FastCourse Series

Access Chapter 1: Getting Started with Tables

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Learning Objectives

- After studying this chapter, you will be able to:
  - Identify database objects and the functions they perform
  - Identify table features
  - Create database tables
  - Identify and choose data types
  - Sort and filter table records
  - Import a data source
  - Establish a relationship between two database tables

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Introducing Databases

- You probably use them daily.
- They are a collection of related data files and tables.
- Types include:
  - Those that are custom designed for large organizations
  - Those that are industry specific and use real-time data
  - Those that are designed for small business customer-order tracking

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Introducing Databases (cont.)

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Database Objects and the Access Window

- The Access window contains:
  - The Ribbon
  - The Navigation pane – displays list of objects
  - The work area – create/modify database objects
- Database objects include tables, forms, queries, and reports.

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Database Object Types

- Tables – View, enter, edit, delete, or view data.
- Forms – View, enter, edit, delete, or add one record at a time.
- Queries – Search, sort, and perform calculations.
- Reports – Display, group, and summarize data.

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Introducing Tables

- Tables are comprised of:
  - Data – units of information organized for reference or analysis
  - Fields – the smallest meaningful unit of information about one person, place, or item (columns)
  - Records – a collection of related fields (rows)

Field

Record

Customers

CustID	Last Name	First Name	Street Address	City	ST	ZIP	Telephone
AbramsJ	Abrams	John	1210 West Pier Wa	Palmetto	FL	34620	(941) 555-9902
AndersM	Anders	Mark	205 Montana St	Bradenton	FL	34211	(941) 555-2209
BlaserH	Blaser	Helen	600 Fowler	Tampa	FL	33802	(941) 555-1991
DavisP	Davis	Peter	65 Terracotta Way	Sarasota	FL	34024	(941) 555-1792
FleetwoodC	Fleetwood	Candace	92 Highland St	Sarasota	FL	34023	(941) 555-9256
HassanA	Hassan	Ahmed	2301 Proctor Rd	Sarasota	FL	34048	(941) 555-0809

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Introducing Tables (cont.)

- Data types enable instant field formatting.
- A primary key field:
  - Uniquely identifies each record in a table
  - Is the starting point for a database
- Design View offers intuitive options for creating the database.

Table1

Field Name	Data Type	Description (Optional)
CustID	Short Text	Customer Last Name and First Initial
CustLastName	Short Text	
CustFirstName	Short Text	
CustStreetAddress	Short Text	
CustCity	Short Text	
CustState	Short Text	2 character state abbreviation
CustZip	Short Text	5 digit ZIP code
CustPhone	Short Text	Area code and number
CustEmail	Hyperlink	
Notes	Long Text	Special comments

Field Properties table

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Sorting and Filtering Table Data

- Helps you locate and retrieve data quickly
- Sorting:
  - Automatically sorts on the primary field
  - Allows you to change the sort structure, if necessary
  - Allows you to sort on more than one field
- Filtering:
  - Displays the specified subset of records

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Importing Data Sources

- Import data using Import & Link.
- Imported data becomes part of the database.
- Excel workbooks are the most common source.

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Relational Databases

- Problems with early database programs:
  - The data was stored in a large, flat file similar to a worksheet.
  - Repetitive entries caused data errors and inconsistencies.

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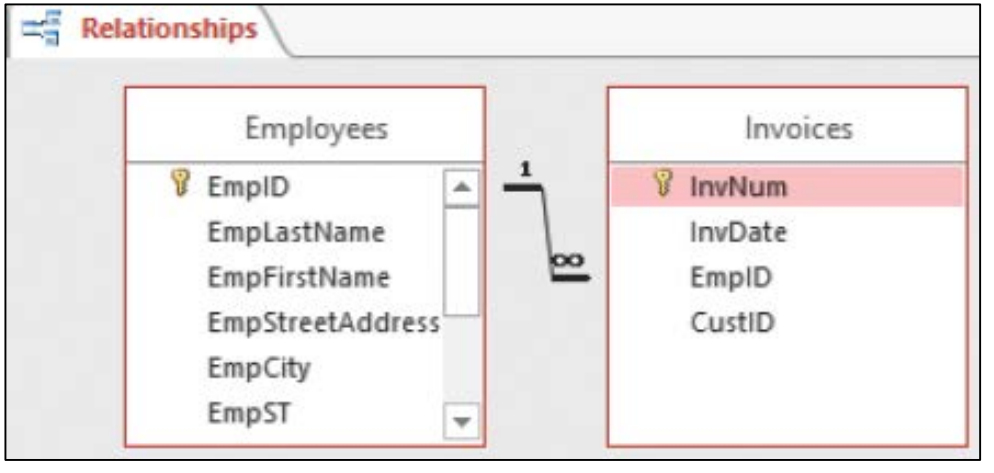
Relational Databases (cont.)

- Relational databases:
  - Link tables together using primary fields
  - Types include one-to-many database relationships or the lesser-used one-to-one or many-to-many relationships



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Relational Databases (cont.)

- Referential integrity:
  - Prevents changes to related fields
  - Requires data types of related fields to be the same or compatible
- Data normalization:
  - Eliminates data duplication
  - Decreases errors and inconsistencies
  - Streamlines information

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