folio.

- To run Access, on the Desktop, double click on **OFFICE 2000** and then on **MICROSOFT ACCESS**. In this folio you will produce a report of all of the data entered in the Forms of each Table in columns on one page.

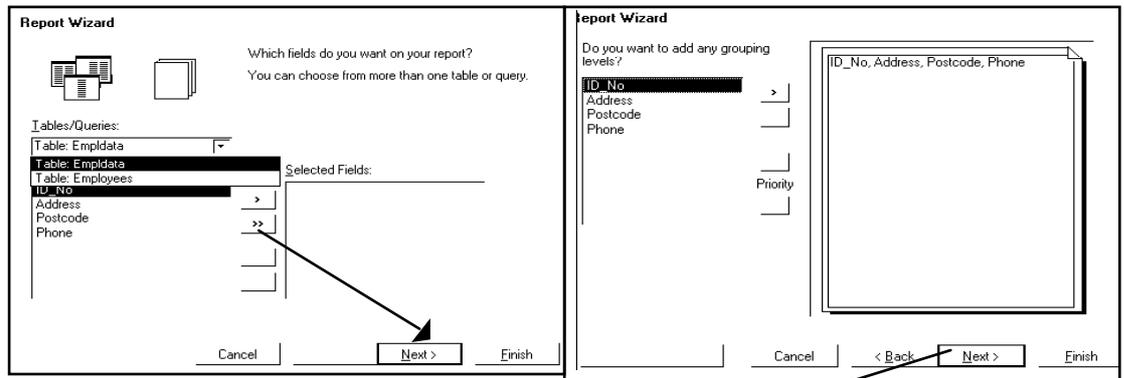
Opening the Database - Go to Step 3 if the previous folio is already open.

- If the previous folio is not open, choose **FILE -> OPEN**, click on the **Look In:** ▼, then on **Users On MGSCFile (Z:)** and then double click on your Year Level, then on your Name and then on **DB**, then click on **COMPDB** and click on **OPEN**. Click on the **Tables** title.

Preparing a Report

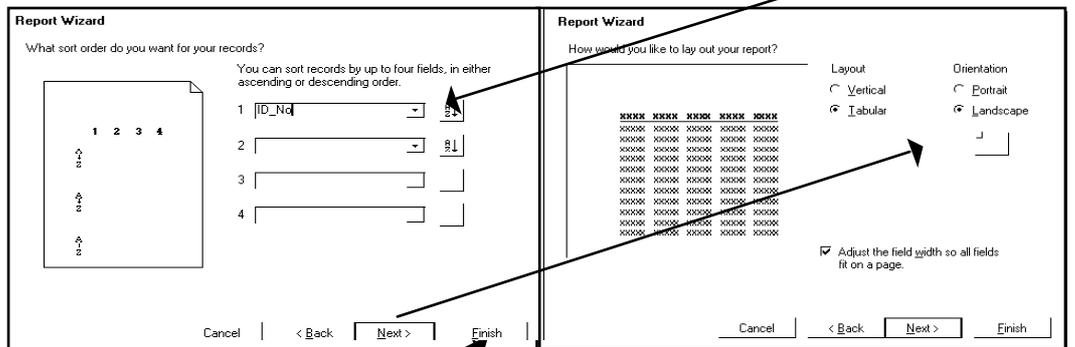
- Choose **WINDOW -> CompDB: Database**, click on the **REPORT** title and click on **NEW**.
- In the **New Report** dialog box, click on **Report Wizard** and then click on **OK**
- In the box below **Tables/Queries:** click on the ▼ and select **Empldata**.

- To move all the fields into the **Selected Fields:** box so they will be on the Report, click on the >> and click on **NEXT>**



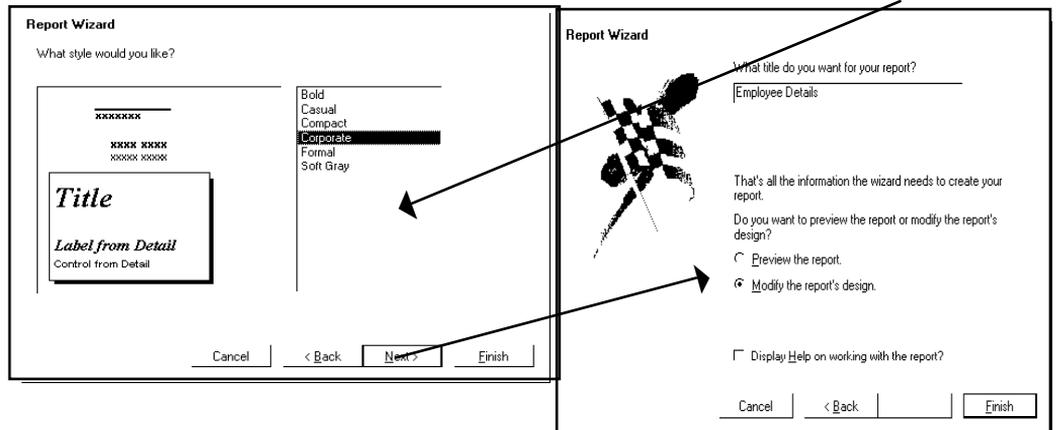
- Since no Grouped data is needed, click on **NEXT>**.

- To sort records according to the **ID_No**, click on the top ▼ in front of **ID_No** and choose **Ascending** and click on **NEXT>**.



- To fit the information on 1 page, click in the ring in front of **Landscape** in the **Orientation:** area & click on **NEXT>**.

- To select an appealing style, click on **Corporate** and then click on **NEXT>**.



- To include a heading, erase the name in the top box and type in **EMPLOYEE DETAILS** then click in the ring in front of **Modify the Report's Design** and click on **FINISH**.

Note: Although it is possible to add extra fields to the Report format after it has been created, if any fields are omitted or incorrectly grouped in the Report Wizard setup, it is easier to repeat all of the above stages again to create a properly constructed report.

If the Report tools are not shown on the left side of the screens, choose **VIEW -> TOOLBOX**.

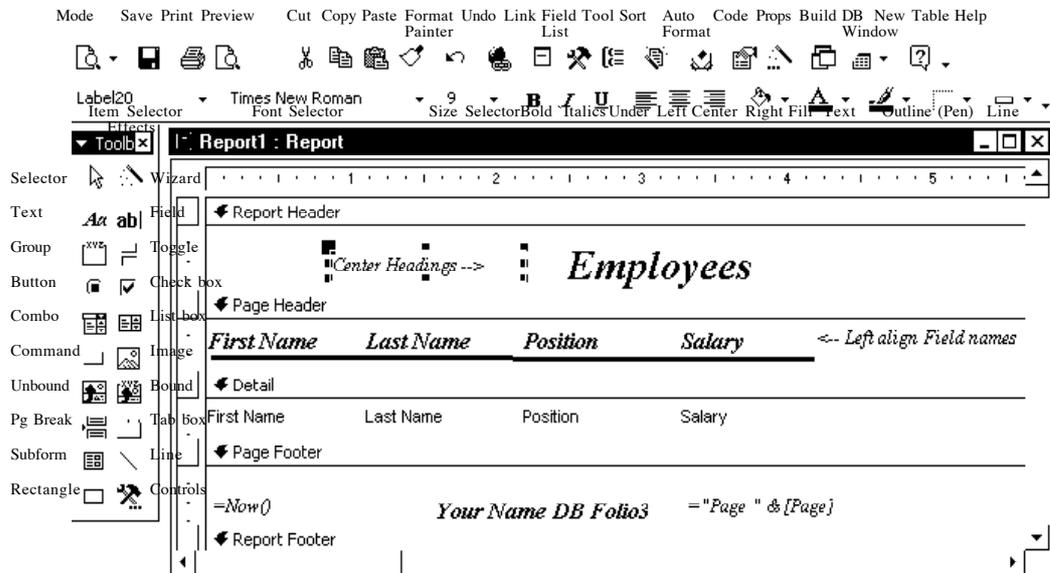
The Report Header area contains the Heading.

The Page Header area contains the field names (eg. ID_No).

The Detail area contains the field data (eg. AA01).

The Page Footer area contains report details (eg. NOW()) displays the date of printing.

The Report Footer area can contain report summaries.



- To insert your name, select the **Text (Aa)** tool and move the mouse into the **Page Footer** area and click in a blank area after =Now() and type in your Name then press the Spacebar and type in **DBFolio3**.

Formatting the Report

- To alter the field or field name position and format, ensure you are in Design View (choose **VIEW -> DESIGN VIEW**).
If you need to reselect the Report Style, choose **FORMAT -> AUTOFORMAT** and select the style and click on **OK**.
- If you need to lengthen the line in the **Page Header** area, select the , click on it and drag the right dot handle to the right.
- To center the Heading, select the  tool and click on the heading and drag it to the center of the Report Header area.
- Select the  tool and hold down the **SHIFT** key and click on each of the data boxes in the **Detail** area to select them and then choose the Font **Time New Roman** and Size **10** from the Toolbar.
- All Field Names should be left aligned, so click on any not left aligned and click on the  in the Toolbar.

Saving and Printing the Report

- To save the report, choose **FILE -> SAVE** (this can only be done in the Design mode).
- To preview the report, choose **VIEW -> PRINT PREVIEW**. When ready, click on **CLOSE**.
- If you need to widen the Address field, select the  tool, click on the Address box in the **Detail** area and drag a dot handle on the right edge to the right and release the mouse button. You will also need to drag the Address field name in the **Page Header** area to suit the position of its data box. You may then need to move the fields and field names after this to the right so they are not cut off by the Address field.

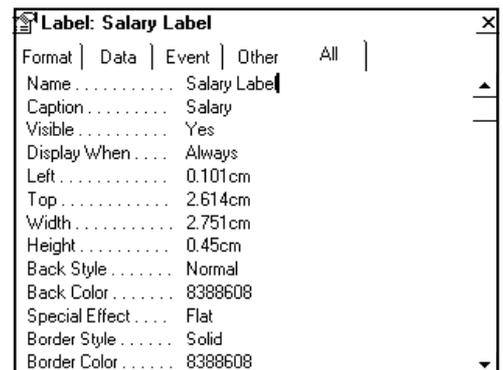
*If you have errors, close off the report (**FILE -> CLOSE**) and choose **WINDOW -> CompDB: Database**, click on the **Form** title, double click on the **Employee** form and locate the error and make changes and close off the Form (**X** on top RHS). Then choose **WINDOW -> CompDB: Database**, click on the **Report** title and double click on the report.*

- To print the report, choose **FILE -> PRINT** and click on **OK** or click on the  in the Toolbar.

Preparing another Report

- Choose **WINDOW -> CompDB: Database**, click on the **Report** title and click on  **NEW**.
- In the **New Report** dialog box, click on **Report Wizard** and then click on **OK** and in the box below **Tables/Queries:** click on the  and select **Employees** to show its fields in the **Available Fields:** box.

24. To move all of these fields into the **Selected Fields:** box so they will be shown on the Report, click on the **>>**.
25. Click on **NEXT>** and since there is no need for sorting Grouped data, click on **NEXT>**.
26. To sort the records according to the ID_No, click on the top **▼** in front of **Z↓**, choose **ID_No** and then click on **NEXT>**.
27. To fit the information on 1 page, click in the ring for **Landscape** in the **Orientation:** area and click on **NEXT>**.
28. To select an appealing style, click on **Corporate** (so it is consistent with the other report) and then click on **NEXT>**.
29. To include a heading, erase the name in the top box and type in **EMPLOYEE INFO**
30. Click in the ring in front of **Modify the Report's Design** and click on **FINISH**.
31. To insert a Calculation field select the **abl** tool and click in the **Detail** area and since the field name cannot be moved into the Header position, click on the blue Field name and delete it.
Double click on the **Unbound** field data box so the **Properties** box is shown.
32. Click on **All** and click on the **Control Source ...** and type **=SALARY/52** and click on **OK**. Then alter the **Format** to **Currency** and then alter the **Decimal Places Format** to **0**.
33. To make the related field name, click on any of the existing blue field names and choose **EDIT -> COPY** and then **EDIT -> PASTE** and drag the duplicated field to the position above the new field data box in the **Page Header** area (after the other fields). Then rename the field **Weekly Salary**.
34. Click on the long blue line and lengthen it so it's under **Weekly Salary**. Check that the new field name and field data box are correctly aligned (if not, drag the dark box on the top left edge of each to suit).
35. Select the **☚** tool and hold down the **SHIFT** key and click on each of the Field data boxes in the **Detail** area to select them and then choose the Font **Time New Roman** and Size **10** from the Toolbar.
36. All (Blue) Field Names should be left aligned, so click on any that are not and click on the **≡** in the Toolbar. But the Phone, Postcode, Date, Salary & Weekly Salary field data boxes should be Right aligned.
37. To insert your name, select the **Text (Aa)** tool and move the mouse into the **Page Footer** area and click in a blank area after **=Now()** and type in your Name then press the Spacebar and type in **DBFolio3**.



34. Click on the long blue line and lengthen it so it's under **Weekly Salary**. Check that the new field name and field data box are correctly aligned (if not, drag the dark box on the top left edge of each to suit).
35. Select the **☚** tool and hold down the **SHIFT** key and click on each of the Field data boxes in the **Detail** area to select them and then choose the Font **Time New Roman** and Size **10** from the Toolbar.
36. All (Blue) Field Names should be left aligned, so click on any that are not and click on the **≡** in the Toolbar. But the Phone, Postcode, Date, Salary & Weekly Salary field data boxes should be Right aligned.
37. To insert your name, select the **Text (Aa)** tool and move the mouse into the **Page Footer** area and click in a blank area after **=Now()** and type in your Name then press the Spacebar and type in **DBFolio3**.

Saving and Printing the Report

38. To save the report, choose **FILE -> SAVE** (this is only done in the Design mode).
39. To preview the report, choose **VIEW -> PRINT PREVIEW**.
40. Choose **FILE -> PAGE SETUP**, click on the **Page** title and click in the ring in front of **Landscape** and set the Paper type to **A4** and click on **OK**.
41. If you need to alter the position of any field name or the width of any field data box, choose **VIEW -> DESIGN VIEW** and make the necessary changes and then rechoose **VIEW -> PRINT PREVIEW**.
42. To print the report, choose **FILE -> PRINT**.
*If you need to delete a report, choose **WINDOW -> Compinfo: Database** and click on the report and click on the **X** in the window or press **DELETE** and click on **YES** when asked to confirm the deletion.*

Produce a Flowchart summarising steps you followed to complete this folio.

- To run Access, on the Desktop, double click on **OFFICE 2000** and then on **MICROSOFT ACCESS**. In this folio you will link the previous folios' Tables and search for particular information and produce a report.

Opening the Database

- If the previous folio is not open, choose **FILE -> OPEN**, click on the **Look In:** ▼, then on **Users On MGSCFile (Z:)** and then double click on your Year Level, then on your Name and then on **DB**, then click on **COMPDB** and click on **OPEN**. Click on the **Tables** title.

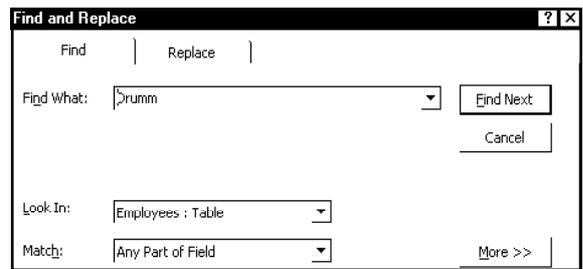
Searching for Information: This is used to search for only one piece of information.

- Click on the **Employees** Table in the **CompDB: Database** window and click on **OPEN**.

- Choose **EDIT -> FIND** or click on the  in the toolbar.

- Click in the **Find What:** box and type in **Drumm**

- Click on the **Look In:** ▼ and choose **Employees: Table** and then click on the **Match:** ▼ and choose **Any Part Of Field** so part of the information typed in can be located.



- Click on **FIND NEXT** and the “cell” containing **Drummond** should be highlighted. When ready, click on **CANCEL** or **OK**.

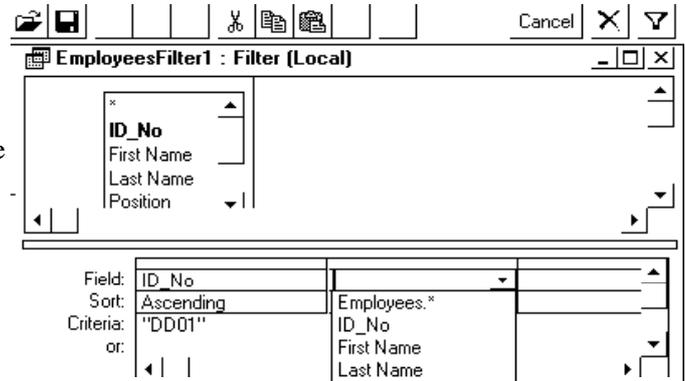
Applying a Filter

Another way to search for particular information is to apply a filter which will only display the matching information.

- To apply a filter, choose **RECORDS -> FILTER -> ADVANCED FILTER/SORT**.

- To locate the record with DD01, click on the **Field:** ▼ in the 1st datasheet column at the bottom of the window and choose **ID_No**.

- Click in the **Criteria:** ▼ in the 1st column and type in “**DD01**” (text is placed in “ “ while numbers do not need the “ “).



- Click on the **Sort:** ▼ and choose **Ascending**.

Additional criteria could be selected from the 2nd or later columns.

- To perform the selection, click on the  in the Toolbar or choose **RECORDS -> APPLY FILTER**.

- To show all the records again, choose **RECORDS -> REMOVE FILTER/SORT** or click on the  again.

*To sort the records by 2 or more fields, choose **RECORDS -> FILTER -> ADVANCED FILTER/SORT**, select the 1st field in the 1st **Field** column ▼, select **Ascending/Descending** from the **Sort** ▼ but ensure nothing is in the **Criteria** area. Then select the 2nd field in the 2nd **Field** column and select the order.*

To perform the sort, click on the  in the Toolbar.

*When completed, you can reshown all of the records by choosing **RECORDS -> REMOVE FILTER/SORT**.*

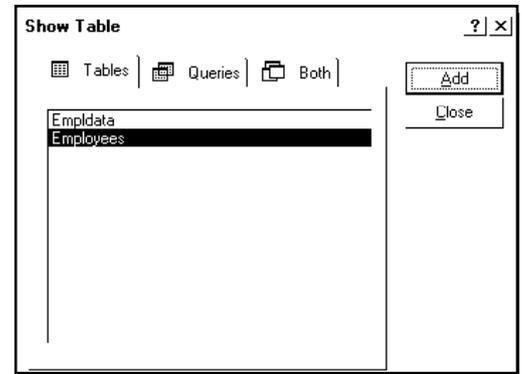
Note: The difference between a Search and a Filter is that the Search only locates specific information while a Filter can search and sort the information found into any order using any selected field.

Linking Tables in a Database

- To link Tables together, a Relationship is defined via the Primary Key field so choose **TOOLS -> RELATIONSHIP**. If you have not defined a primary/index key in Folio 1/2, this will not work. This would mean that you would need to close off any forms and then open each Table and check the Field Structure and then Save it and close off each Table.

*If the Table are not shown, choose **RELATIONSHIPS -> SHOW TABLES** or click on  in the Toolbar.*

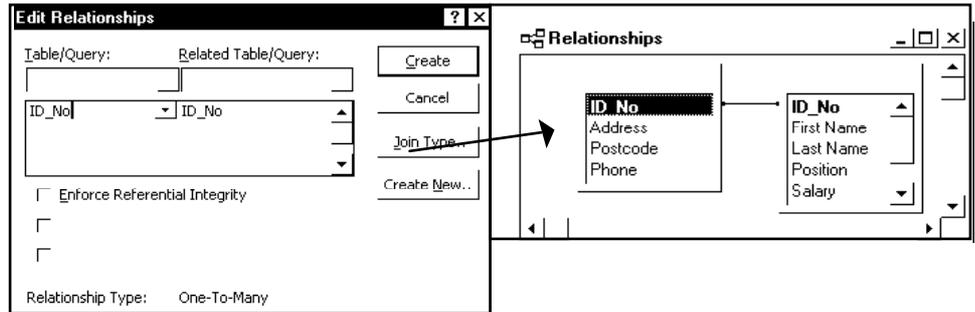
15. In the dialog box displayed, click on **Employees** and click on **ADD** and then click on **Empldata** and click on **ADD** and then click on **CLOSE** and the **Relationship** window will display the fields in each table.



*If you had selected the wrong table, after clicking on **CLOSE**, click on the incorrect table and choose **RELATIONSHIPS** -> **HIDE TABLE** or press the **DELETE** key. If a dialog box is shown to confirm its removal, click on **OK**. Then **ADD** the correct Table.*

16. Click on the **ID_No** field in the **Employees** box and drag this field on top of the **ID_No** in the **Empldata** box and release the mouse button to display the **Relationship Definition** dialog box.

17. Click on **CREATE** and the Tables will be joined which is shown by an arrow linking the tables.



*If you link the wrong field, click on the link, press **DELETE** and click on **YES** and try again.*

18. Since there are multiple records with the same **ID_No** in the 2nd table, a **1 – many** relationship is created. If this is not shown, cancel this process and check the Field Structure of each table and after saving the new structure and closing off each table, repeat this process again.

19. To save the Relationship, choose **FILE -> SAVE** or click  in the Toolbar.

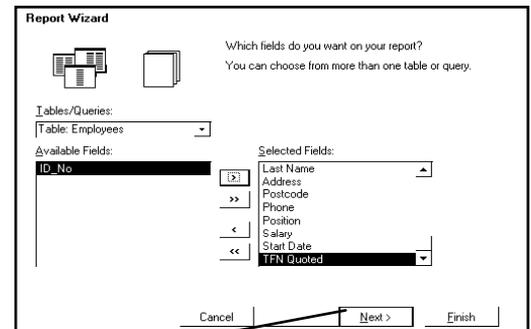
20. To hide the Relationship window, choose **FILE -> CLOSE** or click on the **X** in the top right of its window.

Preparing a Report containing the Linked Tables

21. Choose **WINDOW -> CompDB: Database** and click on the **Report** title.

22. Click on  **NEW** and in the **New Report** dialog box, click on **Report Wizard** and then click on **OK**.

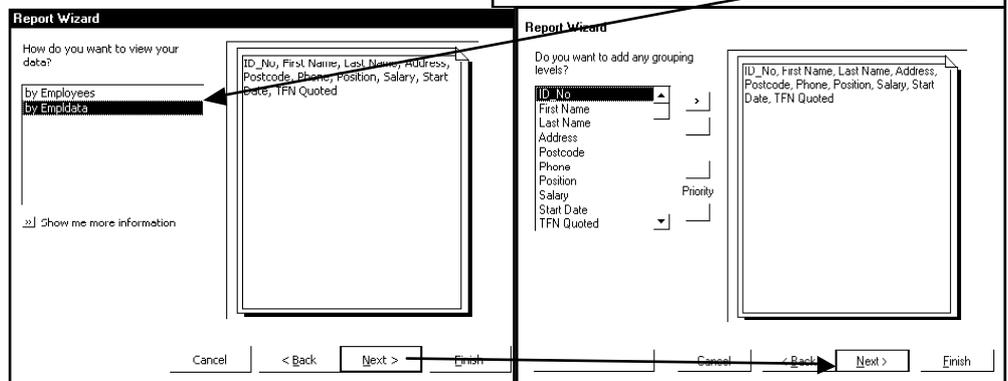
23. In the box below **Tables/Queries**: click on the  and select **Empldata** and click on **>** to move the **ID_NO** into the **Selected Fields**: box. Since **Empldata** is the Indexed Table, its **ID_No** must be the first field on all reports.



*If you move the wrong field into the **Selected Fields**: box, click on it and click on **<**.*

24. Click on the **Tables/Queries**:  and select **Employees** and then click on **>** to move the **First Name** and **Last Name** into the **Selected Fields**: box.

25. Click on the **Tables/Queries**:  and select **Empldata** and click on the **>** to move the **Address**, then **Postcode**, then **Phone** into the **Selected Fields**: box.



26. Click on the **Tables/Queries**:  and select **Employees** and click on **>** to move **Position**, then **Salary**, then **Start Date** and then the **TFN Quoted** into the **Selected Fields**: box and click on **NEXT>**.

27. Ensure **Tables/Queries**:  is set to **Empldata** in the **View By Tables** screen and click on **NEXT>**.

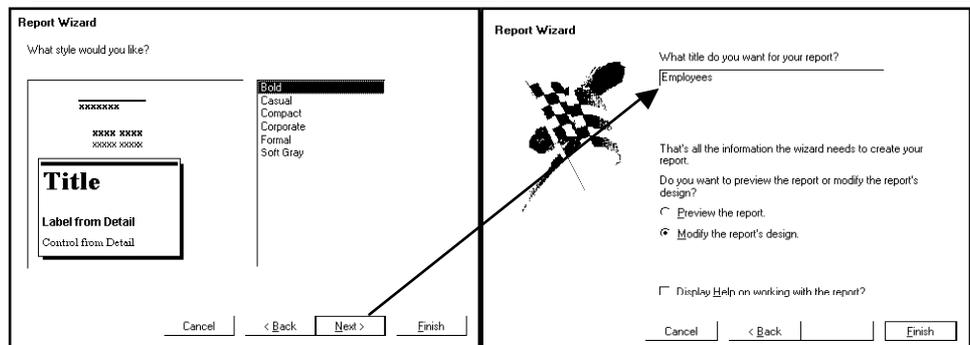
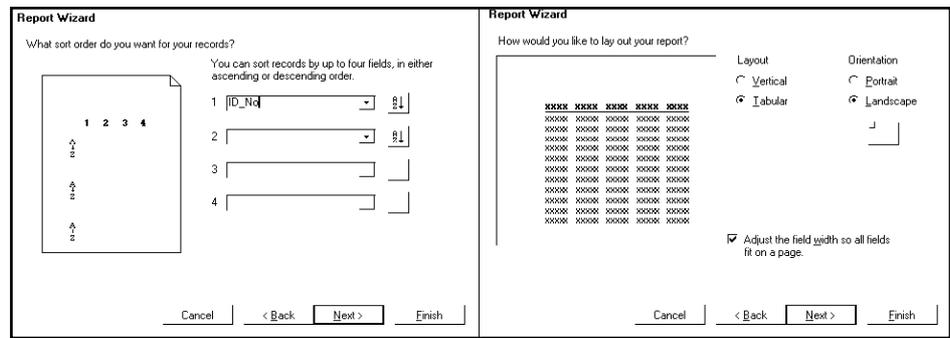
28. Click on **NEXT>** and since there is no sorted Grouped data, click on **NEXT>**.

29. To sort the records, choose **ID_No** from the top ∇ in front of $\frac{A}{Z}$ and click **NEXT>**.

30. To ensure the information fits on 1 page, click in the ring in front of **Landscape** in the **Orientation** area and click on **NEXT>**.

31. To select an appealing style, click on **Bold** & then click on **NEXT>**.

32. To include a heading, erase the name in the top box, type in **EMPLOYEES** and then click in the ring in front of **Modify the Report's Design** and click on **FINISH**.



33. To insert your name, select the **Text (Aa)** tool. Click in a blank space after Now() in the **Page Footer** area and type in your Name and **DBFolio4**.

34. All Field Names should be left aligned, so click on any that are not left aligned and click on the \equiv in the Toolbar.

Note: Any Numerical or Date Data Field boxes (under the field names) should be Right aligned.

35. To save the report, choose **FILE -> SAVE** or click on the  in the Toolbar.

36. To preview the report, click on **Preview**  in the Toolbar or choose **VIEW -> PRINT PREVIEW**.

*If any errors appear in the data, close off the Report (**FILE -> CLOSE**), open its Form (**WINDOW -> CompDB: Database** and click on **Forms**) and make changes and then close off the Form and re-open the Report (choose **CompDB: Database** and click on **Reports** and double click on **EMPLOYEES**).*

37. To reshown the Report design, choose **VIEW -> DESIGN VIEW** or click on **CLOSE** when ready.

*If you need to alter the position of any field name or the width of any field data box, choose **VIEW -> DESIGN VIEW** and make the necessary changes and then rechoose **VIEW -> PRINT PREVIEW**.*

*If you need to resize a field, select the **Arrow** () tool, click on the field in the **Detail** area so dot handles appear. Hold the mouse button down on the right dot handle and drag the mouse to the right/left to enlarge/reduce the field.*

*If you need to move fields or their labels, select the **Arrow** () tool and click on the desired field name or field to select it and then hold the mouse button down and drag the mouse to relocate the item and release the mouse button.*

If you need to change the Field names or Heading, select the  tool, double click on the data and make the changes.

38. Choose **FILE -> PAGE SETUP**, click on the **Page** title and change the **Paper:** ∇ size to **A4** and click on **OK**.

39. To print the report, choose **FILE -> PRINT** or click on the  in the Toolbar.

Produce a Flowchart summarising steps you followed to complete this folio.

- To run Access, on the Desktop, double click on **OFFICE 2000** and then on **MICROSOFT ACCESS**. In this folio you will perform queries on the Tables (both linked and separate) to extract information.

Opening the Database - Go to Step 3 if the previous folio is already open.

- If the previous folio is not open, choose **FILE -> OPEN**, click on the **Look In:** ▼, then on **Users On MGSCFile (Z:)**. Double click on your Year Level, then on your Name, then on **DB**, then click on **COMPDB** and click on **OPEN**.

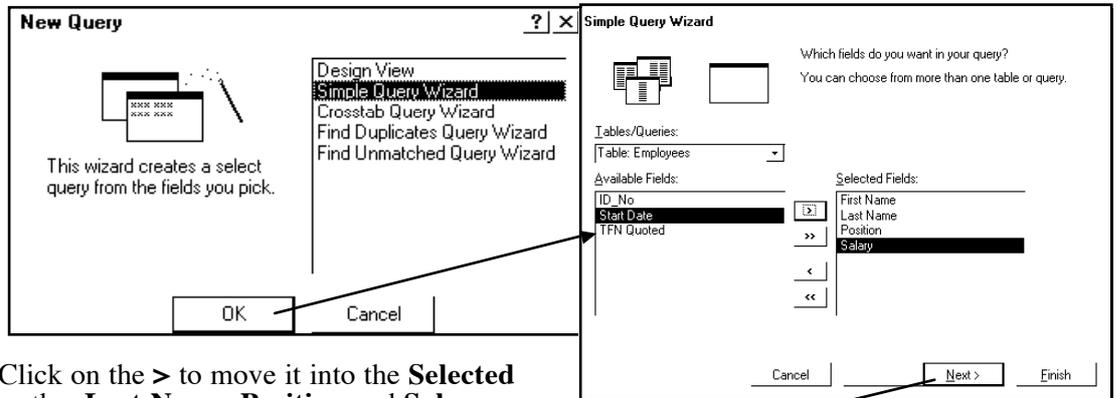
Querying the Database Tables

Using a Query is a precise way to search for information as various criteria can be used and the queries can be saved/reused.

QUERY 1: To determine a list of the employees that earn less than \$40,000

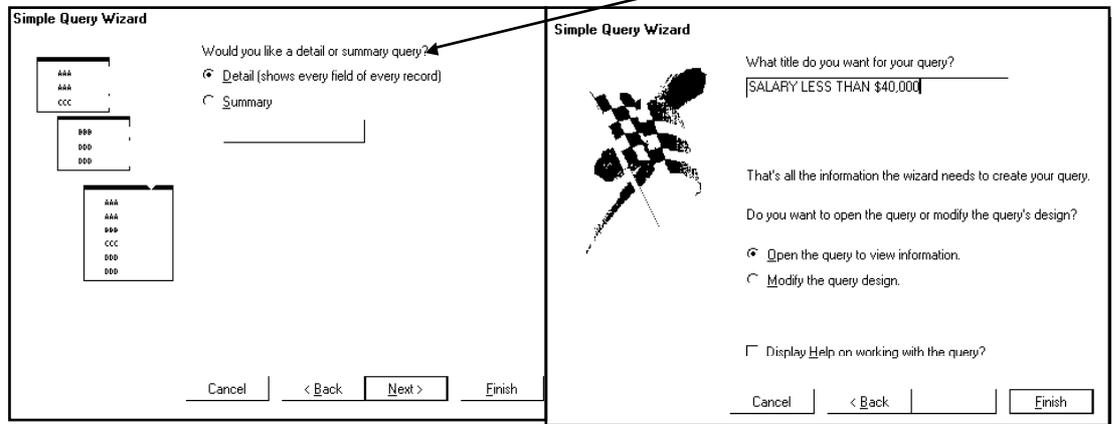
- Choose **WINDOW -> COMPDB: Database**, click on the **Queries** title and click on **NEW**.

- In the **New Query** dialog, click on **Simple Query Wizard** and click on **OK**.



- Then choose **Employees** from the **Tables/Queries:** ▼ and click on **First Name**. Click on the > to move it into the **Selected Fields:** box. Move the **Last Name, Position** and **Salary** fields into the **Selected Fields:** box and click on **NEXT>**.

- In the next dialog box shown, select the **Detail** option to show data from all fields in a record and click on **NEXT>**.



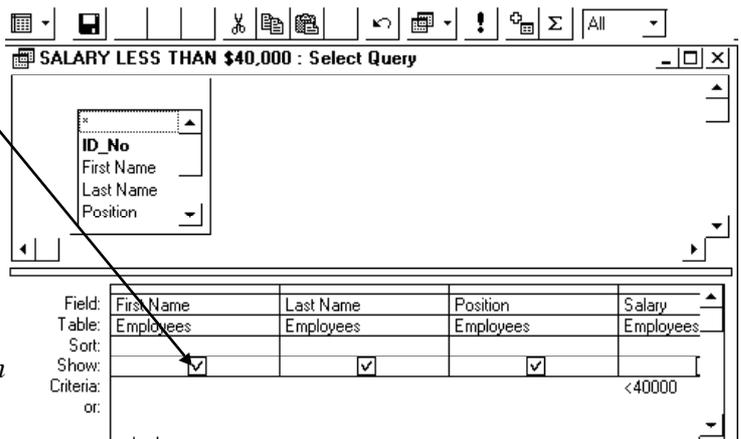
- To include a heading, erase the name in the top box and type **WAGE LESS THAN \$40,000**.

- Click in the ring in front of **Modify the Query Design** and click on **FINISH**.

- The Query Design window will be shown with the 4 fields selected as well as rows to specify the criteria. If a box on the **Show:** row contains a ✓, it will be shown in the Answer Table otherwise it will be omitted from being shown but can still be used to specify criteria.

*If you want to select another field, click in the **Field:** row and use the ▼ to select the desired field and then click in the **Show:** row to display this field.*

The following are the criteria symbols that can be used to specify the information to be located during a query.



It is important to note that text should be enclosed in “ “ but dates and numbers do not use any quotation marks. Once the query has been constructed, Access inserts its own symbols around date values.

- (i). = for equals to.
- (ii). > for greater than.
- (iii). < for less than.
- (iv). >= greater and equal to.
- (v). <= less and equal to.
- (vi). * to match any text.
- (vii). **IS NUL** or “” to find empty field.
- (viii). **NOT NUL** to find fields not empty.
- (ix). **LIKE** for finding similar data to the criteria.
- (x). # to match any digit. eg. 4# = 41, 412, 4300,
- (xi). ? to match a single letter. eg. B? = Be, By, etc.
- (xii). [] to match letters in []. eg. B[ey] = Be, By.
- (xiii). ! to match letter not in []. eg. B[!a] = Bb, Bc, Bd, etc.
- (xiv). - to match a range of letters in the []. eg. B[a-c] = Ba, Bb, Bc.
- (xv). **BETWEEN** x **AND** y to find values between the dates or numbers x and y.
eg. Between 1 And 5 to find 2, 3, 4. eg. Between 31/12/00 And 1/2/01 to find all January dates.
- (xvi). **NOT** to find values that don't match the information. eg. NOT 2 to find numbers other than 2.

10. On the **Criteria:** row in the **Salary** column, type in **<40000** (do not type in the \$ or , for currency).

11. To run the query, click on the ! in the Toolbar or choose **QUERY -> RUN**.

12. Write the number of records here: _____

If you need to alter the Query, choose **VIEW -> QUERY DESIGN** or click on the  in the Toolbar and make changes.

13. To save the Query, choose **FILE -> SAVE** or click on the  in the Toolbar.

Once saved, the query can be rerun by selecting the Query from the **Queries** title in the **CompDB** window.

If you need to delete a query, click on it in the **Queries** title in the **DBFolio** window and click on the X in the window or press the **DELETE** key and then click on **YES** in the dialog box displayed.

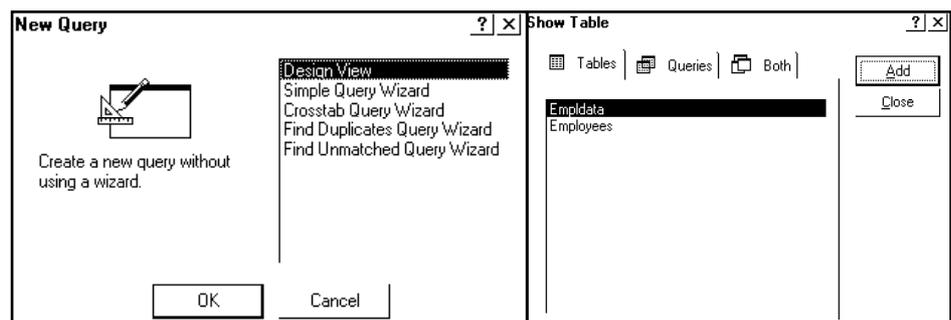
QUERY 2: To find the employees that started work in 1996 (1/1/96 -> 31/12/96).

14. Choose **WINDOW -> COMPDB: Database**, click on the **Queries** title and click on  **NEW**.

15. In the **New Query** dialog box, click on **Design View** & click on **OK**. This is another way to create a Query.

16. In the **Show Table** dialog box, click on **Employees** and click on **ADD** and then click on **CLOSE**.

If you add the wrong Table, click on its Structure (showing its fields) and press **DELETE** and then to add a Table, click on  in the Toolbar or choose **QUERY -> SHOW TABLE** and click on the correct Table and click on **ADD** and then on **CLOSE**.



17. A Datasheet will be shown so click in the **Field:** row in the 1st column to show the ▾ and select **First Name**.

18. In the 2nd column of the **Field:** row, select **Last Name**. In the 3rd column, select **Start Date**.

An alternative way to select fields is to double click on the field in the Table box showing the list of fields.

If you select the wrong field, click on the **Table:** row ▾ and select the correct Table and then click on the **Field:** row ▾ and select the correct field. If you need to remove a field, delete its name in the **Field:** row.

19. Since the **Start Date** should not be shown, click in the box on the **Show:** row to remove its ✓.

20. On the **Criteria:** row of the **Start Date** column, type in **Between 1/1/96 And 31/12/96**

Do not use any “ since the date should include 2 digits for the day/month/year, a # will be automatically inserted where needed.

21. To sort the records, click in the **Sort:** row on the **Last Name** column and then click on the ▾ and select **Ascending**.
22. To save the Query, choose **FILE -> SAVE** and type in **Started in 1996** and click on **OK**.
23. To run the query, click on the ! in the Toolbar or choose **QUERY -> RUN**.

24. Write the number of records here: _____

QUERY 3: To find the employees that live in Cheltenham

25. Choose **WINDOW -> COMPDB: Database**, click on the **Queries** title and click on  **NEW**.
26. In the **New Query** dialog box, click on **Design View** and click on **OK**.
27. Since fields from 2 Tables are needed to perform this query, in the **Show Table** dialog box, click on **Employees** and click on **ADD** and then click on **Empldata** and click on **ADD** and then click on **CLOSE**.
28. In the Datasheet, click in the **Field:** row in the first column to show the ▾ and select **First Name**. In the 2nd column of the **Field:** row, select **Last Name**. In the 3rd column, select **Address** and in the 4th column, select **Postcode**.

*If you select the wrong field, click on the **Table:** row ▾ and select the correct Table and then click on the **Field:** row ▾ and select the required field. If you need to remove a field from the listing, delete its name in the **Field:** row.*

29. On the **Criteria:** row of the **Address** column, type in **“*Chelt*”**
*The 1st * is used since the Address starts with the Street Number and Name and the last * is used since the full Cheltenham is not used.*
30. To save the Query, choose **FILE -> SAVE** and type in **Cheltenham** and click on **OK**.
31. To run the query, click on the ! in the Toolbar or choose **QUERY -> RUN**.

32. Write the number of records here: _____

QUERY 4: To find the employee addresses with no Tax File Number who earn less than \$40,000

33. Choose **WINDOW -> COMPDB: Database**, click on the **Queries** title and click on  **NEW**.
34. In the **New Query** dialog box, click on **Design View** and click on **OK**.
35. In the **Show Table** dialog box, click on **Employees** and click on **ADD** and then click on **Empldata** and click on **ADD** and then click on **CLOSE**.
36. A Datasheet will be shown so click in the **Field:** row in the first column to show the ▾ and select **First Name**.
37. In the 2nd column of the **Field:** row, select **Last Name**. In the 3rd column, select **Address**. In the 4th column, select **Postcode**. In the 5th column, select **Salary** and in the 6th column, select the **TFN Quoted**.

38. Since the **TFN Quoted** should not be shown, click in the box on the **Show:** row to remove its ✓.
39. On the **Criteria:** row of the **Salary** column, type in **<40000** and in the **TFN Quoted** column, type in **No**
There is no “ “ used since this is a Yes/No field and not a Text field.
40. To save the Query, choose **FILE -> SAVE** and type in **Less than 40000 no TFN** and click on **OK**.
41. To run the query, click on the ! in the Toolbar or choose **QUERY -> RUN**.

42. Write the number of records here: _____

QUERY 5: To find the employees who live in Cheltenham OR Sandringham

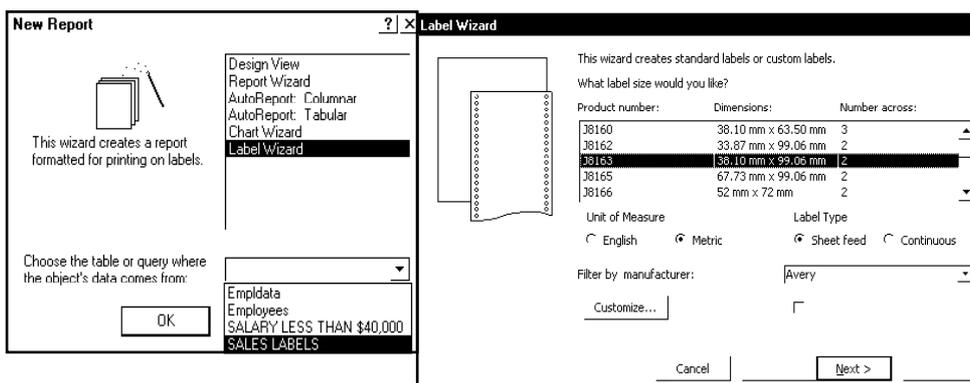
43. Choose **WINDOW -> COMPDB: Database**, click on the **Queries** title and click on  **NEW**.
44. In the **New Query** dialog box, click on **Design View** and click on **OK**.

45. In the **Show Table** dialog box, click on **Employees** and click on **ADD** and then click on **Empldata** and click on **ADD** and then click on **CLOSE**.
46. In the Datasheet shown, click in the **Field:** row in the first column to show the ∇ and select **First Name**. In the 2nd column, select **Last Name**. In the 3rd column, select **Address &** in the 4th column, select **Postcode**.
47. On the **Criteria:** row of the **Postcode** column, type in **3192** and then in the **Or:** row, type in **3190**
*Using the Criteria: “*Chelt*” in the Address column and then “*Sandrin*” in the Or: row would perform the same query.*
48. To save the Query, choose **FILE -> SAVE** and type in **CheltSand** and click on **OK**.
49. To run the query, click on the **!** in the Toolbar or choose **QUERY -> RUN**.
50. Write the number of records here: _____

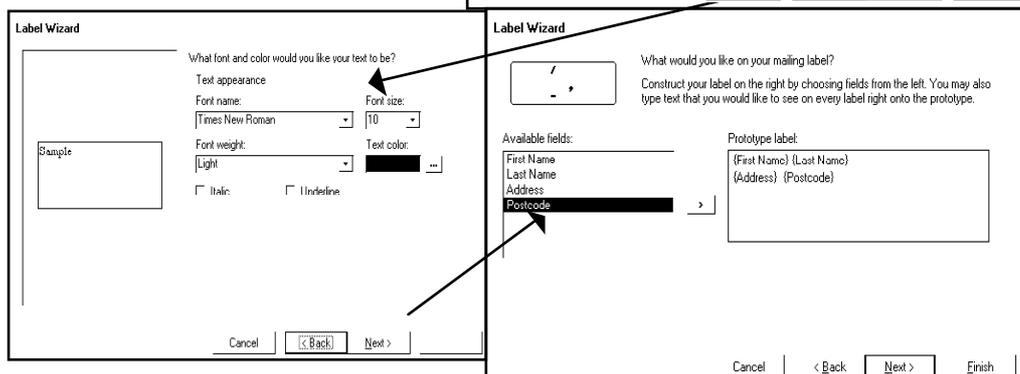
QUERY 6: To determine the Sales employees so mailing labels can be produced for their salary

51. Choose **WINDOW -> COMPDB: Database**, click on the **Queries** title and click on  **NEW**.
52. In the **New Query** dialog box, click on **Simple Query Wizard** and click on **OK**.
53. In the dialog box, choose **Employees** from the **Tables/Queries:** ∇ and move the **First Name**, **Last Name** and **Position** fields, then choose **Empldata** from the **Tables/Queries:** ∇ and move the **Address** and **Postcode** fields into the **Selected Fields:** box and then click on **NEXT>**.
54. In the next dialog box shown, select the **Detail** option to show data from all the fields in a record and click on **NEXT>**.
55. To include a heading and specify the file name, erase the name in the top box and type **SALES LABELS** and then click in the ring in front of **Modify the Query Design** and click on **FINISH**.
56. Since the **Position** should not be shown on the labels, click in the box on the **Show:** row to remove its \checkmark .
57. On the **Criteria:** row of the **Position** column, type in “Sales” (use a Capital letter for S as this is how it was entered in the form)
58. To save the Query, choose **FILE -> SAVE** or click on the  in the Toolbar.
59. To run the query, click on the **!** in the Toolbar or choose **QUERY -> RUN**.
60. To produce the mailing labels, choose **WINDOW -> COMPDB** and click on the **Reports** title.

61. Click on **NEW** and in the **New Report** dialog box, click on **Label Wizard** and then click on the **Choose the Table or Query** ∇ and click on **SALES LABELS** and click on **OK**.



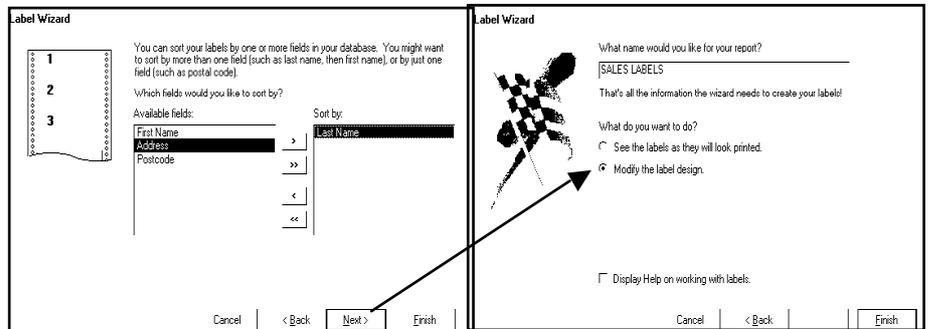
62. In the **Label Wizard** dialog box, click on **Metric** in the **Unit of Measure:** area. Then click on the **Filter By Manufacturer:** ∇ & select **Avery**. In the **Product Number:** box, click on **J8163** and click on **NEXT>**.



63. To choose the Font, click on the **Font:** ▾ and choose **Times New Roman** and then click on the **Size:** ▾ and choose **10** and then click on **NEXT>**.
64. In the **Available Fields:** area, click on **First Name** and click on **>** to move it into the **Prototype Label:** area (each field is shown in {}), press the Spacebar **once** and click on **Last Name** and click on **>**.
65. Press **ENTER** once, then click on **Address** and click on **>**. Press the Spacebar **twice** and click on **Postcode** and click on **>** and click on **NEXT>**.

*If you move the wrong field, click on it in the **Prototype Label:** area and click on **<** and then move the correct field.*

66. To sort the labels by surname, click on **Last Name** in the **Available Fields:** area & click on **>** to move it to the **Sort By:** area and click on **NEXT>**.



67. To include a heading, erase the name in the top box and type **SALES LABELS**

68. Click in the ring in front of **Modify the Label Design** and click on **FINISH**.

69. Choose **VIEW -> REPORT HEADER/FOOTER** and then select the **Text (Aa)** tool and in the **Report Footer** area, drag a rectangle between **1.2** and **5** in the ruler which is about **1 cm** high and type in your Name and **DBFolio5**.

70. To save the labels, choose **FILE -> SAVE**.

71. To preview the label, choose **VIEW -> PRINT PREVIEW** and when ready, click on **CLOSE** to reshown the design.

72. To print the labels, choose **FILE -> PRINT** or click on the  in the Toolbar.

QUERY 7: To determine the Total Salary of non Sales employees

Although a Query can determine a Total (by selecting **VIEW -> TOTALS** and selecting **Sum** in the **Salary** field), it will not show the normal field values so a query will be used to isolate specific records and a report with a total will be produced.

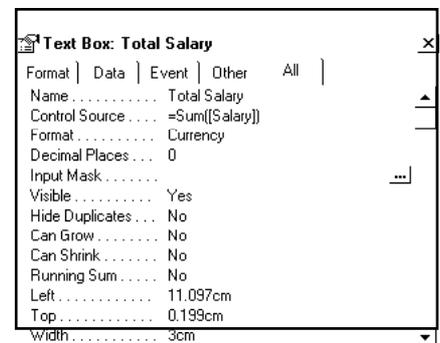
73. Choose **WINDOW -> COMPDB: Database**, click on the **Queries** title and click on  **NEW**.
74. In the **New Query** dialog box, click on **Simple Query Wizard** and click on **OK**.
75. In the dialog box, choose **Employees** from the **Tables/Queries:** ▾ and use **>** to move the **First Name**, **Last Name**, **Salary** and **Position** fields into the **Selected Fields:** box and then click on **NEXT>**.
76. In the next dialog box shown, select the **Detail** option to show data from all fields in a record and click on **NEXT>**.
77. To include a heading and specify the file name, erase the name in the top box and type **NON SALES** and then click in the ring in front of **Modify the Query Design** and click on **FINISH**.
78. Since the Position should not be shown in the labels to be produced, click in the box on the **Show:** row to remove its ✓.
79. On the **Criteria:** row of the **Position** column, type in **NOT "Sales"** or **<>"Sales"** (to find employee not in Sales)
80. To save the Query, choose **FILE -> SAVE** or click on the  in the Toolbar.

*In industry, a Query language called **SQL (Structured Query Language)** is used. Access is able to convert its queries into **SQL** by choosing **VIEW -> SQL VIEW**. The original Query can be shown by reselecting **VIEW -> DESIGN VIEW**.*

81. To run the query, click on the ! in the Toolbar or choose **QUERY -> RUN**.
82. To create a report showing the total salary, choose **WINDOW -> COMPDB** & click on the **Reports** title.
83. Click on **NEW** and in the **New Report** dialog box, click on **Report Wizard** and then click on the **Choose the Table or Query** ▾ and click on **NON SALES** and click on **OK**.
84. Click on the **Tables/Queries:** ▾ and select **Non Sales** and click on > to move **First Name, Last Name** and **Salary** into the **Selected Fields:** box.
85. Click on **NEXT>** and since there is no need for sorting Grouped data, click on **NEXT>**.
86. To sort the records according to the surname, click on the top sort ▾ and choose **Last Name** and then click on **NEXT>**.
87. To fit the information on 1 page, click in the ring in front of **Landscape** in the **Orientation** area and click on **NEXT>**.
88. To select an appealing style, click on **Casual** and then click on **NEXT>**.
89. To include a heading, erase the name in the top box and type in **NON SALES REPORT** and then click in the ring in front of **Modify the Report's Design** and click on **FINISH**.
90. To insert your name, select the **Text (Aa)** tool and click in the **Page Footer** area after Now() and type in your Name and **DBFolio5**.
91. To create a field to determine the total salary, select the **abl** tool and in the **Report Footer** area, click under the Salary field name and field data box.

*If you needed to delete an item, select the  tool and click on the item and press the **Delete** key or choose **EDIT -> DELETE**.*

92. Select the  tool and double click on the **Text: 11?** field name and change the field name to **Total Salary**.
93. Click on **Unbound** in the **Report Footer** area and choose **VIEW -> PROPERTIES** or click on  in the Toolbar. In the **Properties** box, click on the **All** title.



94. Click on the **Control Source** row and click on the ... and in the **Expression Builder** dialog box, type in **=sum([SALARY])** and click on **OK**.

An error will be produced if Unbound is not in the Report Footer area.

95. Click on the **Format** row and click on the ▾ and choose **Currency**.

96. Click on the **Decimal Places** row and click on the ▾ and choose **0**.

97. To hide the Properties box, click on the **X** in the top right corner.

98. To save the report, choose **FILE -> SAVE**.

99. To preview the report, click on **Preview**  in the Toolbar or choose **VIEW -> PRINT PREVIEW**.

100. To reshown the Report design, choose **VIEW -> DESIGN VIEW** or click on **CLOSE** when ready.

101. If you need to move the “Unbound” field data box under the other Salary values, select the  tool and drag it to the right.

Also, check all other fields and information to ensure it is correctly displayed before printing it.

102. To print the report, choose **FILE -> PRINT** or click on the  in the Toolbar.

Produce a Flowchart summarising steps you followed to complete this folio.

Write the answers to all of the Queries on one of the printouts.

You need to enter the information into a database in MS Access and perform the tasks that are listed below.

1. Create a Database called **DBTEST**
2. Create a Table called **TestData** with the following fields and formats:

| Field Name | Data Type | Field Properties |
|-------------------|-----------------|--|
| NAME | Text | Size= 30 , Required and Indexed. Make this field the Primary Key . |
| DEPARTMENT | Text | Size= 20 , Not Required and Not indexed. |
| ID | Text | Size= 20 , Not Required and Not indexed. |
| HR WAGE | Currency | 2 Decimal Places |
| HOURS | Number | 0 Decimal Places |
| DATE | Date | Short Date Format |

3. Save the Table to your disk using the file name **TestData**
4. Enter the following data.

| NAME | DEPARTMENT | ID | HR WAGE | HOURS | DATE |
|-----------------|-------------|------|---------|-------|----------|
| Margaret Robins | Sales | CD01 | \$12.50 | 38 | 03/08/99 |
| Sam Jones | Marketing | CD23 | \$10.25 | 42 | 10/08/99 |
| Patrick Brock | Cleaning | CD43 | \$11.75 | 36 | 06/08/99 |
| Angel Madonna | Music | CD17 | \$10.80 | 38 | 08/08/99 |
| Debra Bread | Marketing | CD13 | \$11.50 | 36 | 10/08/99 |
| Leonard Franks | Marketing | CD26 | \$10.75 | 40 | 03/08/99 |
| Simone Demons | Advertising | CD37 | \$10.55 | 37 | 10/08/99 |
| Kerry Deld | Sales | CD98 | \$11.60 | 38 | 11/08/99 |

5.
 - a). Alter the format of the data so the **Font Arial** in **Size 10** is used.
 - b). Adjust the widths of the fields so all of the information is attractively displayed.
6.
 - a). Change the **Hr Wage** of **Patrick Brock** to **\$11.90**.
 - b). Copy **Sales** in the **Margaret Robins** record and paste it into the **Leonard Franks** record.
 - c). Delete the record containing **Angel Madonna**.
7. **Print** the information in the Table.
8. Create a colourful **Columnar Form** called **Database Form** and in the Design, type **Database Test** in the **Header** and then type in your name in the **Footer**.
9. In the Form, create a **Text Field** called **WAGE** positioned under the Date field and change its **Properties** so the **Control Source** uses **=[HR WAGE]*[HOURS]** and the **Format** is set to **Currency** to **2 Decimal Places**.
10. **Save** the form and then **Print** one record in the form.
11. Create a **Landscape Report** called **Database Report** that is **sorted** according to the **Hr Wage** so the **highest** Hr Wage is displayed **first**.
12. In the Report Design, type **Database Test** in the **Header** and then type in your name in the **Footer**.
13. **Save** the report and then **Print** the report.
14. **Perform each of the following queries and Save each one using a suitable name.**
 - a). Create a **Query** to determine the **Names** of the staff who work between **37** and **40** hours.
Write the Names of the staff on one of the printouts.
 - b). Create a **Query** to determine the **Names** of the staff in **Marketing** whose **Date** is the **10/08/99**.
Using these results, prepare a Landscape Report with a suitable Header and Footer.
Ensure you select enough fields to show adequate proof of the Query Criteria.