Microsoft® Office 2013

First Course | Second Course | Third Course

Access 2013
UNIT A

Getting Started with Access 2013

Objectives

- Understand relational databases
- Explore a database
- Create a database
- Create a table

(continued)

Objectives *(continued)*

- Create primary keys
- Relate two tables
- Enter data
- Edit data

Understand Relational Databases

- Lists of information are related to one another
- Access provides tools that allow sorting, grouping, analyzing and reporting data in many different ways

Advantages of Access

- Minimizes duplicate data, increasing accuracy and consistency
- Data entry is faster and easier
- Data can be viewed and sorted in many ways
- Information is more secure
- Data can be shared and edited by several users simultaneously

Access vs. Excel

Table of Contents

feature	Excel	Access
Layout	Provides a natural tabular layout for easy data entry	Provides a natural tabular layout as well as the ability to create customized data entry screens called forms
Storage	Restricted to a file's limitations	Virtually unlimited when coupled with the ability to use Microsoft SQL Server to store data
Linked tables	Manages single lists of information—no relational database capabilities	Relates lists of information to reduce data redundancy and create a relational database
Reporting	Limited	Provides the ability to create an unlimited number of reports
Security	Limited to file security options such as marking the file "read-only" or protecting a range of cells	When used with SQL Server, provides extensive security down to the user and data level
Multiuser capabilities	Not allowed	Allows multiple users to simultaneously enter and update data
Data entry	Provides limited data entry screens	Provides the ability to create an unlimited number of data entry forms

Explore a Database

- Access can be opened in multiple ways
- **Objects** include:
  - Tables
  - Queries
  - Forms
  - Reports

Access Objects

object	icon	purpose
Table		Contains all of the raw data within the database in a spreadsheet-like view; tables are linked with a common field to create a relational database, which minimizes redundant data
Query		Allows you to select a subset of fields or records from one or more tables; queries are created when you have a question about the data
Form		Provides an easy-to-use data entry screen
Report		Provides a professional printout of data that can contain enhancements such as headers, footers, graphics, and calculations on groups of records

Create a Database

- Start by using an Access template or by opening a blank database
- Table Design View provides the most options for defining fields
- Datasheet View is a spreadsheet-like view of the data in a table

Data Types

data type	description of data
Short Text	Text or numbers not used in calculations such as a name, zip code, or phone number
Long Text	Lengthy text greater than 255 characters, such as comments or notes
Number	Numeric data that can be used in calculations, such as quantities
Date/Time	Dates and times
Currency	Monetary values
AutoNumber	Sequential integers controlled by Access
Yes/No	Only two values: Yes or No
OLE Object	OLE (Object Linking and Embedding) objects such as an Excel spreadsheet or Word document
Hyperlink	Web and e-mail addresses
Attachment	External files such as .jpg images, spreadsheets, and documents
Calculated	Result of a calculation based on other fields in the table
Lookup Wizard	The Lookup Wizard helps you set Lookup properties, which display a drop-down list of values for the field; after using the Lookup Wizard, the final data type for the field is either Short Text or Number depending on the values in the drop-down list

Create a Table

- Essential tasks in creating a table:
  - Defining the fields
  - Selecting data type for each field (e.g., numbers, text, dates)
  - Naming the table
  - Determining how the table will participate in the relational database

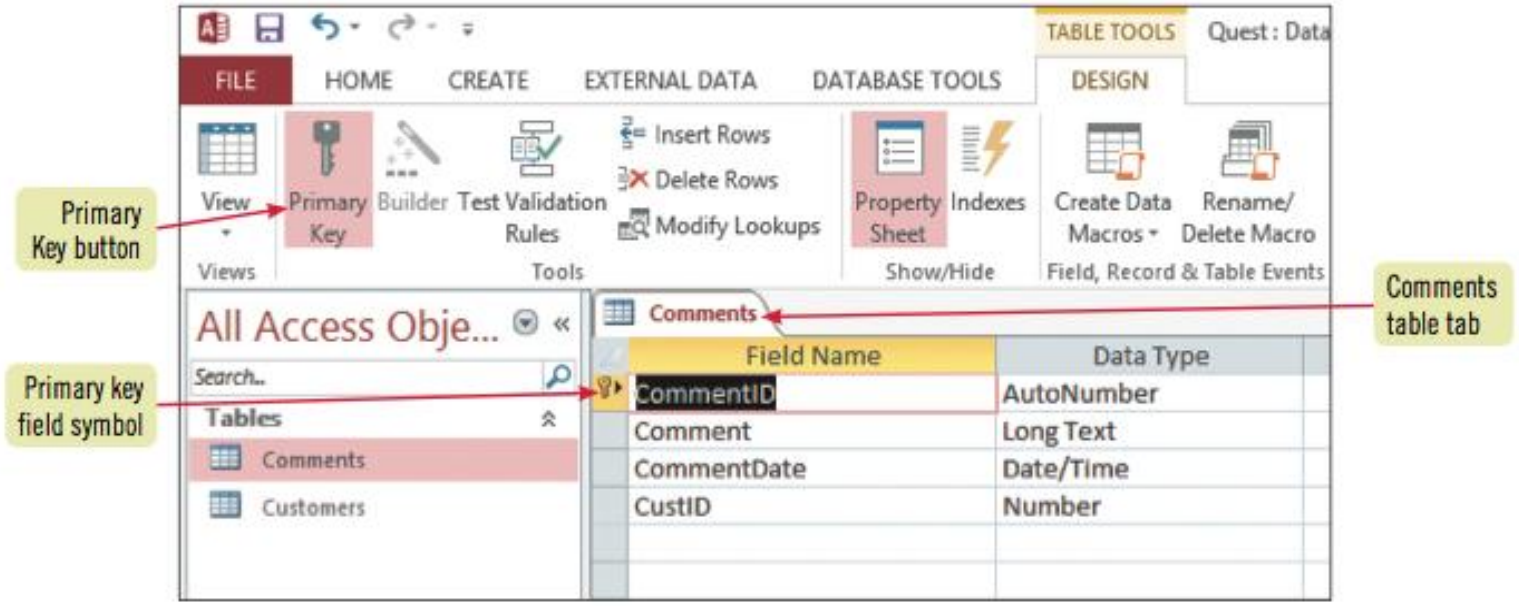
Important Database Terminology

term	description
Field	A specific piece or category of data such as a first name, last name, city, state, or phone number
Record	A group of related fields that describes a person, place, thing, or transaction such as a customer, location, product, or sale
Key field	A field that contains unique information for each record, such as a customer number for a customer
Table	A collection of records for a single subject such as Customers, Products, or Sales
Relational database	Multiple tables that are linked together to address a business process such as managing tours, sales, and customers at Quest Specialty Travel
Objects	The parts of an Access database that help you view, edit, manage, and analyze the data: **tables**, **queries**, **forms**, **reports**, **macros**, and **modules**

Create Primary Keys

- **Primary key field**: Contains data that uniquely identifies each record; no 2 records can have the same entry in this field
- Primary key field relates one table to another in a **one-to-many relationship**; one record in the 1st table is related to many records in the 2nd table

Designating the Primary Key Field



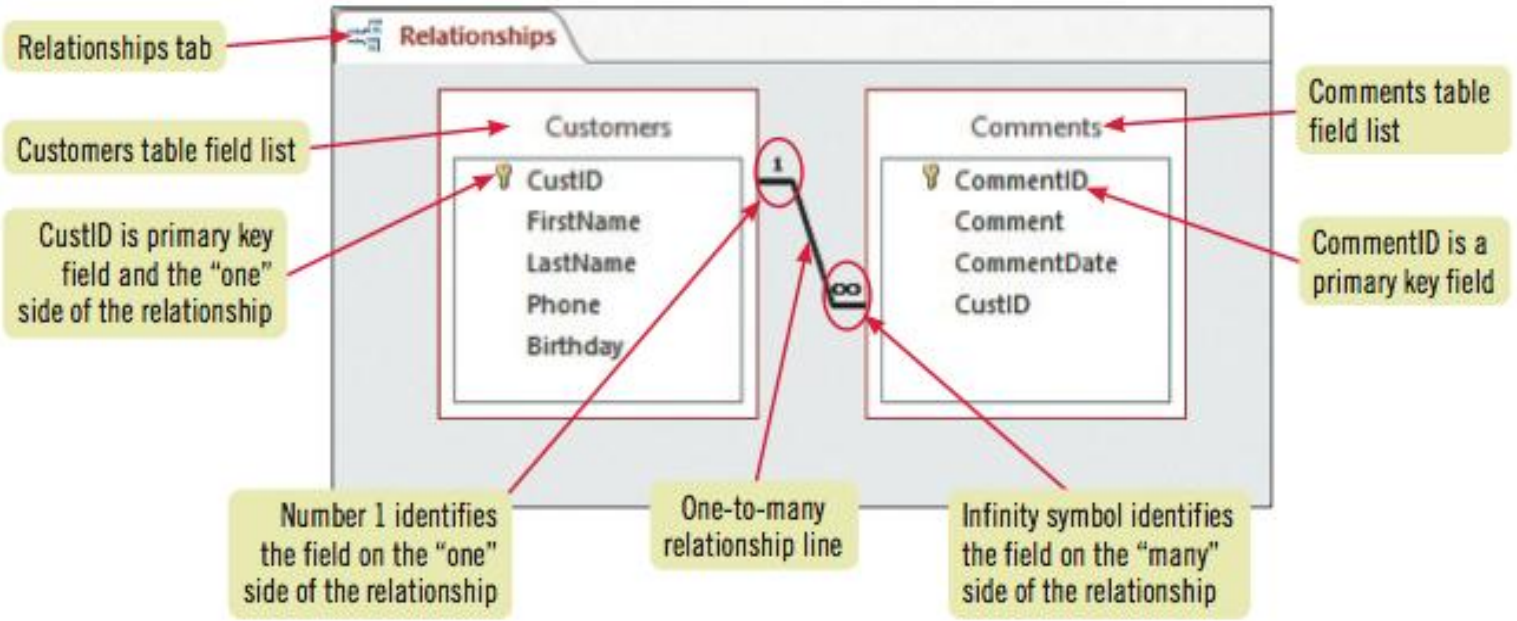
Learning about field properties

- Properties = characteristics of a field
- 2 properties required for every field: Field Name and Data Type
- You can add other properties, such as Field Size, Format and Caption
- More properties = more restrictions = more data entry accuracy

Relate Two Tables

- Tables must be linked before queries, forms, or reports can be created that utilize fields from more than one table
- Tables are linked in a **one-to-many relationship**

Linking Tables



Enter Data

- Focus:
  - Refers to which data would be entered or edited if you started typing

Moving the Focus to Navigate Data

Options

- [Tab]
- [Enter]
- Navigation buttons:
  -  Previous record
  -  Next record

Navigation mode keyboard shortcuts

shortcut key	moves to the
[Tab], [Enter], or [→]	Next field of the current record
[Shift][Tab] or [←]	Previous field of the current record
[Home]	First field of the current record
[End]	Last field of the current record
[Ctrl][Home] or [F5]	First field of the first record
[Ctrl][End]	Last field of the last record
[↑]	Current field of the previous record
[↓]	Current field of the next record

Edit Data

- Access automatically saves **new data** and **changes to existing data** as soon as you move to another record OR close the datasheet
- To change the contents of an existing record, navigate to the field you want to change and type the new information

Edit mode keyboard shortcuts

editing keystroke	action
[Backspace]	Deletes one character to the left of the insertion point
[Delete]	Deletes one character to the right of the insertion point
[F2]	Switches between Edit and Navigation mode
[Esc]	Undoes the change to the current field
[Esc][Esc]	Undoes all changes to the current record
[F7]	Starts the spell-check feature
[Ctrl][']	Inserts the value from the same field in the previous record into the current field
[Ctrl][;]	Inserts the current date in a Date field

Resizing & Moving Datasheet Columns

- Click and drag column separators to manually widen or narrow columns
- Double-click the column separator to automatically adjust width to the widest entry in the field
- Click the field name and drag it left or right to move a column

Summary

- Understanding relational databases
- Exploring databases
- Creating databases
- Creating tables
- Creating primary keys
- Relating two tables
- Entering and editing data