

Week 6 - Lab 2: Fields, Keys, Simple Queries

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CPSC 203 - T16

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Overview

- In this tutorial, we will learn how to create a new database using **Microsoft Access 2007** including simple:
 - Tables
 - Records
 - Forms
 - Queries
 - Reports

- Template Categories
- Featuring
- Local Templates
- From Microsoft Office Online
- Business
- Education
- Personal
- Sample
- Non-profit

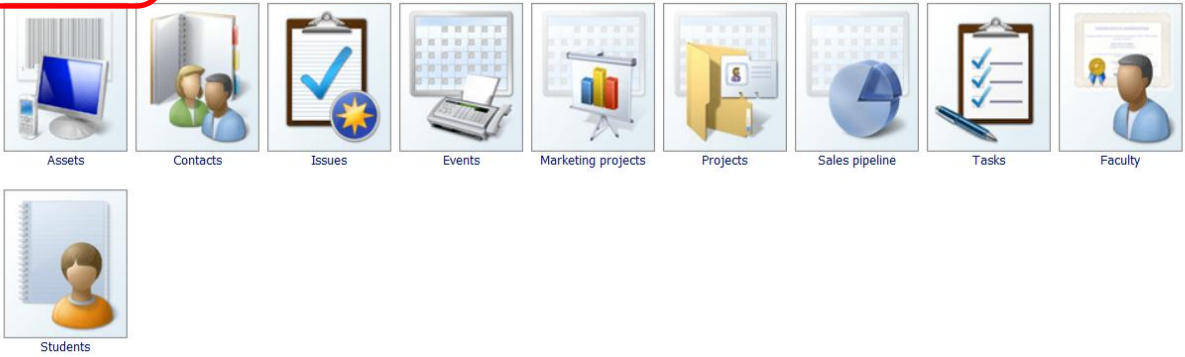
Getting Started with Microsoft Office Access

New Blank Database



Blank Database

Featured Online Templates



Assets Contacts Issues Events Marketing projects Projects Sales pipeline Tasks Faculty

Students

Open Recent Database

- More...
- \...\Schema_and_Query_Quiz4...
14/12/2009
- \...\Volunteer Information.a...
13/12/2009
- \...\Submission_Link_10046825...
10/12/2009
- \...\Submission_Link_10043738...
10/12/2009
- \...\Submission_Link_10043230...
10/12/2009
- \...\Submission_Link_10042546...
10/12/2009
- \...\Submission_Link_10037444...
10/12/2009
- \...\Submission_Link_10037109...
10/12/2009
- \...\Submission_Link_10037006...
10/12/2009

Microsoft Office Online

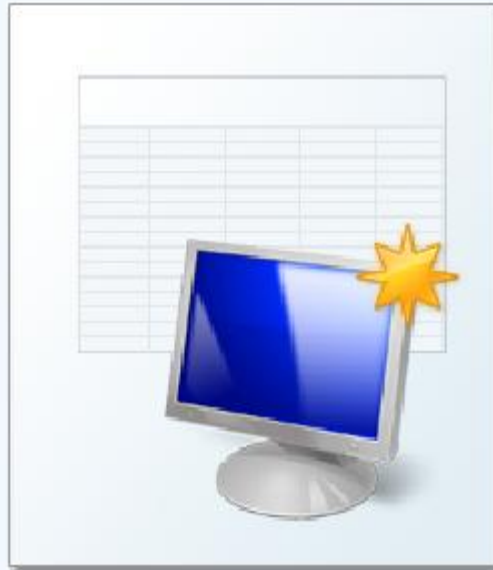
What's new in Access 2007?

The new Access 2007 contains more powerful tools to help you quickly track, report, and share information in a manageable environment. Learn more about the new features and improvements.

More on Office Online:
[Training](#) | [Templates](#) | [Downloads](#)

- Get the latest content while working in the 2007 Microsoft Office system
- Guide to Access 2007 User Interface
- Organize all your objects using the new, easy access Navigation Pane

Automatically update this content from Office Online [Learn more](#)



Blank Database

Create a Microsoft Office Access database that does not contain any existing data or objects.

File Name:



C:\Users\Ealaf\Documents\

Elements of databases

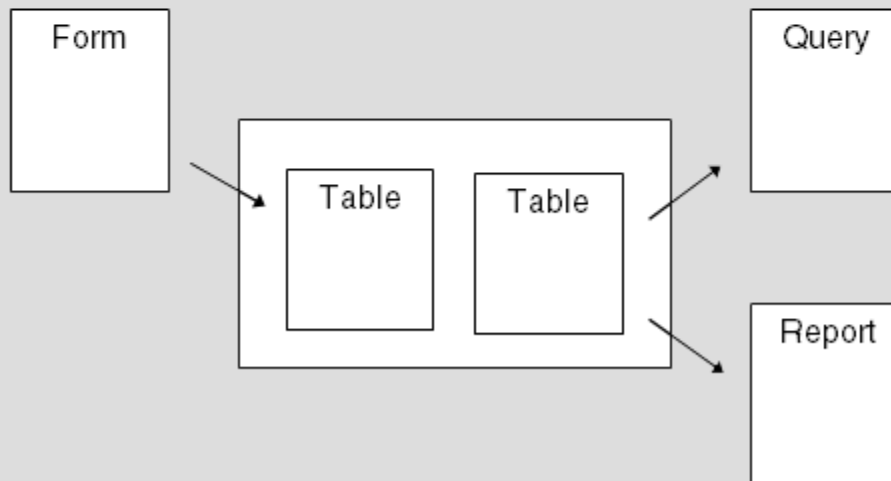
A database stores information in an organized way, and makes it easy to get information in and out.

Tables store data within the database.

Forms make it easy to put data into tables.

Queries pull out specific data.

Reports put data in an easily-read format.

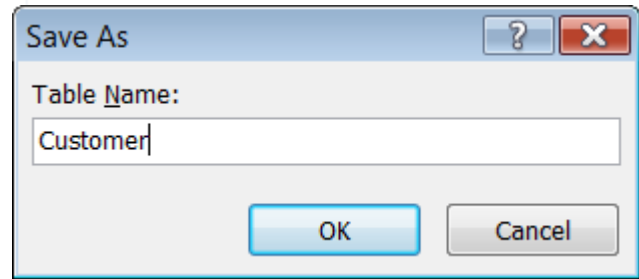
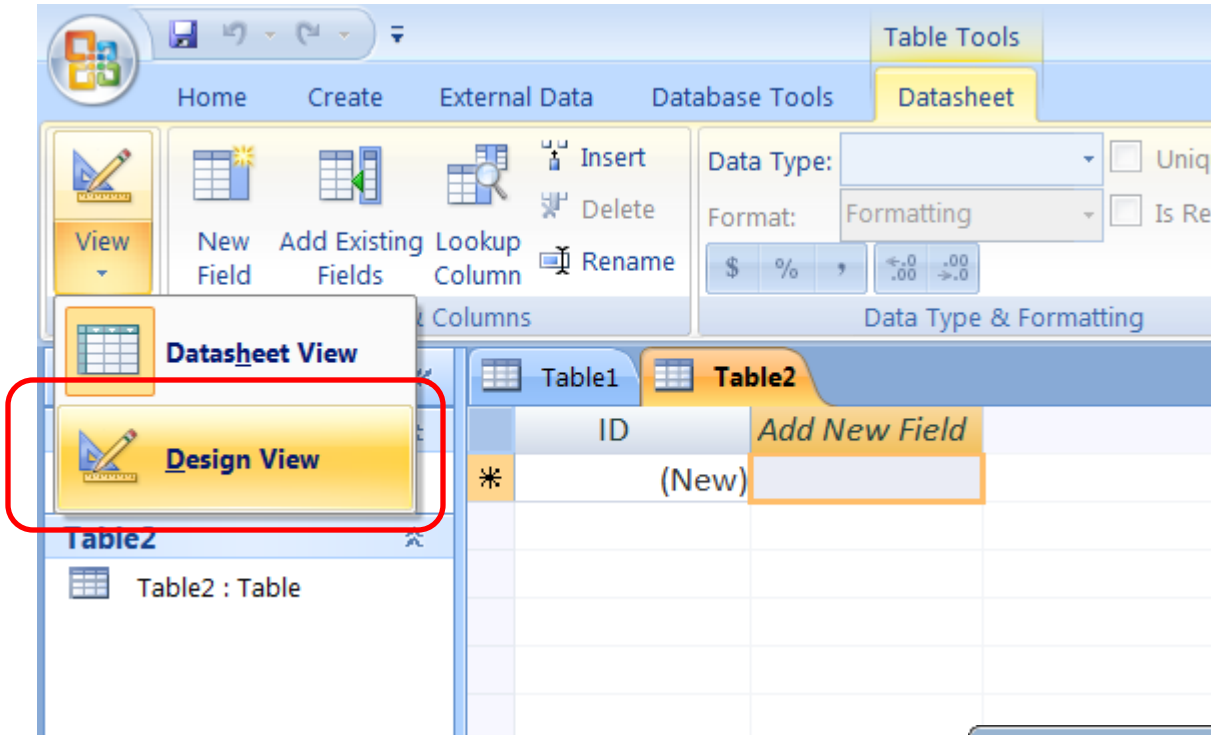


Creating Tables

The screenshot shows the Microsoft Access interface with the 'Table Tools' ribbon selected. The 'Datasheet' tab is active, displaying the 'Fields & Columns' group with buttons for 'New Field', 'Add Existing Fields', 'Lookup Column', 'Insert', 'Delete', and 'Rename'. The 'Data Type & Formatting' group shows 'Data Type' set to 'Text', 'Format' set to 'Formatting', and checkboxes for 'Unique' and 'Is Required'. Below the ribbon, the 'All Tables' pane on the left lists 'Table1' and 'Table2'. The main window shows 'Table2' selected, with a new field '(New)' being added to the table. The field name '(New)' is highlighted in orange, and a tooltip 'Add New Field' is visible above it. The table structure is as follows:

ID	Add New Field
*	(New)

Creating Tables



Access_lab_2 : Database (Access 2007) - Microsoft Access

Table Tools

Home Create External Data Database Tools Design

Views Primary Key Builder Test Validation Rules Lookup Column Property Indexes Sheet Show/Hide

All Tables

- Table1
- Customer

Field Name	Data Type	Description
ID	AutoNumber	

Field Properties

General	Lookup
Field Size	Long Integer
New Values	Increment
Format	
Caption	
Indexed	Yes (No Duplicates)
Smart Tags	
Text Align	General

A field name can be up to 64 characters long, including spaces. Press F1 for help on field names.

Design view. F6 = Switch panes. F1 = Help. Num Lock

Creating Tables

The screenshot displays the Microsoft Access interface for creating a table. On the left, the 'All Tables' pane shows two tables: 'Table1' and 'Customer'. The 'Customer' table is selected, and its design grid is visible. The design grid has two columns: 'Field Name' and 'Data Type'. The 'ID' field is the primary key (indicated by a key icon) and is set to 'AutoNumber'. The 'FirstName' field is set to 'Text'. The 'LastName' field is currently selected, and a dropdown menu is open, showing a list of data types: 'Text', 'Memo', 'Number', 'Date/Time', 'Currency', 'AutoNumber', 'Yes/No', 'OLE Object', 'Hyperlink', 'Attachment', and 'Lookup Wizard...'. The 'Text' option is highlighted in the dropdown menu.

Field Name	Data Type
ID	AutoNumber
FirstName	Text
LastName	Text

Creating Tables

The image shows a Microsoft Access interface. At the top, there are two tabs: 'Table1' and 'Customer'. Below the tabs is a table design grid with two columns: 'Field Name' and 'Data Type'. The 'ID' field is marked as a primary key with a key icon, circled in red. The 'LastName' field is selected, and its data type dropdown menu is open, showing 'Text' selected. Below the table design grid is the 'Properties' window, which has two tabs: 'General' and 'Lookup'. The 'Lookup' tab is active, showing a list of properties for the selected field. The 'Required' property is set to 'No', and the 'Allow Zero Length' property is set to 'Yes', both of which are circled in red.

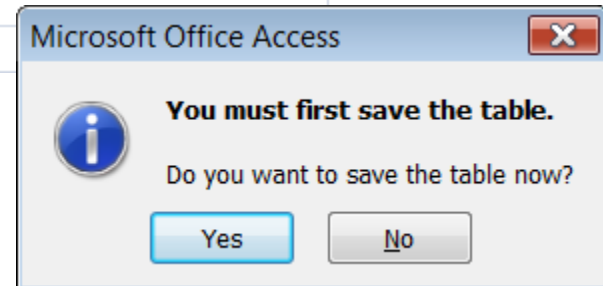
Field Name	Data Type
ID	AutoNumber
FirstName	Text
LastName	Text

Property	Value
Field Size	255
Format	
Input Mask	
Caption	
Default Value	
Validation Rule	
Validation Text	
Required	No
Allow Zero Length	Yes
Indexed	No
Unicode Compression	Yes
IME Mode	No Control
IME Sentence Mode	None
Smart Tags	

Creating Records

The screenshot shows the Microsoft Office Access interface. The ribbon is set to 'Table Tools' > 'Design'. A 'View' dropdown menu is open, showing options: Datasheet View, PivotTable View, PivotChart View, and Design View. The 'Design View' option is selected. The table 'Customer' is displayed with the following fields and data types:

Field Name	Data Type
ID	AutoNumber
FirstName	Text
LastName	Text
City	Text
Province	Text
ZipCode	Text
PhoneNumber	Text



Creating Records

Access_Lab_2 : Database (Access 2007) - Microsoft Access

Table Tools

External Data Database Tools Datasheet

Calibri 11

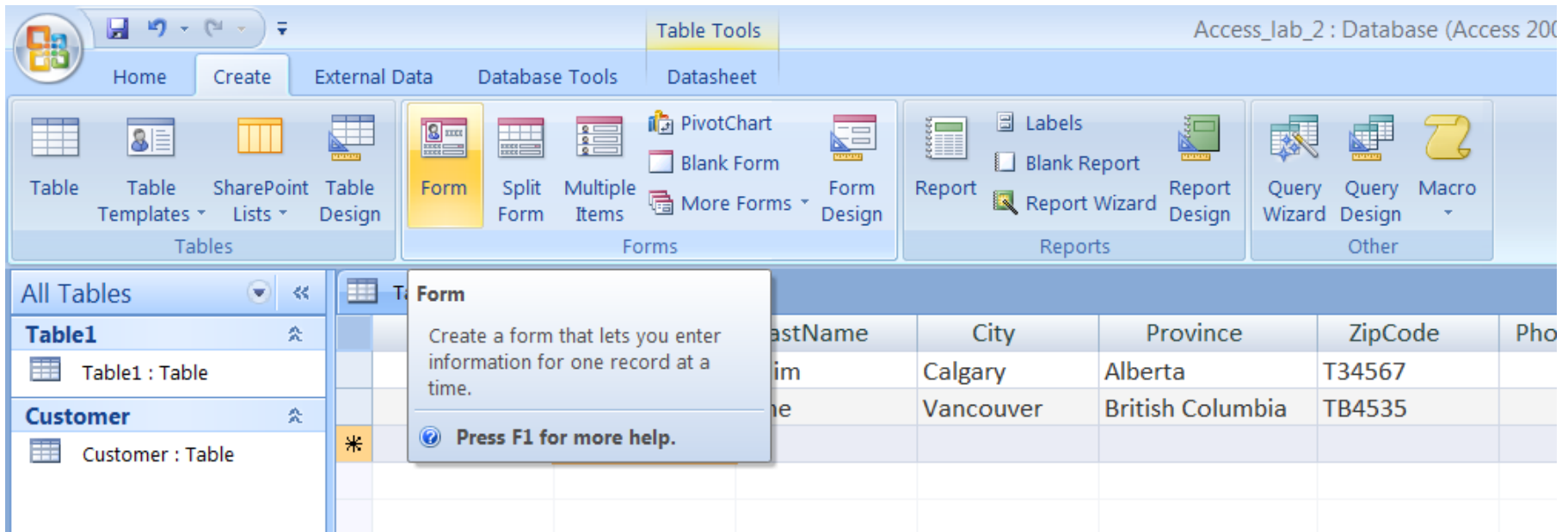
Font Rich Text Records Sort & Filter Find

Table1 Customer

ID	FirstName	LastName	City	Province	ZipCode	PhoneNumber	Add New Field
1	Ealaf	Selim	Calgary	Alberta	T34567		
2	Mary	Jane	Vancouver	British Columbia	TB4535		
*	(New)						

Creating Forms

Forms are the interface to tables that allow you to create, retrieve, modify and delete information



The screenshot shows the Microsoft Access 2010 ribbon with the 'Table Tools' context menu open. The 'Form' option is highlighted, and a tooltip is displayed over it. The tooltip text reads: 'Form: Create a form that lets you enter information for one record at a time. Press F1 for more help.' The ribbon also shows other options like 'Split Form', 'Multiple Items', 'Form Design', 'Report', 'Report Wizard', 'Query Wizard', and 'Macro'. The background shows a table with columns: LastName, City, Province, ZipCode, and Phone.

LastName	City	Province	ZipCode	Phone
Smith	Calgary	Alberta	T34567	
Johnson	Vancouver	British Columbia	TB4535	

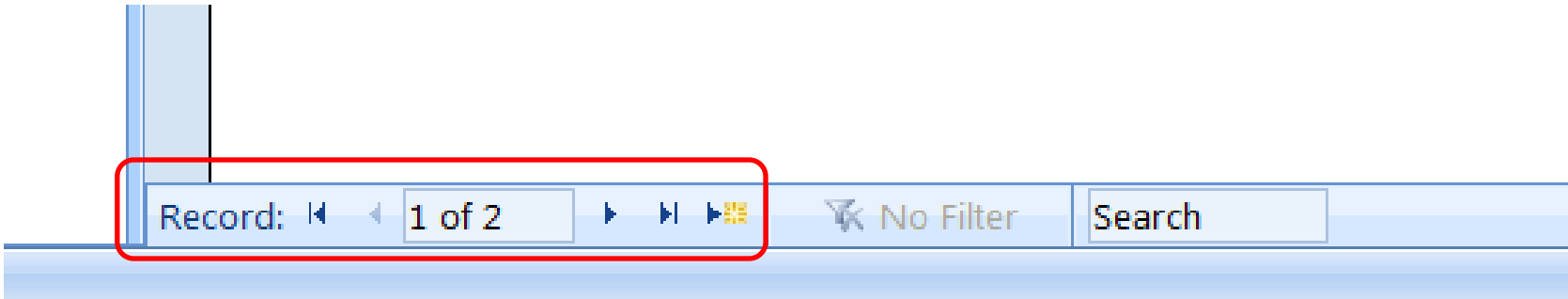
Creating Forms

The screenshot displays the Microsoft Access interface. The title bar indicates the database is 'Access_lab_2 : Database (Access 2007) - Microsoft Access'. The ribbon is set to 'Form Layout Tools', with the 'Format' tab selected. The ribbon includes sections for 'Font' (Calibri, size 11), 'Formatting' (currency, percentage, decimal), 'Gridlines' (Width, Style, Color), and 'Controls' (Title, Page Numbers, Date and Time, Line Thickness, Line Type, Line Color). The 'All Tables' pane on the left shows 'Table1' and 'Customer'. The 'Customer' table is selected, and its form is displayed in the center. The form contains the following fields:

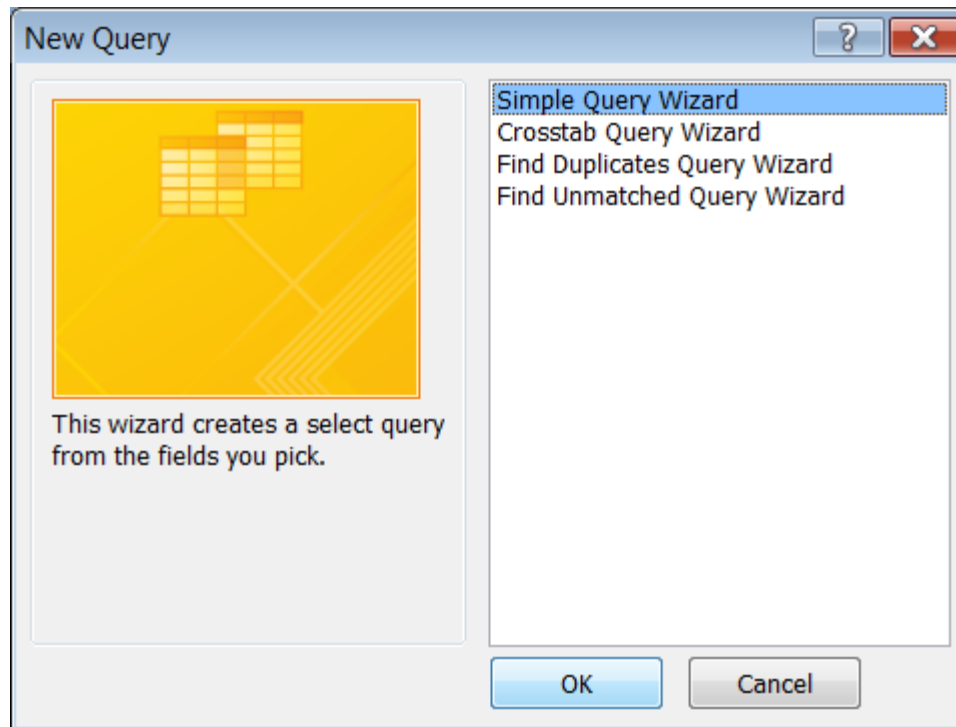
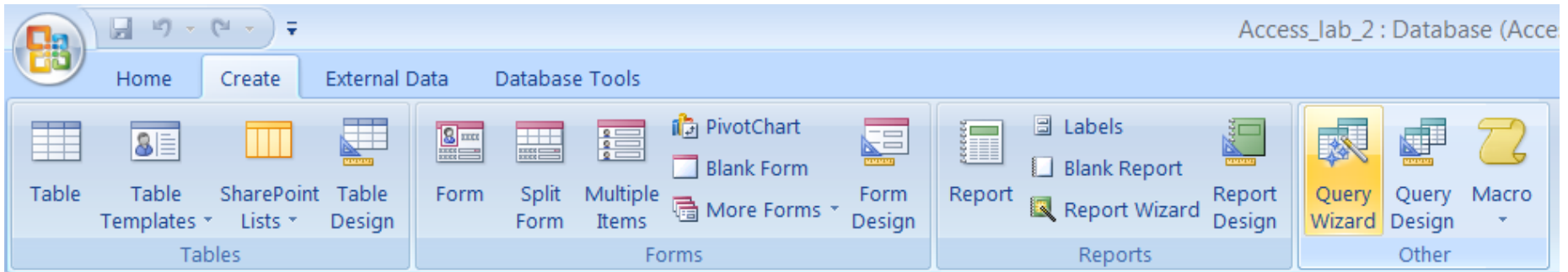
ID:	1
FirstName:	Ealaf
LastName:	Selim
City:	Calgary
Province:	Alberta
ZipCode:	T34567
PhoneNumber:	

Creating Forms

To create new records or browse through existing records.



Creating Queries



Creating Queries

Select the fields you want to include as part of your query from the Available Fields list and then click on the ">" button to add these fields to the list of Selected Fields.

Simple Query Wizard

Which fields do you want in your query?

You can choose from more than one table or query.

Tables/Queries

Table: Customer

Available Fields:

ID
LastName
Province
ZipCode
PhoneNumber

>
>>
<
<<


Selectd Fields:

FirstName
City

Cancel < Back Next > Finish

Creating Queries

Simple Query Wizard



What title do you want for your query?

Customer Query

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

Do you want to open the query or modify the query's design?

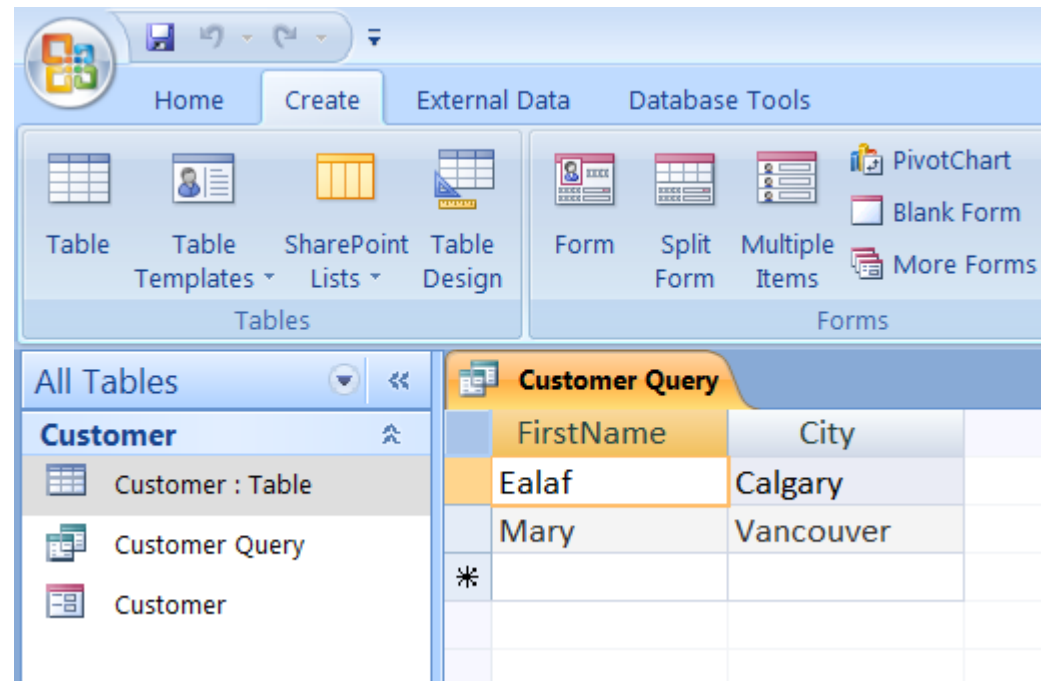
Open the query to view information.

Modify the query design.

Cancel < Back Next > Finish

Creating Queries

The query will be automatically saved and executed, it searches through the table and displays a final result.

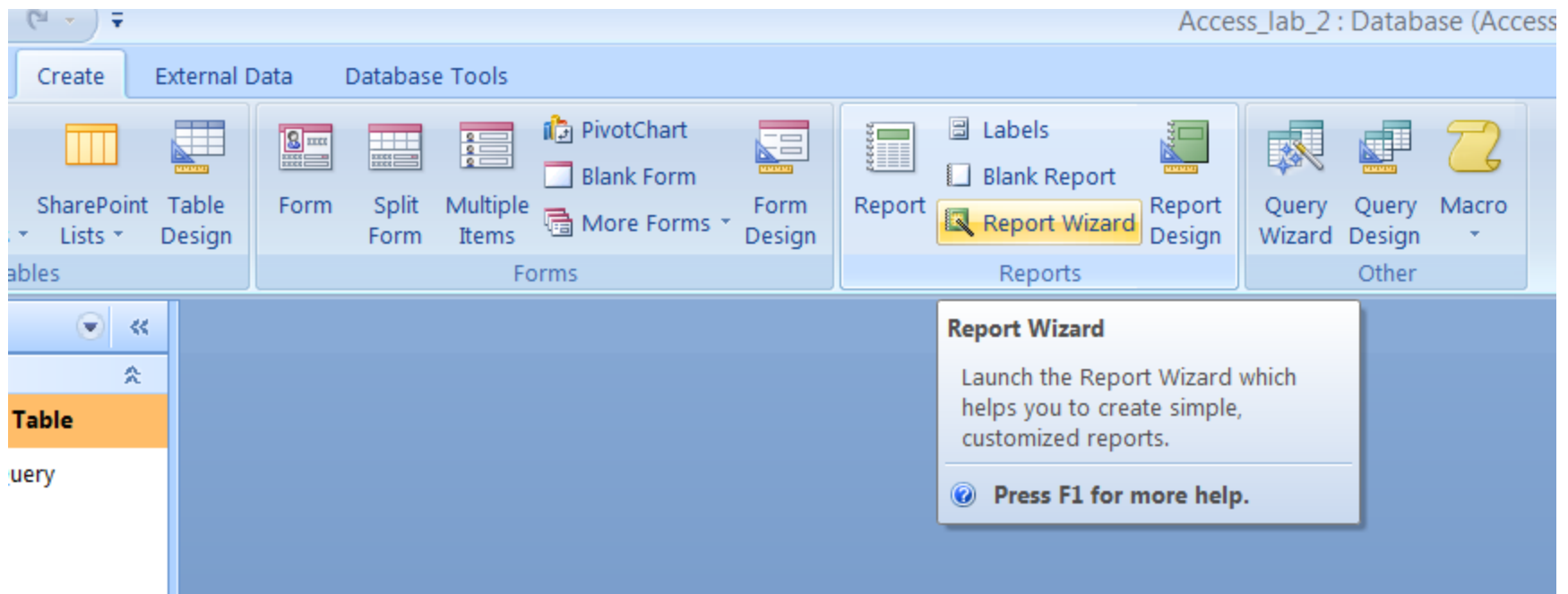


The screenshot shows the Microsoft Access interface. The 'Create' ribbon is active, displaying options for creating tables and forms. Below the ribbon, the 'All Tables' pane shows a list of objects: 'Customer' (Table), 'Customer Query' (Query), and 'Customer' (Table). The 'Customer Query' is selected, and its results are displayed in a table view.

FirstName	City
Ealaf	Calgary
Mary	Vancouver
*	


Creating Reports

Reports are a way to present information collected or queried in a professional manner that is easy to read and understand.



Creating Reports

Report Wizard



Which fields do you want on your report?
You can choose from more than one table or query.

Tables/Queries

Table: Customer

Table: Customer

Query: Customer Query

Fields:

ID

FirstName

LastName

City

Province

ZipCode

PhoneNumber

>

>>


<

<<

Cancel < Back Next > Finish

Creating Reports

Report Wizard



Which fields do you want on your report?
You can choose from more than one table or query.

Tables/Queries
Table: Customer

Available Fields:

ID

Selected Fields:

FirstName
LastName
City
Province
ZipCode
PhoneNumber

Navigation buttons: Cancel, < Back, Next >, Finish

Creating Reports

Use Grouping to organize the data and avoid duplication.

The screenshot shows the 'Report Wizard' dialog box. The title bar reads 'Report Wizard'. The main question is 'Do you want to add any grouping levels?'. On the left, there is a list of fields: 'FirstName', 'LastName', 'ZipCode' (which is selected and highlighted), and 'PhoneNumber'. To the right of this list are four arrow buttons: a right-pointing arrow (>), a left-pointing arrow (<), an up-pointing arrow (↑), and a down-pointing arrow (↓). Below these arrows is the label 'Priority'. On the right side of the dialog, there is a large text area with a yellow border. It contains two grouping levels: 'Province' and 'City'. Below these, the fields 'FirstName, LastName, ZipCode, PhoneNumber' are listed. At the bottom of the dialog, there are five buttons: 'Grouping Options ...', 'Cancel', '< Back', 'Next >', and 'Finish'.

Creating Reports

Select how you would like to have the data arranged and sorted.

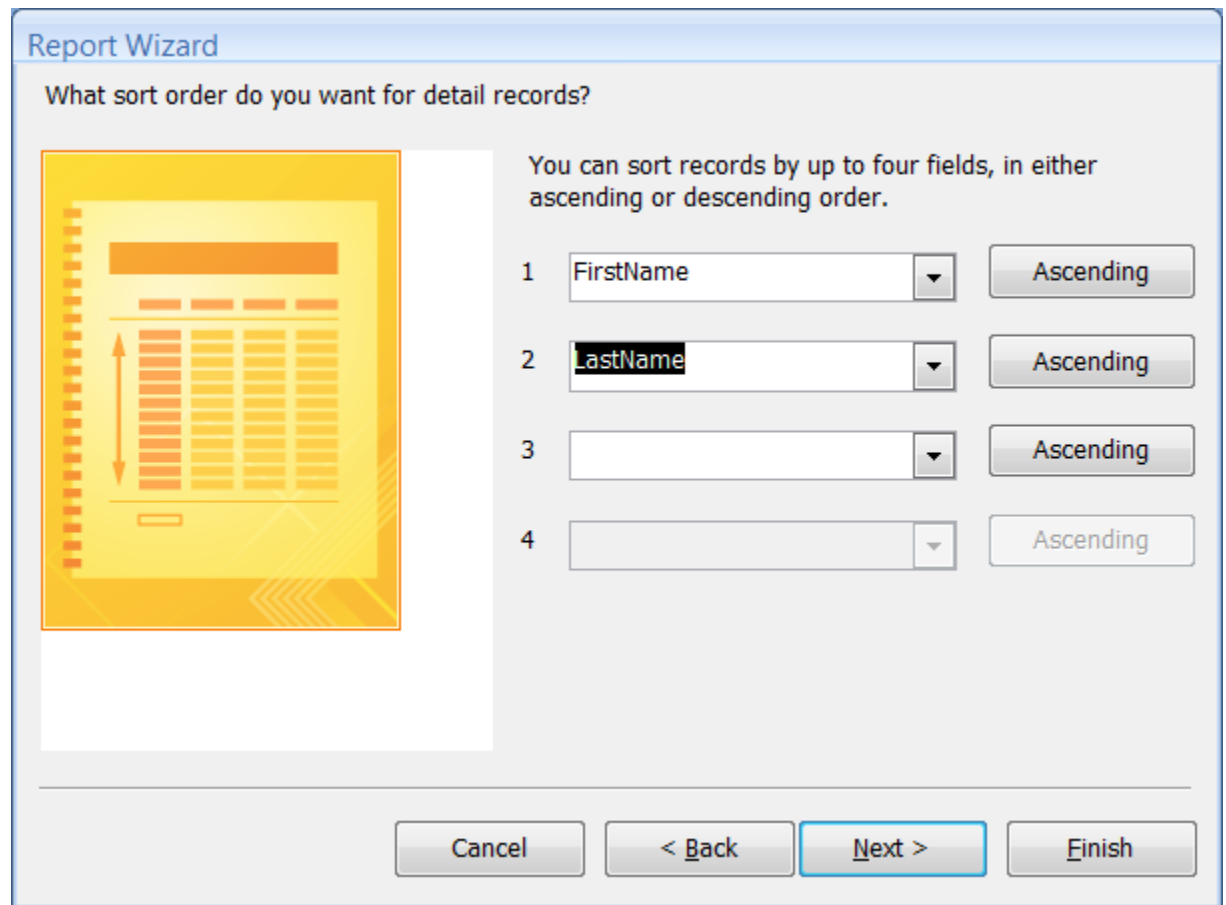
Report Wizard

What sort order do you want for detail records?

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

1	FirstName	Ascending
2	LastName	Ascending
3		Ascending
4		Ascending

Cancel < Back **Next >** Finish


The image shows a 'Report Wizard' dialog box. On the left, there is a yellow icon of a report with a table and a vertical double-headed arrow indicating sorting. The main area contains the question 'What sort order do you want for detail records?' and a sub-instruction: 'You can sort records by up to four fields, in either ascending or descending order.' Below this, there are four rows of input fields. The first row has '1' in a small box, a dropdown menu containing 'FirstName', and a button labeled 'Ascending'. The second row has '2' in a small box, a dropdown menu containing 'LastName', and a button labeled 'Ascending'. The third row has '3' in a small box, an empty dropdown menu, and a button labeled 'Ascending'. The fourth row has '4' in a small box, an empty dropdown menu, and a button labeled 'Ascending'. At the bottom of the dialog, there are four buttons: 'Cancel', '< Back', 'Next >', and 'Finish'. The 'Next >' button is highlighted with a blue border.

Creating Reports

Select the layout and style of how you would like your report to look like.

Report Wizard

How would you like to lay out your report?



Layout

Stepped


Block

Outline

Orientation

Portrait

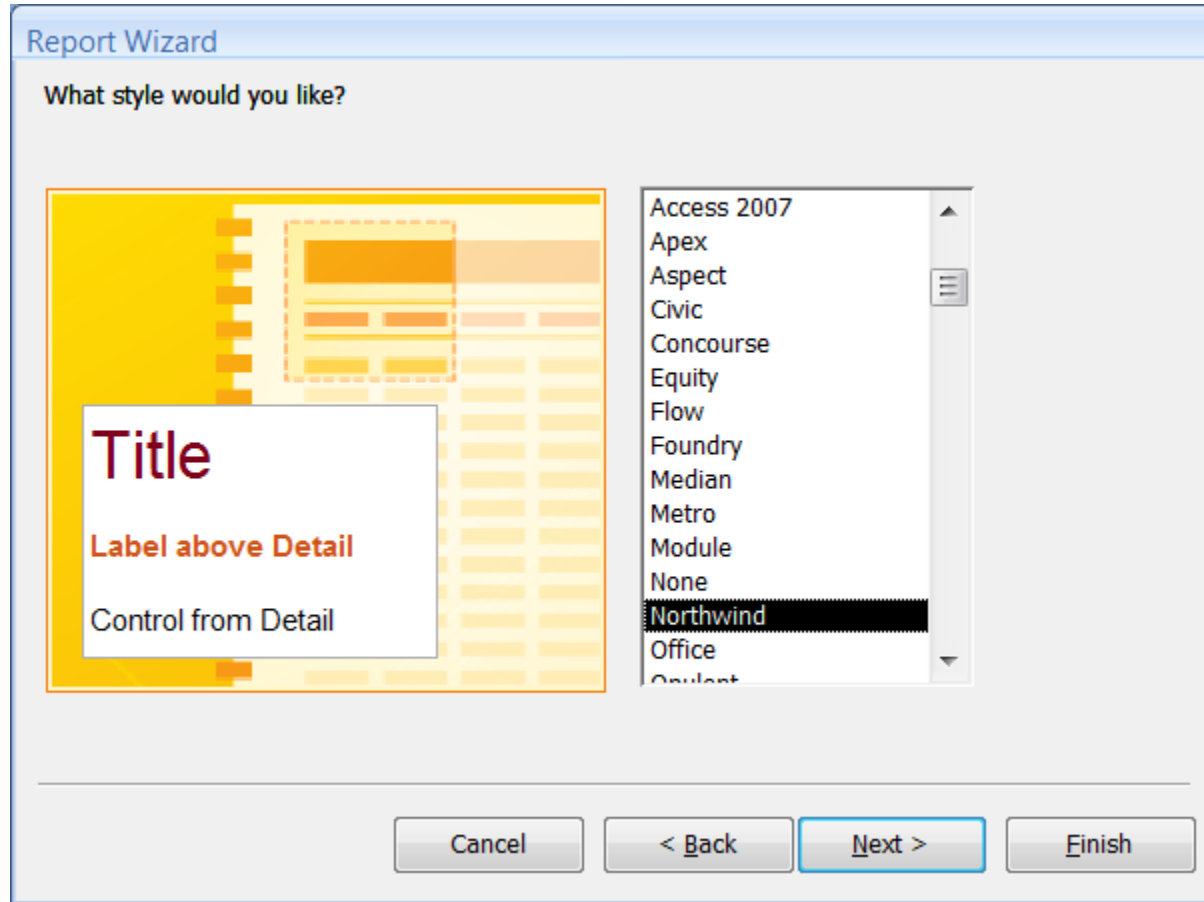
Landscape



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


Cancel < Back Next > Finish

Creating Reports



Creating Reports

Report Wizard



What title do you want for your report?

Customer

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

Creating Reports

Access Lab_2 : Database (Access 2007) - Microsoft Access

Print Preview

Print Size Portrait Landscape Margins Show Margins Print Data Only Columns Page Setup Zoom One Page Two Pages More Pages Refresh All Excel SharePoint List PDF or XPS More Word Text File More

Close Print Preview Close Preview

All Tables Customer

Customer

- Customer : Table
- Customer Query
- Customer
- Customer

Customer

Province	City	FirstName	LastName	ZipCode	PhoneNumbe
Alberta	Calgary	Ealaf	Selim	T34567	
British C	Vancouver	Mary	Jane	TB4535	