

**Guided Computer Tutorials**

**Learning**

**Microsoft<sup>®</sup>**

**Access<sup>®</sup> 365, 2022**

**Module 1**

**By Greg Bowden**

PUBLISHED BY

GUIDED COMPUTER TUTORIALS

PO Box 311

Belmont, Victoria, 3216, Australia

[www.gct.com.au](http://www.gct.com.au)

© Greg Bowden

This product is available in Single or Multi User versions.

Single-user versions are for single person use at any particular time, just as a single text book would be used. If you intend to use the notes with multiple students the single user version needs to be upgraded to the multi-user version.

Multi-user versions allow the school or institution to print as many copies as required, or to place the PDF files on the school network, intranet and staff laptops. A certificate of authentication is provided with multi-user versions. Bookmarks provide links to all headings and sub-headings, and individual chapters are provided.

First published 2023

ISBN: 978-1-922018-78-6 (Module 1)

PDF document for download or on DVD

Microsoft Access 365 (2022) is a product of Microsoft Corporation.  
Used with permission from Microsoft

Every effort has been made to ensure that images used in this publication are free of copyright, but there may be instances where this has not been possible. Guided Computer Tutorials would welcome any information that would redress this situation..

# Learning Microsoft Access 365, 2022

---

## Module 1 Contents

### Chapter 1: Introduction to Microsoft Access

Getting Started With Microsoft Access .....	1-2
Starting a New Blank Database .....	1-2
The Database Screen .....	1-4
Creating a Table .....	1-5
Entering a Text Field .....	1-6
Setting the Field Properties .....	1-7
Entering More Text Fields .....	1-8
Entering a Date Field .....	1-9
Inserting Number Fields.....	1-10
Saving the Table .....	1-11
Entering a Record.....	1-12
Adjusting the Columns.....	1-13
Adding Extra Records.....	1-15
Changing the Data .....	1-16
Changing the Contents of a Field.....	1-16
Adding New Records .....	1-17
Deleting a Record .....	1-17
Printing the Database .....	1-18
Previewing the Database .....	1-18
The Page Setup .....	1-19
Adding Fields.....	1-21
Deleting Fields .....	1-23
Adding a Calculated Field.....	1-24
Finishing a Microsoft Access Session .....	1-25
<b>Databases Assignment 1 .....</b>	<b>1-27</b>

## Chapter 2: Processing Data

Loading the Sample File .....	2-1
Saving the Database .....	2-2
File Security.....	2-2
Sorting Data .....	2-3
Alphabetical Sorting .....	2-3
Numerical Sorting.....	2-4
Chronological Sorting .....	2-5
Unsorting.....	2-6
Sorting on More Than One Column.....	2-6
Filtering Information .....	2-7
Filter By Selection.....	2-7
Practice Exercise 2-1 .....	2-9
Multiple Selection Searches.....	2-10
One Condition or Another Searches .....	2-11
Omitting Records .....	2-13
Practice Exercise 2-2 .....	2-14
Common Filters.....	2-14
Finding Data .....	2-16
Using Find Wildcards .....	2-18
<b>Databases Assignment 2 .....</b>	<b>2-21</b>
Databases Assignment 2 Question Sheet .....	2-22



## Chapter 3: Introduction to Queries

Loading the Sample File .....	3-1
Looking at the Tables .....	3-2
Creating a Query .....	3-2
Linking the Tables .....	3-4
Building the Query.....	3-4
Looking at the Query .....	3-6
Adding a Calculation Field .....	3-6
Sorting the Query.....	3-8
Filtering a Query .....	3-10
Saving the Query .....	3-11
Opening the Queries Pane .....	3-11
Creating a Second Query .....	3-12
Using the Query Wizard.....	3-12
Adjusting the Query.....	3-15
Formatting Fields in a Query.....	3-16
Combining Text Fields.....	3-17
Sorting the Query.....	3-19
Interactive Queries .....	3-22
Duplicating a Query.....	3-22
Setting an Interactive Dialogue Box .....	3-23
Setting Multiple Interactive Dialogue Boxes .....	3-24
Deleting Queries.....	3-26
Creating Relationships Between Tables.....	3-27
<b>Databases Assignment 3 .....</b>	<b>3-29</b>

## Chapter 4: Simple Forms

Loading the Database .....	4-1
Creating a Form.....	4-2
Layout and Form View .....	4-3
Saving the Form.....	4-4
Changing the Form Title .....	4-4
Reducing the Field Width .....	4-6
Changing the Field Formats .....	4-7
Adding a Logo .....	4-8
Using the Form .....	4-10
Adjusting Forms .....	4-12
Control Padding .....	4-12
Adjusting Field Labels.....	4-13
Applying Themes .....	4-14
Adjusting the Field Order .....	4-16
Adjusting Rows and Columns .....	4-17
Duplicating the Form.....	4-17
Inserting Columns .....	4-18
Moving Controls.....	4-18
Merging Cells .....	4-20
Deleting Cells.....	4-21
Blank Forms .....	4-22
<b>Databases Assignment 4 .....</b>	<b>4-24</b>

## Chapter 5: Creating Data Entry Forms

Starting a New Database.....	5-1
Defining the Fields .....	5-2
Deleting the First Table .....	5-3
Starting the Form .....	5-4
Opening the Form in Design View .....	5-4
Linking the Form to the Data Table.....	5-5
Setting the Grid.....	5-6
Inserting Fields .....	5-6
Understanding the Handles .....	5-8
Saving the Form.....	5-10
Looking at the Form .....	5-10
Adding the Remaining Fields .....	5-11
Aligning the Fields and Labels .....	5-14
Adding Rectangles .....	5-17
Copying the Rectangle.....	5-19
Changing the Background Colour.....	5-21
Changing Text Colours.....	5-22
Adding a Company Logo .....	5-23
Inserting the Image .....	5-23
Entering the Logo Text .....	5-24
Entering the Data .....	5-27
Inserting an Image into the Photo Field.....	5-28
Adjusting the Form .....	5-30
Adding Another Record.....	5-31
The Value of Forms .....	5-32
<b>Databases Assignment 5 .....</b>	<b>5-33</b>

## Chapter 6: Enhancing Data Entry Forms

Creating a Pop-up List .....	6-1
Creating a Table to Store the Menu Items .....	6-1
Copying the Form .....	6-3
Setting the Menu List .....	6-3
Formatting the Menu List .....	6-5
Entering a Record Using the Menu List .....	6-7
Adjusting the Tab Order .....	6-8
Entering the Rest of the Record .....	6-8
Attachment Fields .....	6-9
Adding an Attachment Field .....	6-9
Adding the Photo2 Field to the Data Entry Form .....	6-11
Adding Data to the Attachment Field .....	6-14
Looking at the Table .....	6-16
Special Effect Formats .....	6-16
Printing the Field Definitions .....	6-18
Exercise 6-1 .....	6-19
<b>Databases Assignment 6 .....</b>	<b>6-20</b>

## Chapter 7: Quick Reports

Loading the Sample File .....	7-1
Using the Report Wizard.....	7-2
Tabular Reports .....	7-2
Looking at the Report .....	7-4
Columnar Reports.....	7-6
Setting the Report Into Columns .....	7-8
Adjusting the Report.....	7-9
The Report Icon .....	7-12
Creating the Report.....	7-12
Saving the Report .....	7-13
Totals .....	7-14
Themes .....	7-15
Sorting the Data.....	7-15
Adjusting the Header .....	7-17
Adjusting the Page Numbers .....	7-18
Formatting Field Headings .....	7-19
Adjusting Field and Label Positions.....	7-20
Blank Reports.....	7-22
<b>Databases Assignment 7 .....</b>	<b>7-24</b>

## Chapter 8: Creating More Detailed Reports

Loading the Database .....	8-1
Starting a New Report .....	8-1
Reducing the Height of the Detail Section.....	8-2
Displaying the Grid Increments .....	8-3
Inserting Fields into the Detail Section .....	8-3
Looking at the Report .....	8-7
Widening the Grid .....	8-8
Adding a Calculation Field .....	8-10
Saving the Report .....	8-14
Formatting the Report .....	8-14
Formatting the Fields.....	8-14
Formatting the Labels.....	8-15
Adding a Main Heading .....	8-17
Adding the Sub-Heading.....	8-18
Inserting the Current Date .....	8-19
Adding Page Numbers to the Page Footer .....	8-21
Some Finishing Touches.....	8-22
Adding a Rectangle .....	8-22
Inserting a Line .....	8-23
<b>Databases Assignment 8 .....</b>	<b>8-26</b>

## Chapter 9: Creating User-Friendly Databases

Opening the Sample File .....	9-1
Opening the File as an Exclusive file .....	9-1
The Sections of the Database .....	9-2
Tables.....	9-2
Queries.....	9-2
Forms .....	9-2
Reports.....	9-2
The Structure of the Database.....	9-3
Completing the Data Entry Form .....	9-3
Inserting a New Record Button .....	9-4
Inserting a Find Record Button .....	9-5
Inserting a Delete Record Button .....	9-7
Testing the Buttons.....	9-10
Creating a Main Switchboard Form .....	9-12
Setting the Grid.....	9-13
Setting the Background Colour .....	9-14
Inserting a Graphic.....	9-14
Adding a Button to Open the Data Entry Form.....	9-16
Inserting Buttons to Print Reports.....	9-19
Adding an Exit Button .....	9-22
Formatting the Buttons.....	9-24
Adding a Rectangle .....	9-25
Adding the Headings .....	9-26
Testing the Buttons.....	9-27
Setting the Opening Form .....	9-30
Setting a Password.....	9-31
Printing the Form.....	9-32
Preventing Buttons From Printing.....	9-33
<b>Databases Assignment 9 .....</b>	<b>9-34</b>

## Microsoft Access Project

Andersons Real Estate .....	P-2
-----------------------------	-----





# Introduction to Microsoft Access

---

Data is simply a collection of characters (that is, letters, numbers and symbols) which, on their own, have no particular meaning. When data about a particular topic is stored it is said to be a database. A database allows data to be processed into information, something that can be communicated and understood.

There are two different types of databases:

- those that already contain data and just allow you to obtain information from them. You are not able to make any changes to the data. These are called **CLOSED DATABASES**.
- those that allow you to enter and change the data and process it. These are called **OPEN DATABASES**.

Microsoft Access is an **OPEN DATABASE**.

Some databases that we use in everyday life include: the telephone book, a dictionary, an atlas, a bus timetable, etc. Data within a database is usually divided into categories or sections, called **FIELDS**. The fields that the telephone book is divided into are:

Surname, Initials, Street Number, Street Name, Suburb, Telephone Number

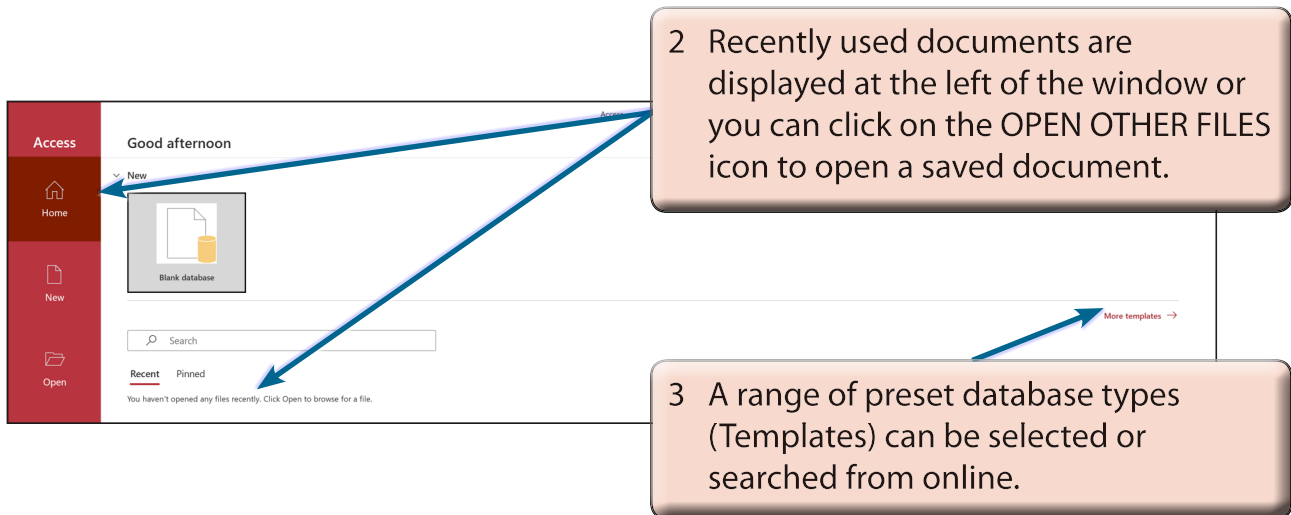
These **FIELDS** can vary in length depending on how much data (characters) needs to be placed into them. For example, an Initials field does not need as much space as a Surname field.

One complete set of fields is termed a **RECORD**. For example, each subscriber's details in the phone book is a record. There are over 1 000 000 records in the Melbourne telephone book.

A group of records on a particular subject is called a **FILE**. For example, the phone book is divided into two **FILES**, white pages and yellow pages.

## Getting Started With Microsoft Access

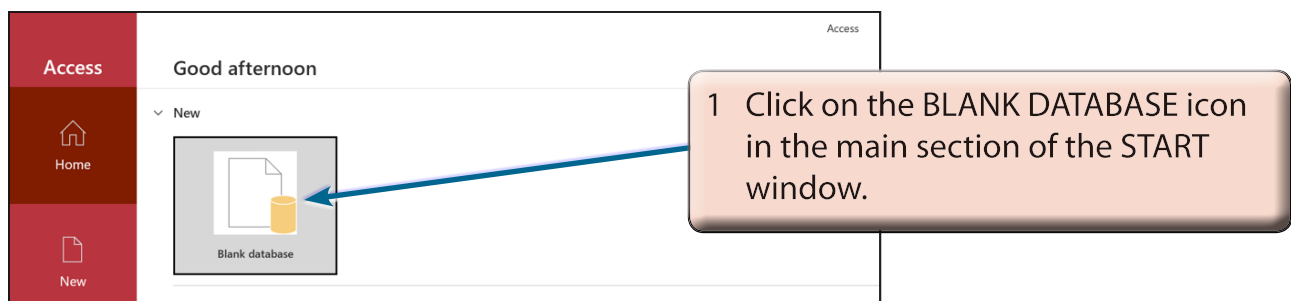
- 1 Load Microsoft Access and you should receive the ACCESS START WINDOW. The following diagram describes the sections of the start window.



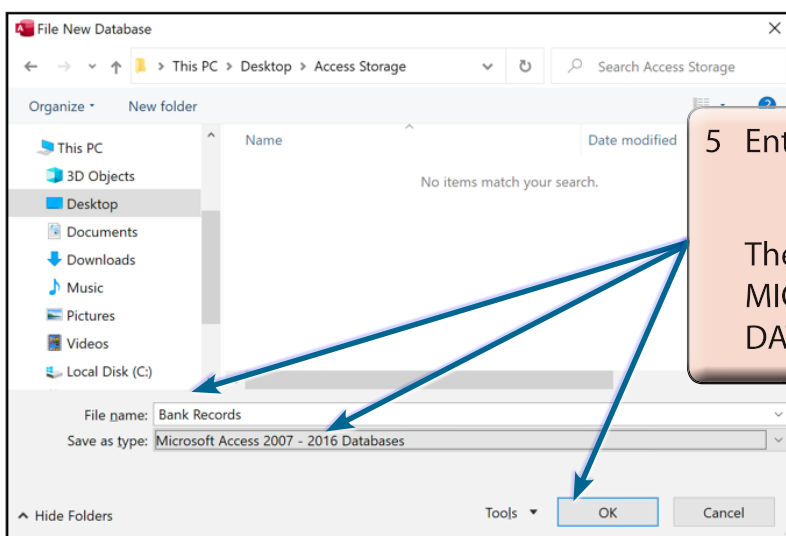
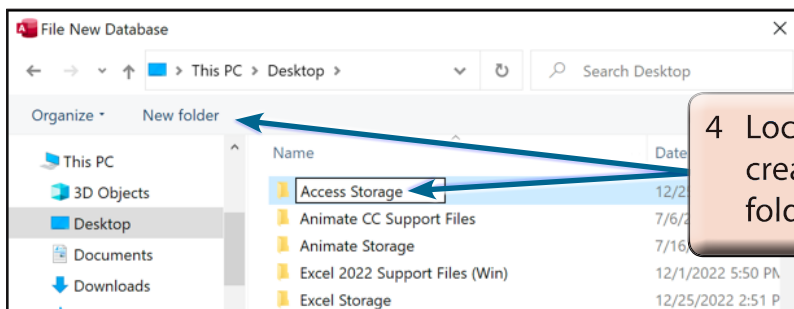
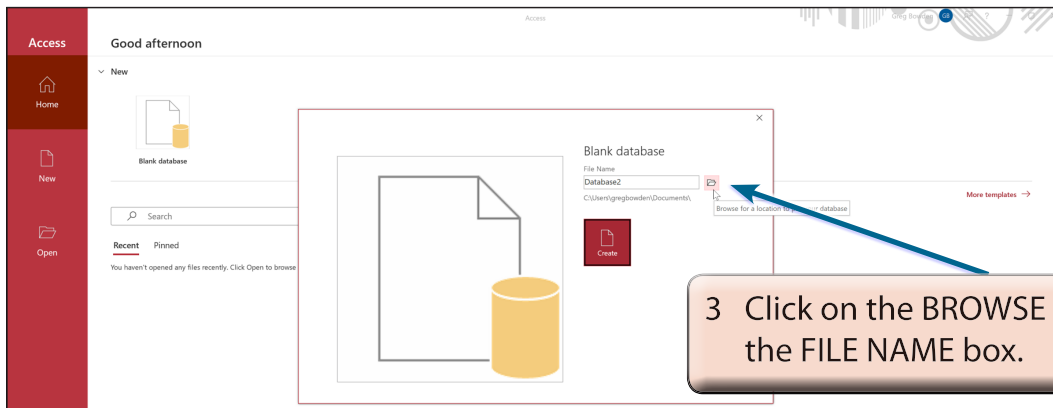
- NOTE:**
- i Once you are familiar with creating Access databases you can use the templates to quickly setup the type of database you require.
  - ii There are templates available through Microsoft's SkyDrive or the Microsoft web site.

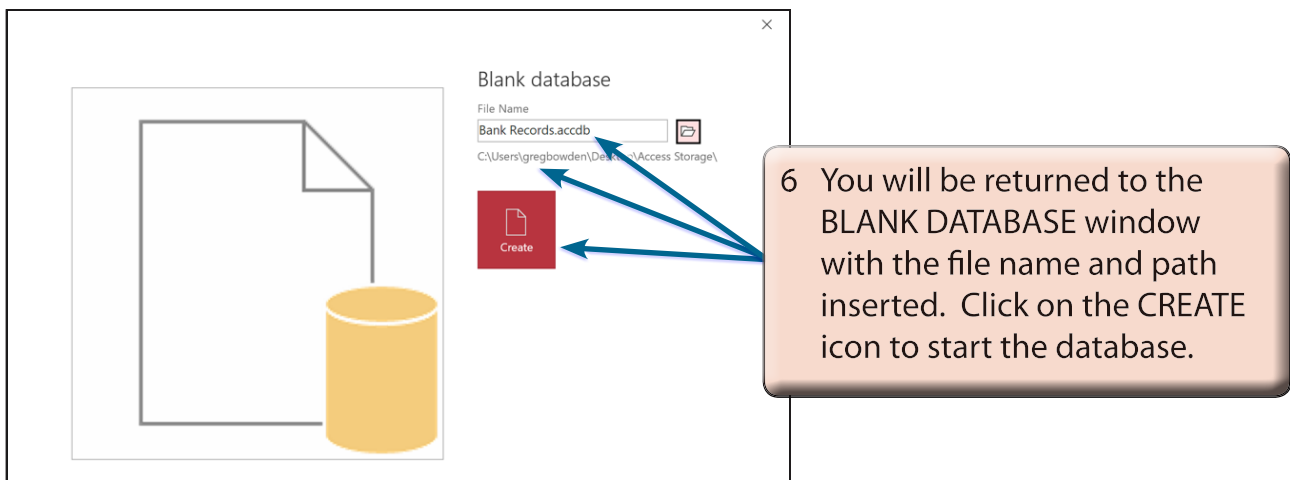
## Starting a New Blank Database

To learn how to create your own database, a database for a bank will be created.



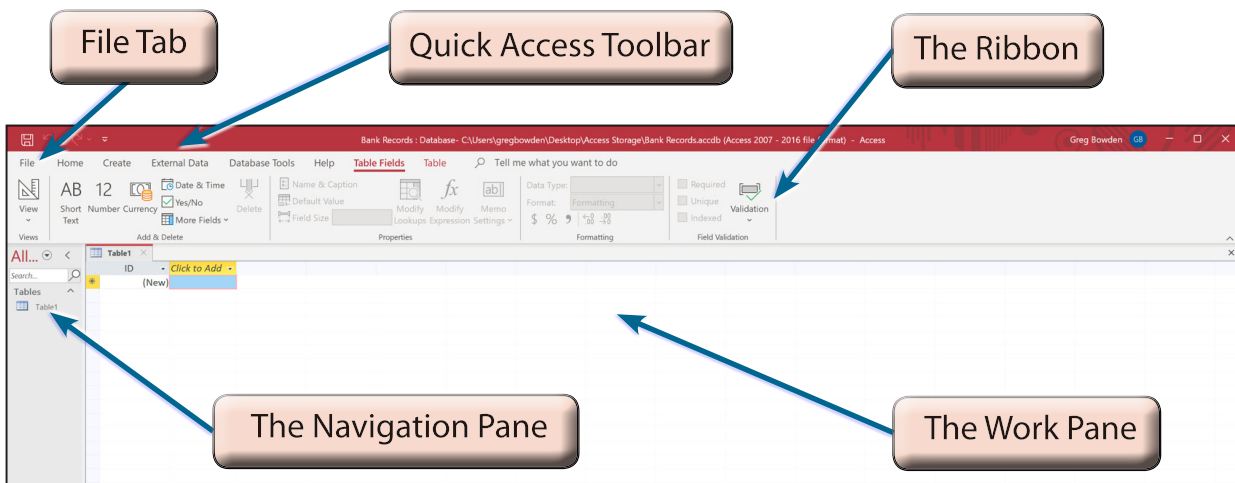
- 2 Microsoft Access automatically saves your data as you enter it, so the program needs to know where to save the file before you create it. A window is displayed for you to set the file name and the location of the file.





## The Database Screen

The database screen has a number of sections which are labelled in the following diagram.



An Access database is made up of **TABLES** where you enter the data, **QUERIES** where you ask questions of the data, **FORMS** where you make the data easier to view and edit, and **REPORTS** where you print the data. These sections will be covered in the next few chapters.

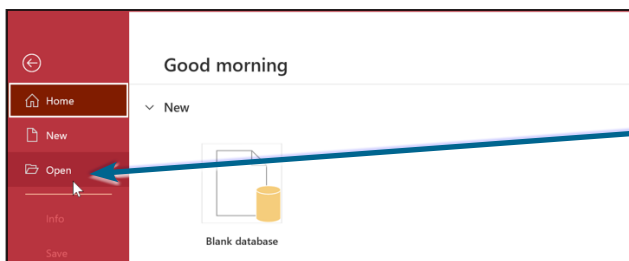
# Processing Data

A database allows you to extract information quickly and accurately from the data you have entered, and to arrange it into required orders. This chapter will involve sorting (arranging) data into various orders, finding specific information and counting the number of times data items occur.

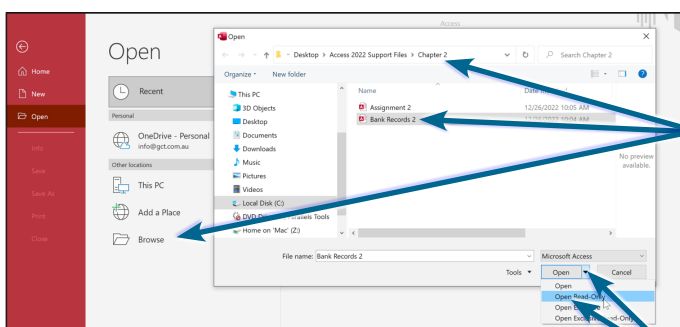
## Loading the Sample File

For this chapter you will be using prepared databases to save you the time of entering data. A copy of the database will need to be opened from the ACCESS 2022 SUPPORT FILES, then the database saved in your STORAGE folder. It is a similar database to the one you created in the previous chapter with more data entered.

- 1 Load Microsoft Access or close the current database and click on the FILE tab.



- 2 In the ACCESS START WINDOW, click on OPEN OTHER FILES or in the BACKSTAGE VIEW click on the OPEN option.



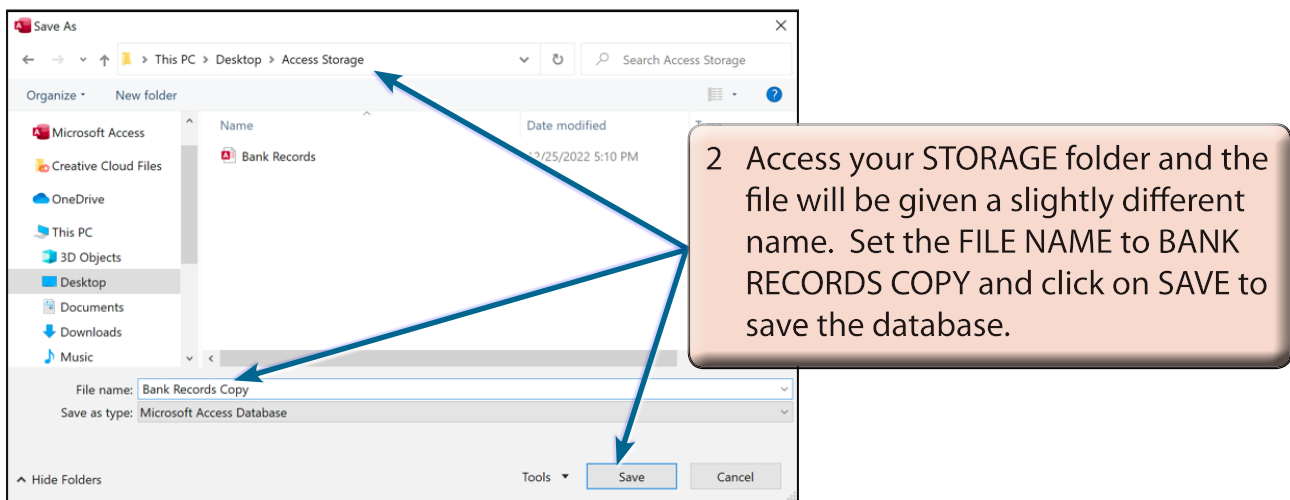
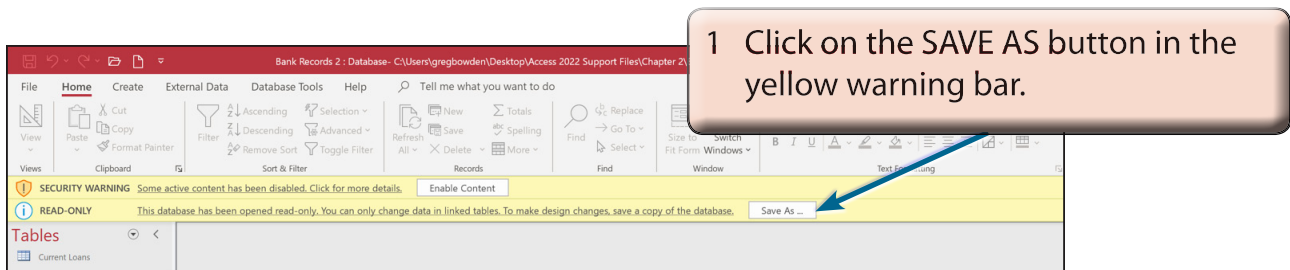
- 3 Click on BROWSE, access the ACCESS 2022 SUPPORT FILES folder, open the CHAPTER 2 folder and click ONCE on the BANK RECORDS 2 file.

- 4 At the bottom right of the OPEN dialogue box click on the arrow next to the OPEN button and select OPEN READ ONLY.

**NOTE: READ-ONLY will open the file for viewing only and prevent any changes being made to the data.**

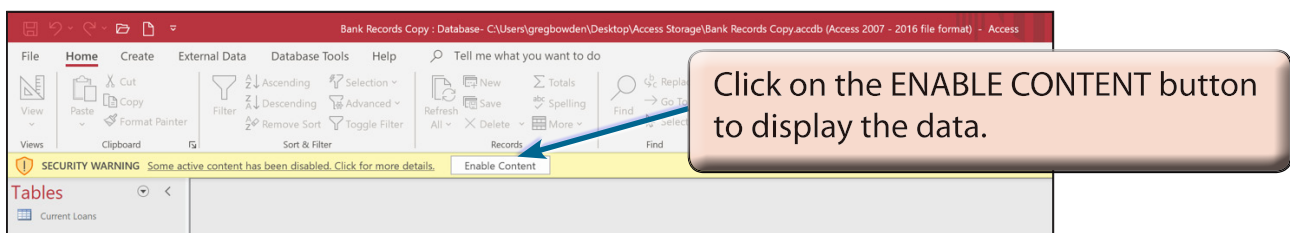
## Saving the Database

The database can now be saved in your STORAGE folder.



## File Security

There will probably be a SECURITY WARNING BAR at the base of the RIBBON indicating that certain content has been disabled. This is because the file is an external file and Microsoft is being cautious with the data.

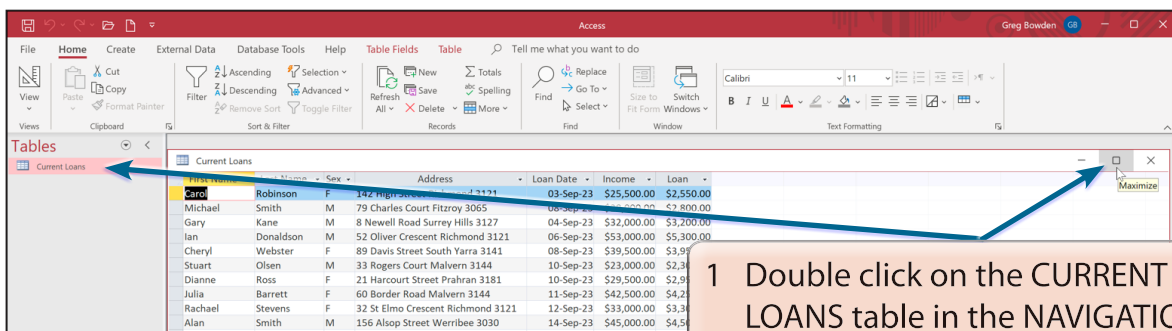


## Sorting Data

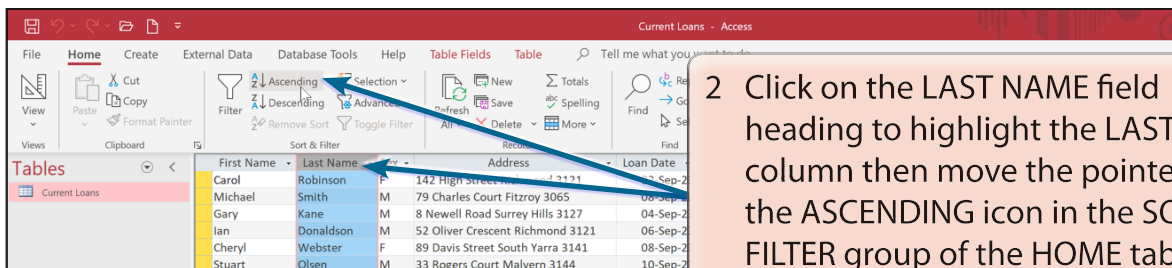
Sorting is the process of arranging the data into a particular order. Microsoft Access allows you to arrange data into alphabetical, numerical or chronological (date) order.

### A Alphabetical Sorting

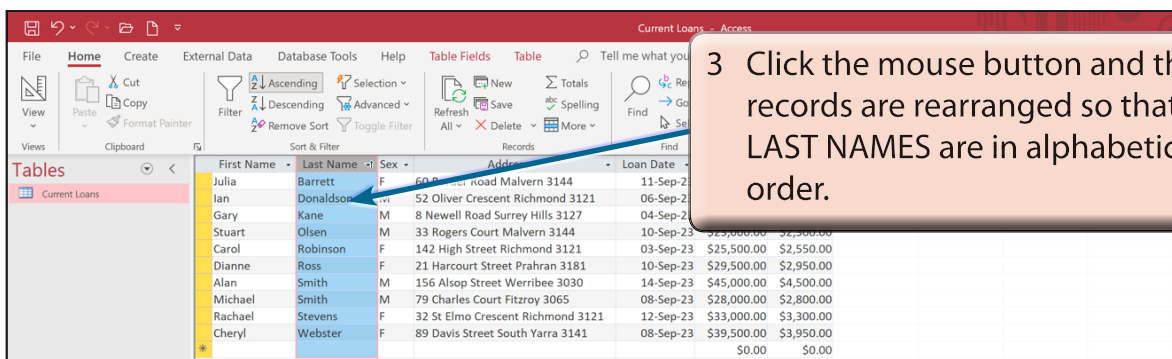
At the moment the names are in no particular order. Text fields such as FIRST NAME and LAST NAME can be placed into alphabetical order.



1 Double click on the CURRENT LOANS table in the NAVIGATION pane to open it and MAXIMIZE the table window.



2 Click on the LAST NAME field heading to highlight the LAST NAME column then move the pointer over the ASCENDING icon in the SORT & FILTER group of the HOME tab in the RIBBON.



3 Click the mouse button and the records are rearranged so that the LAST NAMES are in alphabetical order.

4 Click on the arrow next to the SEX field heading and select SORT A TO Z.

5 The records are rearranged so that the females are listed first.

First Name	Last Name	Sex	Address	Loan Date	Income	Loan
Julia	Barrett	F	60 Border Road Malvern 3144	11-Sep-23	\$42,500.	\$4,250.00
Carol	Robinson	F	142 High Street Richmond 3121	03-Sep-23	\$25,500.	\$2,550.00
Dianne	Ross	F	21 Harcourt Street Prahran 3181	10-Sep-23	\$29,500.	\$2,950.00
Rachael	Stevens	F	32 St Elmo Crescent Richmond 3121	12-Sep-23	\$33,000.	\$3,300.00
Cheryl	Webster	F	89 Davis Street South Yarra 3141	08-Sep-23	\$39,500.	\$3,950.00
Ian	Donaldson	M	52 Oliver Crescent Richmond 3121	06-Sep-23	\$53,000.	\$5,300.00
Gary	Kane	M	8 Newell Road Surrey Hills 3127	04-Sep-23	\$32,000.	\$3,200.00
Stuart	Olsen	M	33 Rogers Court Malvern 3144	10-Sep-23	\$23,000.	\$2,300.00
Alan	Smith	M	156 Alsop Street Werribee 3030	14-Sep-23	\$45,000.	\$4,500.00
Michael	Smith	M	79 Charles Court Fitzroy 3065	08-Sep-23	\$28,000.	\$2,800.00

**NOTE:** It is personal choice whether you use the ASCENDING icon in the RIBBON or the arrow next to the field name to sort data.

## B Numerical Sorting

Number fields can be sorted into ascending order (lowest to highest) or descending order (highest to lowest).

1 Click on the INCOME field heading arrow and select SORT LARGEST TO SMALLEST.

2 The records are rearranged so that they start with the LARGEST income and finish with the SMALLEST income.

First Name	Last Name	Sex	Address	Loan Date	Income	Loan
Ian	Donaldson	M	52 Oliver Crescent Richmond 3121	06-Sep-23	\$53,000.00	\$5,300.00
Alan	Smith	M	156 Alsop Street Werribee 3030	14-Sep-23	\$45,000.00	\$4,500.00
Julia	Barrett	F	60 Border Road Malvern 3144	11-Sep-23	\$42,500.00	\$4,250.00
Cheryl	Webster	F	89 Davis Street South Yarra 3141	08-Sep-23	\$39,500.00	\$3,950.00
Rachael	Stevens	F	32 St Elmo Crescent Richmond 3121	12-Sep-23	\$33,000.00	\$3,300.00
Gary	Kane	M	8 Newell Road Surrey Hills 3127	04-Sep-23	\$32,000.00	\$3,200.00
Dianne	Ross	F	21 Harcourt Street Prahran 3181	10-Sep-23	\$29,500.00	\$2,950.00
Michael	Smith	M	79 Charles Court Fitzroy 3065	08-Sep-23	\$28,000.00	\$2,800.00
Carol	Robinson	F	142 High Street Richmond 3121	03-Sep-23	\$25,500.00	\$2,550.00
Stuart	Olsen	M	33 Rogers Court Malvern 3144	10-Sep-23	\$23,000.00	\$2,300.00
					\$0.00	\$0.00



# Introduction to Queries

Queries allow you to ask questions of your database. You can combine data from different tables, permanently find or sort data, do calculations or produce interactive dialogue boxes to allow a user to enter search data.

There are many different types of Queries, in this chapter you will be introduced to the most common type, SIMPLE QUERIES.

A sample database has been prepared for you which records employee information in two tables. One table records the employee's personal details, the second table records the employee's pay details. The following diagram summarises the structure of the two tables.

Personal Details	Pay Details
Employee ID	Employee ID
First Name	Position
Last Name	Section
Address	Weekly Hours
	Pay Rate

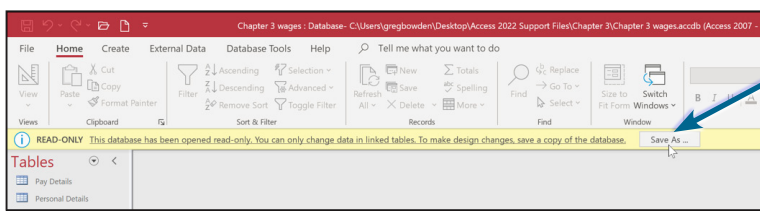
Notice that the field EMPLOYEE ID is present in both tables. This field is called the **PRIMARY KEY** and it enables two tables to be linked so that data can be used from both of them in the Query.

## Loading the Sample File

- 1 Load Microsoft Access and select OPEN in the START window or close the current file and select the OPEN option in the BACKSTAGE VIEW.

2 BROWSE to the CHAPTER 3 folder of the ACCESS 2022 SUPPORT FILES and click ONCE on the CHAPTER 3 WAGES file.

3 Click on the arrow next to the OPEN button and select OPEN READ-ONLY.



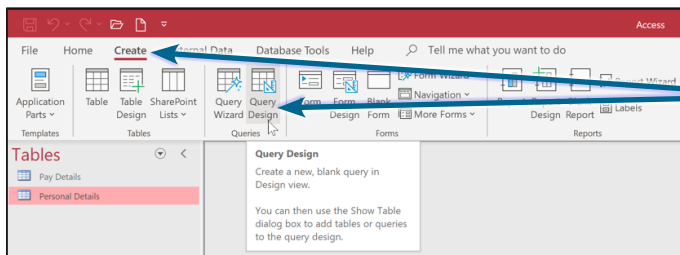
4 Click on the SAVE AS button in the WARNING BAR at the base of the RIBBON.

- 5 Access your STORAGE folder and save the database as: CHAPTER 3 WAGES COPY.
- 6 Click on the ENABLE CONTENT button to display the data.

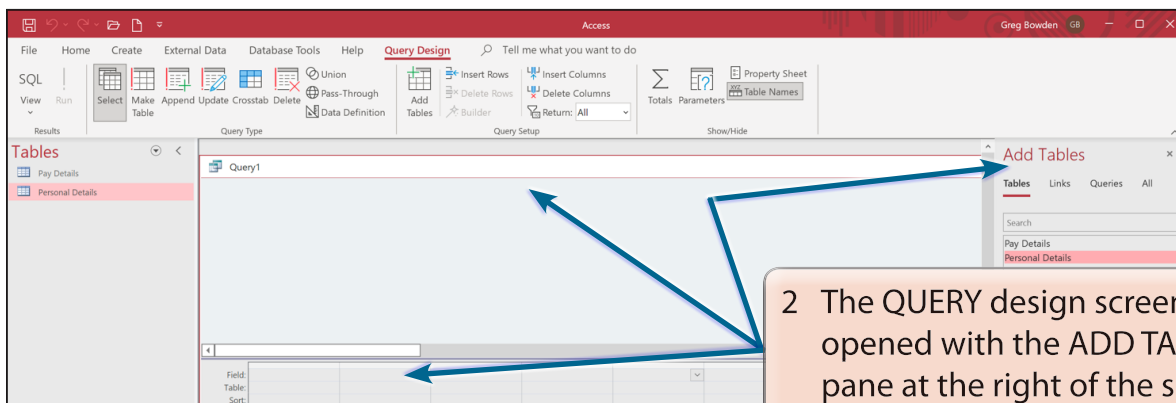
## Looking at the Tables

- 1 Open each of the two tables in turn to become familiar with the data stored in them.
- 2 Close the tables by clicking on their close boxes at the top right of their windows.

## Creating a Query



1 Open the CREATE tab in the RIBBON and click on the QUERY DESIGN icon to start the query.



2 The QUERY design screen is opened with the ADD TABLES pane at the right of the screen.

- 3 Before the Query can be constructed the tables used by the Query need to be set.

4 Click on the PERSONAL DETAILS table in the ADD TABLE pane followed by the ADD SELECTED TABLE button to add it to the Query.

The screenshot shows the Microsoft Access Query Design view. On the left, the 'Tables' pane lists 'Pay Details' and 'Personal Details'. The 'Personal Details' table is highlighted. In the center, the 'Query1' design grid shows the 'Personal Details' table being added. On the right, the 'Add Selected Tables' button is visible. A blue arrow points from the 'Personal Details' table in the 'Tables' pane to the 'Add Selected Tables' button.

5 Click on the PAY DETAILS table and ADD it to the Query frame.

The screenshot shows the Microsoft Access Query Design view. On the left, the 'Tables' pane lists 'Pay Details' and 'Personal Details'. The 'Pay Details' table is highlighted. In the center, the 'Query1' design grid shows the 'Pay Details' table being added. On the right, the 'Add Selected Tables' button is visible. A blue arrow points from the 'Pay Details' table in the 'Tables' pane to the 'Add Selected Tables' button.

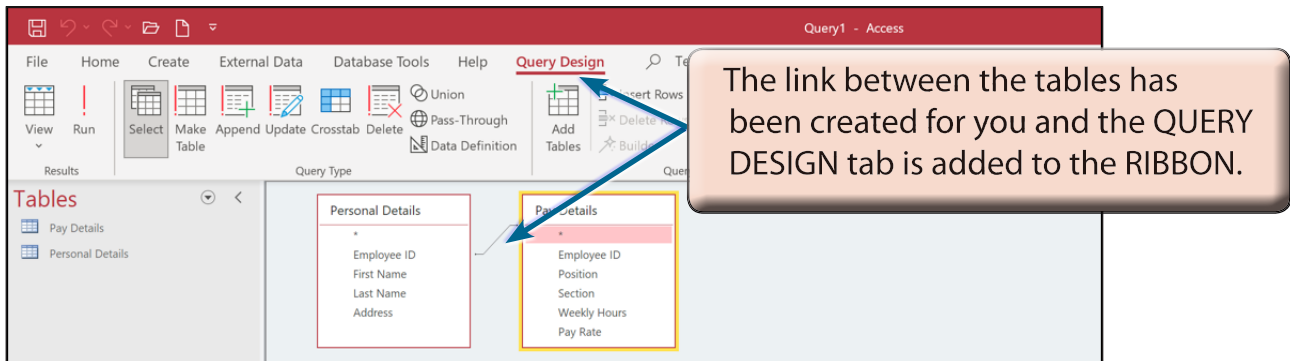
- 6 Close the ADD TABLES pane by clicking on its CLOSE button (x).

7 Click on the MAXIMIZE icon to expand the Query window.

The screenshot shows the Microsoft Access Query Design view. The 'Query1' design grid is visible. In the bottom right corner, the 'Maximize' icon is highlighted. A blue arrow points from the 'Maximize' icon to the 'Query1' design grid.

## A Linking the Tables

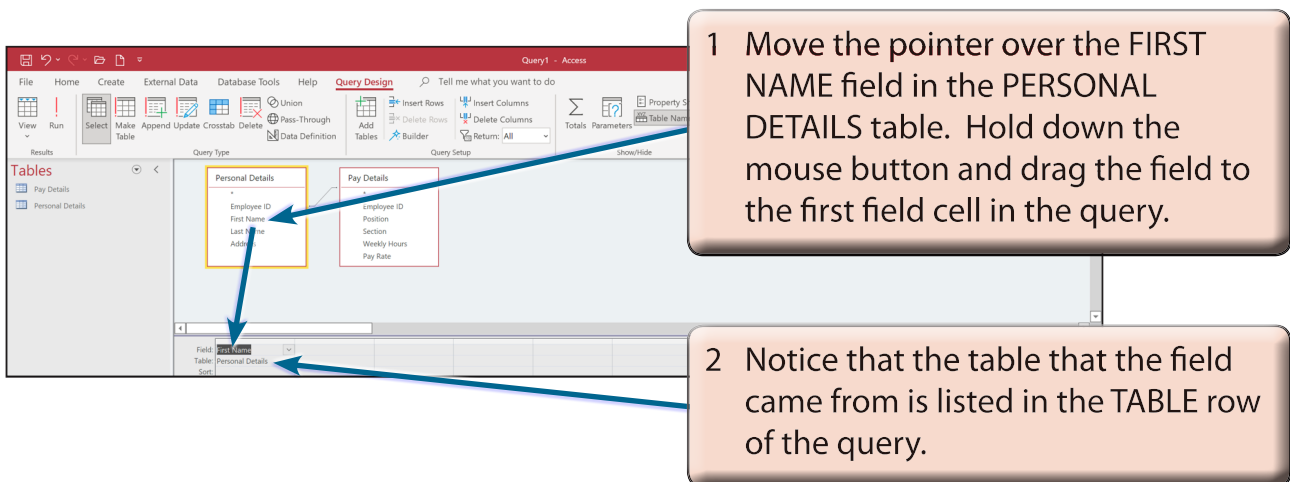
In order to create a query on multiple tables, the tables needed to be linked together using the PRIMARY KEY fields. In this case the EMPLOYEE ID field is present in both tables and it has been set as the PRIMARY KEY field in each table.



**NOTE** If a LINK or (RELATIONSHIP) line is not present between your tables, click on the EMPLOYEE ID field in the PERSONAL DETAILS table, drag the field over the EMPLOYEE ID field in the PAY DETAILS table and select OK.

## B Building the Query

Let's create a query that displays the employee's name, weekly hours and pay rate.



# Simple Forms

Forms allow you to view, edit or enter data in a more attractive way than using tables. Fields can be placed anywhere on the screen to make the data easier to view and understand.

The creation of simple forms uses the LAYOUT view. This view allows you to quickly create a form, which is most suitable for smaller databases. Also, LAYOUT view needs to be used for data that is going to be displayed on the internet.

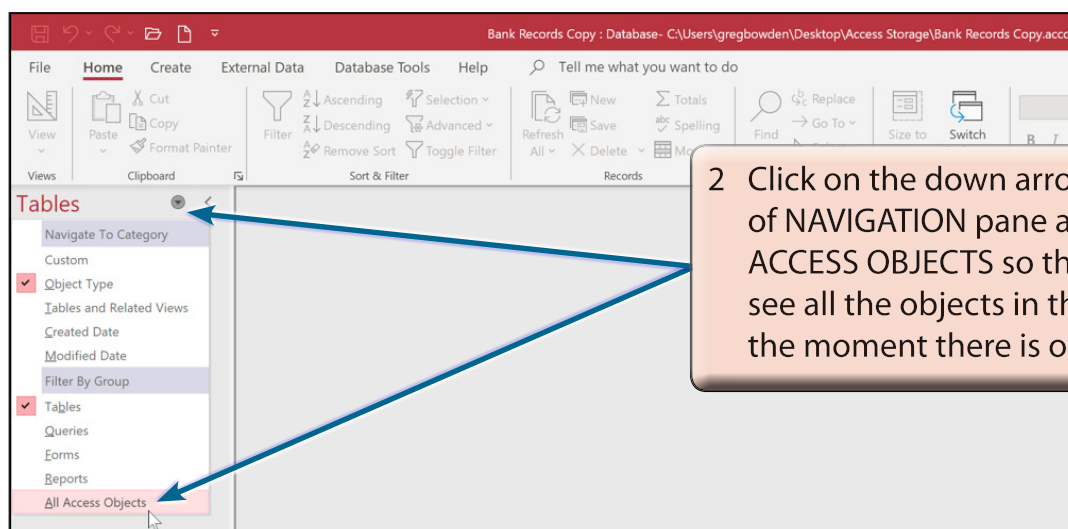
For larger databases more detailed forms can be created and you will do that in the next chapter.

## Loading the Database

A simple form will be added to the Bank Records database that you used in Chapter 2.

- 1 Load Microsoft Access or close the current database and open the BANK RECORDS COPY database from your STORAGE folder.

**NOTE:** If you do not have a copy of the BANK RECORDS COPY database you can open it from the CHAPTER 2 folder of the ACCESS 2022 SUPPORT FILES as an OPEN READ-ONLY file, then save it in your STORAGE folder as BANK RECORDS COPY.



- 2 Click on the down arrow at the top of NAVIGATION pane and select ALL ACCESS OBJECTS so that you can see all the objects in the pane (at the moment there is only one table).

## Creating a Form

A form will be created to make it easier to enter data into the database.

1 Double click on the CURRENT LOANS table to open it and MAXIMIZE the screen if you wish to.

First Name	Last Name	Sex	Address	Loan Date	Income	Loan
Carol	Robinson	F	142 High Street Richmond 3121	03-Sep-23	\$25,500.00	\$2,550.00
Michael	Smith	M	79 Charles Court Fitzroy 3065	08-Sep-23	\$28,000.00	\$2,800.00
Gary	Kane	M	8 Newell Road Surrey Hills 3127	04-Sep-23	\$32,000.00	\$3,200.00
Ian	Donaldson	M	52 Oliver Crescent Richmond 3121	06-Sep-23	\$53,000.00	\$5,300.00
Cheryl	Webster	F	89 Davis Street South Yarra 3141	08-Sep-23	\$39,500.00	\$3,950.00
Stuart	Olsen	M	33 Rogers Court Malvern 3144	10-Sep-23	\$23,000.00	\$2,300.00

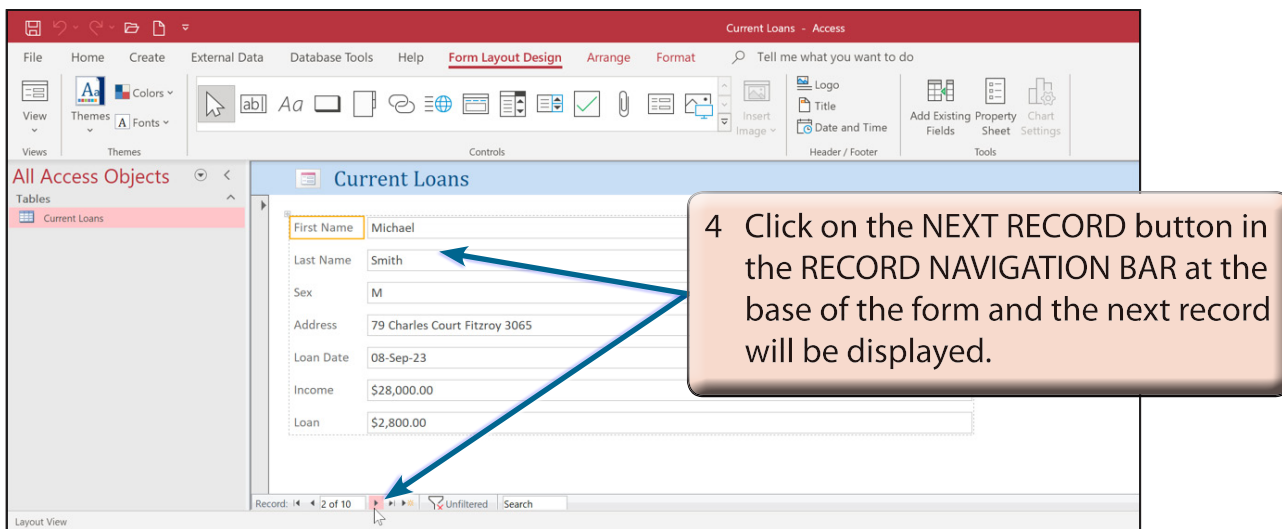
**NOTE:** The table that a simple form is based on needs to be open when creating a simple form.

2 Open the CREATE tab in the RIBBON and click on the FORM icon to start the form.

First Name	Last Name	Sex	Address	Loan Date	Income	Loan
Carol	Robinson	F	142 High Street Richmond 3121	03-Sep-23	\$25,500.00	\$2,550.00
Michael	Smith	M	79 Charles Court Fitzroy 3065	08-Sep-23	\$28,000.00	\$2,800.00
Gary	Kane	M	8 Newell Road Surrey Hills 3127	04-Sep-23	\$32,000.00	\$3,200.00
Ian	Donaldson	M	52 Oliver Crescent Richmond 3121	06-Sep-23	\$53,000.00	\$5,300.00
Cheryl	Webster	F	89 Davis Street South Yarra 3141	08-Sep-23	\$39,500.00	\$3,950.00

3 The FORM is created with the table name in the HEADER section and the fields in the DETAIL section. This is called a STACKED form and the FORM LAYOUT DESIGN, ARRANGE and FORMAT tabs are added to the RIBBON.

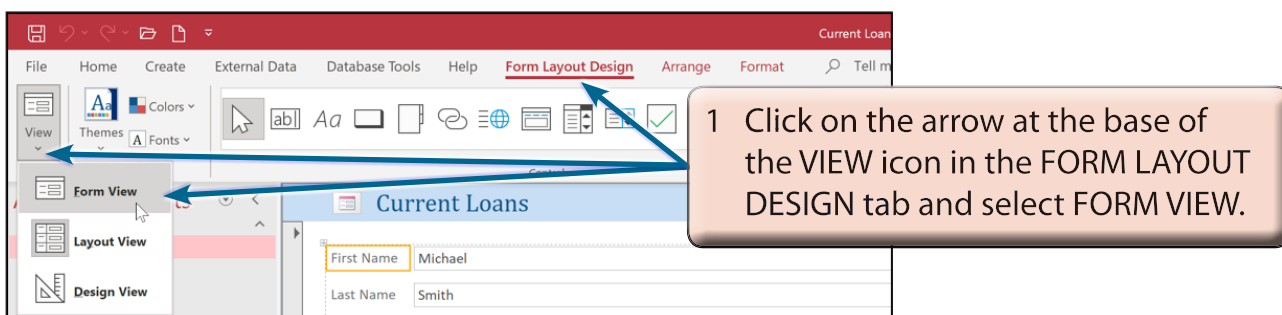
Current Loans						
First Name	Carol					
Last Name	Robinson					
Sex	F					
Address	142 High Street Richmond 3121					
Loan Date	03-Sep-23					
Income	\$25,500.00					
Loan	\$2,550.00					



**NOTE:** The form displays one record at a time on the screen. You can think of the form as a 'card' for each record.

## Layout and Form View

At the moment your screen is in LAYOUT VIEW which allows you to see 'live' data. You can make changes to the appearance of the form in this view, but you cannot change the data in any way.





2 FORM VIEW is used when a form is complete and operational. You can change the data, but not the appearance of the form in this view.

First Name	Michael
Last Name	Smith
Sex	M
Address	79 Charles Court Fitzroy 3065
Loan Date	08-Sep-23
Income	\$28,000.00
Loan	\$2,800.00

## Saving the Form

As with Tables and Queries, Forms need to be saved.

1 Click on the SAVE icon in the QUICK ACCESS TOOLBAR and you will be asked to give the form a name.

2 Enter:  
Data Entry  
and select OK.

Save As

Form Name:  
Data Entry

OK Cancel

## Changing the Form Title

The program places the Table name as the TITLE of the form. This can be misleading so let's insert a more appropriate title.

- 1 Try altering the CURRENT LOANS text in the TITLE section of the form. You should not be able to do so because the form is in FORM VIEW.

2 Click on the LAYOUT VIEW button at the bottom right of the FORM screen to set the screen to LAYOUT VIEW.

Layout View



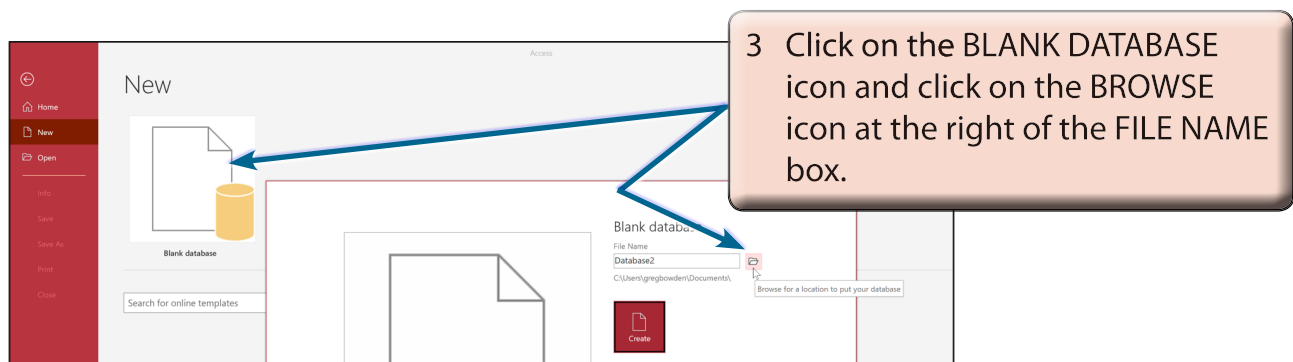
# Creating Data Entry Forms

When databases become larger it is necessary to be able move fields anywhere on the screen so that all the data can be clearly displayed. Access allows you to produce professional-looking screen displays which can be printed or simply designed to make data entry easier. Fields can be moved, graphics, shadings and pictures added, etc.

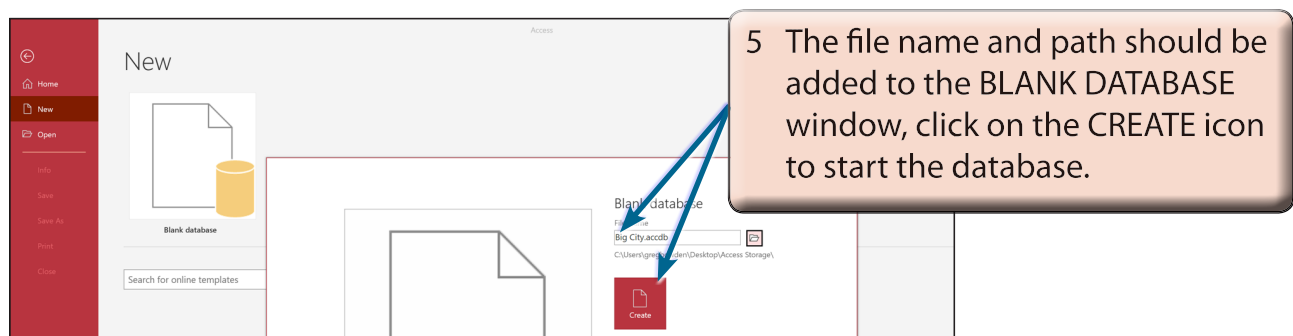
The easier the data entry process is made the less chance there is of incorrect data being entered. In this chapter you will create a data entry form for a department store using DESIGN VIEW.

## Starting a New Database

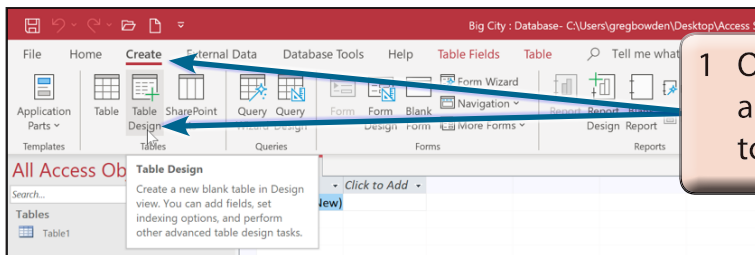
- 1 If you are starting a fresh session, load Microsoft Access.
- 2 If you are continuing directly from the previous chapter, close the current file, click on the FILE tab and select NEW.



- 4 Access your STORAGE folder, call the file BIG CITY and select OK.



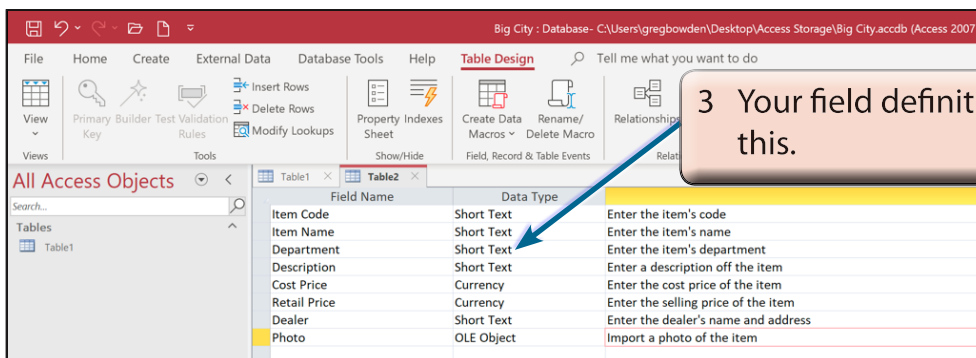
## Defining the Fields



1 Open the CREATE tab of the RIBBON and click on the TABLE DESIGN icon to start a new table.

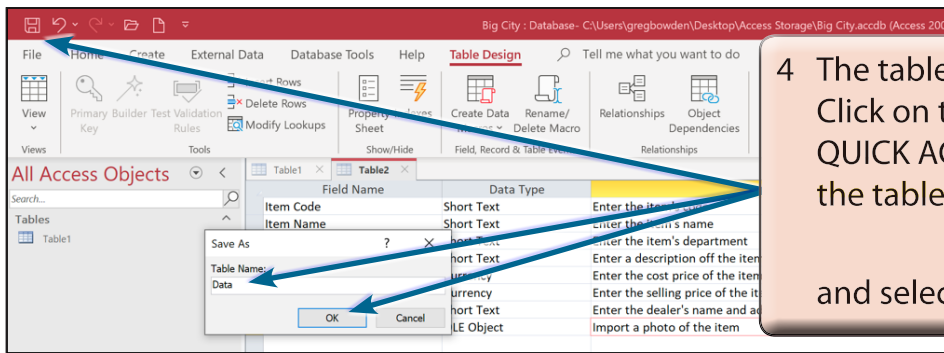
2 Enter the following Field Names, Data Types and Descriptions:

Item Code	Short Text	Enter the item's code
Item Name	Short Text	Enter the item's name
Department	Short Text	Enter the item's department
Description	Short Text	Enter a description of the item
Cost Price	Currency	Enter the cost price of the item
Retail Price	Currency	Enter the selling price of the item
Dealer	Short Text	Enter the dealer's name and address
Photo	OLE Object	Import a photo of the item

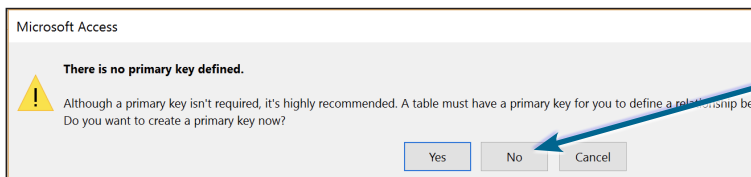


3 Your field definitions should look like this.

- NOTE:**
- i An OLE Object field allows graphics, sounds or videos to be stored in the field.
  - ii The descriptions of the fields is not essential, however, the descriptions that you do enter will appear at the bottom of the screen when a field is selected, providing assistance to the person entering the data.
  - iii We could have adjusted the field sizes of all the fields, but the default settings will suffice for this activity.



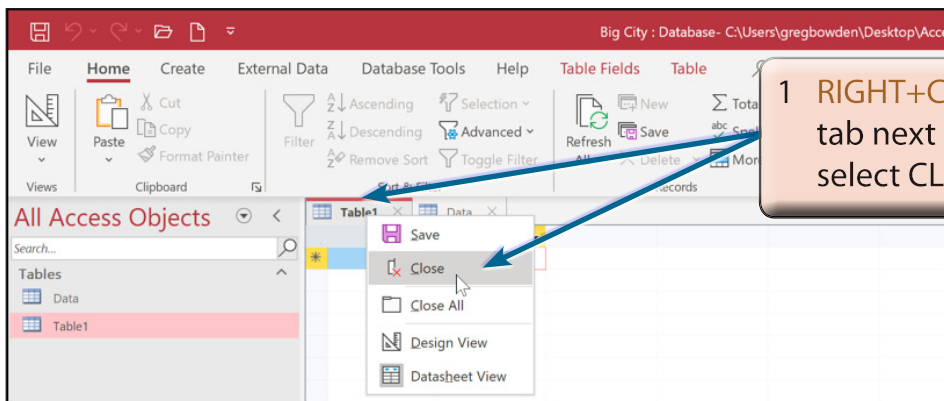
- 4 The table needs to be saved. Click on the SAVE icon in the QUICK ACCESS TOOLBAR, enter the table name:  
Data  
and select OK.



- 5 You will be asked to set a PRIMARY KEY, which enables tables to be linked to other tables. This is not necessary for this activity so select NO.

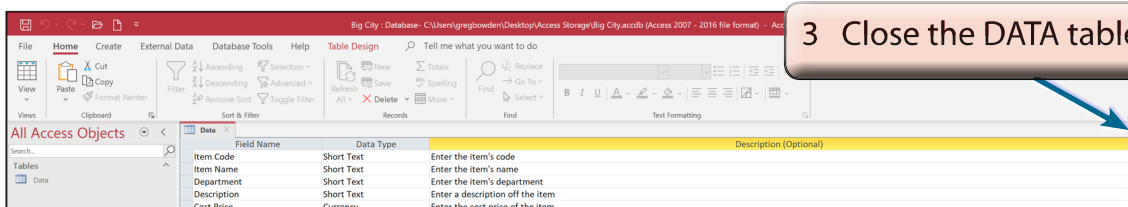
## Deleting the First Table

The first table that Access provides when you start a new database can be deleted.



- 1 RIGHT+CLICK on the TABLE 1 tab next to the DATA tab and select CLOSE.

- 2 The table will be deleted as no fields have been entered into it.

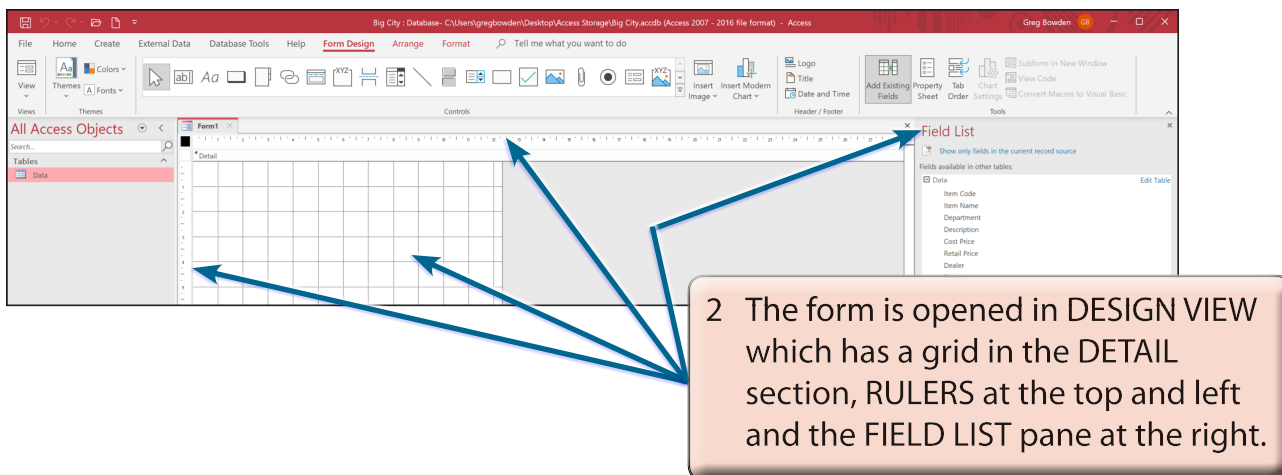
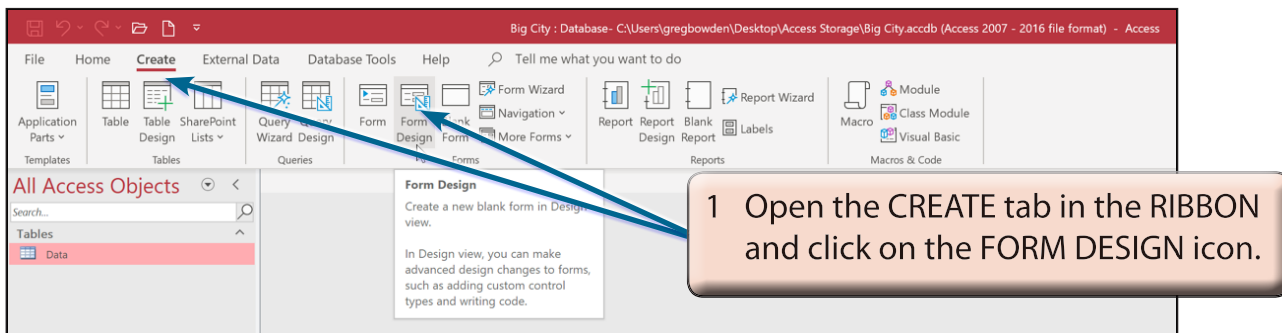


- 3 Close the DATA table as well.

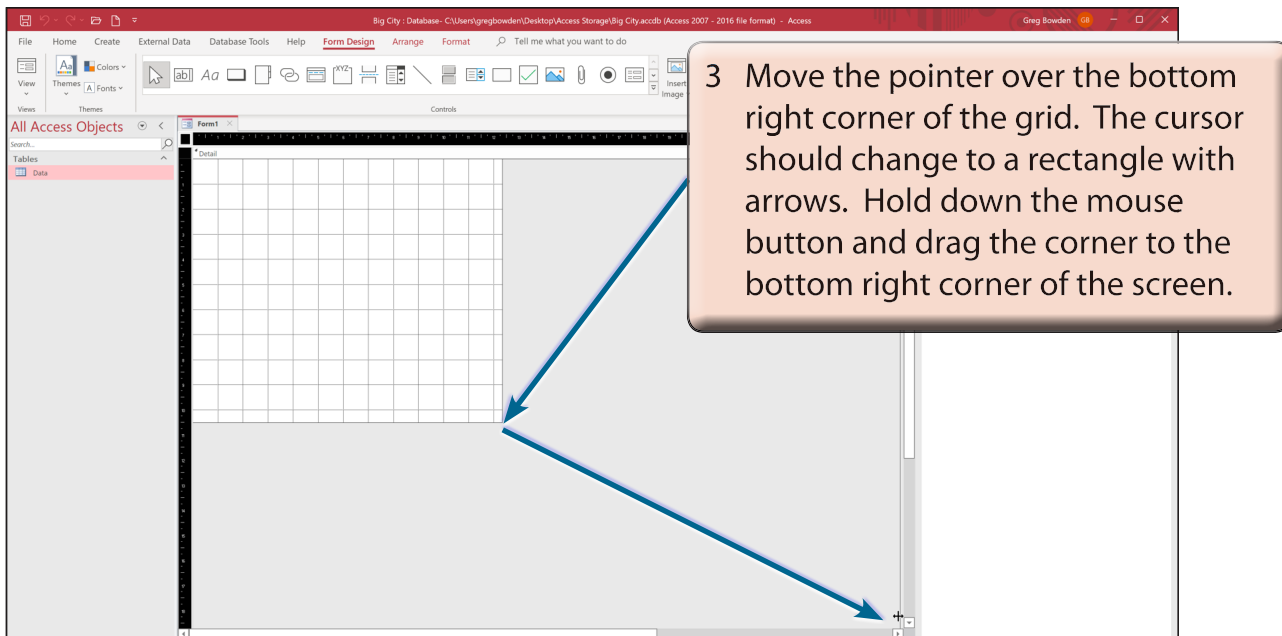
## Starting the Form

The FORMS section of the program allows you to control how the data will be displayed on the screen. The one database can have several different forms. We will create a form that displays all the fields on the one screen. In this case the form will be created in DESIGN VIEW.

### A Opening the Form in Design View



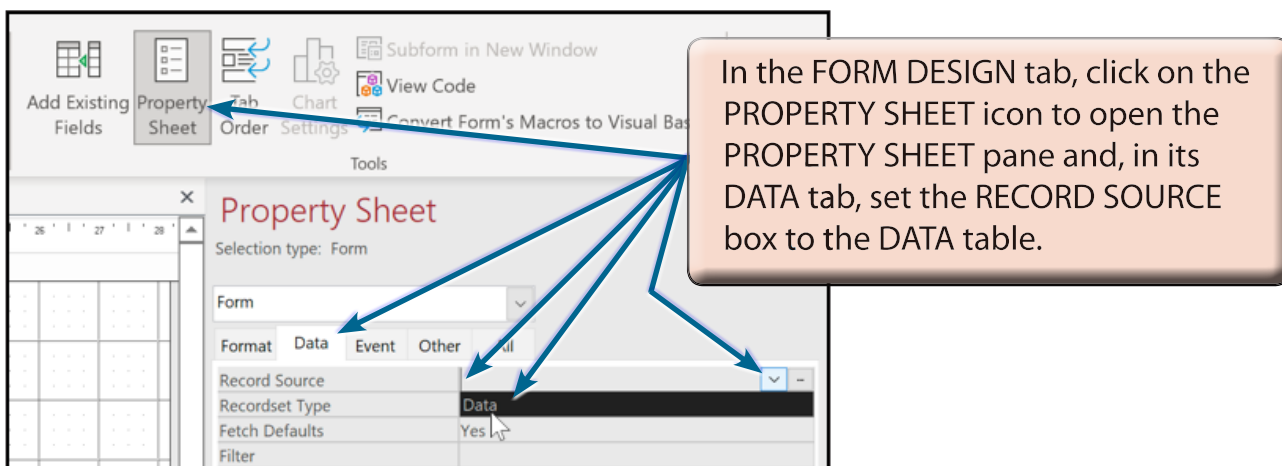
**NOTE:** If the FIELD LIST pane is not open, click in the ADD EXISTING FIELDS button in the FORM DESIGN tab of the RIBBON.



**NOTE:** When creating a detailed data entry form, usually as much of the screen as possible is used.

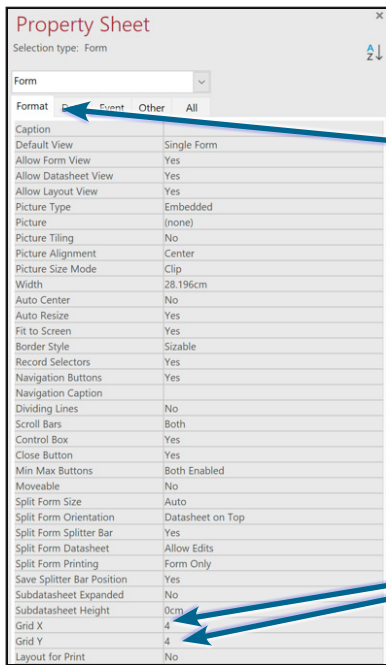
## B Linking the Form to the Data Table

When creating a form in DESIGN VIEW the table or query that stores the data must be specified.



## C Setting the Grid

The grid that is provided can be changed to show less dots.

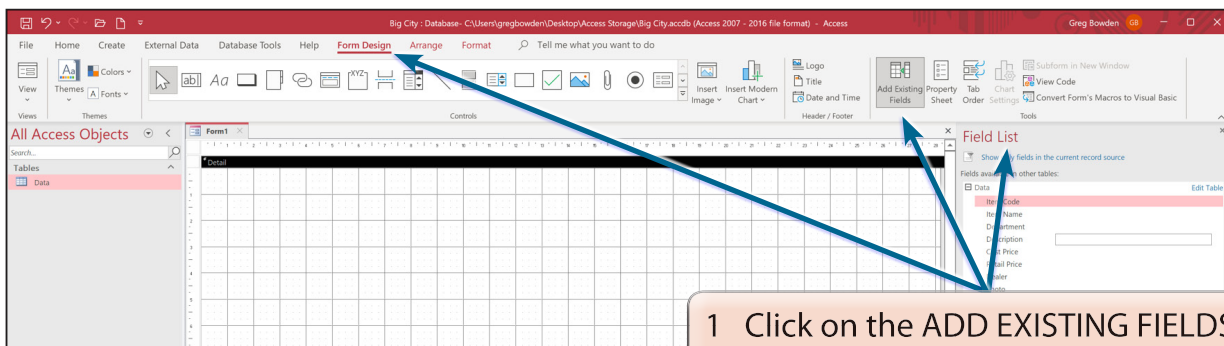


1 In the PROPERTIES SHEET pane open the FORMAT tab.

2 Set the GRID X and GRID Y boxes, which are near the bottom of the list, to 4 so that there are 4 dots per cm.

## Inserting Fields

Fields and labels can be placed anywhere on the screen. The purpose of a data entry screen is to make the data as easy as possible to view and enter, so time is usually taken to make data entry screens look attractive.



1 Click on the ADD EXISTING FIELDS icon in the FORM DESIGN tab of the RIBBON and the FIELD LIST pane replaces the PROPERTY SHEET pane.

# Enhancing Data Entry Forms

Enhancements can be made to data entry forms to improve the data entry process and help to ensuring that data is entered as accurately as possible. In this chapter you will add pop-up lists to fields, set the Tab Order, copy formats, insert Attachment fields and apply special effects to objects in the Big City database.

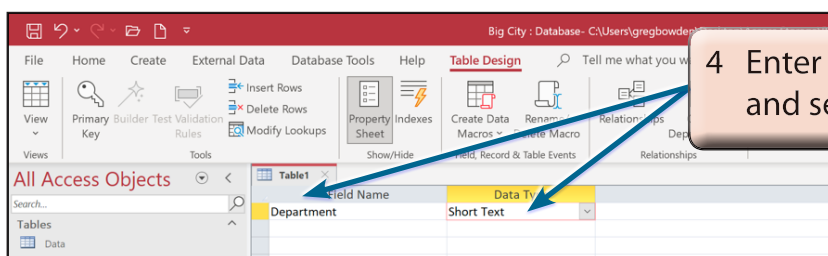
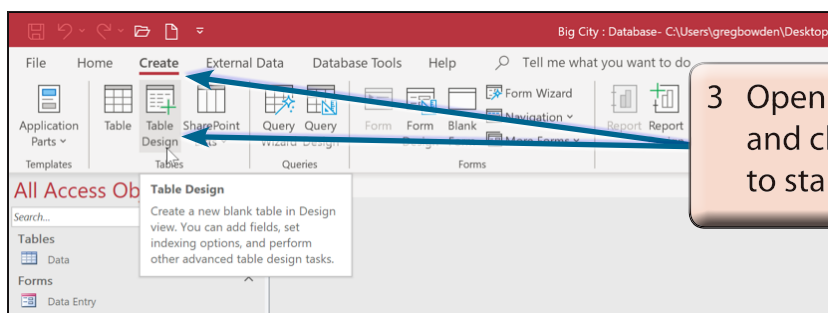
## Creating a Pop-up List

The DEPARTMENT field will contain either ELECTRICAL, HARDWARE, SPORT or TOY. Those values can be placed in a POP-UP LIST so that the user can select from one of the provided values. This is an important tool to ensure the accuracy of the data being entered.

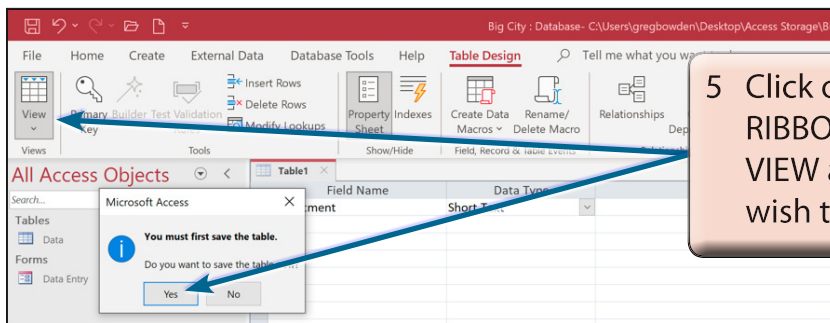
There are different ways of creating menu lists, but the simplest is to place the required values in a separate table and import those values into the menu list.

### A Creating a Table to Store the Menu Items

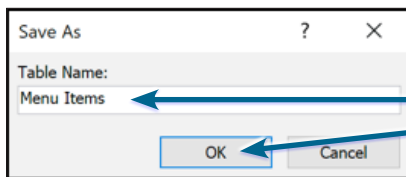
- 1 Load Microsoft Access or close the current files.
- 2 Open the BIG CITY database from your STORAGE folder.



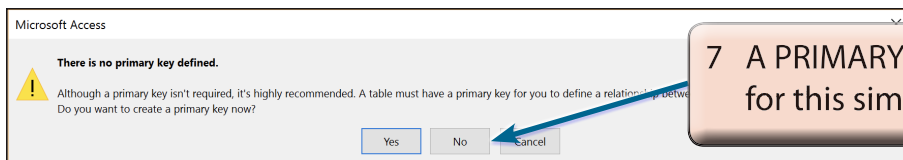




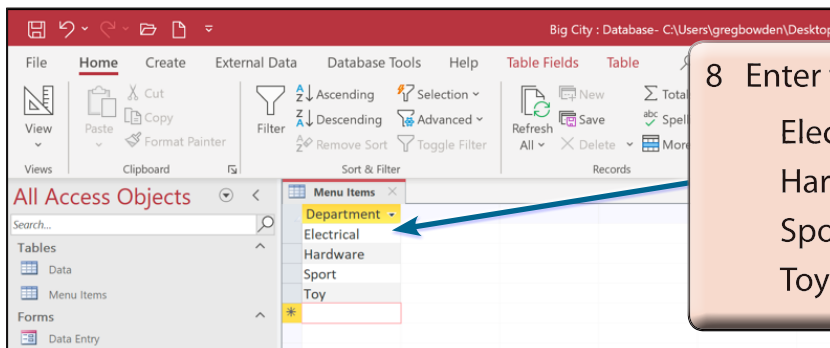
5 Click on the VIEW button in the RIBBON to return to DATASHEET VIEW and you will be asked if you wish to save the table. Select YES.



6 Call the table MENU ITEMS and select OK.



7 A PRIMARY KEY will not be required for this simple table, so select NO.



8 Enter the four departments:

Electrical	<enter>
Hardware	<enter>
Sport	<enter>
Toy	<enter>

**NOTE: i** This table will simply store these four values so that they can be used in the DEPARTMENT field in the DATA ENTRY form.

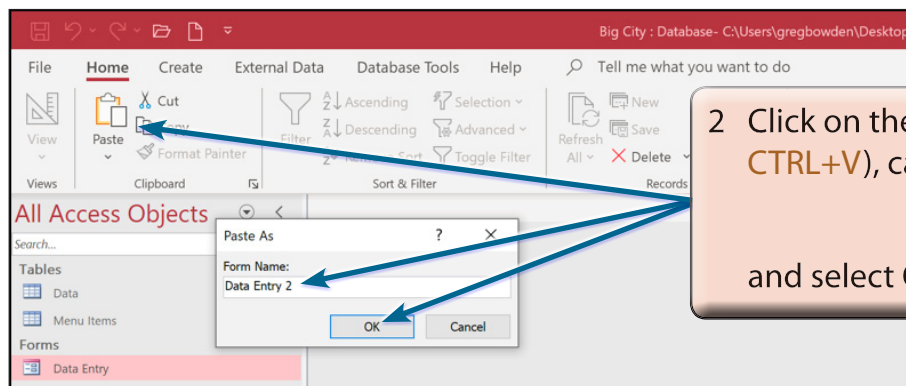
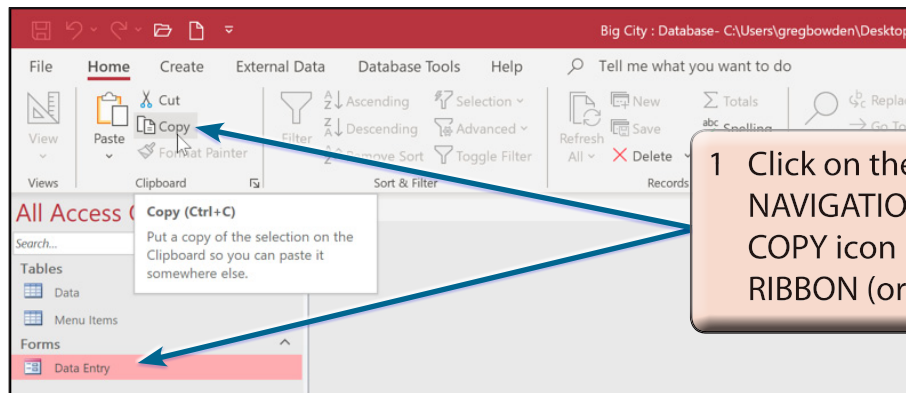
**ii** If you wanted a menu list for another field, create another table, create a field and enter the data for that field.

7 Close the table by clicking on its CLOSE box.

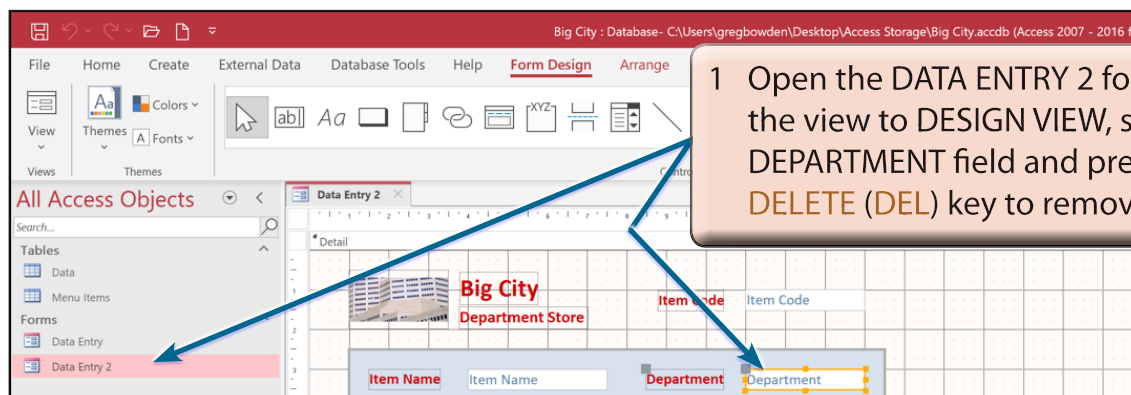


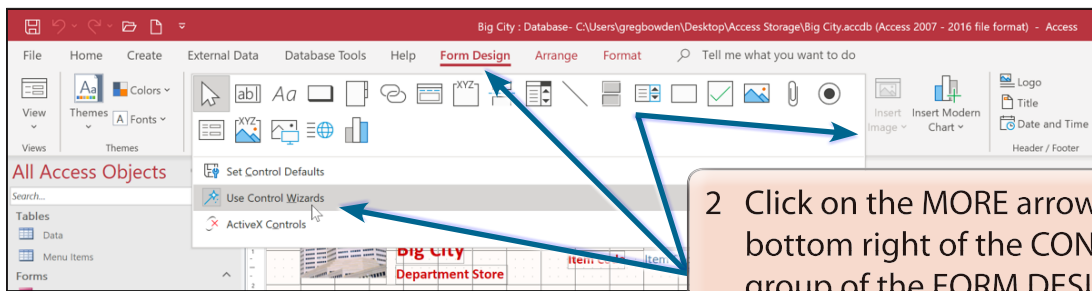
## B Copying the Form

We will make a copy of the DATA ENTRY form then make adjustments to the copy. By doing this you can always use the original form if required.



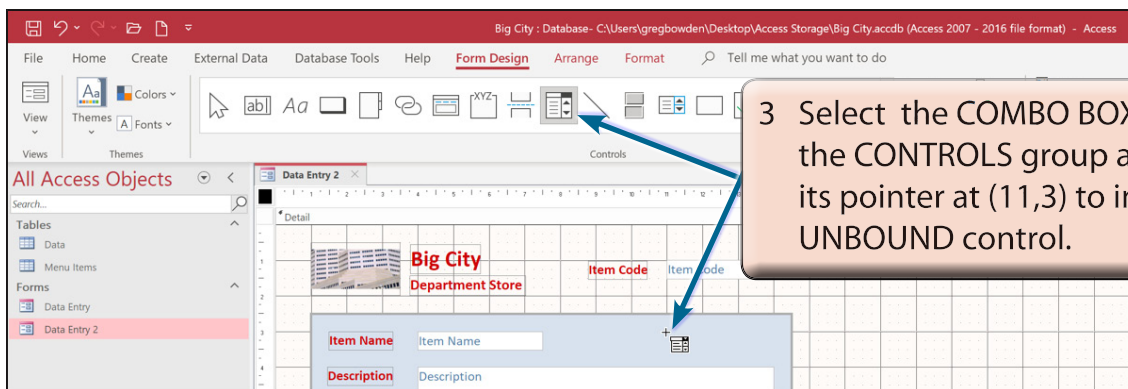
## C Setting the Menu List





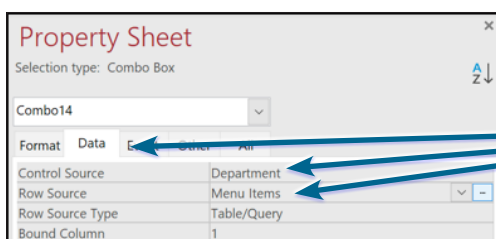
2 Click on the MORE arrow at the bottom right of the CONTROLS group of the FORM DESIGN tab and turn off USE CONTROL WIZARDS.

**NOTE:** The WIZARD icon is unshaded when it is turned off. A wizard can be used to create a menu list, but in this case it is easier to do it manually. The WIZARD CONTROL button is turned on when you want to use a wizard with a tool from the CONTROL group.



3 Select the COMBO BOX icon in the CONTROLS group and click its pointer at (11,3) to insert an UNBOUND control.

**NOTE:** If the WIZARD dialogue box opens, select CANCEL. It means that the WIZARD CONTROL button was not turned off. Turn the WIZARD CONTROL off and try step 3 again.



4 In PROPERTIES SHEET pane open the DATA tab then set the CONTROL SOURCE to DEPARTMENT and ROW SOURCE to the MENU ITEMS table.

# Quick Reports

One of the main functions of a database is to be able to display its data as clearly as possible so that it can be communicated and understood. In this way data is processed into information. Microsoft Access offers a variety of different reports that can be used to achieve this. The most common report is called a TABULAR REPORT, however, you can also create COLUMNAR REPORTS, CHARTS or MAILING LABELS. The one database can have several different reports to suit different requirements.

There are also a number of different ways to create these reports. In this chapter you will use the REPORT WIZARD and the REPORT tool to create simple reports in a few mouse clicks. In the next chapter you will use REPORT DESIGN to create more detailed reports.

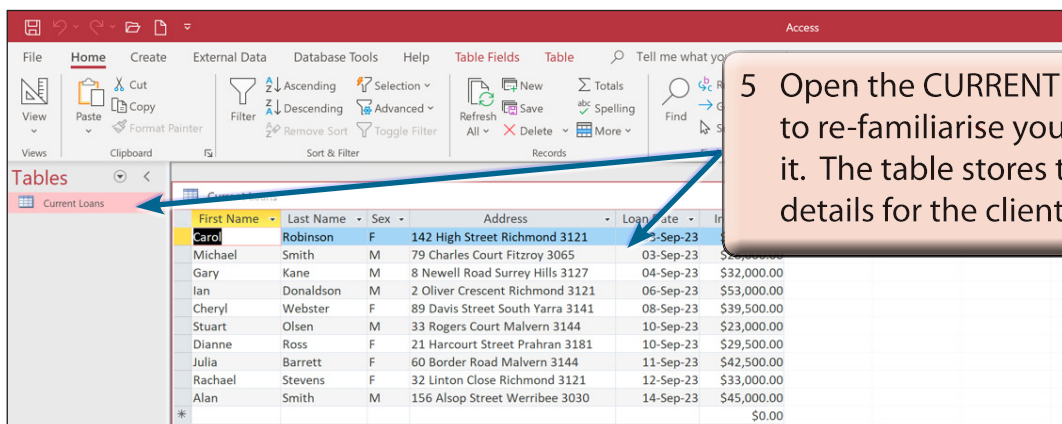
## Loading the Sample File

A database has been prepared for you and it will need to be opened from the ACCESS 2022 SUPPORT FILES

- 1 Load Microsoft Access and click on the OPEN icon in the START window, or close the current file, click on the FILE tab and select the OPEN icon.
- 2 BROWSE to the CHAPTER 7 folder of the ACCESS 2022 SUPPORT FILES and open the BANK RECORDS 7 file as an OPEN READ-ONLY file.
- 3 Click on the SAVE AS button in the warning bar below the RIBBON.
- 4 Access your ACCESS STORAGE folder, save the file as:

Bank Records 7 Copy

and click on the ENABLE CONTENT button.



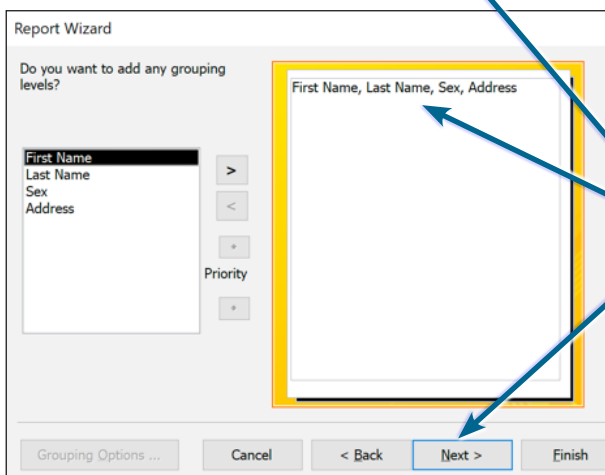
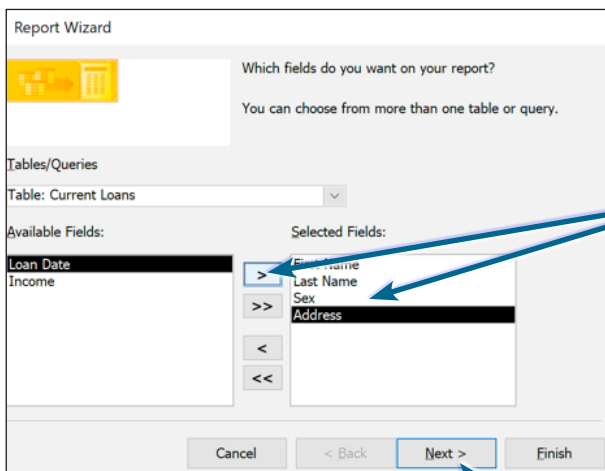
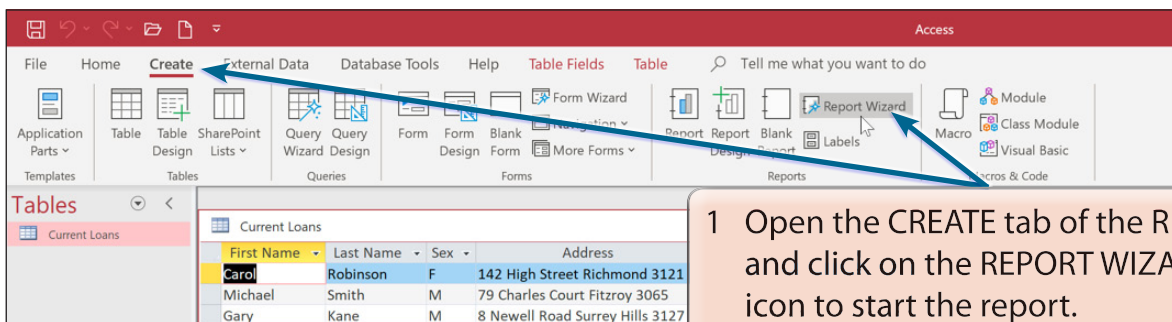
First Name	Last Name	Sex	Address	Loan Date	Loan Amount
Carol	Robinson	F	142 High Street Richmond 3121	03-Sep-23	\$29,500.00
Michael	Smith	M	79 Charles Court Fitzroy 3065	04-Sep-23	\$32,000.00
Gary	Kane	M	8 Newell Road Surrey Hills 3127	06-Sep-23	\$53,000.00
Ian	Donaldson	M	2 Oliver Crescent Richmond 3121	08-Sep-23	\$39,500.00
Cheryl	Webster	F	89 Davis Street South Yarra 3141	10-Sep-23	\$23,000.00
Stuart	Olsen	M	33 Rogers Court Malvern 3144	10-Sep-23	\$29,500.00
Dianne	Ross	F	21 Harcourt Street Prahran 3181	11-Sep-23	\$42,500.00
Julia	Barrett	F	60 Border Road Malvern 3144	12-Sep-23	\$33,000.00
Rachael	Stevens	F	32 Linton Close Richmond 3121	14-Sep-23	\$45,000.00
Alan	Smith	M	156 Alsop Street Werribee 3030		\$0.00

- 5 Open the CURRENT LOANS table to re-familiarise yourself with it. The table stores the personal details for the clients of a bank.

## Using the Report Wizard

### A Tabular Reports

We will create a TABULAR REPORT using the REPORT WIZARD where field names appear at the top of columns and the records are listed in rows under those headings. It is similar to displaying data from a spreadsheet and it is the most efficient way to print large numbers of records.



Report Wizard

What sort order do you want for your records?

You can sort records by up to four fields, in either ascending or descending order.

1	Last Name	Ascending
2	First Name	Ascending
3		Ascending
4		Ascending

Cancel < Back Next > Finish

4 The next window asks about the SORT ORDER. Use the down arrows to set the first sort box to LAST NAME and the second sort box to FIRST NAME.

5 In both cases leave the boxes next to the fields as ASCENDING (A to Z) and click on the NEXT button.

**NOTE: This will sort the report into LAST NAME order first. If any of the clients have the same LAST NAME those clients will be sorted into FIRST NAME order.**

Report Wizard

How would you like to lay out your report?

Layout

☐ Columnar ☒ Tabular ☐ Justified

Orientation

☒ Portrait ☐ Landscape

☒ Adjust the field width so all fields fit on a page.

Cancel < Back Next > Finish

6 The next window asks about the layout of the report. Leave TABULAR selected in the LAYOUT frame and PORTRAIT (or normal) selected in the ORIENTATION frame, then click on the NEXT button.

Report Wizard

What title do you want for your report?

Client Addresses

That's all the information the wizard needs to create your report.

Do you want to preview the report or modify the report's design?

☒ Preview the report. ☐ Modify the report's design.

Cancel < Back Next > Finish

7 Finally, you will be asked to enter a title for the report. Enter:

Client Addresses

and click on the FINISH button.

8 The report should be prepared for you and opened in the PRINT PREVIEW window.

9 The REPORT WIZARD changes the order of the fields, probably because it was sorted into LAST NAME order. The field positions can be adjusted as you will see later in the chapter.

Last Name	First Name	Sex	Address
Barrett	Julia	F	60 Border Road
Donaldson	Ian	M	2 Oliver Cresce
Kane	Gary	M	8 Newell Road
Olsen	Stuart	M	33 Rogers Court
Robinson	Carol	F	142 High Street
Ross	Dianne	F	21 Harcourt St
Smith	Alan	M	156 Alsop Street
Smith	Michael	M	79 Charles Court
Stevens	Rachael	F	32 Linton Close Richmond 3121
Webster	Cheryl	F	89 Davis Street South Yarra 3141

## B Looking at the Report

1 Click on the CLOSE PRINT PREVIEW icon in the RIBBON to close the PRINT PREVIEW screen the report's DESIGN VIEW screen will be opened.

2 Use the down arrow at the top of the NAVIGATION pane to set the pane to ALL ACCESS OBJECTS so that you can see the report. You can also widen the NAVIGATION pane.



# Creating More Detailed Reports

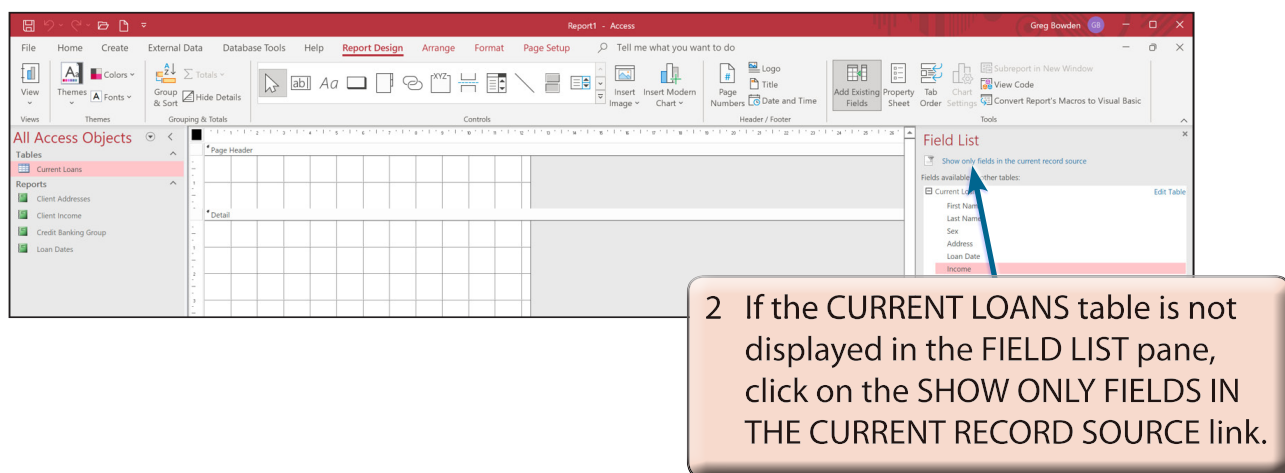
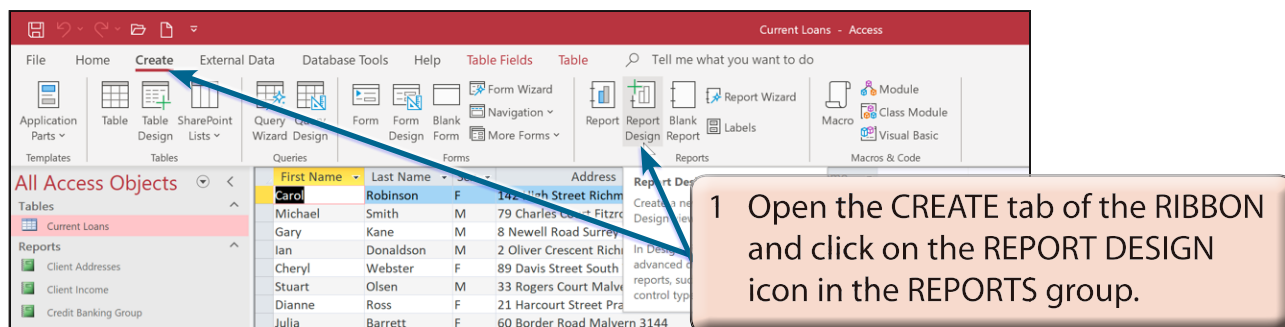
When more detailed reports are required, DESIGN VIEW can be used to build a report from scratch. This allows you to customise reports to suit your requirements.

## Loading the Database

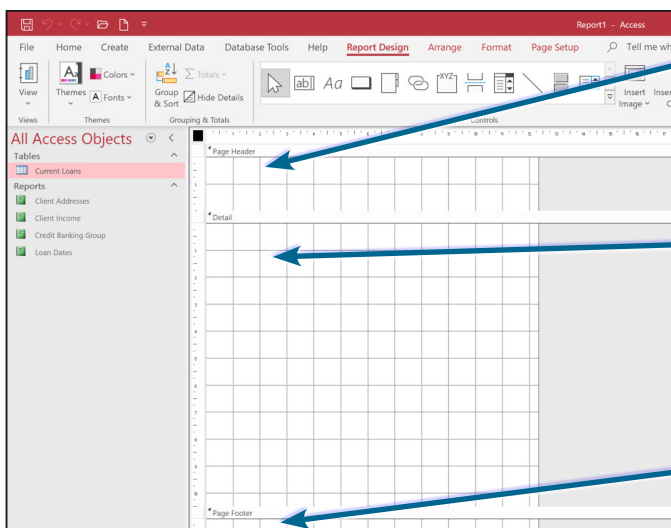
- 1 Load Microsoft Access or close any open files and open the BANK RECORDS 7 COPY database from your STORAGE folder.
- 2 Another report will be added to the database.

## Starting a New Report

We will create another TABULAR REPORT to show the client loan details for the bank.



3 MAXIMIZE the window and the REPORT screen is made up of three main sections:



A The **PAGE HEADER** section. Anything placed in this section is printed at the top of each page.

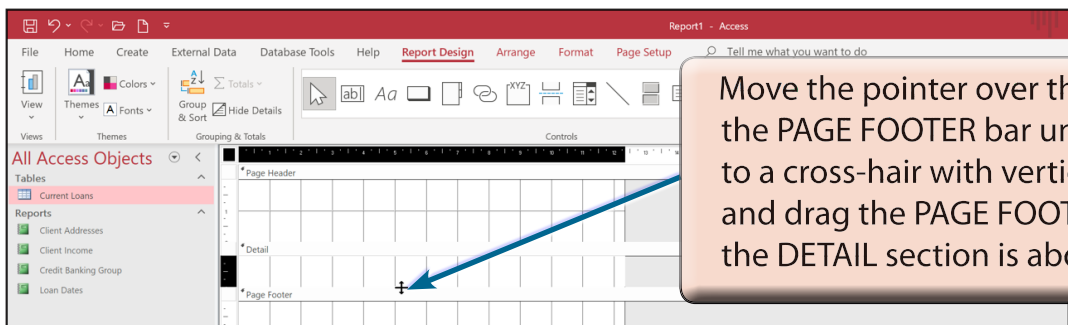
B The **DETAIL** section. Anything placed in this section fills the body of the page.

C The **PAGE FOOTER** section. Anything placed in this section prints at the bottom of each page, for example, page numbers are often placed in the Page Footer.

**NOTE:** You can add other sections to the report. For example, a **REPORT HEADER** which prints its contents once at the beginning of a report. You can set a cover page in this section. You can also set a **REPORT FOOTER** which prints once at the end of a report. A reply slip could be printed in this section. You can **RIGHT+CLICK** on the report and select these options from the **SHORTCUTS** menu to turn them on.

## A Reducing the Height of the Detail Section

We want this report to display the records in rows under one another. Therefore, we will not want a large amount of space for the DETAIL section. This would be the space between each record in the printout.

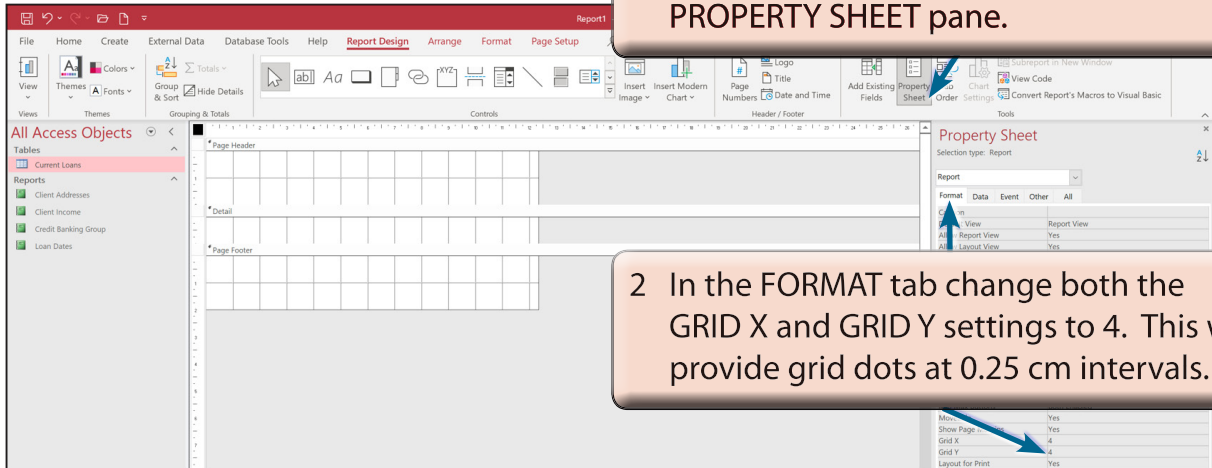


Move the pointer over the top edge of the **PAGE FOOTER** bar until it changes to a cross-hair with vertical arrows and drag the **PAGE FOOTER** up so that the **DETAIL** section is about 1 cm high.



## B Displaying the Grid Increments

As with FORMS, a more suitable grid can be displayed to assist with the accurate placement of objects in the report.



1 Click on the PROPERTY SHEET icon in the REPORT DESIGN tab to display the PROPERTY SHEET pane.

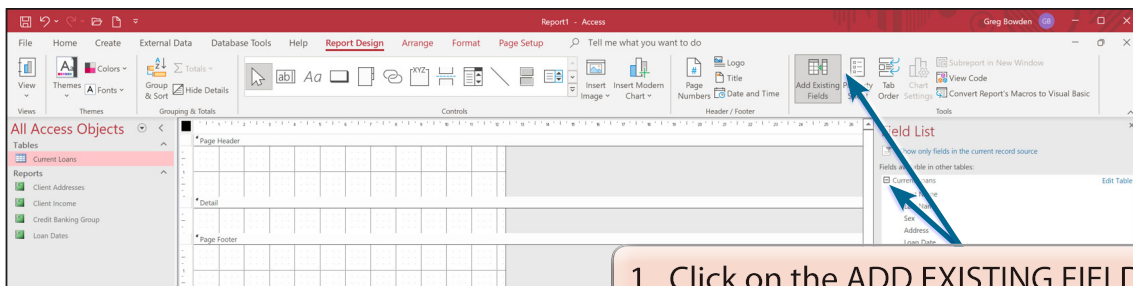
2 In the FORMAT tab change both the GRID X and GRID Y settings to 4. This will provide grid dots at 0.25 cm intervals.

Property Sheet	
Selection type: Report	
Format	Data
Show Page	Yes
Grid X	4
Grid Y	4
Layout for Print	Yes

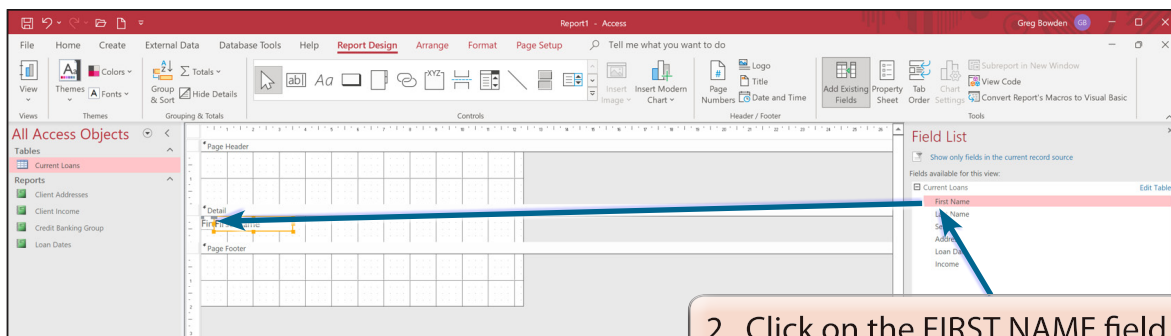
**NOTE:** If the GRID options are not visible, check that the SELECTION TYPE box at the top of the PROPERTIES SHEET pane is set to REPORT.

## C Inserting Fields into the Detail Section

You are able to select the fields that you want in the report from the FIELD LIST pane just as you did in the FORMS section. All the fields can be included or just a selection. Fields can also be added at a later date.

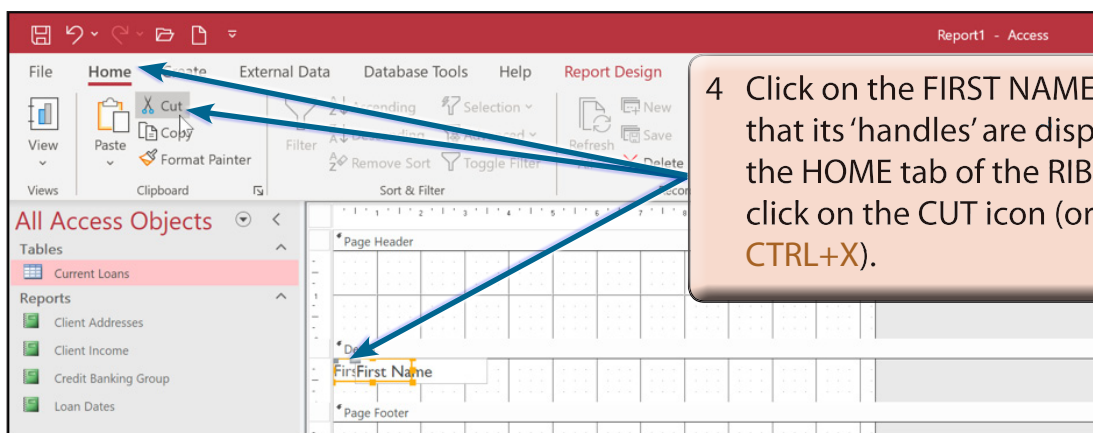


1 Click on the ADD EXISTING FIELDS icon in the REPORT DESIGN tab to open the FIELD LIST pane and check that the CURRENT LOANS table is expanded.

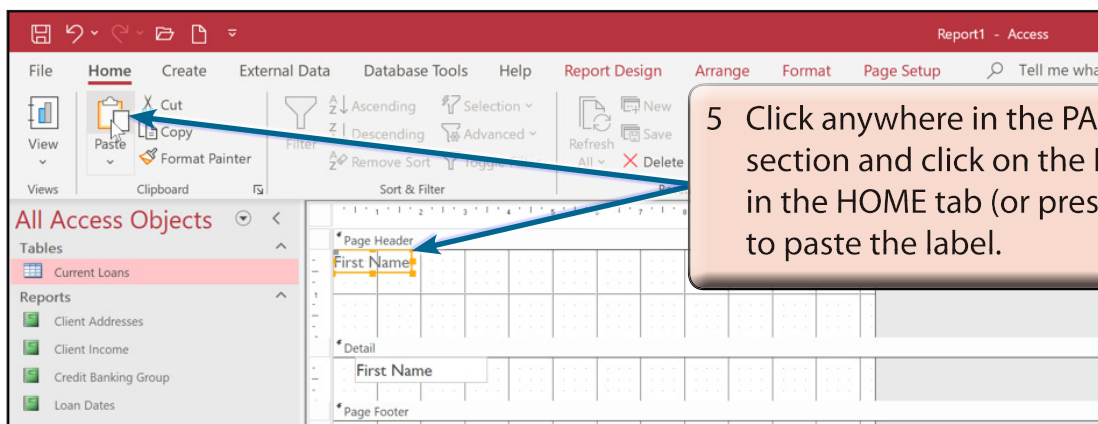


2 Click on the FIRST NAME field in the FIELD LIST pane then drag it to the top left of the DETAIL section in line with 0.5 cm in the top ruler.

- 3 We need the FIRST NAME label to be placed in the PAGE HEADER section. Unfortunately, Microsoft Access does not allow you to drag just the label into other sections, so we will need to cut and paste it.



4 Click on the FIRST NAME label so that its 'handles' are displayed, open the HOME tab of the RIBBON and click on the CUT icon (or PRESS **CTRL+X**).



5 Click anywhere in the PAGE HEADER section and click on the PASTE icon in the HOME tab (or press **CTRL+V**) to paste the label.

# Creating User-Friendly Databases

Databases are often created by a small number of people then used by a larger number of others. Often these users of the database do not know how to use all the features of the database software, so it is advantageous to create databases that are easy to use through the use of buttons. Buttons are simply graphics placed on the screen to perform commands and they allow users to navigate around forms, add records, print reports, etc. All the user has to do is click on the button for the command to be run.

In this chapter you will add buttons to a simplified database for a real estate agency which allows users access to a series of forms and reports.

## Opening the Sample File

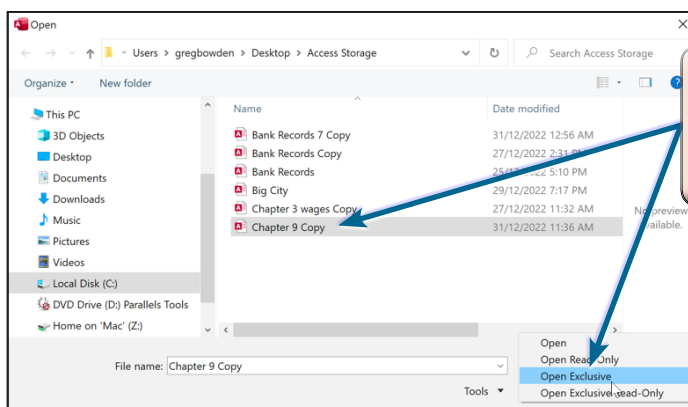
The database has been prepared for you

- 1 Load Microsoft Access and click on the OPEN icon in the START window, or close the current file, click on the FILE tab and select the OPEN icon.
- 2 Browse to the CHAPTER 9 folder of the ACCESS 2022 SUPPORT FILES and open the CHAPTER 9 file as an OPEN READ-ONLY file.
- 3 Click on SAVE AS in the WARNING BAR below the RIBBON.
- 4 Access your STORAGE folder and save the file as CHAPTER 9 COPY.

## Opening the File as an Exclusive file

The file will be opened as an EXCLUSIVE file so that a password can added to it.

- 1 Close the CHAPTER 9 COPY file, select OPEN from the BACKSTAGE VIEW and access your STORAGE folder.



- 2 Select the CHAPTER 9 COPY file then click on the arrow next to the OPEN button and select OPEN EXCLUSIVE.

## The Sections of the Database

Click on the ENABLE CONTENT button (if asked) so that the data is displayed. The database consists of the following sections. Look at each in turn.

### A Tables

*Owner Details:* Records the property's owner details.

*Property Details:* Records specific details about the property, such as its location, type, description, sale type (sale, auction or rent) and price.

The tables are linked by the OWNER ID primary key field.

### B Queries

*All Details:* Combines details from both tables. This query is used by the DATA ENTRY form.

*Properties for Auction:* Filters the properties available for auction, sorted into SURNAME then FIRST NAME order.

*Properties for Rent:* Filters the properties available for rent, sorted in WEEKLY RENT then SURNAME order.

*Properties for Sale:* Filters the properties for sale, sorted into SALE PRICE order.

### C Forms

*Data Entry:* Displays all the fields from the two tables.

### D Reports

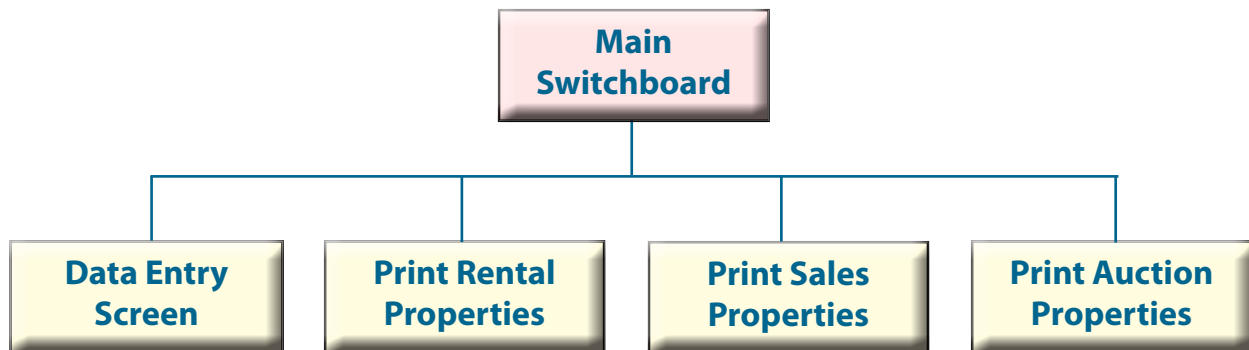
*Auction Properties:* Prints the Properties for Auction Query details.

*Rental Properties:* Prints the Properties for Rent Query details.

*Sale Properties:* Prints the Properties for Sale Query details.

## The Structure of the Database

You will be required to add buttons to a DATA ENTRY form and to create a MAIN SWITCHBOARD form to control the use of the database. The structure of the database system that you will create is summarised in the following diagram.



## Completing the Data Entry Form

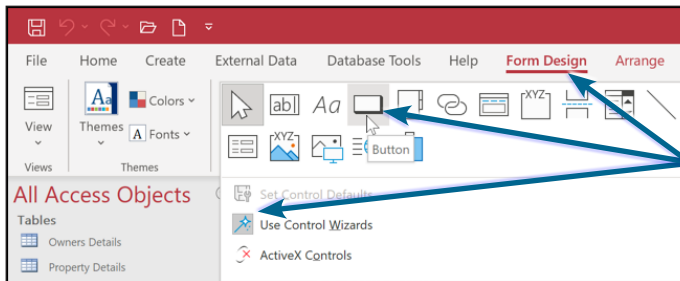
Buttons are needed in the DATA ENTRY form to allow the users of the database to carry out the general maintenance procedures such as adding new records, finding records and deleting records.

1 Open the DATA ENTRY form from the NAVIGATION pane, MAXIMIZE its window and use the VIEW icon to set the screen to DESIGN VIEW.

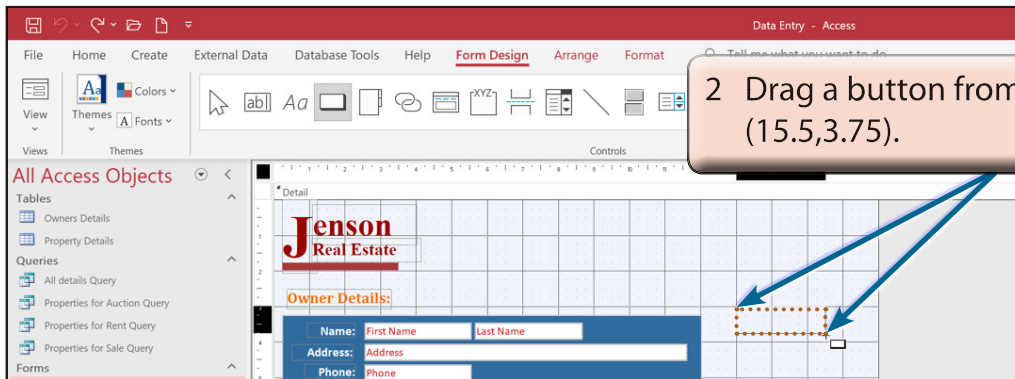
2 Buttons will be placed along the right side of the form.

## A Inserting a New Record Button

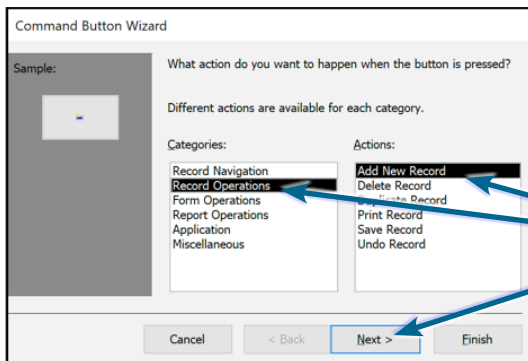
We will use a wizard to help create the button.



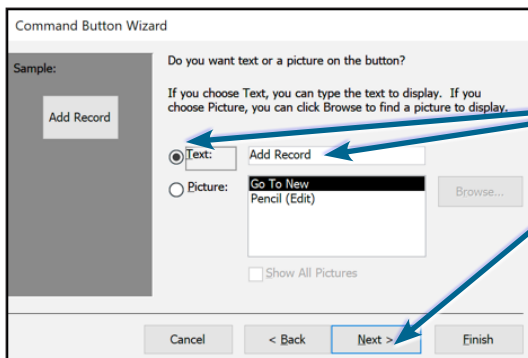
1 In the FORM DESIGN tab click on the MORE icon in the CONTROLS group, check that the USE CONTROL WIZARD is turned on (if its icon is not shaded, select USE CONTROL WIZARDS) then click on the BUTTON icon.



2 Drag a button from (13,3) to (15.5,3.75).



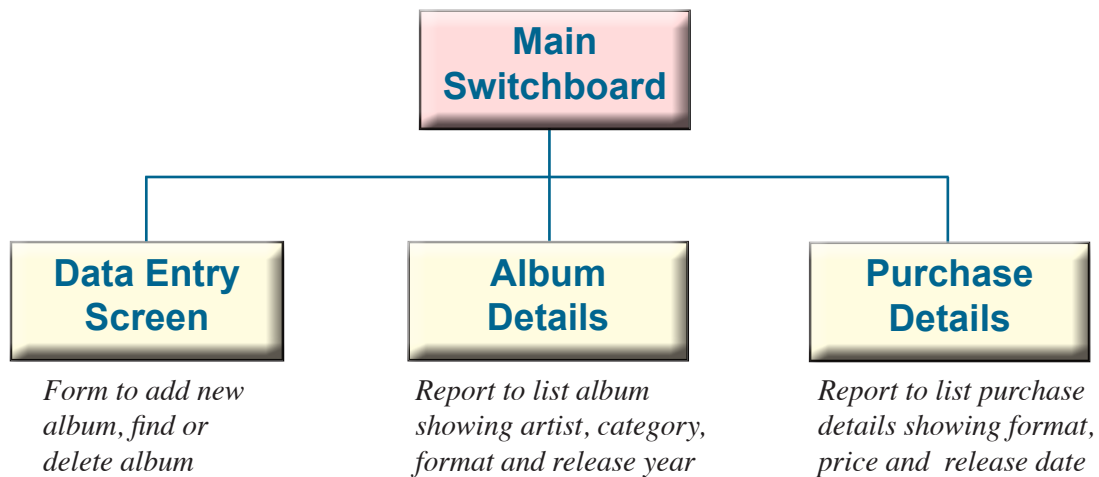
3 In the COMMAND BUTTON WIZARD dialogue box set the CATEGORIES frame to RECORD OPERATIONS, leave the ACTIONS frame as ADD NEW RECORD and click on NEXT.



4 Click on the TEXT radio button, leave the text box as Add Record and click on NEXT.

## Databases Assignment 9

Your task for this Assignment will be to create a simple menu-driven database to allow a person to maintain their music collection. The database will need the following structure:



The DATA ENTRY form, the ALBUM DETAILS report and the PURCHASE DETAILS report have been prepared for you and some data has been entered (you can enter some of your own music data by changing the records supplied if you wish to). You will need to add buttons to the DATA ENTRY form and create a MAIN SWITCHBOARD form.

### Opening the Prepared File

- 1 Load Microsoft Access and select OPEN or close the current file, click on the FILE tab and select the OPEN icon.
- 2 BROWSE to the CHAPTER 9 folder of the ACCESS 2022 SUPPORT FILES and open the ASSIGNMENT 9 file as an OPEN READ-ONLY file.
- 3 Click on SAVE AS in the WARNING bar below the RIBBON.
- 4 Access your ACCESS STORAGE folder and save the file as ASSIGNMENT 9 COPY.
- 5 Close the ASSIGNMENT 9 COPY file then open it as an OPEN EXCLUSIVE file (refer to page 9-1 if you have forgotten how to do this) and enable the content.



## Adding Buttons to the Data Entry Form

The DATA ENTRY form is used to maintain the database. There is space to the right of the main heading for buttons to be included. Add buttons that allow the user to:

Add a NEW RECORD  
FIND a RECORD  
DELETE a RECORD

Test the operation of each of the buttons.

## Creating the Main Switchboard

- 1 Create a MAIN SWITCHBOARD form which has buttons that allow the user to carry out the following tasks:

Switch the screen to the DATA ENTRY form  
Preview the ALBUM DETAILS REPORT  
Preview the PURCHASE DETAILS REPORT  
EXIT from the program

- 2 You can add a graphic to your form if you wish.

**NOTE:** If you cannot find any appropriate graphics, there are music samples in the GRAPHICS folder of the ACCESS 2022 SUPPORT FILES that can be used.

- 3 Set the MAIN SWITCHBOARD form to open automatically when the database is opened.
- 4 Add a password to the database.
- 5 Add a button to the DATA ENTRY form that allows the user to return to the MAIN SWITCHBOARD.



## Printing

- 1 Print a copy of the MAIN SWITCHBOARD.
- 2 Print a copy of one record of the DATA ENTRY form (use FROM 1 TO 1 in the PAGES section if the PRINT dialogue box).
- 3 Set the buttons in the DATA ENTRY form to SCREEN ONLY (refer to Page 9-33) and print another copy of the form (one record only).
- 4 Ask your teacher to check the operation of your database and submit your three printouts for marking.