Microsoft Application Series

Access 2007 Introduction

Best STL

- Courses never cancelled: guaranteed
- Last minute rescheduling
- 24 months access to Microsoft trainers
- 12+ months schedule
- UK wide delivery

www.microsofttraining.net

Version 1

BEST STL

Microsoft CERTIFIED Partner

Institute of IT Training
Accredited Training Provider

Your Best STL Learning Tools

Welcome to your Best STL training course.

As part of your training, we provide you with the following tools and resources to support and enhance your learning experience.

Thank you for choosing Best STL.

1 In-course handbook

To guide you through your training while you are on the course.

Contains unit objectives, exercises and space to write notes.

2 Reference material

Available online through your delegate account.

Comprehensive reference material with 100+ pages, containing step-by-step instructions.

3 12 months access to Microsoft trainers

Available through online support forum.

Need help? Our team of Microsoft qualified trainers are on hand to offer advice and support.

4 Delegate account

Your delegate account gives you access to:

- Reference material
- Course exercise files
- Advice & support forum
- Rewards programme
- Promotions & Newsletters

5 Trainer hints and tips

Hints and tips available online from our Microsoft qualified trainers for:

- All MS Office applications
- VBA
- MS Project
- MS Visio

+ more

6 Save with Promotions

Save on further training courses you book with Promotions.

- 30% off list price (time limited)
- £50 off list price (blue card discount)

E&OE

Best Training reserves the right to revise this publication and make changes from time to time in its content without notice.

Quick reference: Access shortcut keys

Command	Keystroke
Add new record	Ctrl +
Builder	Ctrl-F2
Check/uncheck box or option button	Spacebar
Close	Ctrl-W
Copy	Ctrl-C
Cut	Ctrl-X
Cut current line and copy to Clipboard	Ctrl-Y
Cycle through sections	F6/Shift-F6
Cycle through tab of each object's type (toggle)	Ctrl-Tab/Shift-Ctrl-Tab
Database window	F11
Delete current record	Ctrl -
Edit/Navigation mode (toggle)	F2
Exit subform and move to next/previous field in next record	Ctrl-Tab/Shift-Tab
Extend selection to next/previous record	Shift-Dn/Up
File/Save As	F12
Find	Ctrl-F
Find Next	Shift-F4
Find Previous	Shift-F3
GoTo	Ctrl-G
Insert current date	Ctrl ;
Insert current time	Ctrl :
Insert default value	Ctrl-Alt-spacebar
Insert new line	Ctrl-Enter
Insert value from same field in previous record	Ctrl '
Menu bar	F10
Move to beginning/end of multiple-line field	Ctrl-Home/End
Move to current field in first/last record (Navigation mode)	Ctrl-Up/Dn
Move to first field in first record (Navigation mode)	Ctrl-Home
Move to first/last field in current record (Navigation mode)	Home/End
Move to last field in last record (Navigation mode)	Ctrl-End
Move to left edge of page	Home or Ctrl-Left
Move to page number/record number box	F5
Move to right edge of page	End or Ctrl-Right
Next window	Ctrl-F6
Open combo box	F4
Open in Design view	Ctrl-Enter

Course Overview

1. Database concepts
2. Access basics
3. Creating databases
4. Working with fields and records
5. Querying tables
6. Creating and using forms
7. Creating and using reports
8. Importing, exporting, and linking objects

© Best STL 2013

Database concepts

Unit 1 objectives

- Use database terminology to become familiar with Access
- Start Access, learn about its environment, open a database, and learn about database objects
- Plan and design a database to ensure that no data is missing or redundant, and explore relationships between tables
- Use Help options to get information on Access topics
- Close a database and Access

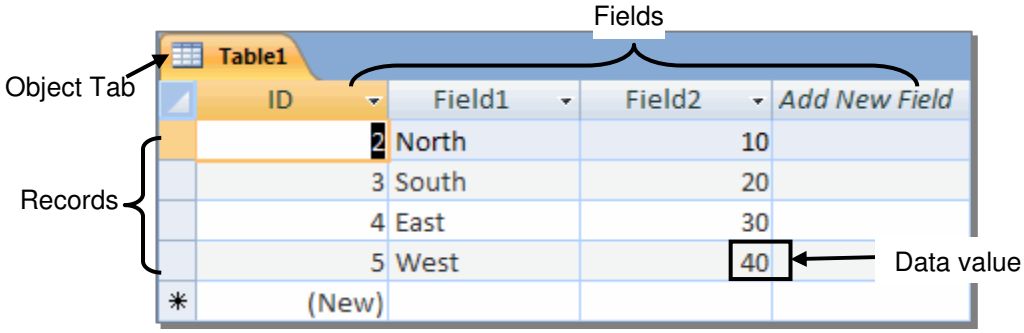
Your notes: Unit 1

© Best STL 2013

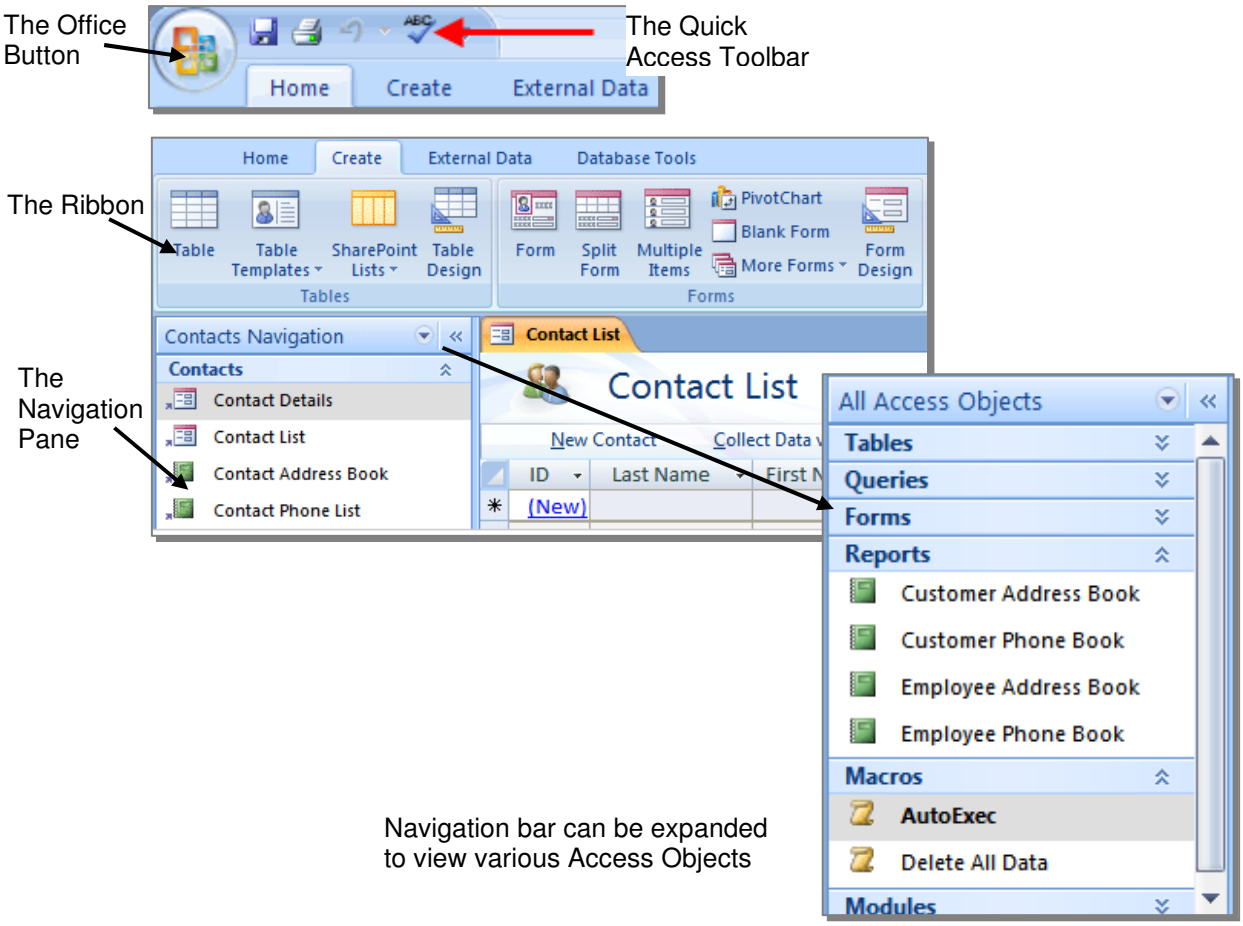
Visual summary: Unit 1 objectives

Use database terminology to become familiar with Access

Table	Used to store data (e.g. all company employees)
Query	Used to retrieve specific data (e.g. most sold product in a month)
Forms	Used to enter data. Can also be used to modify data.
Reports	Used to display and print data in an easy-to-read format.



Learn about the Access environment and database objects



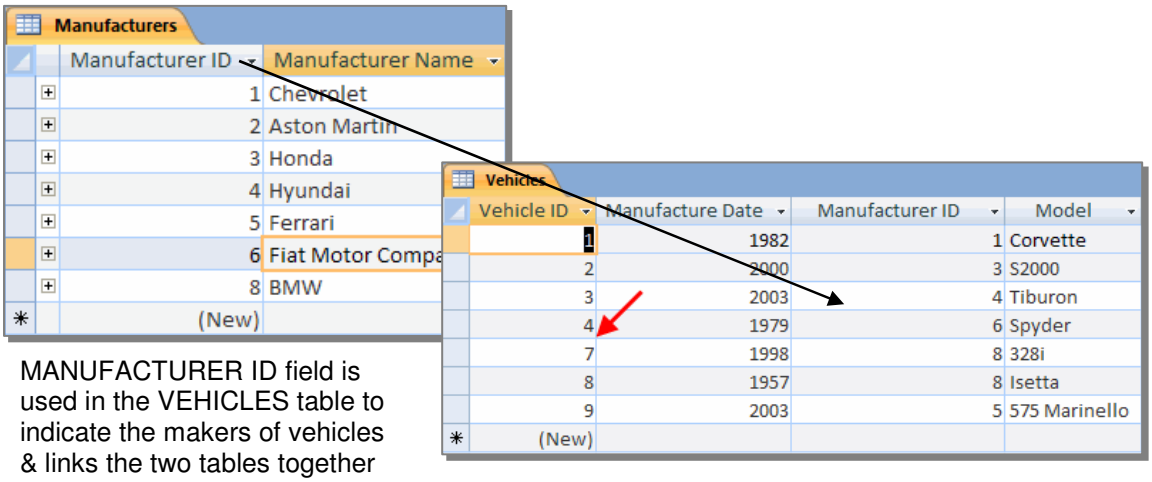
© Best STL 2013

Visual summary: Unit 1 objectives

Plan and design a database and explore relationships

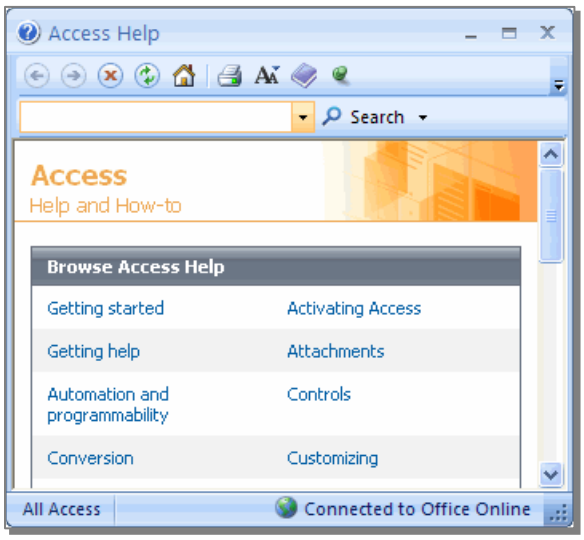
Planning a Database – Factors

- Purpose of the database
- Number of tables and type of information they will contain
- Fields that will be in each table
- Type of queries to perform on the database
- Forms that you'll need
- Types of reports that you'll need



MANUFACTURER ID field is used in the VEHICLES table to indicate the makers of vehicles & links the two tables together

Use Help options to get information on Access topics



- Help menu
- Press F1 key
- Google search
- Ask an expert or colleague
- Visit database forums online

© Best STL 2013

Unit 1 Practice Activity

1. Start Access.
2. In the Access window, identify the toolbar, menu bar and title bar.
3. Open **Concepts.accdb**. How many and what types of database objects are there in this database?
4. Open the Transaction table. How many fields and records are there in this table?
5. Close **Concepts.accdb** and Access.
6. Write down the appropriate database term for each of the following:
   a. A set of related data values
   b. A collection of records
   c. An Item of data

7. Suppose you are working with a database containing information about the salespersons in Outlander Spices. Write down the name of the object you would use in each of the following situations:
   a. You want to enter information for a new Salesperson
   b. You want to know which departments have earnings more than $80,000.
   c. You want to print all the values from the table.

8. Plan and design a database for storing information about customers who place orders for different products. The database should have a minimum of two tables.

Answers to 3, 4, 6 and 7 on the following page.

© Best STL 2013

Access Introduction

Answers to Unit 1 Practice Activity

Answer to 3.

There are three types of database objects: Tables, Queries, and Reports

Answer to 4.

5 fields and 11 records

Answer to 6. a to c, in order:

Database, table, data value

Answer to 7. a to c, in order:

Table, query, report

Online support forum and knowledge base
http://www.microsofttraining.net/forum
Visit our forum to have your questions answered by our Microsoft qualified trainers.

© Best STL 2013

Access basics

Unit 2 objectives

- Explore a table in Datasheet view and Design view, navigate in a table and a form, and explore a form in Design view
- Examine a query in Design view and run it
- View a report and explore it in Design view

Your notes: Unit 2

© Best STL 2013

Visual summary: Unit 2 objectives

Explore a table in datasheet and design views

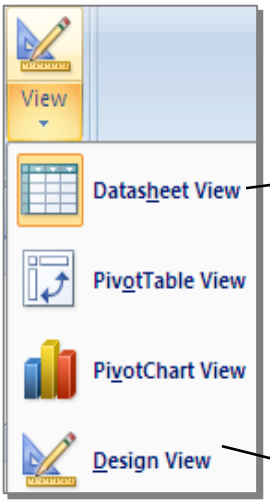


Table datasheet view with navigation buttons

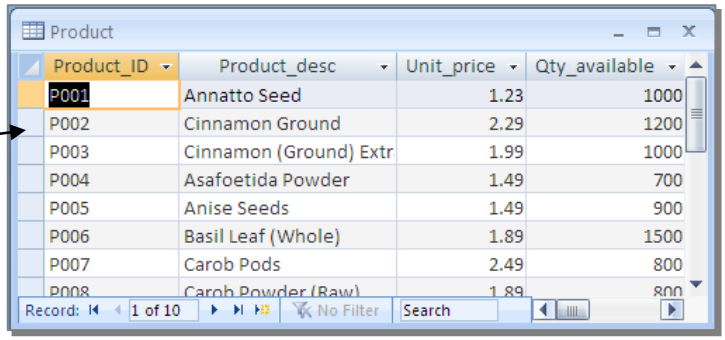
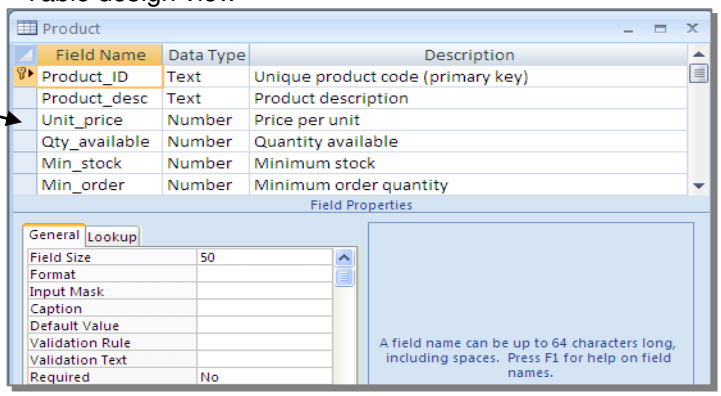
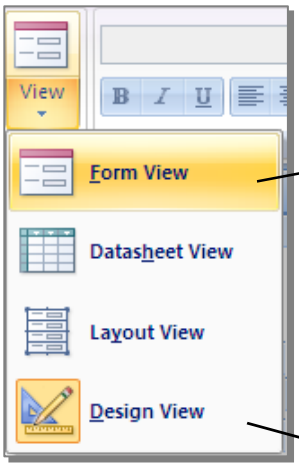


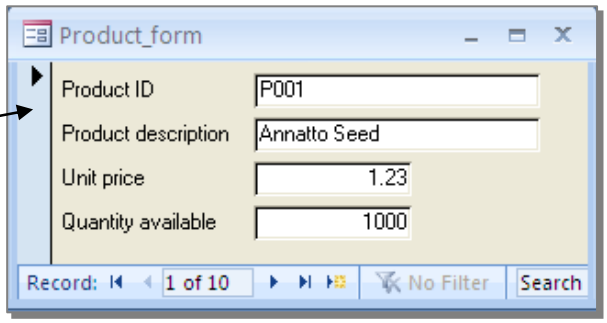
Table design view



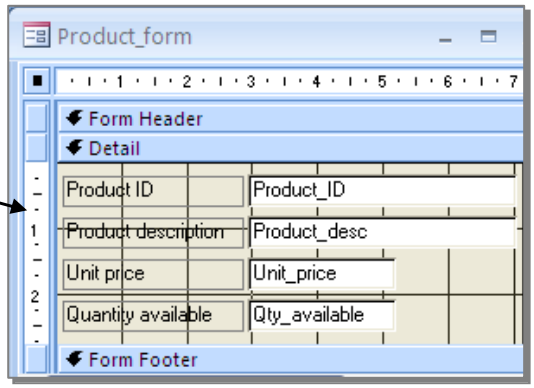
Explore a form in normal and design view



A form in normal view with navigation buttons



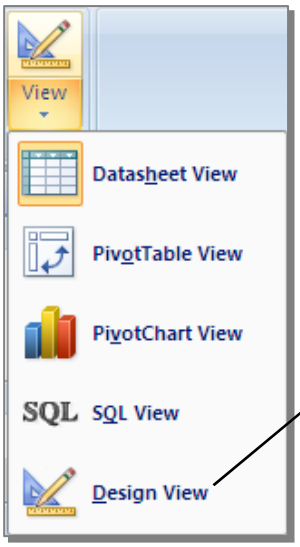
Form in design view



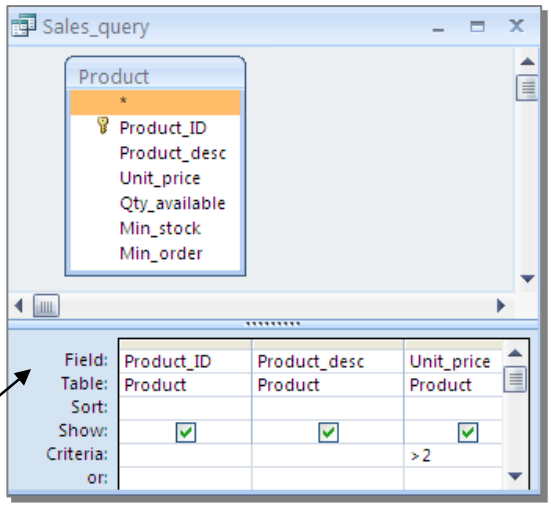
© Best STL 2013

Visual summary: Unit 2 objectives

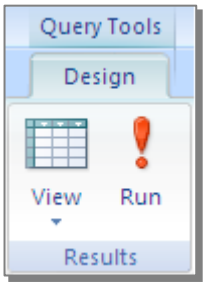
Examine a query in design view and run it



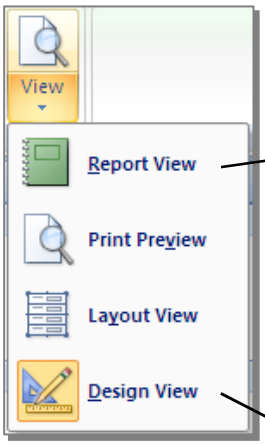
Query in design view



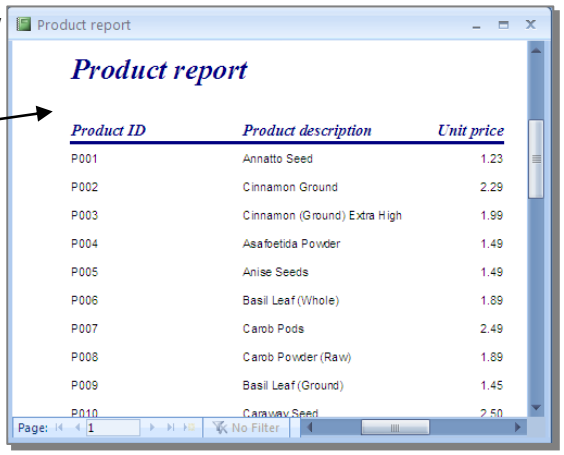
Use the Run Query button to view the results



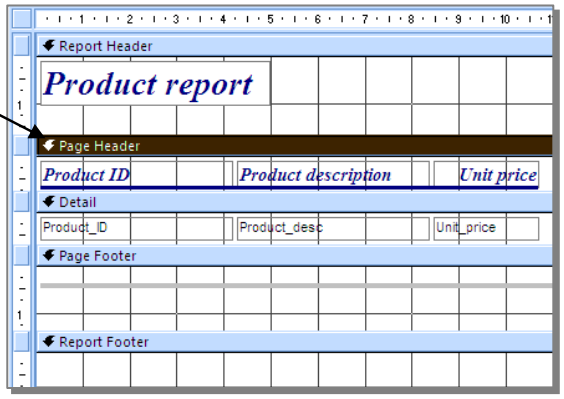
View a report and explore it in design view



Report in Report View



Report in design



© Best STL 2013

Unit 2 Practice Activity

1. Open **Product_data.accdb**.
2. Examine the Retailer table in Datasheet and in Design view.
3. Identify the primary key.
4. Navigate the datasheet view of the table by using the navigation buttons.
5. In the same database, examine and navigate the Retailer_form.
6. Examine Product_query in Design view and run the query.
7. View Retailer_report. Examine this report in Design view.
8. Close **Product_data.accdb**.
9. Match each of the following terms with the statement that describes it.

Term		Description
Datasheet view	•	• Small box to the left of each record in a table that you can click to select a record.
Design view	•	• Shows data in tabular format.
Navigation Button	•	• Gives you complete control over the structure of the table.
Record selector	•	• Buttons located at the bottom of the Datasheet view window that you can use to move through various records in the datasheet view.

Answers to 9 on the following page.

© Best STL 2013

Access Introduction

Answers to Unit 2 Practice Activity

Term	Description
Datasheet view	Small box to the left of each record in a table that you can click to select a record.
Design view	Shows data in tabular format.
Navigation Button	Gives you complete control over the structure of the table.
Record selector	Buttons located at the bottom of the Datasheet view window that you can use to move through various records in the datasheet view.

Online support forum and knowledge base
www.microsofttraining.net/forum
Visit our forum to have your questions answered by our Microsoft qualified trainers.

© Best STL 2013

Creating databases

Unit 3 objectives

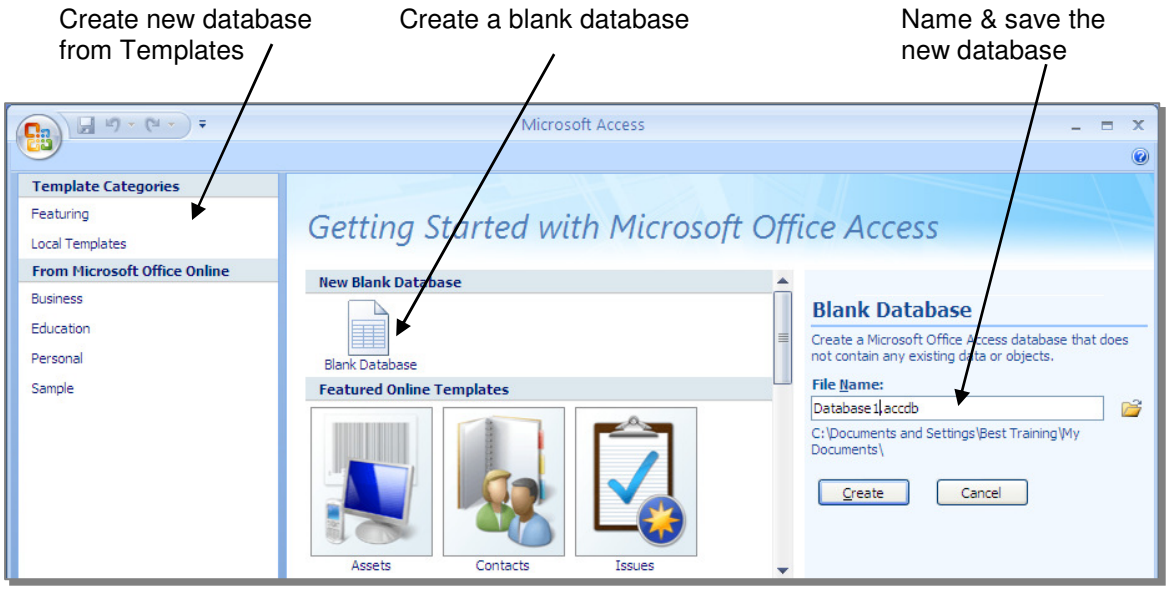
- Create and save a database
- Create a table and set the primary key by using the Table Wizard
- Create and work with tables in Design view and enter records in tables

Your notes: Unit 3

© Best STL 2013

Visual summary: Unit 3 objectives

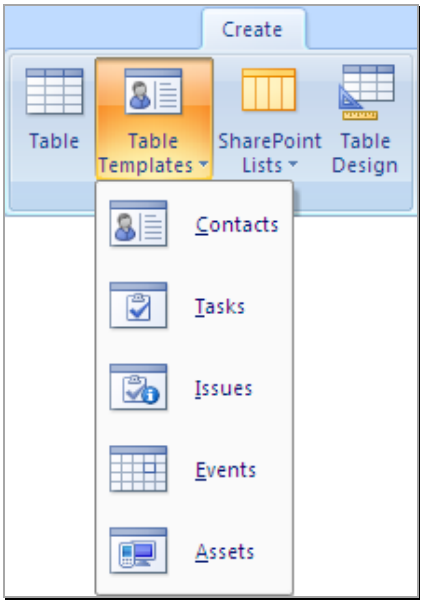
Create and save a database



Naming Rules

- Any combination of letters, numbers, special characters, and embedded spaces
- 64 or fewer characters
- Cannot start with a space
- No periods (.), exclamation marks (!), accents grave (`), or brackets ([ ])

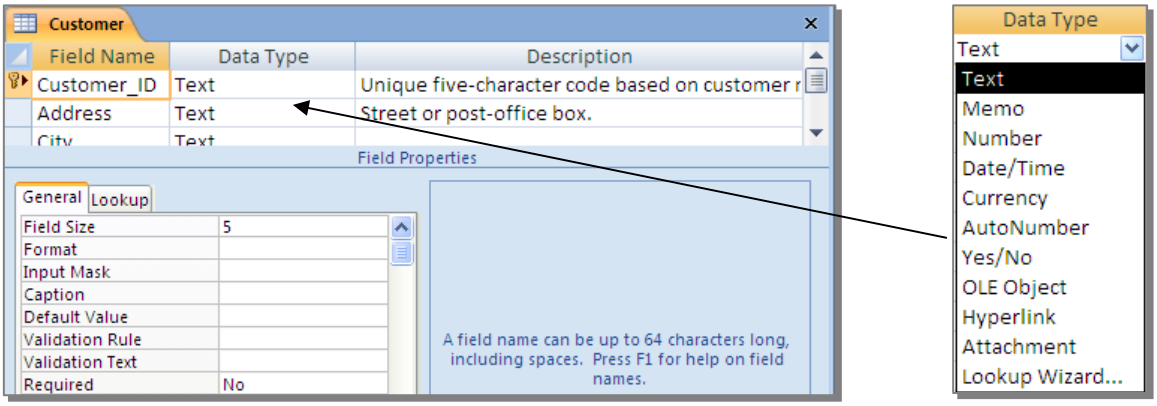
Use the Tables section of the Create ribbon to make a table:



© Best STL 2013

Visual summary: Unit 3 objectives

Create and work with tables in design view



Description of Data types	
Text	(Default) Text or combinations of text and numbers, as well as numbers that don't require calculations, such as phone numbers.
Memo	Lengthy text or combinations of text and numbers.
Number	Numeric data used in mathematical calculations. See the next page for the **Number Field Size properties**
Date/Time	Date and time values for the years 100 through 9999.
Currency	Currency values and numeric data used in mathematical calculations involving data with one to four decimal places. See the next page for the **Currency Size properties**
AutoNumber	A unique sequential (incremented by 1) number or random number assigned by Microsoft Access whenever a new record is added to a table. AutoNumber fields can't be updated
Yes/No	Yes and No values and fields that contain only one of two values (Yes/No, True/False, or On/Off).
OLE Object	An object (such as a Microsoft Excel spreadsheet, a Microsoft Word document, graphics, sounds, or other binary data) **linked** to or **embedded** in a Microsoft Access table.
Hyperlink	Text or combinations of text and numbers stored as text and used as a **hyperlink address**. A hyperlink address can have up to three parts: ***text to display*** — the text that appears in a field or control. ***address*** — the path to a file (**UNC path**) or page (**URL**). ***subaddress*** — a location within the file or page. ***screentip*** — the text displayed as a tool tip. The easiest way to insert a hyperlink address in a field or control is to click **Hyperlink** on the **Insert** menu.
Lookup Wizard	Creates a field that allows you to choose a value from another table or from a list of values by using a **list box**

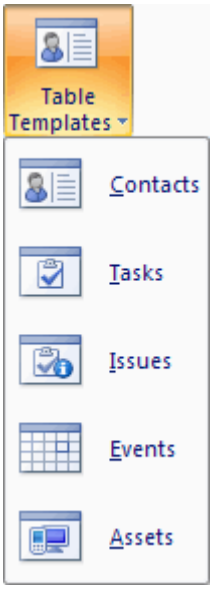
© Best STL 2013

Visual summary: Unit 3 objectives

Number and Currency Field Size properties		
Data type	**Storage size**	**Range**
Byte	1 byte integer	0 to 255
Integer	2 bytes	-32,768 to 32,767
Long Integer	4 byte integer	-2,147,483,648 to 2,147,483,647
Single	4 byte floating point	Approximate range -3.40×10^{38} to 3.40×10^{38}
Double	8 byte floating point	-1.79769313486231E308 to -4.94065645841247E-324 for negative values; 4.94065645841247E-324 to 1.79769313486232E308 for positive values
Currency	8 bytes fixed point	-922,337,203,685,477.5808 to 922,337,203,685,477.5807
Decimal	12 byte (Only used within a Variant)	28 places to the right of the decimal; smallest non-zero number is +/-0.0000000000000000000000000001

© Best STL 2013

Unit 3 Practice Activity



1. Create a new blank database with a name of your choice.
2. Create a table using Table Templates.
3. Select a sample table of your choice.
4. Use the Table Design to view the various data type & properties (may need to save table first with a name).
5. Close the table after viewing.
6. Create another table using Table Design.
7. Use the example below to set up 6 data fields with appropriate data type and field properties.
8. Set the primary key and save the table as Customer_order.
9. Switch to datasheet view and enter data into the table as shown in the example below.
10. Save and close the table.
11. Close the database.

Customer_Order

Order_No	Product_ID	Order_Date	Customer	Order_Quantity	Dispatched
1	P001	02/01/2001	Rebecca Austin	250	☑
2	P002	02/02/2001	Annie Philips	367	☑
3	P003	03/12/2001	Julie Stone	234	☐
(New)					☐

Online support forum and knowledge base
http://www.microsofttraining.net/forum
Visit our forum to have your questions answered by our Microsoft qualified trainers.

© Best STL 2013

Working with fields and records

Unit 4 objectives

- Modify a table's design by editing fields and setting field properties
- Add and delete records
- Find and replace values in records by using the Find feature and use the spelling checker to correct spelling mistakes in a table
- Sort and filter records

Your notes: Unit 4

© Best STL 2013

Visual summary: Unit 4 objectives

Edit fields and set field properties

Naming fields

Product

Field Name	Data Type	Description
Product_ID	Text	Product identification number
Product_desc	Text	Product description
Unit_price	Number	Unit Price
Qty_available	Number	Quantity available

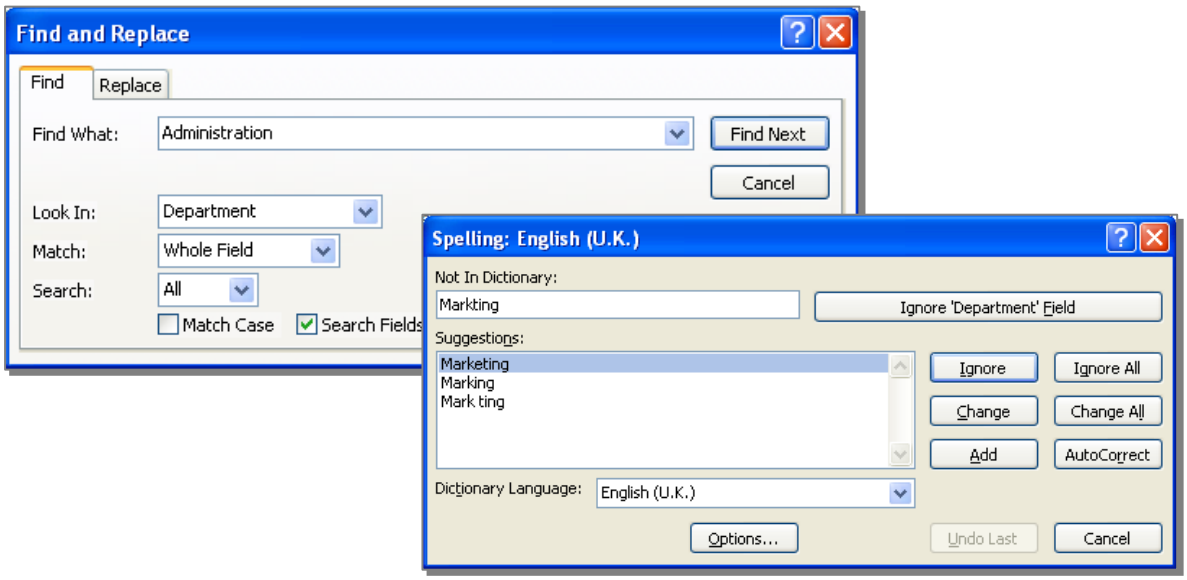
- Always give the fields easily understood and relevant names
- Always give a description of the field's data

Text formatting characters for input masking	
@	At least one letter or space
<	Letters will be converted to lowercase
>	Letters will be converted to uppercase
&	Letters cannot be entered in this field

Eg **>L000** – A capital letter followed by 3 numbers (**C001**)

For more characters type **Input mask Syntax** in the **"Type a question for help"** box

Using the Find feature and the Spelling Checker in a table



© Best STL 2013

Unit 4 Practice Activity

1. Open **Modifying_database.accdb**.
2. Open the table New_retailer in Design view.
3. Observe the table design.
4. Open the Retailer table in Design view.
5. Observe the design of Retailer and compare it to the design of New_retailer. You might want to tile the windows to see both names at the same time.
6. Modify the design of the Retailer table so it matches the New_retailer table. Save the design changes.
7. Close the Retailer table and maximise the New_retailer table.
8. Sort the records based on ascending order of the field Contract_first_name.
9. Update and close the New_retailer table.
10. Close the database.

Online support forum and knowledge base
http://www.microsofttraining.net/forum
Visit our forum to have your questions answered by our Microsoft qualified trainers.

© Best STL 2013

Querying tables

Unit 5 objectives

- Create, run, print, and save queries, use queries to sort data, and filter query results
- Modify query results; modify queries by adding and removing fields and by using comparison operators; use AND and OR conditions in queries; and find records with empty fields
- Perform calculations in queries by using expressions and aggregate functions

Your notes: Unit 5

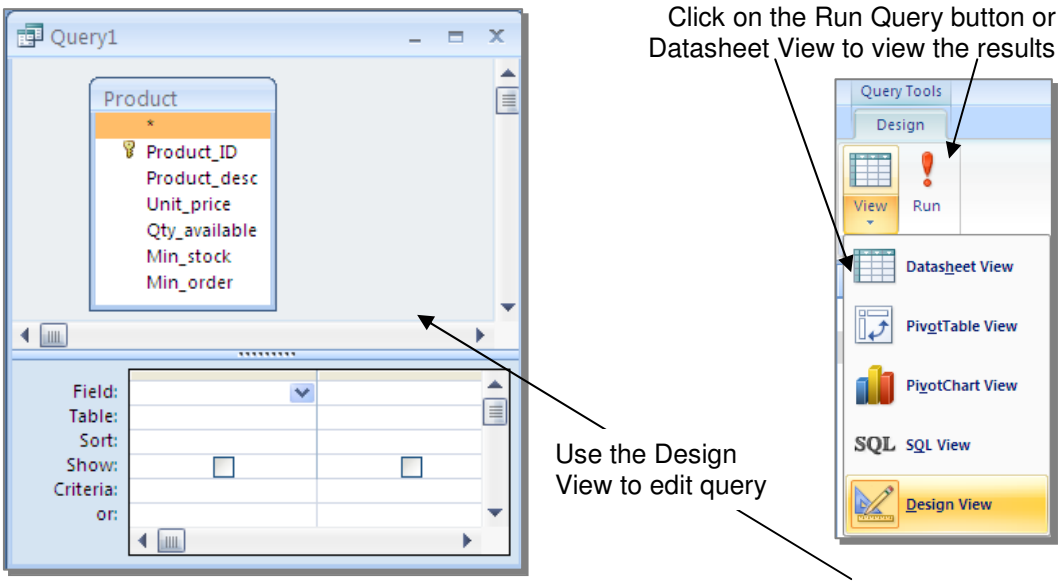
© Best STL 2013

Your notes: Unit 5

© Best STL 2013

Visual summary: Unit 5 objectives

Create, and run queries, sort data, and filter query results



Modify queries by adding and removing fields and by using comparison operators; use AND & OR conditions in queries; and find records with empty fields

Comparison Operators	**Using conditions in queries**
> Greater than < Less Than = Equal to <= Less than or equal to >= Greater than or equal to <> Not Equal to	**OR** 1. Enter the condition in the appropriate cell(s) of the Or row 2. Run the query **AND** 1. Enter the AND condition in the appropriate cell of the Criteria row 2. Run the query

© Best STL 2013

Unit 5 Practise Summary

1. Open **Orders.accdb**.
2. Create a query in design view based on the Product table, that displays all the records where the Product begins with **Ce**.
3. Delete the previous criterion and display all the products having as Unit price between $1.00 and $2.00. Close the query without saving it.
4. Create another query named Summary based on the Order_detail table, that displays the **SumOfQty_sold** to each customer, as shown in the example below.
5. Save and close the query.
6. Close the database.

Summary

Customer_ID	SumOfQty_sold
C001	50
C002	50
C003	115
C004	12
C006	15
C007	24
C008	45

Online support forum and knowledge base
http://www.microsofttraining.net/forum
Visit our forum to have your questions answered by our Microsoft qualified trainers.

© Best STL 2013

Creating and using forms

Unit 6 objectives

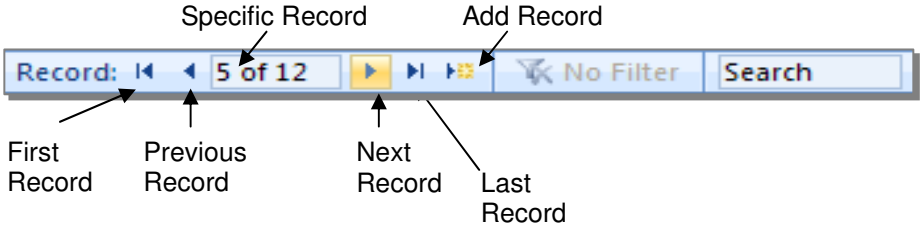
- Create forms by using the AutoForm feature
- Create forms by using the Form Wizard
- Modify forms in Design view
- Find, sort, and filter records by using forms

Your notes: Unit 6

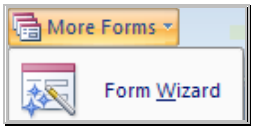
© Best STL 2013

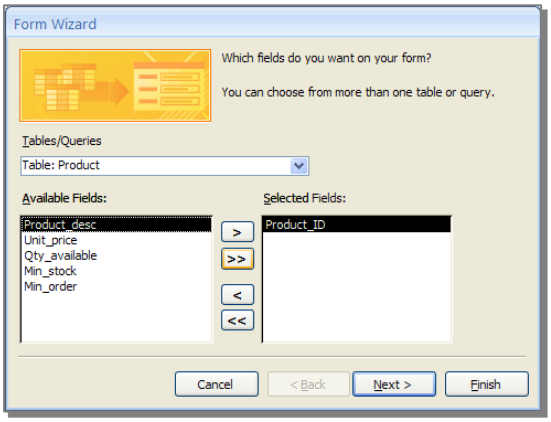
Visual summary: Unit 6 objectives

The Navigation Bar

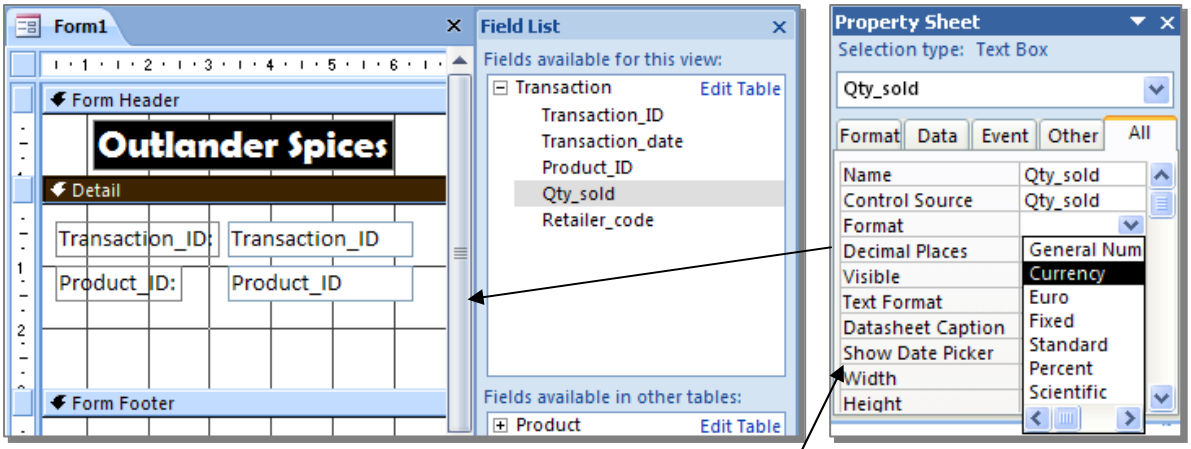


Create forms by using the Form Wizard





Modify forms in Design view



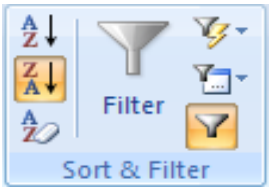
Switch on the properties by right-click on the form object. (All elements of the form have properties including the whole form)

© Best STL 2013

Visual summary: Unit 6 objectives

Find, sort, and filter records by using forms

The Sorting and Filtering commands can be found in the Sort & Filter section of the Home ribbon.

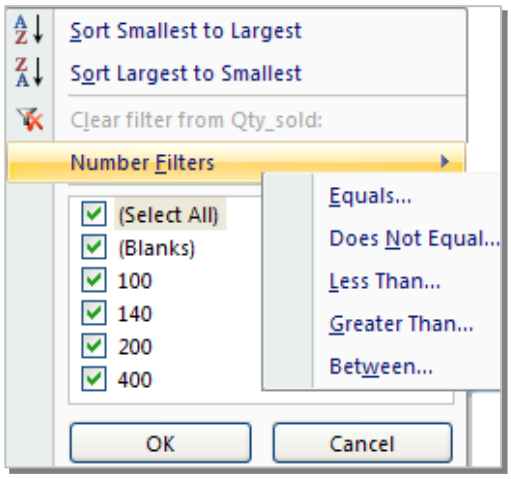


To Sort:

Select a category on the form, and then click on either the Sort Ascending or Descending buttons. You may also cancel sorts using button.

To Filter:

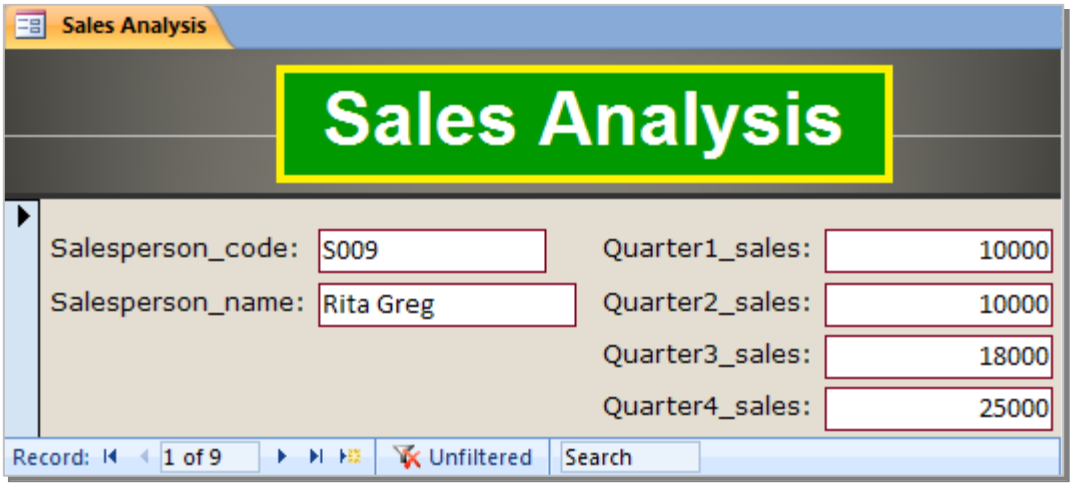
1. Select a category on the form, and then click on the filter button .
2. Either click to choose a criteria or type in the criteria.
3. Press OK when finished.



© Best STL 2013

Unit 6 Practice Activity

1. Open **Employee.accdb**.
2. Create a form based on the Employee_information table by using the Form feature under Create Ribbon.
3. Sort the earnings in descending order.
4. Save and Close the form as Employee_details.
5. Using the Form Wizard, create a form based on the Employee_information table.
6. Select only the Employee_code, First_name, Last_name, Region, Department, and Earnings fields to create a tabular form based on the Median style.
7. Save the Form as Employee_form.
8. Enter a new record for Megan Reid as follows:
   S028, Megan, Reid, East, Human Resources, 75,000
9. Close Employee_form.
10. Select the Quarterly_sales_analysis table to create a Form in design view.
11. Enter **Sales Analysis** as the title. The size and font of the title should be 14pt and Arial.
12. Set the background colour to green and the border colour to yellow.
13. Drag Fields from the fields list to create the form as shown in the example below.
14. Sort the records in ascending order by Quarter1_sales.
15. Filter the records based on the field Quarter1_sales for values greater than 10,000.
16. Save the form as Sales_analysis.
17. Close the form and the database.



© Best STL 2013

Creating and using reports

Unit 7 objectives

- Create reports by using the Report Wizard and queries
- Group records in a report, summarise information in a report, modify the appearance of a report by changing the report layout, and print a report

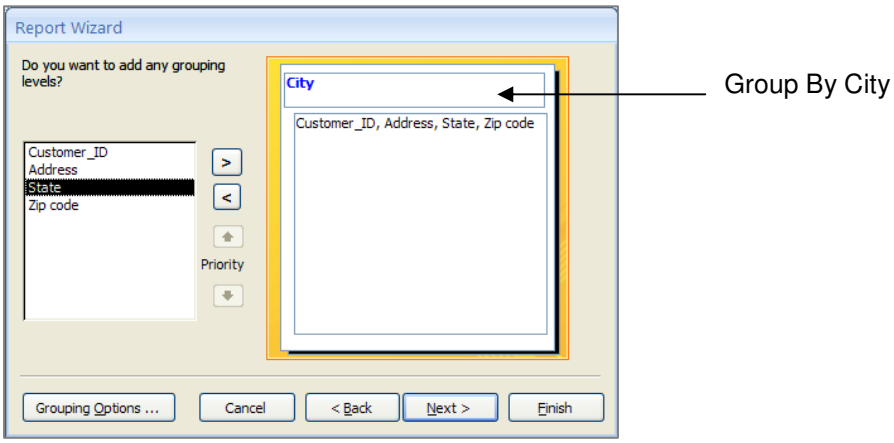
Your notes: Unit 7

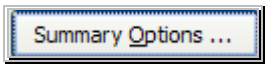
© Best STL 2013

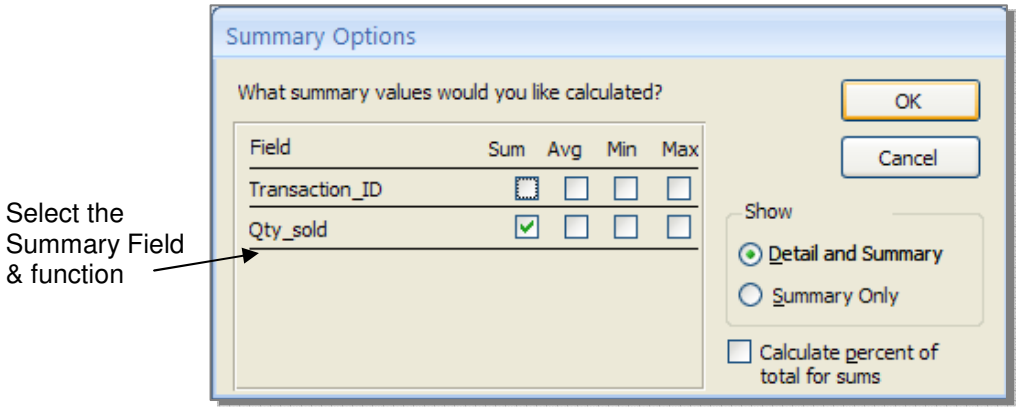
Visual summary: Unit 7 objectives

Create reports by using the Report Wizard and queries

Group records in a report, summarize information in a report



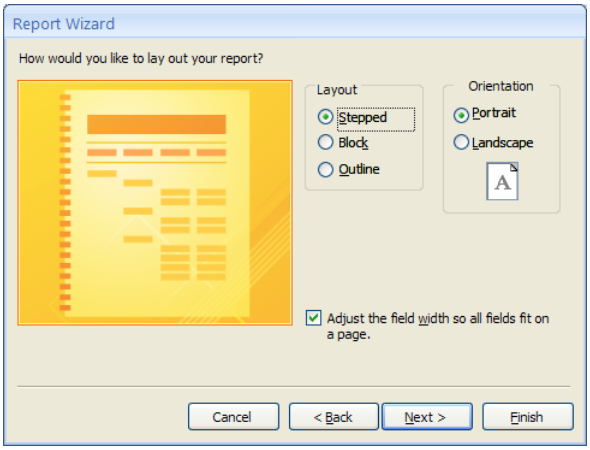
- Click **Next**
- Click 

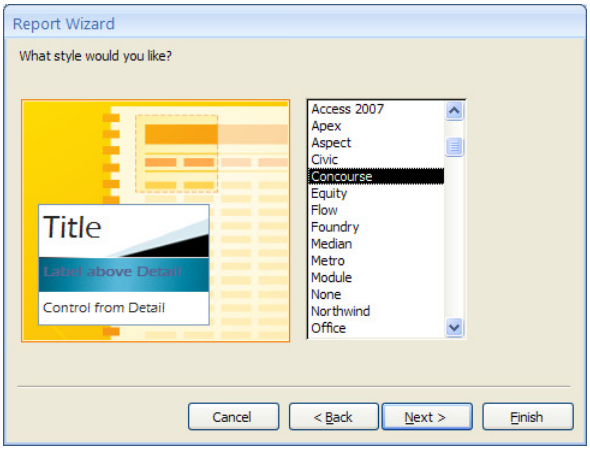


© Best STL 2013

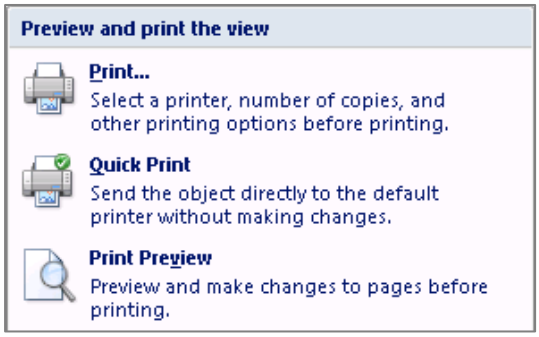
Visual summary: Unit 7 objectives

Change the report layout, style and print a report

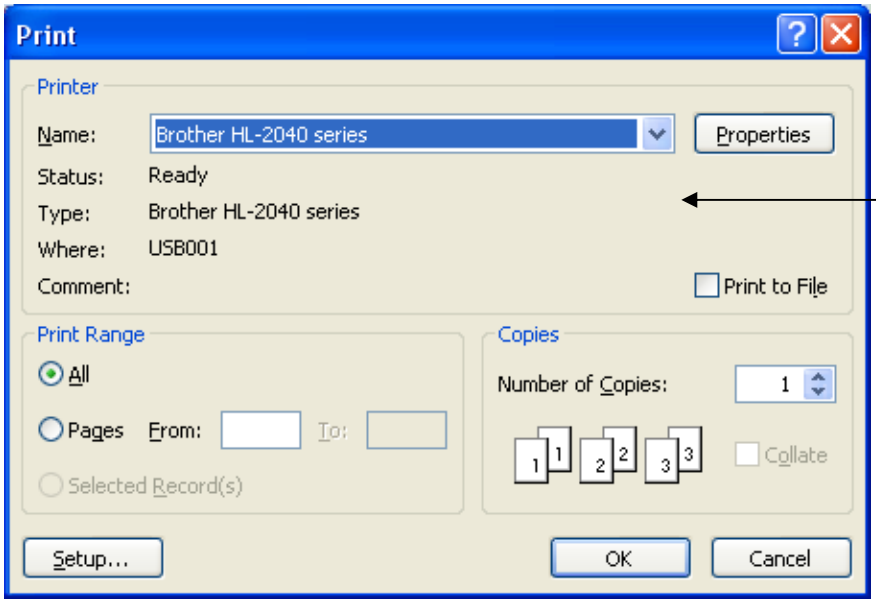




Click on the Office button and choose Print to bring up the list of options:



Select Print to choose printer & print range in the dialog box



The Print dialog box

© Best STL 2013

Unit 7 Practice Activity

1. Open **Emp.accdb**.
2. Create a query based on the Quarterly_sales_analysis table displaying the Salesperson_name and Quarter1_sales fields, where Quarter1_sales>10000.
3. Save the Query as Sales_query and create a columnar report based on this query.
4. Save the report as Sales_report.
5. Close the report and query.
6. Using the report wizard, create a report based on the Employee_information table with the following settings:
   - Display all the fields of the table.
   - Group the report by Department.
   - Sort Earnings in ascending order.
   - Summarise by calculating the average (Avg) of Earnings.
   - Use the Outline1 layout.
   - Use the Soft Gray style for the title background colour.
   - Specify Employee Details as the title.
7. Change the background colour of the detail section (select any colour of your choice) and set the Special Effect property to Raised.
8. Preview the report.
9. Update and close the Report.
10. Close the database.

Online support forum and knowledge base
http://www.microsofttraining.net/forum
Visit our forum to have your questions answered by our Microsoft qualified trainers.

© Best STL 2013

Importing, exporting, and linking objects

Unit 8 objectives

- Import Access objects into the active database from a different database
- Export objects from the active database to a different Access database
- Link objects from one database to another and update the links

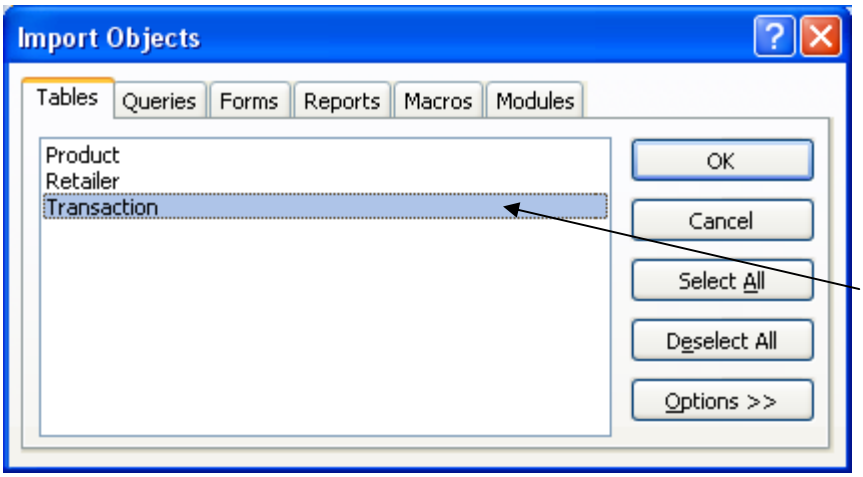
Your notes: Unit 8

© Best STL 2013

Visual summary: Unit 8 objectives

Import Access objects from a different database

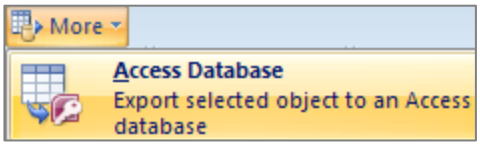
Select **External Data** ribbon**, Access,** browse database file



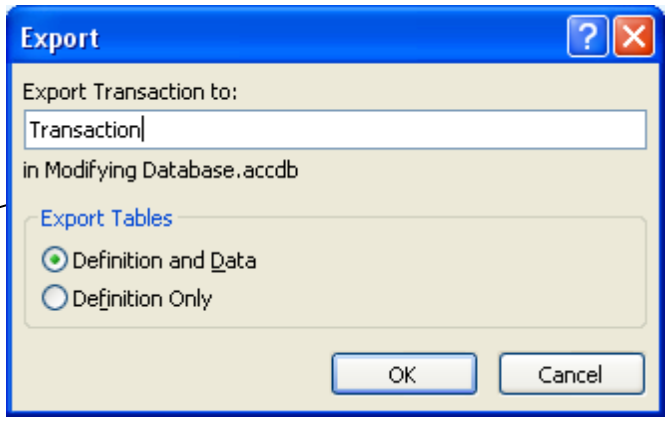
The Import Objects dialog box

Export objects to a different Access database

Select **object to be exported, choose format from External Data ribbon, Export, More, Access Database**



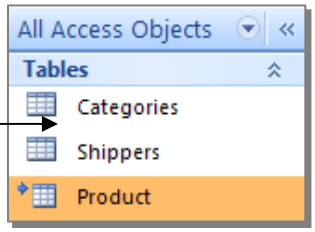
The Export Table dialog box



Link objects between Databases and update the links

Select **Link to data source by creating a linked table**

Product is a linked table



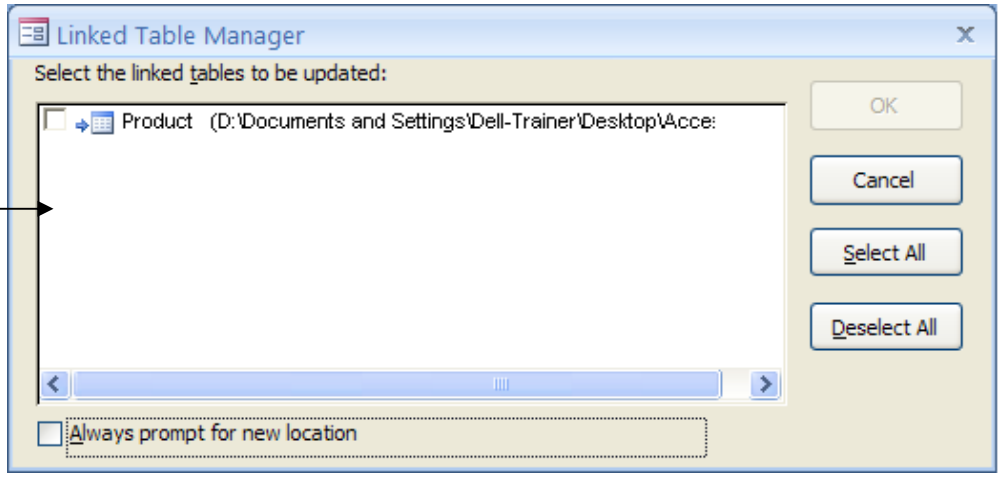
© Best STL 2013

Visual summary: Unit 8 objectives

Linked Table manger

Select **Database Tools** ribbon**, Linked Table Manager**

Select link to update

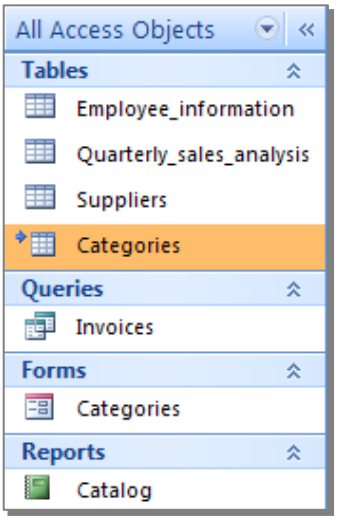


© Best STL 2013

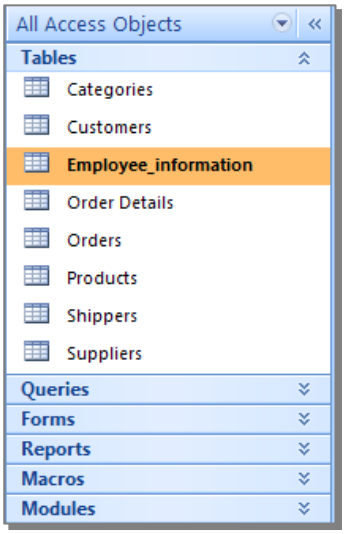
Unit 8 Practice Activity

1. Open **Import_practice.accdb**.
2. Import the following objects from the **Spices.accdb** database:
   - The Suppliers table
   - The Invoices Query
   - The Categories form
   - The Catalogue report
3. From the **Import_practice** database, export the Employee information table to the **Spices** database.
4. Close **Import_practice.accdb**.
5. Open **Spices** to verify that the table was successfully exported.
6. Close **Spices.accdb**.
7. Open **Links_practice.accdb**.
8. Link to the table Categories from the **Spices** database.
9. Close **Links_practice.accdb**.
10. Close Access.

Import_Practice.accdb should have the following objects:



Spices.accdb should have the following table:



Online support forum and knowledge base
http://www.microsofttraining.net/forum
Visit our forum to have your questions answered by our Microsoft qualified trainers.

© Best STL 2013