

**WHY DO I
NEED A
DATABASE?**



What is a Database?



A database allows you to store information related to a specific topic in an organized way.

In addition to storing data, you can also sort, extract, and summarize information related to the data.

One of the software programs that allow you to do this is Microsoft Office Access 2007, which is a database creation and management program.

Contacts : Database (Access 2007) - Microsoft Access

Home Create External Data Database Tools

View Paste Font Rich Text Records

Calibri 11

B I U A

Refresh All

New Save Delete

Totals Spelling More

Contact List

Contact List

New Contact Collect Data Add From Outlook E-mail List

ID	First Name	Last Name	E-mail Address	Business Phone	Company
1	Jim	Jones	123@fakeemail.com	123-456-7890	ABC Tek Comp
2	Kim	Mack	123@fakeemail.com	123-456-7890	ABC Tek Comp
3	Nancy	Kuller	123@fakeemail.com	123-456-7890	DEF Graphics
4	Mike	Clark	123@fakeemail.com	123-456-7890	ABC Web Comp
5	Lisa	Rimos	123@fakeemail.com	123-456-7890	ABC Tek Comp
6	Deidrick	South	123@fakeemail.com	123-456-7890	ABC Tek Comp

Access 2007 Example

A database is a place where you can store information related to a specific topic.

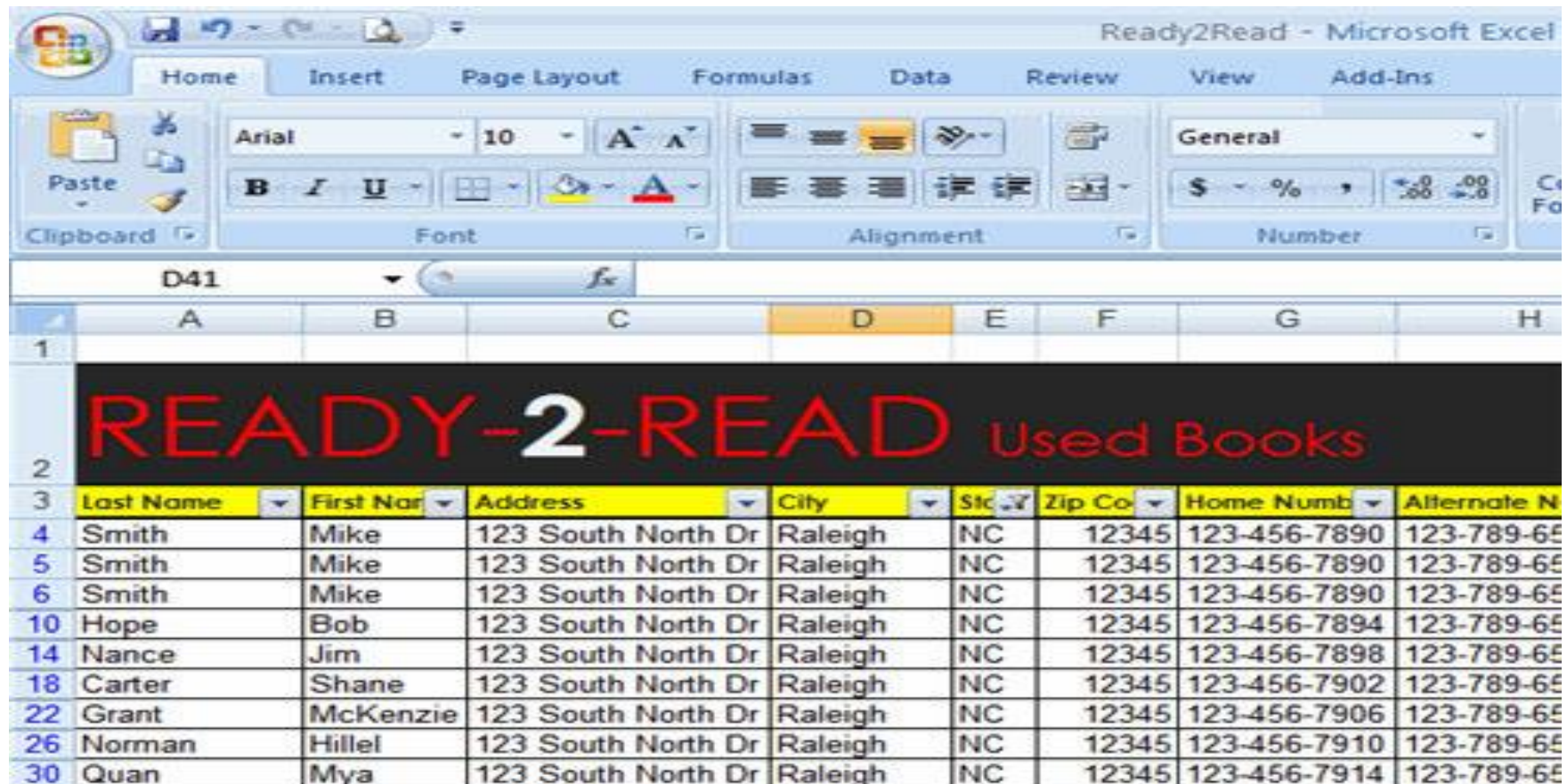


**Why Not Use
Excel?**

**Excel is a
spreadsheet software
program that is
traditionally used to
manage numerical
information**

Excel Example: Customer List and Order Tracking

□ Sorting and Filtering to Locate Data in Excel



The screenshot shows the Microsoft Excel interface with the 'Ready2Read - Microsoft Excel' title bar. The ribbon includes 'Home', 'Insert', 'Page Layout', 'Formulas', 'Data', 'Review', 'View', and 'Add-Ins'. The 'Data' tab is active, showing the 'Sort & Filter' group. The worksheet contains a table of customer data. The first two rows are headers: 'READY-2-READ' and 'Used Books'. The third row is a filter row with dropdown arrows for each column. The data rows show customer information, with the 'State' column filtered to 'NC'.

	Last Name	First Name	Address	City	State	Zip Code	Home Number	Alternate Number
4	Smith	Mike	123 South North Dr	Raleigh	NC	12345	123-456-7890	123-789-6543
5	Smith	Mike	123 South North Dr	Raleigh	NC	12345	123-456-7890	123-789-6543
6	Smith	Mike	123 South North Dr	Raleigh	NC	12345	123-456-7890	123-789-6543
10	Hope	Bob	123 South North Dr	Raleigh	NC	12345	123-456-7894	123-789-6543
14	Nance	Jim	123 South North Dr	Raleigh	NC	12345	123-456-7898	123-789-6543
18	Carter	Shane	123 South North Dr	Raleigh	NC	12345	123-456-7902	123-789-6543
22	Grant	McKenzie	123 South North Dr	Raleigh	NC	12345	123-456-7906	123-789-6543
26	Norman	Hillel	123 South North Dr	Raleigh	NC	12345	123-456-7910	123-789-6543
30	Quan	Mya	123 South North Dr	Raleigh	NC	12345	123-456-7914	123-789-6543

Data Filtered to Display NC State Records

Data Entry in Excel

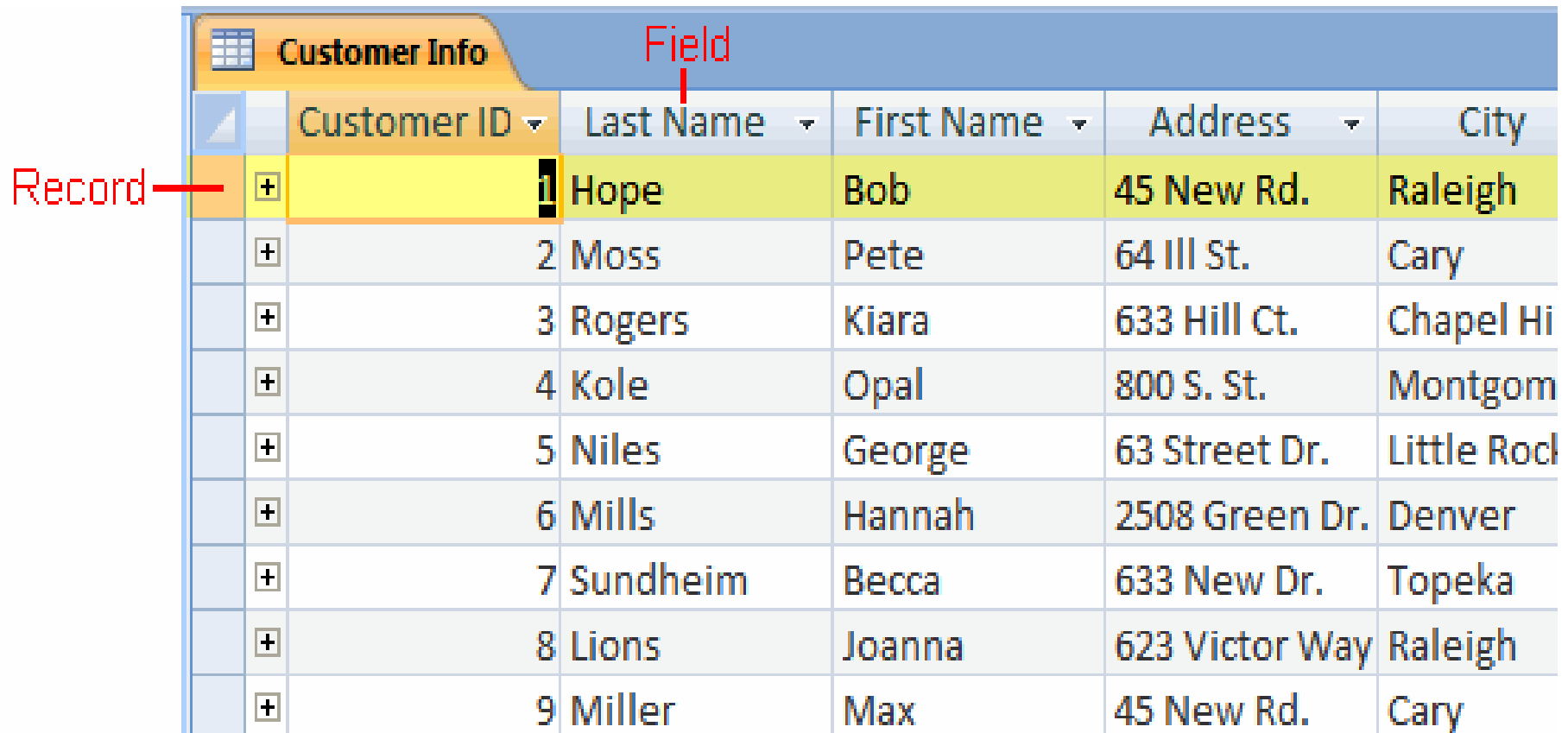
- This is the limitation of spreadsheet software such as Excel because it is a single, flat file.

3	Last Name	First Name	Address	City	State	Zip Code	Home Number	Date	Title
4	Blankenship	William	456 West East St	Atlanta	GA	34512	123-456-7913	1/31/2008	Proofing F
5	Bullock	Tonya	456 West East St	Charleston	SC	54321	123-456-7903	3/16/2008	Styles and
6	Bullock	Tonya	456 West East St	Charleston	SC	54321	123-456-7903	4/15/2008	Line Para
7	Bullock	Tonya	456 West East St	Charleston	SC	54321	123-456-7903	4/6/2008	Text Basic
8	Davenport	Josh	456 West East St	Atlanta	GA	34512	123-456-7897	5/10/2008	Setting Up
9	Davere	Aileen	456 West East St	Atlanta	GA	34512	123-456-7917	3/11/2008	Styles and
10	Falk	Matthew	456 West East St	Charleston	SC	54321	123-456-7895	2/15/2008	Line Para
11	Grant	McKenzie	123 South North Dr	Raleigh	NC	12345	123-456-7906	4/6/2008	Proofing F
12	Grant	McKenzie	123 South North Dr	Raleigh	NC	12345	123-456-7906	2/22/2008	Quick Tips
13	Jones	Sherry	456 West East St	Charleston	SC	54321	123-456-7911	3/16/2008	Setting Up

Data Sorted By Customer in an Excel Spreadsheet

Access Example: Customers and Orders Tracking

□ Entering Data in Access



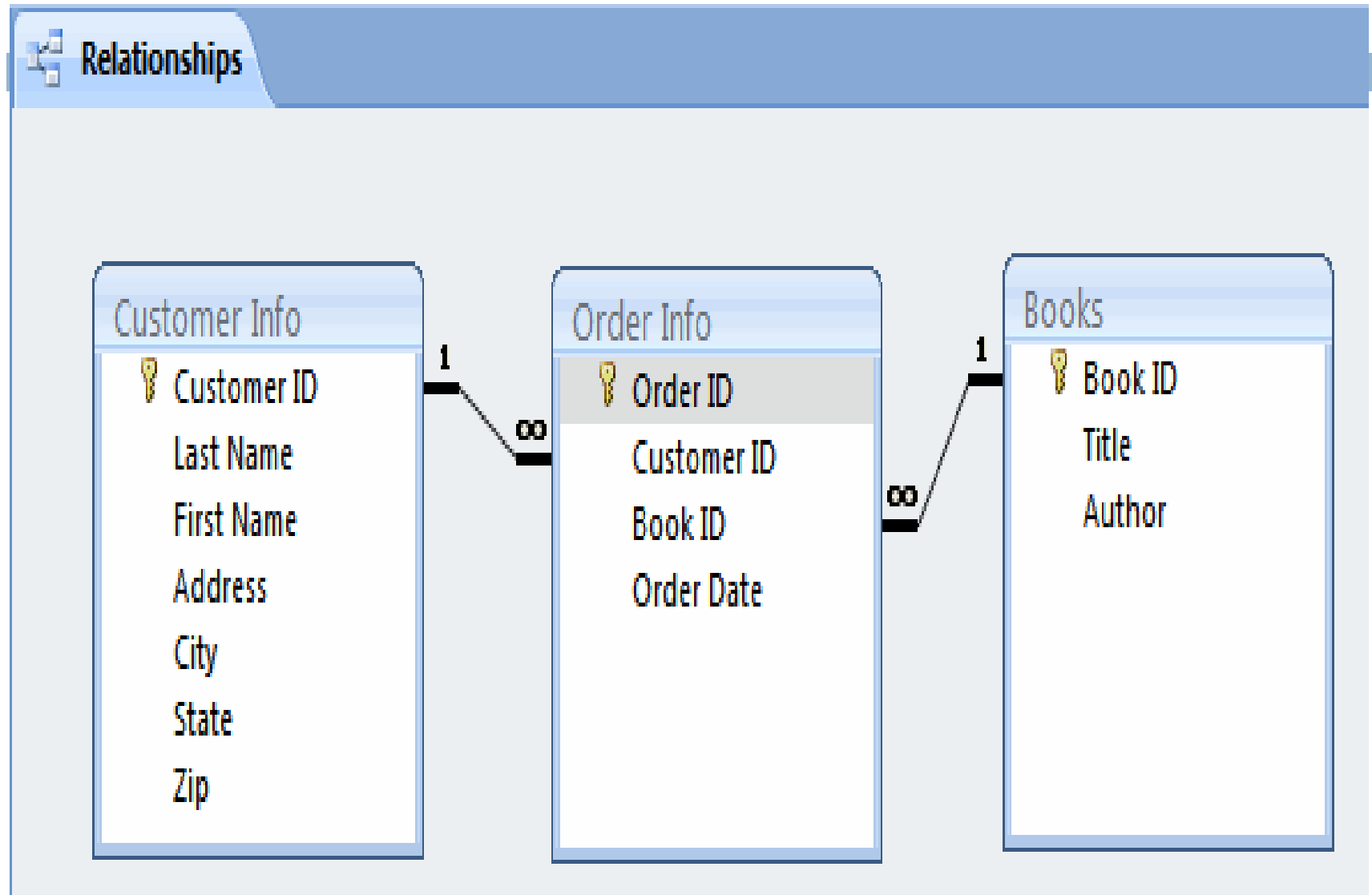
The screenshot shows an Access table named "Customer Info" with the following data:

	Customer ID	Last Name	First Name	Address	City
Record	1	Hope	Bob	45 New Rd.	Raleigh
	2	Moss	Pete	64 Ill St.	Cary
	3	Rogers	Kiara	633 Hill Ct.	Chapel Hi
	4	Kole	Opal	800 S. St.	Montgom
	5	Niles	George	63 Street Dr.	Little Rock
	6	Mills	Hannah	2508 Green Dr.	Denver
	7	Sundheim	Becca	633 New Dr.	Topeka
	8	Lions	Joanna	623 Victor Way	Raleigh
	9	Miller	Max	45 New Rd.	Cary

Data in an Access Customer Info Table

Access is called a relational database management program, because the tables are linked, or related.

□ Table Relationships Diagram in Access



The real power of Access comes in being able to link and extract information from multiple tables to answer specific questions.

□ Search Results

Customer Info Query			
	State	Book ID	Title
	NC	13	American History
	NC	8	Computer Basics
	NC	1	Quick Tips
	NC	8	Computer Basics
	NC	3	Good Cookin'
	NC	7	State Parks
	NC	10	Deep South
	NC	10	Deep South
	NC	8	Computer Basics
	NC	10	Deep South



THINKING ABOUT DATABASE DESIGN

Exploring an Access Database

A database could store this information, and also allow the store to quickly determine how many Brand X toasters are in the inventory without needing to count the inventory on the shelves.



Product Information:

Brand X Toaster

Item # 12546465

Color: Black

Price: \$15.00

Quantity Instock: 100



Sale Information:


Item # → Subtract from Inventory

Price → Add to Daily Sales Total

Real World Example

Inventory in Access Database

Department Store Inventory							
ID	Item	Item #	Color	Price	In Stock	Barcode	Location
2	Brand X Toaster	12546465	Blk	\$15.00	100	12211111	Kitchen & Hom
3	Brand Y Toaster	243456464	Crm	\$25.00	85	13419673	Kitchen & Hom
4	Pots and Pans	55664	Blk	\$150.00	150	15444779	Kitchen & Hom
5	Indoor Grill	977484152	Wht	\$66.85	50	11547547	Kitchen & Hom
6	Utensils	354675678	Silver	\$15.99	235	15457867	Kitchen & Hom
7	Brand Y Bedding	232	Pink/Gold	\$12.00	32	12547977	Bedding
8	Game System	1314645	Blk	\$300.00	12	12457878	Electronics



A database maintains order and structure in our lives. Databases are created using programs such as Microsoft Office Access 2007, which is a relational database program.



