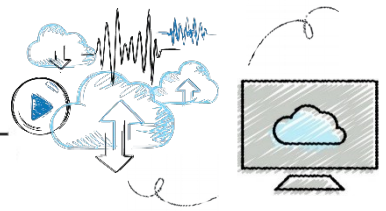
Access 2016 Module 1

Getting Started with Access 2016



Module Objectives

- Understand relational databases
- Explore a database
- Create a database
- Create a table
- Create primary keys
- Relate two tables
- Enter data
- Edit data

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Understand Relational Databases (Slide 1 of 3)

- **Relational database software**
  - Data organized into lists
  - Examples – customers, products, vendors, employees
- Access provides tools that allow
  - Sorting, grouping, analyzing and reporting data in many different ways

Understand Relational Databases (Slide 2 of 3)

- Duplicate data minimized
- Information is more accurate, reliable and consistent
- 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

Understand Relational Databases (Slide 3 of 3)

Excel vs. Access Comparison

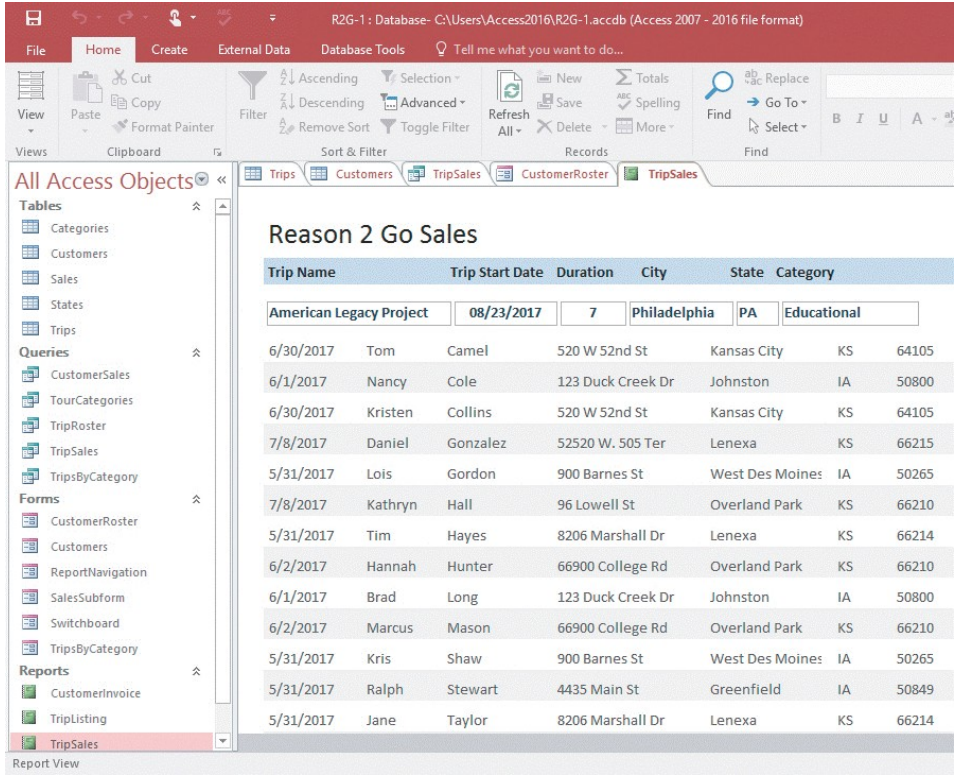
feature	Excel	Access
Layout	Provides only a tabular spreadsheet layout	Provides tabular layouts as well as the ability to create customized data entry screens called forms
Storage	Restricted to a file's limitations	Virtually unlimited when coupled with the ability to use Microsoft SQL Server to store data
Linked tables	Manages single lists of information—no relational database capabilities	Relates lists of information to reduce data redundancy and create a powerful 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 only one spreadsheet layout	Provides the ability to create an unlimited number of data entry forms

Explore a Database (Slide 1 of 3)

- Can start Access in different ways
- Database contains different **objects**
  - Tables
  - Queries
  - Forms
  - Reports
- **Navigation Pane** displays objects

Explore a Database (Slide 2 of 3)

Objects in a database



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Explore a Database (Slide 3 of 3)

Access objects and their purpose

object	icon	purpose
Table		Contains all of the data within the database in a spreadsheet-like view called Datasheet 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; create a query when you have a question about the data
Form		Provides an easy-to-use data entry screen
Report		Provides a professional presentation of data with headers, footers, graphics, and calculations on groups of records

Create a Database (Slide 1 of 2)

- Use an Access **template** (sample database) or create a blank database
- **Table Design View**
  - provides the most options for defining fields
- **Datasheet View**
  - spreadsheet-like view of the data in a table
- **Data type**
  - Characteristic of a field

Create a Database (Slide 2 of 2)

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 less than 255 characters
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 email addresses or links to local files
Attachment	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 (Slide 1 of 2)

- Essential tasks
  - Define the fields
  - Select data type for each field (e.g., numbers, text, dates)
  - Name the table
  - Determine how the table will participate in the relational database
- Identify **primary key**
  - Field that contains unique data for each record

Create a Table (Slide 2 of 2)

Important database terminology

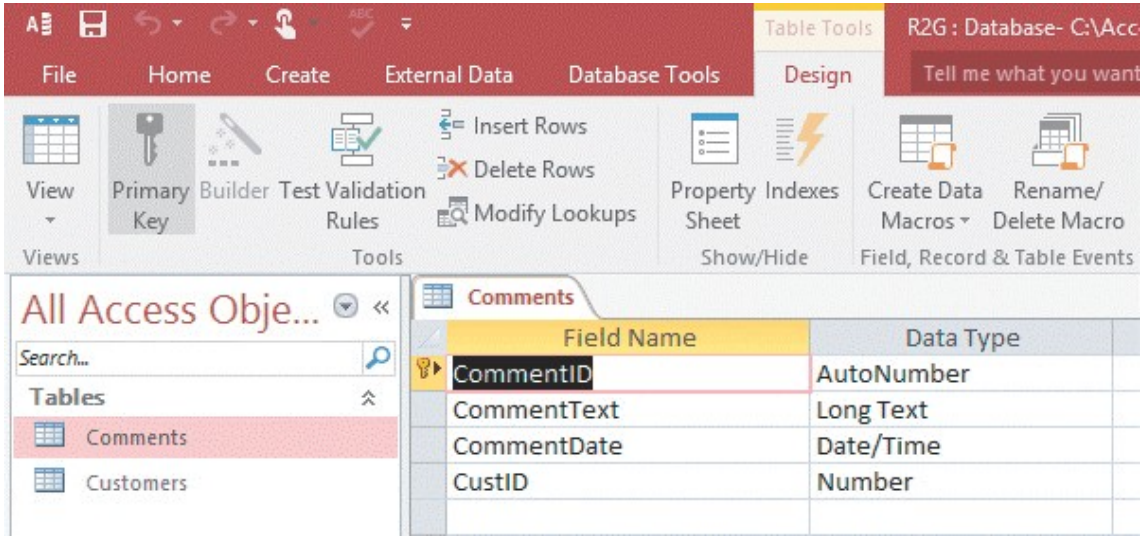
term	description
Field	A specific piece or category of data such as a first name, last name, city, state, or phone number
Record	A group of related fields that describes a person, place, thing, or transaction such as a customer, location, product, or sale
Key field	A field that contains unique information 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 trips, sales, and customers at Reason 2 Go
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 (Slide 1 of 2)

- **Primary key field**
  - Contains data that uniquely identifies each record
    - No two records can have the exact same entry in primary key field
  - Helps relate one table to another
    - **One-to-many relationship** (one record in one table relates to many records in another table)

Create Primary Keys (Slide 2 of 2)

Creating a primary key field

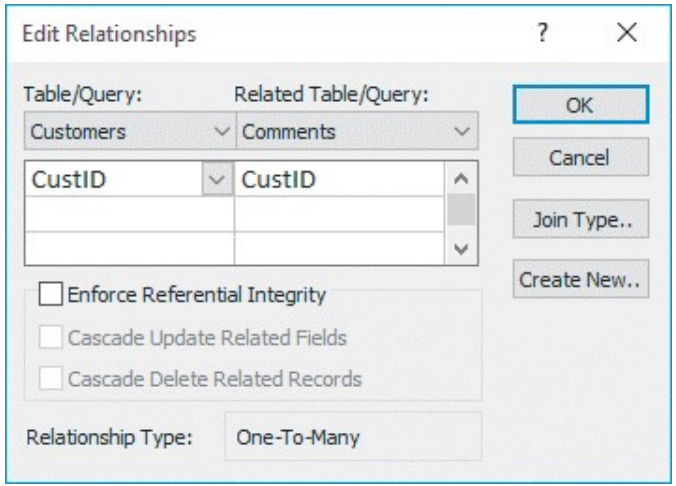


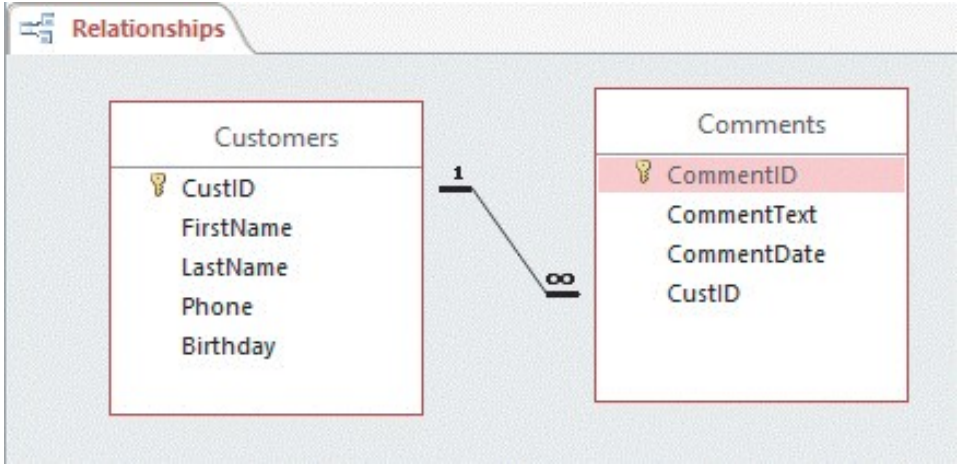
Relate Two Tables (Slide 1 of 2)

- Create a one-to-many relationship
  - Use a common field to relate tables
  - Primary key is the “one” side of the relationship
  - **Foreign key** is the “many” side of the relationship
  - **One-to-many line** shows the link with a “1” on the one side and an infinity symbol on the many side
- In Datasheet view, **subdatasheet** shows related records (records in the many table)

Relate Two Tables (Slide 2 of 2)

Creating a one-to-many relationship





Enter Data (Slide 1 of 2)

- Focus
  - Which data you would enter or edit if you started typing
- Options for changing focus
  - [Tab]
  - [Enter]
  - Navigation buttons:

    Previous record

    Next record

Enter Data (Slide 2 of 2)

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

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Edit Data (Slide 1 of 2)

- 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
- Press [Esc]
  - Once to remove the current field's editing changes
  - Twice to remove all changes to current record

Edit Data (Slide 2 of 2)

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