Microsoft

MOS 2016
Study Guide

John Pierce

EXAM 77-730

Microsoft Access

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MOS 2016 Study Guide for Microsoft Access

John Pierce

Microsoft Office Specialist
Exam 77-730

MOS 2016 Study Guide for Microsoft Access
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Introduction

The Microsoft Office Specialist (MOS) certification program has been designed to validate your knowledge of and ability to use programs in the Microsoft Office 2016 suite of programs. This book has been designed to guide you in studying the types of tasks you are likely to be required to demonstrate in Exam 77-730, "Access 2016: Core Database Management, Manipulation, and Query Skills."

Who this book is for

MOS 2016 Study Guide for Microsoft Access is designed for experienced computer users seeking Microsoft Office Specialist certification in Access 2016.

MOS exams for individual programs are practical rather than theoretical. You must demonstrate that you can complete certain tasks or projects rather than simply answer questions about program features. The successful MOS certification candidate will have at least six months of experience using all aspects of the program on a regular basis; for example, using Access at work or school to create and manage databases, build database tables, import and export data, design and run queries, create and format forms, and design detail and summary reports.

As a certification candidate, you probably have a lot of experience with the program you want to become certified in. Many of the procedures described in this book will be familiar to you; others might not be. Read through each study section and ensure that you are familiar with the procedures, concepts, and tools discussed. In some cases, images depict the tools you will use to perform procedures related to the skill set. Study the images and ensure that you are familiar with the options available for each tool.

How this book is organized

The exam coverage is divided into chapters representing broad skill sets that correlate to the functional groups covered by the exam. Each chapter is divided into sections addressing groups of related skills that correlate to the exam objectives. Each section includes review information, generic procedures, and practice tasks you can complete on your own while studying. We provide practice files you can use to work through the practice tasks and result files you can use to check your work. You can practice the generic procedures in this book by using the practice files supplied or by using your own files.

Throughout this book, you will find Exam Strategy tips that present information about the scope of study that is necessary to ensure that you achieve mastery of a skill set and are successful in your certification effort.

Download the practice files

Before you can complete the practice tasks in this book, you need to copy the book's practice files and result files to your computer. Download the compressed (zipped) folder from the following page, and extract the files from it to a folder (such as your Documents folder) on your computer:

https://aka.ms/MOSAccess2016/downloads

IMPORTANT The Access 2016 program is not available from this website. You should purchase and install that program before using this book.

You will save the completed versions of practice files that you modify while working through the practice tasks in this book. If you later want to repeat the practice tasks, you can download the original practice files again.

The following table lists the practice files provided for this book.

Folder and objective group	**Practice files**	**Result files**
MOSAccess2016\Objective1 Create and manage databases	Access_1-1.xlsx Access_1-2.accdb Access_1-3.accdb Access_1-4.accdb Access_1-5.accdb	Access_1-1_results.accdb Access_1-2_results.accdb Access_1-3_results.accdb Access_1-4_results.accdb Access_1-5_results.accdb
MOSAccess2016\Objective2 Build tables	Access_2-1a.accdb Access_2-1b.accdb Access_2-1c.txt Access_2-1d.accdb Access_2-2.accdb Access_2-3a.accdb Access_2-3b.xlsx Access_2-4.accdb	Access_2-1_results.accdb Access_2-2_results.accdb Access_2-3_results.accdb Access_2-4_results.accdb
MOSAccess2016\Objective3 Create queries	Access_3-1.accdb Access_3-2.accdb Access_3-3.accdb	Access_3-1_results.accdb Access_3-2_results.accdb Access_3-3_results.accdb
MOSAccess2016\Objective4 Create forms	Access_4-1.accdb Access_4-2.accdb Access_4-3.accdb Access_4-3a.png	Access_4-1_results.accdb Access_4-2_results.accdb Access_4-3_results.accdb
MOSAccess2016\Objective5 Create reports	Access_5-1.accdb Access_5-2.accdb Access_5-3.accdb	Access_5-1_results.accdb Access_5-2_results.accdb Access_5-3_results.accdb

Adapt procedure steps

This book contains many images of user interface elements that you'll work with while performing tasks in Access on a Windows computer. Depending on your screen resolution or program window width, the Access ribbon on your screen might look different from that shown in this book. (If you turn on Touch mode, the ribbon displays significantly fewer commands than in Mouse mode.) As a result, procedural instructions that involve the ribbon might require a little adaptation.

Simple procedural instructions use this format:

➜ On the **Home** tab, in the **Sort & Filter** group, click the **Filter** button.

If the command is in a list, our instructions use this format:

➜ On the **Home** tab, in the **Sort & Filter** group, click **Advanced Filter Options** and then, in the **Advanced Filter Options** list, click **Filter By Form**.

If differences between your display settings and ours cause a button to appear differently on your screen from how it does in this book, you can easily adapt the steps to locate the command. First click the specified tab, and then locate the specified group. If a group has been collapsed into a group list or under a group button, click the list or button to display the group's commands. If you can't immediately identify the button you want, point to likely candidates to display their names in ScreenTips.

The instructions in this book assume that you're interacting with on-screen elements on your computer by clicking (with a mouse, touchpad, or other hardware device). If you're using a different method—for example, if your computer has a touchscreen interface and you're tapping the screen (with your finger or a stylus)—substitute the applicable tapping action when you interact with a user interface element.

Instructions in this book refer to user interface elements that you click or tap on the screen as buttons, and to physical buttons that you press on a keyboard as keys, to conform to the standard terminology used in documentation for these products.

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Taking a Microsoft Office Specialist exam

Desktop computing proficiency is increasingly important in today’s business world. When screening, hiring, and training employees, employers can feel reassured by relying on the objectivity and consistency of technology certification to ensure the competence of their workforce. As an employee or job seeker, you can use technology certification to prove that you already have the skills you need to succeed, saving current and future employers the time and expense of training you.

Microsoft Office Specialist certification

Microsoft Office Specialist certification is designed to assist students and information workers in validating their skills with Office programs. The following certification paths are available:

- A Microsoft Office Specialist (MOS) is an individual who has demonstrated proficiency by passing a certification exam in one or more Office programs, including Microsoft Word, Excel, PowerPoint, Outlook, or Access.
- A Microsoft Office Specialist Expert (MOS Expert) is an individual who has taken his or her knowledge of Office to the next level and has demonstrated by passing Core and Expert certification exams that he or she has mastered the more advanced features of Word or Excel.
- A Microsoft Office Specialist Master (MOS Master) is an individual who has demonstrated a broader knowledge of Office skills by passing the Word Core and Expert exams, the Excel Core and Expert exams, the PowerPoint exam, and the Access or Outlook exam.

Selecting a certification path

When deciding which certifications you would like to pursue, assess the following:

- The program and program version(s) with which you are familiar
- The length of time you have used the program and how frequently you use it
- Whether you have had formal or informal training in the use of that program
- Whether you use most or all of the available program features
- Whether you are considered a go-to resource by business associates, friends, and family members who have difficulty with the program

Candidates for MOS certification are expected to successfully complete a wide range of standard business tasks. Successful candidates generally have six or more months of experience with the specific Office program, including either formal, instructor-led training or self-study using MOS-approved books, guides, or interactive computer-based materials.

Candidates for MOS Expert and MOS Master certification are expected to successfully complete more complex tasks that involve using the advanced functionality of the program. Successful candidates generally have at least six months, and might have several years, of experience with the programs, including formal, instructor-led training or self-study using MOS-approved materials.

Test-taking tips

Every MOS certification exam is developed from a set of exam skill standards (referred to as the *objective domain*) that are derived from studies of how the Office programs are used in the workplace. Because these skill standards dictate the scope of each exam, they provide critical information about how to prepare for certification. This book follows the structure of the published exam objectives.

See Also For more information about the book structure, see "How this book is organized" in the introduction.

The MOS certification exams are performance based and require you to complete business-related tasks in the program for which you are seeking certification. For example, you might be presented with a document and told to insert and format additional document elements. Your score on the exam reflects how many of the requested tasks you complete within the allotted time.

Here is some helpful information about taking the exam:

- Keep track of the time. Your exam time does not officially begin until after you finish reading the instructions provided at the beginning of the exam. During the exam, the amount of time remaining is shown in the exam instruction window. You can't pause the exam after you start it.
- Pace yourself. At the beginning of the exam, you will receive information about the tasks that are included in the exam. During the exam, the number of completed and remaining tasks is shown in the exam instruction window.
- Read the exam instructions carefully before beginning. Follow all the instructions provided completely and accurately.
- If you have difficulty performing a task, you can restart it without affecting the result of any completed tasks, or you can skip the task and come back to it after you finish the other tasks on the exam.
- Enter requested information as it appears in the instructions, but without duplicating the formatting unless you are specifically instructed to do so. For example, the text and values you are asked to enter might appear in the instructions in bold and underlined text, but you should enter the information without applying these formats.
- Close all dialog boxes before proceeding to the next exam item unless you are specifically instructed not to do so.
- Don't close task panes before proceeding to the next exam item unless you are specifically instructed to do so.

- If you are asked to print a document, worksheet, chart, report, or slide, perform the task, but be aware that nothing will actually be printed.
- Don't worry about extra keystrokes or mouse clicks. Your work is scored based on its result, not on the method you use to achieve that result (unless a specific method is indicated in the instructions).
- If a computer problem occurs during the exam (for example, if the exam does not respond or the mouse no longer functions) or if a power outage occurs, contact a testing center administrator immediately. The administrator will restart the computer and return the exam to the point where the interruption occurred, with your score intact.

Exam Strategy This book includes special tips for effectively studying for the Microsoft Office Specialist exams in Exam Strategy paragraphs such as this one.

Certification benefits

At the conclusion of the exam, you will receive a score report, indicating whether you passed the exam. If your score meets or exceeds the passing standard (the minimum required score), you will be contacted by email by the Microsoft Certification Program team. The email message you receive will include your Microsoft Certification ID and links to online resources, including the Microsoft Certified Professional site. On this site, you can download or order a printed certificate, create a virtual business card, order an ID card, review and share your certification transcript, access the Logo Builder, and access other useful and interesting resources, including special offers from Microsoft and affiliated companies.

Depending on the level of certification you achieve, you will qualify to display one of three logos on your business card and other personal promotional materials. These logos attest to the fact that you are proficient in the applications or cross-application skills necessary to achieve the certification. Using the Logo Builder, you can create a personalized certification logo that includes the MOS logo and the specific programs in which you have achieved certification. If you achieve MOS certification in multiple programs, you can include multiple certifications in one logo.

For more information

To learn more about the Microsoft Office Specialist exams and related courseware, visit:

http://www.certiport.com/mos

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Microsoft Office Specialist

Exam 77-730

Access 2016: Core Database Management, Manipulation, and Query Skills

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This book covers the skills you need to have for certification as a Microsoft Office Specialist in Access 2016. Specifically, you need to be able to complete tasks that demonstrate the following skills:

1. Create and manage databases
2. Build tables
3. Create queries
4. Create forms
5. Create reports

With these skills, you can create, populate, and manage the types of databases most commonly used in a business environment.

Prerequisites

We assume that you have been working with Access 2016 for at least six months and that you know how to carry out fundamental tasks that are not specifically mentioned in the objectives for this Microsoft Office Specialist exam.

The certification exam and the content of this book address the processes of designing and building Access databases. We assume that you are familiar with the Microsoft Office ribbon and that you understand basic Access features—for example, that you know how to enter and edit data. We also assume you are familiar with the definition and function of relational databases and database objects such as tables and forms. To provide context and an opportunity for review, the following list provides brief explanations of five important terms:

- **Table** Defines the data stored in a database. Tables are composed of fields, and each field is defined as a specific data type (text, number, date, or another data type). Each field also has certain properties. For example, you can specify that a field is required. You can also define the size of a field (such as the maximum number of characters a field can contain). Users of a database fill in fields (and must fill in required fields) with values to create a record in the database. In most tables, each record is identified by a unique value called a *primary key*, which might be a single field (such as a product ID) or a combination of fields.
- **Relationship** Helps maintain the integrity of the information in a database and reduce data redundancy. You can create several types of relationships between tables in an Access database. In a one-to-many relationship, a record in one table can be related to one or many records in another. You can also create one-to-one relationships and many-to-many relationships. Relationships are created by linking a table's foreign key (such as a customer ID field in an order table) with another table's primary key (the customer ID field in the customer table). Relationships protect data integrity by preventing you from creating orphan records (for example, an order with no customer). Relationships help reduce data redundancy by letting you store information in separate tables that you link together. For example, you can create a customer table and then relate each order in an order table to the record for a specific customer. This prevents you from having to enter a custom record for each separate order.

- **Query** Can be used to select records that meet specific criteria and to perform actions such as updating a group of records. To build a select query, you add fields from one or more tables and then define criteria that Access uses to retrieve the records you want to view. For example, you might want to retrieve records with a certain value in a date field (all records created after 1/1/2017, for example) or records associated with a specific project. Using criteria, you can also create and run action queries that insert, update, or delete selected records.
- **Form** Used to display, enter, and edit data. Forms are often bound to tables (or to queries) that serve as the form's record source. Forms use controls such as text boxes, check boxes, and list boxes to provide a user interface for a database. Forms can also be used to confirm and execute database operations and to navigate from one database object to another. Access provides several built-in form designs, a gallery of form controls, and tools you use to design and lay out a form.
- **Report** Used to share and present data and to summarize data for a specific field or fields. You might print reports for a meeting or distribute them electronically as PDF files or in email.

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Objective group 1

Create and manage databases

The skills tested in this section of the Microsoft Office Specialist exam for Microsoft Access 2016 relate to creating and managing databases. Specifically, the following objectives are associated with this set of skills:

- **1.1** Create and modify databases
- **1.2** Manage relationships and keys
- **1.3** Navigate through a database
- **1.4** Protect and maintain databases
- **1.5** Print and export data

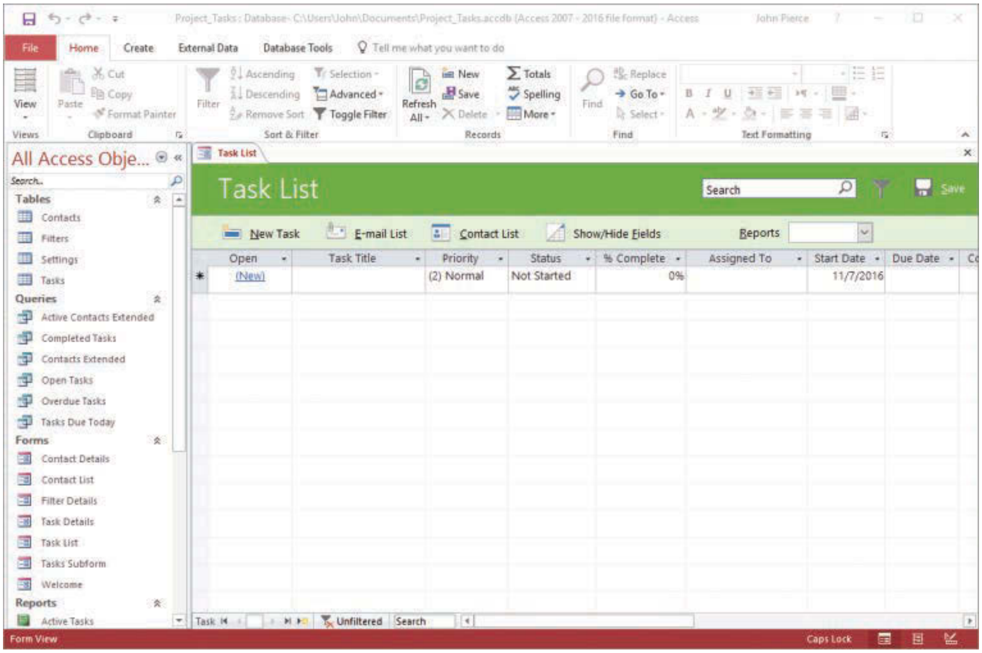
Many of the operations and tasks involved in creating and managing Access databases originate in the Backstage view. For example, the New page includes templates that you can use to create a database, and a search box that you can use to locate other templates. The Info page provides commands that help you maintain and protect a database. Beyond the specific commands you use, Access also offers a way to back up a database, which is a critical step in ensuring that data is available in the event of an accident or a security incident. By taking steps to make database navigation clear and logical, you help ensure that the database's users have an easy time keeping the data current.

This chapter guides you in studying ways to create and modify databases, manage relationships and keys, navigate through a database, protect and maintain a database, and print and export data.

To complete the practice tasks in this chapter, you need the practice files contained in the **MOSAccess2016\Objective1** practice file folder. For more information, see "Download the practice files" in this book's introduction.

Objective 1.1: Create and modify databases

When you start Access without opening a recently used database or double-clicking a database file, the program opens to its startup screen. The startup screen displays a list of recent files and a set of thumbnails for templates on which you can base a variety of desktop databases or Access web apps (a type of database stored in the cloud). Access also provides an option for creating a blank desktop database or a custom (blank) web app.


Project_Tasks : Database- C:\Users\John\Documents\Project_Tasks.accdb (Access 2007 - 2016 file format) - Access
John Pierce
File
Home
Create
External Data
Database Tools
Tell me what you want to do
View
Paste
Cut
Copy
Format Painter
Filter
Ascending
Descending
Remove Sort
Selection
Advanced
Toggle Filter
Refresh All
New
Save
Delete
Totals
Spelling
More
Find
Replace
Go To
Select
Views
Clipboard
Sort & Filter
Records
Find
Text Formatting
All Access Obje...
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Tables
Contacts
Filters
Settings
Tasks
Queries
Active Contacts Extended
Completed Tasks
Contacts Extended
Open Tasks
Overdue Tasks
Tasks Due Today
Forms
Contact Details
Contact List
Filter Details
Task Details
Task List
Tasks Subform
Welcome
Reports
Active Tasks
Task List
Task List
Search
Save
New Task
E-mail List
Contact List
Show/Hide Fields
Reports
Task
Unfiltered
Search
Form View
Caps Lock

Open	Task Title	Priority	Status	% Complete	Assigned To	Start Date	Due Date
(New)		(2) Normal	Not Started	0%		11/7/2016	

Database templates such as the Task Management template provide a set of database objects you can build on

This topic provides details about how to create a blank desktop database, how to create a database from a template, how to import data to build a database, and how to delete a database object.

Tip On the General page of the Access Options dialog box, you can set options for the default file format for a blank database and the default database folder.

Create databases

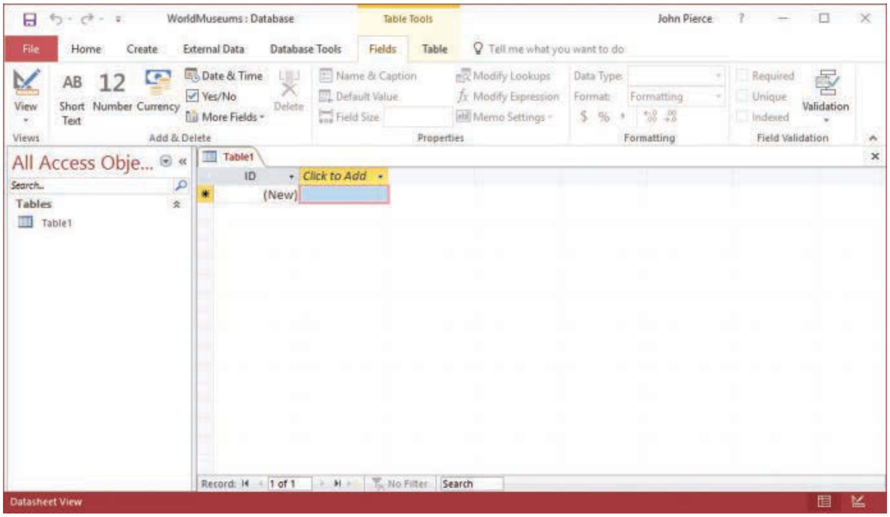
Access databases are made up of database objects: tables, queries, forms, reports, and supporting objects such as macros. Templates provide some or all of the database objects you need to manage the type of data the template is designed to support.

When you create a blank database, Access provides a single table by default. You can set up and define other database objects to expand the databases you create. By default, Access names new database files by using Database*n*, where *n* is a number such as 1 or 2. You can enter a more descriptive name when you create the database.

Access provides templates for desktop databases and for what Access calls *SharePoint web apps*. (The thumbnails for web apps display a globe.) When you work with an Access web app, you work in a web browser, but you design and modify the web app in Access. You can share the data in a web app by using an instance of SharePoint.

Exam Strategy Exam 77-730, "Access 2016: Core Database Management, Manipulation, and Query Skills," does not require you to demonstrate that you can create an Access web app.

A blank desktop database opens with the Navigation Pane open. In a blank database, Access creates a default table, called *Table1*, which serves as a starting point. Access displays the default Table1 in what Access refers to as *Datasheet view*. When a table is displayed in Datasheet view, you can define field names and data types and insert records. You can also display a table in *Design view*. In Design view, you work directly with the structure of the table (the table's field names and properties) instead of with the records stored in the table.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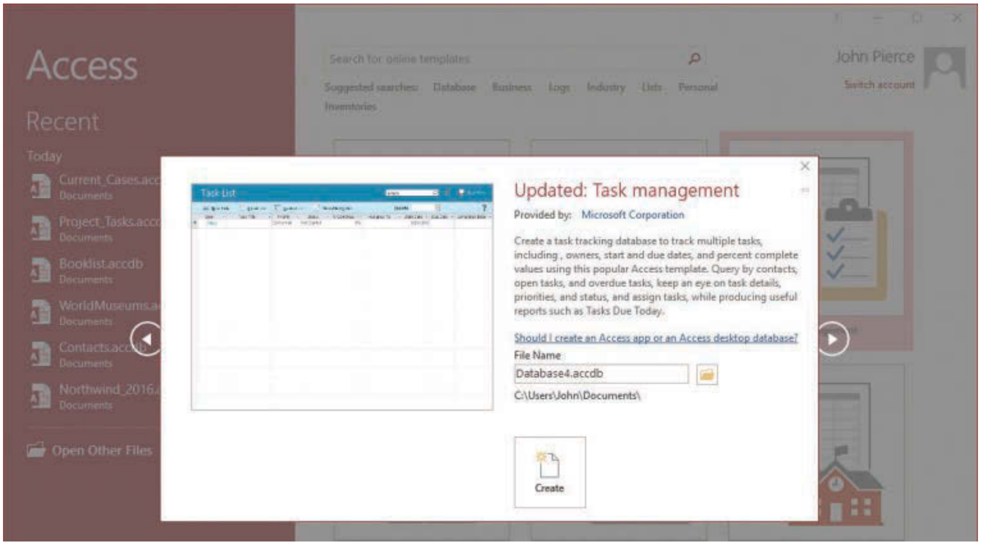
Create
External Data
Database Tools
Fields
Table
Tell me what you want to do
View
AB
Short Text
12
Number
Currency
Date & Time
Yes/No
More Fields
Delete
Name & Caption
Default Value
Field Size
Modify Lookups
Modify Expression
Memo Settings
Data Type:
Format:
Formatting
$ %
Required
Unique
Indexed
Validation
Views
Add & Delete
Properties
Formatting
Field Validation
All Access Obje...
Search...
Tables
Table1
Table1
ID
Click to Add
(New)
Record: 1 of 1
No Filter
Search
Datasheet View

The Navigation Pane and Datasheet view of the default table in a blank desktop database

See Also For more information about how to display objects in the Navigation Pane, see "Display objects in the Navigation Pane" in "Objective 1.3: Navigate through a database."

The database templates represented by the set of thumbnails that appears on the startup page are not the only database templates you can use. At the top of the startup window is the search box, with the prompt "Search for online templates," and just below the search box are suggested search terms. You can search by using one of the suggestions or enter the search term you want to use in the search box to locate other templates that might be available.

When you select a thumbnail for a database template on the startup screen, Access displays a window that provides a description of the template.


Access
Recent
Today
Search for online templates
Suggested searches: Database Business Logs Industry Lists Personal Inventories
John Pierce
Switch account
Open Other Files
Task List
Create

Updated: Task management

Provided by: Microsoft Corporation

Create a task tracking database to track multiple tasks, including , owners, start and due dates, and percent complete values using this popular Access template. Query by contacts, open tasks, and overdue tasks, keep an eye on task details, priorities, and status, and assign tasks, while producing useful reports such as Tasks Due Today.

Should I create an Access app or an Access desktop database?

File Name: Database4.accdb

C:\Users\John\Documents\

Use the arrows that appear to the left and right of this window to browse through the set of templates

In most cases, when the new database opens, Access displays a table or opens a form for data input. Other objects in the database appear in the Navigation Pane. The Task Management desktop template, for example, includes tables that define records for contacts and tasks. This template also includes several queries used to analyze the data, forms for working with tasks and contacts, and several reports.

Tip Access 2016 includes the Northwind Traders sample database, which has been part of Access for many versions of the program. The Northwind Traders database provides examples of features, including a login dialog box, sample macros, and Microsoft Visual Basic for Application (VBA) modules. Use the search box to find the Northwind Traders database template (the thumbnail identifies the database as *Northwind 2007 sample*). Create the database, and then refer to it when you're looking for a solution, or just work with it from time to time to gain an understanding of the extent of the work you can do in Access.

To create a database from a template

1. On the startup screen or the **New** page of the Backstage view, click the thumbnail for the template you want to use.

   Tip Use the search box to locate a template that's not displayed. To create a blank desktop database, click the Blank Desktop Database thumbnail. (Depending on your installation of Access, the template might be named *Blank Database* or *Blank Desktop Database*.)

   ---

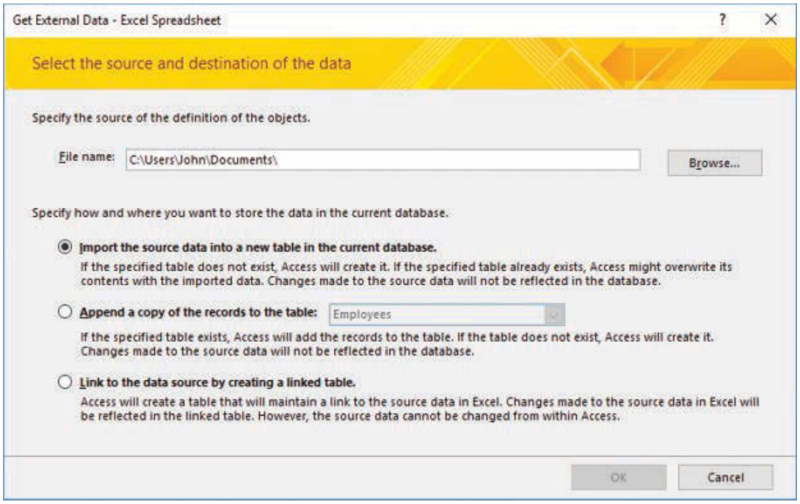
2. In the **File Name** box, enter a name for the database.
3. If you want to store the database in a location other than your Documents folder, do the following:
   a. Click the folder icon to the right of the **File Name** box.
   b. In the **File New Database** dialog box, navigate to the folder where you want to store the database.
   c. Click **OK**.
4. Click **Create**. Access downloads the template if necessary, and then creates and opens the new database.
5. If an Info bar below the ribbon displays a security warning, click **Enable Content**.

Import database objects and data

Whether you start with a blank database or base your database on a template, you can add some or all of your records by importing data. You can also define part of the structure of the data by, for example, using column headings in a spreadsheet as field names in a new table. Data sources you can use include Excel workbooks, other Access databases, text files, XML files, Microsoft SharePoint lists, and Microsoft Outlook folders.

When you import data, you generally have three options: importing the source data into a new table, appending the data to a table that's already defined, or linking to the data source to create a linked table. When you are importing objects and data as part of creating a database, you use the first of these options in most cases. Access often provides wizards that help you provide the information Access requires to import data from a specific format.

See Also For information about appending data to a table, see "Append records from external data," in "Objective 2.3: Manage records in tables." For information about creating linked tables, see "Create linked tables," in "Objective 2.1: Create tables."



Select the source and destination of the data

Specify the source of the definition of the objects.

File name: C:\Users\John\Documents\

Specify how and where you want to store the data in the current database.

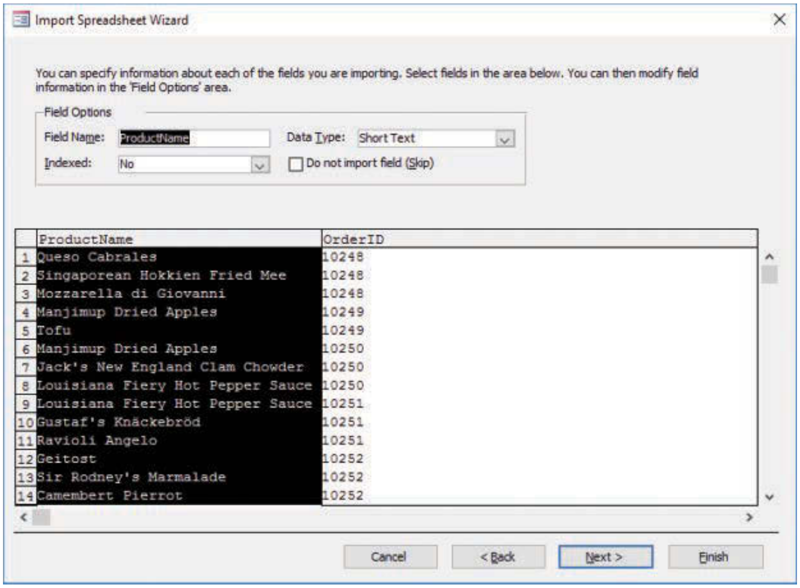
● **Import the source data into a new table in the current database.**
If the specified table does not exist, Access will create it. If the specified table already exists, Access might overwrite its contents with the imported data. Changes made to the source data will not be reflected in the database.

○ **Append a copy of the records to the table:** Employees
If the specified table exists, Access will add the records to the table. If the table does not exist, Access will create it. Changes made to the source data will not be reflected in the database.

○ **Link to the data source by creating a linked table.**
Access will create a table that will maintain a link to the source data in Excel. Changes made to the source data in Excel will be reflected in the linked table. However, the source data cannot be changed from within Access.

Options for importing data from an Excel spreadsheet

When you import data from Excel into a new table, the Import Spreadsheet Wizard prompts you for information to complete the operation. The wizard first prompts you for the worksheet or the named range you want to import. You can view the sample data that the wizard displays from the worksheet, but you cannot modify it. Access can use the column headings in the worksheet as field names in the database. You can also specify each field's data type and whether Access should index the field. The wizard's fourth page provides options for setting the table's primary key. Access can create an ID field in the table to use as the primary key, or you can select a primary key field or use no primary key in the new table.



You can specify information about each of the fields you are importing. Select fields in the area below. You can then modify field information in the 'Field Options' area.

Field Options

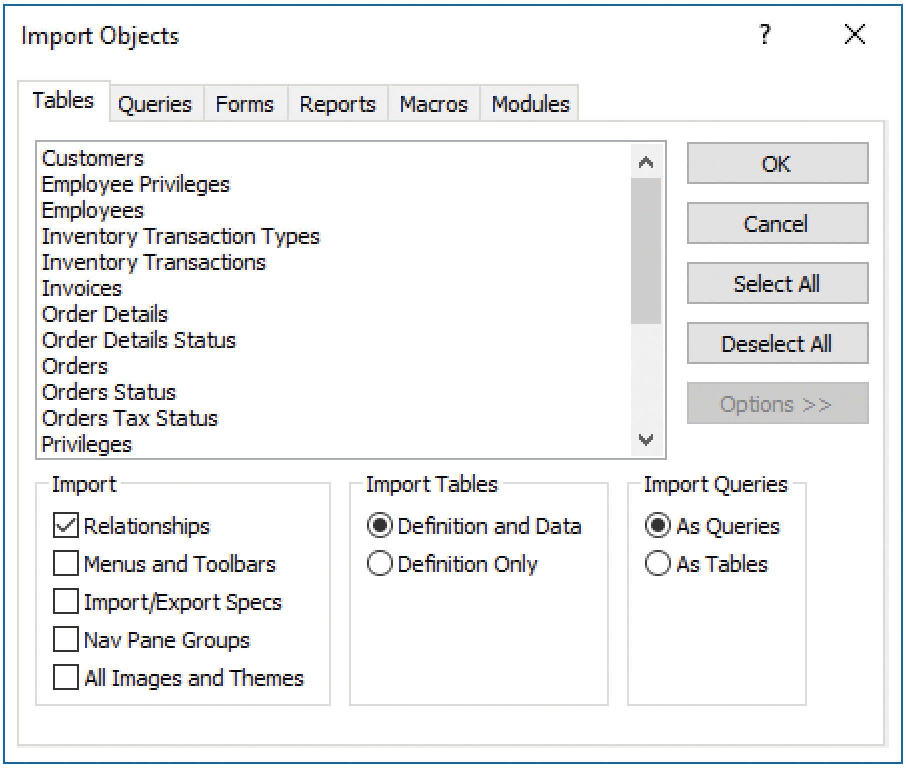
Field Name: ProductName
Data Type: Short Text
Indexed: No
☐ Do not import field (Skip)

	ProductName	OrderID
1	Queso Cabrales	10248
2	Singaporean Hokkien Fried Mee	10248
3	Mozzarella di Giovanni	10248
4	Manjimup Dried Apples	10249
5	Tofu	10249
6	Manjimup Dried Apples	10250
7	Jack's New England Clam Chowder	10250
8	Louisiana Fiery Hot Pepper Sauce	10250
9	Louisiana Fiery Hot Pepper Sauce	10251
10	Gustaf's Knäckebröd	10251
11	Ravioli Angelo	10251
12	Geitost	10252
13	Sir Rodney's Marmalade	10252
14	Camembert Pierrot	10252

Define field names and data types when you import data from a spreadsheet

See Also For information about running saved import and export operations, see "Objective 1.5: Print and export data."

When you import data from another Access database, you can import all the objects in that database or only the objects you select. The Import Objects dialog box shows the tables, queries, forms, reports, macros, and modules in the source database on separate tabs.



Customers
Employee Privileges
Employees
Inventory Transaction Types
Inventory Transactions
Invoices
Order Details
Order Details Status
Orders
Orders Status
Orders Tax Status
Privileges

Import
- ☑ Relationships
- ☐ Menus and Toolbars
- ☐ Import/Export Specs
- ☐ Nav Pane Groups
- ☐ All Images and Themes

Import Tables
- ● Definition and Data
- ○ Definition Only

Import Queries
- ● As Queries
- ○ As Tables

Import options control how the data is imported

The available import options are described in the following list:

- In the Import area, the Relationships option determines whether table relationships are preserved in the import operation. Selecting the Menus And Toolbars option imports any custom menus and toolbars from databases created in versions of Access prior to Access 2007. Selecting Import/Export Specs includes any import or export specifications defined in the source database. Selecting Nav Pane Groups imports any custom Navigation Pane groups set up in the source database, and selecting All Images And Themes includes these elements with the import.
- Options in the Import Tables area control whether you import only the definition of the database objects you select or both the definition of the object and the data. For example, you can import a table with its fields and other properties but

no data or include the data in the table. If you are importing objects to create a new database, you might want to import only the definition for a table in which you store project details, but you might want to include the data when you import a table that stores a set of tasks that is common to all projects.

- The options in the Import Queries area determine whether Access imports a query as a query or as a table. You might import a query as a table when the query's definition (the fields it includes) forms the basis of a table you want in a new database.

You can import data from a text file that uses the .txt, .csv, .tab, or .asc file name extension. When you import data from a text file, you work with the Import Text wizard. In the wizard, you first need to specify whether a character separates the fields of data in the text file (a delimited text file) or whether the data is arranged in fixed-width columns. For delimited text files, you need to specify which character is used as the delimiter; for fixed-width files, you indicate where column breaks should occur.

The later pages of the Import Text wizard are similar to those you work with in the Import Spreadsheet wizard. You can name fields, specify a data type, indicate whether the field should be indexed, and skip a specific field. The wizard also prompts you to set up a primary key for the table.

Three of the other formats you can import are as follows:

- **XML files** Access uses the structure of the XML file to determine table names and fields. Import options include Structure Only, Structure And Data, and Append Data To Existing Table(s).
- **SharePoint lists** You provide the URL for the SharePoint site, and you might need to provide your user name and password to gain access to the site. If Access connects to the site successfully, the lists stored on the site are displayed, and you can then select the list or lists that contain the data you want to import. If you select more than one list, each list is imported as a separate table. Access uses the list's name for the table name and the list's columns as the table's fields.
- **Outlook folders** Importing a contacts or tasks folder from Outlook is an effective way to add this information to a database. Access runs the Import Exchange/Outlook wizard when you import data from Outlook. The wizard prompts you to provide field names, specify data types, and set up indexes. You can skip fields if you don't want to import them.

To import data from Excel into a new table

1. On the **External Data** tab, in the **Import & Link** group, click **Excel**.
2. In the **Get External Data** dialog box, click **Import the source data into a new table in the current database**, click **Browse** to locate the source file, and then click **OK**.

3. In the **Import Spreadsheet Wizard**, select the worksheet or named range that has the data you want to import.
4. Click **Next**, and then work through the wizard to specify whether the first column of the data includes column headings, set field options, designate a primary key, and name the table.
5. Click **Finish** in the wizard. If you want to save the steps in this operation, in the **Get External Data** dialog box, select **Save import steps**.

To import data from another Access database

1. On the **External Data** tab, in the **Import & Link** group, click **Access**.
2. In the **Get External Data** dialog box, click **Browse** to locate the source database.
3. Click **Import tables, queries, forms, reports, macros, and modules into the current database**, and then click **OK**.
4. In the **Import Objects** dialog box, do either of the following:
    - To import all the objects from the source database, click **Select All**.
    - To import only specific objects from the source database, select objects you want to import.
5. Click **Options**, and then set the options for the import operation:
    - In the **Import** area, click **Relationships** to preserve table relationships defined in the source database.
    - In the **Import Tables** area, click **Definition and Data** or **Definition Only**.
    - If you are importing queries, in the **Import Queries** area, click **As Queries** or **As Tables**.
6. In the **Get External Data** dialog box, do the following:
    a. If you want to save the steps of the operation for reuse, select the **Save import steps** check box and provide a name and optional description for the steps.
    b. Click **Close**.

To import data from a text file into a new table

1. On the **External Data** tab, in the **Import & Link** group, click **Text File**.
2. In the **Get External Data** dialog box, do the following:
    a. Click **Import the source data into a new table in the current database**.
    b. Click **Browse**. Navigate to and select the source file, and then click **OK**.

3. In the **Import Text** wizard, do the following:
    a. Specify the format for the file you're importing (**Delimited** or **Fixed Width**), and then click **Next**.
    b. Choose the delimiting character or specify column breaks (depending on the format selected in step a). Select **First Row Contains Field Names** if this option applies.
    c. Click **Next**, and then work through the remaining pages to set field options, designate a primary key, and name the table.
    d. In the **Import Text** wizard, click **Finish**.
4. In the **Get External Data** dialog box, do the following:
    a. If you want to save the steps of the operation for reuse, select the **Save import steps** check box and provide a name and optional description for the steps.
    b. Click **Close**.

To import an XML file

1. On the **External Data** tab, in the **Import & Link** group, click **XML**.
2. In the **Get External Data** dialog box, do the following:
    a. Click **Browse** to open the File Open dialog box. Locate and select the source file, and then click **Open**.
    b. Click **OK** to open the Import XML dialog box.
3. In the **Import Options** area of the **Import XML** dialog box, do either of the following, and then click **OK**:
    - To import only the XML file structure as the table's definition, select **Structure Only**.
    - To import the XML file structure and the data values, select **Structure and Data**.
4. In the **Get External Data** dialog box, do the following:
    a. If you want to save the steps of the operation for reuse, select the **Save import steps** check box and provide a name and optional description for the steps.
    b. Click **Close**.

To import a SharePoint list

1. On the **External Data** tab, in the **Import & Link** group, click **More**, and then click **SharePoint List**.
2. In the **Get External Data** dialog box, do the following:
    a. In the **Specify a SharePoint site** box, enter the URL for the SharePoint site you want to connect to.
    b. Click **Import the source data into a new table in the current database**, and then click **Next**.
3. On the **Import data from list** page, for each list that you want to import as a table, do the following:
    a. Select the list check box.
    b. In the **Items to Import** list, select **All Pages** or an option such as **Recent Changes**.
    c. Click **OK**.
4. In the **Get External Data** dialog box, do the following:
    a. If you want to save the steps of the operation for reuse, select the **Save import steps** check box and provide a name and optional description for the steps.
    b. Click **Close**.

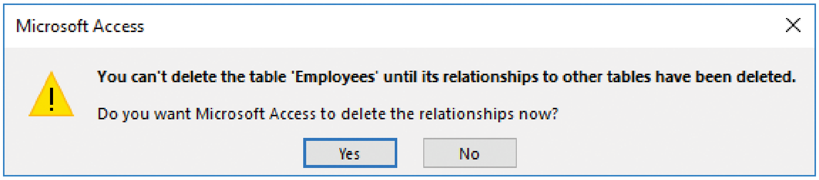
To import an Outlook folder as a table

1. On the **External Data** tab, in the **Import & Link** group, click **More**, and then click **Outlook Folder**.
2. In the **Get External Data** dialog box, click **Import the source data into a new table in the current database**, and then click **OK**.
3. If multiple mail profiles are configured on your computer, the Choose Profile dialog box opens. In the dialog box, select the profile you want to import from, and then click **OK**.
4. If prompted, enter the user name and password for your Outlook account.
5. In the **Import Exchange/Outlook Wizard**, do the following:
    a. Select the folder you want to import, and then click **Next**.
    b. Make changes to the field names or data types Access assigns to the folder's contents, set the **Indexed** property for a field, or specify to skip a field. Then click **Next**.

   c. Choose an option to have Access set a primary key, select your own key, or set no primary key. Then click **Next**.
   d. Change the name of the table if you want to, and then click **Finish**.
6. In the **Get External Data** dialog box, do the following:
   a. If you want to save the steps of the operation for reuse, select the **Save import steps** check box and provide a name and optional description for the steps.
   b. Click **Close**.

Delete database objects

Access databases depend on the relationship between tables to preserve the integrity of data and to eliminate redundant data. You can delete most types of database objects, including queries, forms, and reports, without affecting underlying relationships. However, Access prevents you from deleting a table that is related to another table without first deleting the relationship. Access deletes the relationship for you if you agree.



You can't delete the table 'Employees' until its relationships to other tables have been deleted.

Do you want Microsoft Access to delete the relationships now?

A warning about deleting a table

See Also For more information about table relationships, see "Objective 1.2: Manage relationships and keys." For information about renaming database objects, see "Back up and restore databases" in "Objective 1.4: Protect and maintain databases."

To delete a database object

1. Close the object that you want to delete.
2. In the **Navigation Pane**, right-click the object, and then click **Delete**.
3. In the **Microsoft Access** message box asking you to confirm that you want to delete the object and remove it from all groups, click **Yes**.
4. If you are deleting a table and Access prompts you to confirm that you want Access to delete the relationship, click **Yes** to remove the relationship and delete the table.

Objective 1.1 practice tasks

The practice file for these tasks is located in the **MOSAccess2016\Objective1** practice file folder. The folder also contains a result file that you can use to check your work.

- ➤ Start Access and do the following:
  - ☐ Create a database from the *Desktop contacts* template. (Depending on your installation of Access, the template might be named *Contacts desktop*.) Name the database MOSContacts and save it in the practice file folder.
- ➤ If you want to explore the contact management database features, play the *Using the Contacts Database* video from the Welcome screen.

Tip If the Welcome screen doesn't open automatically, double-click the Welcome form in the Navigation Pane.

  - ☐ Close the MOSContacts database without exiting Access.
- ➤ From the Access Start screen or the New page of the Backstage view, do the following:
  - ☐ From the search box, locate the *Northwind 2007 sample* template.
  - ☐ Create a database from the template. Name the database Northwind and save it in the practice file folder.
  - ☐ Close the Northwind database without exiting Access.
- ➤ From the Access Start screen or the New page of the Backstage view, do the following:
  - ☐ Create a blank desktop database. (Depending on your installation of Access, the template might be named *Blank database* or *Blank desktop database*.) Name the database MOSDatabase and save it in the practice file folder.
  - ☐ Import the Customers and Orders table definitions (not the data) from the Northwind database you created.

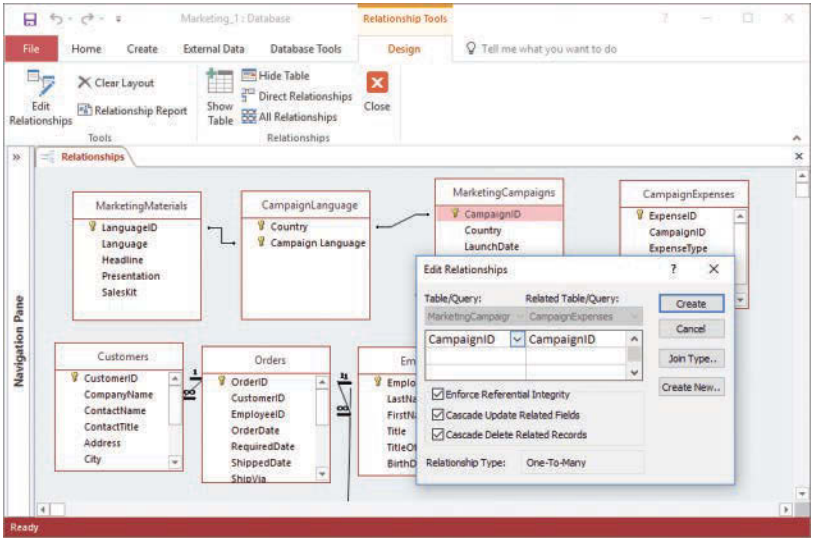
Tip Display the Options area and, in the Import Tables section, select Definition Only.

- ☐ Import the **ExpensesPaid** worksheet from the **Access_1-1** workbook located in the practice file folder to create a new table in the MOSDatabase database, using the worksheet's column headings. Use the ExpenseID field as the primary key. Name the table Expenses.

➤ Open the **Access_1-1_results** database. Compare the two databases to check your work. Then close the open databases.

Objective 1.2: Manage relationships and keys

Formally, Access is known as a *relational database management system*, or RDBMS. In this model, relationships between tables maintain the integrity of the data and reduce the need to store redundant data. For example, customer names can be stored in one table and orders stored in another. By creating a relationship between these tables, you relate each order to a customer; you don't need to repeat the customer's name in the record for new orders. Relationships between tables are also used when you base a query, form, or report on more than one table.


Marketing_1 : Database
Relationship Tools
File
Home
Create
External Data
Database Tools
Design
Tell me what you want to do
Edit Relationships
Clear Layout
Relationship Report
Tools
Show Table
Hide Table
Direct Relationships
All Relationships
Relationships
Close
Relationships
Navigation Pane
MarketingMaterials
LanguageID
Language
Headline
Presentation
SalesKit
CampaignLanguage
Country
Campaign Language
MarketingCampaigns
CampaignID
Country
LaunchDate
CampaignExpenses
ExpenseID
CampaignID
ExpenseType
Customers
CustomerID
CompanyName
ContactName
ContactTitle
Address
City
Orders
OrderID
CustomerID
EmployeeID
OrderDate
RequiredDate
ShippedDate
ShipVia
Em
Emplo
LastNa
FirstN
Title
TitleO
BirthD
Edit Relationships
Create
Cancel
Join Type...
Create New...
Ready

Table/Query: MarketingCampaigns
Related Table/Query: CampaignExpenses
CampaignID CampaignID
☑ Enforce Referential Integrity
☑ Cascade Update Related Fields
☑ Cascade Delete Related Records
Relationship Type: One-To-Many

Set options for a relationship in the Relationships window and the Edit Relationships dialog box

This topic describes how to create table relationships, how to set primary keys and foreign keys in an Access database, and how to display relationships in the Relationships window.

Create and modify relationships

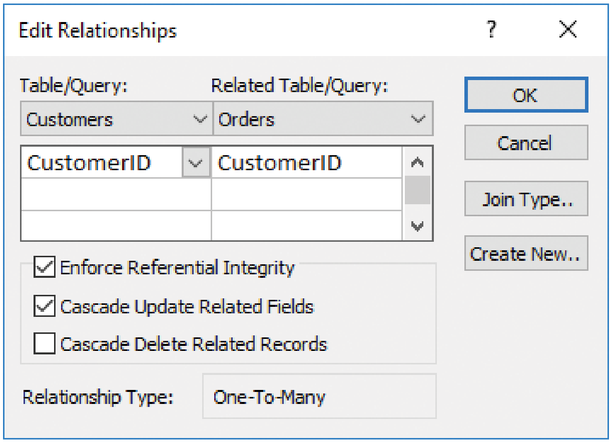
When you create a table relationship, the type of the relationship depends on the data that the tables contain and how that data is related. Tables can have the following types of relationships:

- **One-to-many** In this relationship, any one record in the first table can be related to many records in the second table (for example, one customer can place many orders), but any record in the second table (an order) is related to only one record in the first table (for example, each order is placed by a single customer).

- **One-to-one** In a one-to-one relationship, each record in the first table is related to only one record in the second table. You can use a one-to-one relationship to maintain a separate table that defines and stores fields for data that you don't refer to regularly or that you want to keep more confidential. For example, in an Employees table, you can store general employee information such as first and last name, department, job title, and building and office location. In separate EmployeeRating and EmployeeCompensation tables, you can store performance ratings and compensation data—information that you want only certain people or groups to use. Each record in the Employees table has a single matching record in the table for ratings or compensation.
- **Many-to-many** An Orders table and a Products table have a many-to-many relationship because each record in the Orders table can have many matching records in the Products table, and each record in the Products table can have many matching order records. You can't define a many-to-many relationship directly. Instead, you need to create a linking table (also known as a *junction table*) to create two one-to-many relationships. The linking table includes the primary key fields from both the other tables.

Tip In the Northwind sample database that comes with Access, the Order Details table is a linking table.

When you create a relationship, Access displays the Edit Relationships dialog box. If Access detects matching fields in the tables (for example, if each table has a field named CustomerID), Access displays these fields in the Table/Query and Related Table/Query lists. You can replace these default selections when you need to. The relationship type is indicated at the bottom of the dialog box.



Table/Query: Customers
Related Table/Query: Orders

Table/Query	Related Table/Query
CustomerID	CustomerID

☑ Enforce Referential Integrity
☑ Cascade Update Related Fields
☐ Cascade Delete Related Records

Relationship Type: One-To-Many

Settings for a one-to-many relationship

See Also For information about join types, see "Create multiple-table queries," in "Objective 3.1: Create queries."

The Edit Relationships dialog box includes several important options, such as the following:

- **Enforce Referential Integrity** Referential integrity is used to prevent orphan records (records in one table with no matching record in a related table) and to maintain references between related tables. By using referential integrity, you ensure that no record in one table refers to a record in another table that doesn't exist; for example, a record for a book cannot refer to an author if a record for that author does not exist. If you enforce referential integrity, Access does not allow operations that violate referential integrity rules for that relationship; for example, you can't enter a customer ID in the Orders table if that customer ID does not exist in the Customers table. Also, you can't delete records that reflect an existing relationship; for example, you can't delete a customer record if order records for that customer exist.
- **Cascade options** When you apply referential integrity to a relationship, you can choose one or both Cascade options:
  - If Cascade Update Related Fields is selected, Access updates the foreign key for all related fields when you make a change to the primary record.
  - If Cascade Delete Related Records is selected, Access deletes all related records when you delete a primary record. If you delete a customer, for example, Access also deletes all order records for that customer.

In a large database with a web of table relationships, you might need to refine the view of the relationships in the Relationships window. You can modify the content of the Relationships window in the following ways:

- Hide a table to remove it from the window.
- Select a set of tables you want to view.
- View the tables with direct relationships for the selected table.
- View all the relationships in the database.
- Drag the table thumbnails to alter the arrangement of the window.

When you close the Relationships window, Access prompts you to save the current layout.

The Object Dependencies pane provides information about how one database object depends on others and how others depend on it. Although the dependencies displayed are not the same as table relationships, you can use the Object Dependencies pane to see, for example, which forms depend on the data or fields in a specific table.

Tip The Relationship Report command in the Tools group on the Relationships Tools Design tool tab produces a printable report of the current layout in the Relationships window.

To open the Relationships window

- ➜ On the **Database Tools** tab, in the **Relationships** group, click **Relationships**.

To display tables in the Relationships window

1. On the **Design** tool tab, in the **Relationships** group, click **Show Table**.
2. In the **Show Table** dialog box, select the tables, and then click **Add**.

Tip Hold down the Ctrl key to select multiple items.

To remove tables from the Relationships window

- ➜ In the **Relationships** window, do either of the following:
  - To remove one table, click the table to select it. Then on the **Design** tool tab, in the **Relationships** group, click **Hide Table**.
  - To remove all tables, on the **Design** tool tab, in the **Tools** group, click **Clear Layout**.

To display relationships in the Relationships window

- ➜ In the **Relationships** window, do either of the following:
  - To display all direct relationships of a specific table, click the table to select it. Then on the **Design** tool tab, in the **Relationships** group, click **Direct Relationships**.
  - To display all relationships in the database, on the **Design** tool tab, in the **Relationships** group, click **All Relationships**.

To view object dependencies

1. In the **Navigation Pane**, select the database object whose dependencies you want to view.
2. On the **Database Tools** tab, in the **Relationships** group, click **Object Dependencies**.
3. In the message box informing you that Access needs to update dependency information, click **OK**.
4. In the **Object Dependencies** pane, click **Objects that depend on me** or **Objects that I depend on**.

To create a table relationship

1. Open the **Relationships** window. If the tables you want to create relationships between aren't displayed in the Relationships window, add them.
2. Drag the linking field from the first table (the "one" table in a one-to-many relationship) to the second table (the "many" table).

3. In the **Edit Relationships** dialog box that opens, do the following:
    a. Ensure that the linking fields are selected in the **Table/Query** and **Related Table/Query** lists.
    b. If you want to enforce referential integrity for this relationship, select the **Enforce Referential Integrity** check box.
    c. If you enforce referential integrity, you can also do one or both of the following:
        - If you want Access to update related fields when you change the primary record, select the **Cascade Update Related Fields** check box.
        - If you want Access to delete related records when you delete the primary record, select the **Cascade Delete Related Records** check box.
    d. Click **Create** to establish the relationship and close the dialog box.

To modify a relationship

1. Open the **Relationships** window and do either of the following:
    - Click the relationship line between two tables. Then on the **Design** tool tab, in the **Tools** group, click **Edit Relationship**.
    - Right-click the relationship line between two tables, and then click **Edit Relationship**.
2. In the **Edit Relationships** dialog box, modify the table or query selections, the join type, or the options, and then click **OK**.

Set key fields

In Access, key fields are used when you establish table relationships. For example, if you have a table named *Project Managers*, the table could include the ProjectManagerID field as its *primary key*. A table's primary key uniquely identifies each record in the table. You can then add the ProjectManagerID field to the Projects table to create a relationship between the tables that lets you identify the manager for each project. In the Projects table, the ProjectManagerID field is referred to as a *foreign key*. Primary keys and foreign keys can also be used in queries to join tables; Access uses that relationship to retrieve the set of records that match the criteria you define.

You can use a single field (for example, a unique product or customer code, or an ID field that is set to the AutoNumber data type that Access provides) or a combination of fields as a table's primary key. A multifield primary key is called a *composite key*. For an AutoNumber field, Access assigns a unique number to each record in a table; you don't need to keep track of values that might be duplicates. If you don't use the

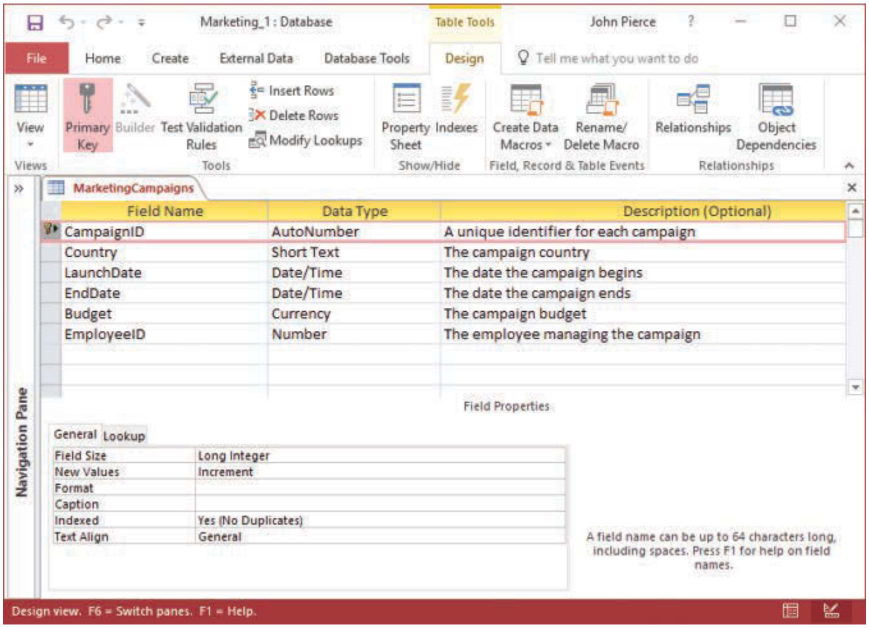
AutoNumber data type but instead use a field whose value you enter, be sure that you set the field's Required property to Yes and that you use a field or a combination of fields whose values change infrequently or not at all.

See Also For information about setting field properties, see "Objective 2.4: Create and modify fields."

Tip When you create a new table, Access includes an ID field in the table and sets this field to be the table's primary key.

A foreign key field should be set to the Number data type. You do not need to enter data for the foreign key field. Instead, the field's values are tied to the unique values from the table in which the field is the primary key field.

To set the primary key for a table, you must have the table open in Design view. Access adds a small key icon to the row selector area to indicate that a field is a primary key field.


Marketing_1 : Database
Table Tools
John Pierce
?
File
Home
Create
External Data
Database Tools
Design
Tell me what you want to do
View
Primary Key
Builder
Test Validation Rules
Insert Rows
Delete Rows
Modify Lookups
Property Sheet
Indexes
Create Data Macros
Rename/ Delete Macro
Relationships
Object Dependencies
Views
Tools
Show/Hide
Field, Record & Table Events
Relationships
Navigation Pane
MarketingCampaigns
Field Properties
General
Lookup

Field Name	Data Type	Description (Optional)
CampaignID	AutoNumber	A unique identifier for each campaign
Country	Short Text	The campaign country
LaunchDate	Date/Time	The date the campaign begins
EndDate	Date/Time	The date the campaign ends
Budget	Currency	The campaign budget
EmployeeID	Number	The employee managing the campaign

Field Size	Long Integer
New Values	Increment
Format	
Caption	
Indexed	Yes (No Duplicates)
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.

A key icon identifies the primary key field

If a table already contains data, the field or fields you designate for the primary key must have unique values. Also, if a primary key field is part of any table relationship, you must remove the relationship before you can change the primary key.

See Also For information about adding and deleting relationships, see "Create and modify relationships" earlier in this topic.

To open a table in Design view

- ➜ If the table is closed, right-click the table in the **Navigation Pane**, and then click **Design View**.
- ➜ If the table is open in another view, on the **Design** tool tab, in the **Views** group, click **View**, and then click **Design View**.

See Also For more information about object views, see "Change object views" in "Objective 1.3: Navigate through a database."

To set a primary key

1. Open the table in Design view.
2. Select the field or fields you want to designate as the table's primary key. To select multiple fields, press **Ctrl** and select the fields.
3. On the **Design** tool tab, in the **Tools** group, click **Primary Key**.

To remove the primary key designation from a field

1. Open the table in Design view.
2. Select the field or fields from which you want to remove the primary key designation.
3. On the **Design** tool tab, in the **Tools** group, click **Primary Key**.

To set a foreign key in a table

1. Open the table in Design view.
2. In the **Field Name** column, enter the name of the foreign key field.
3. In the **Data Type** column, select **Number**.
4. Save the changes to the table.

Objective 1.2 practice tasks

The practice file for these tasks is located in the **MOSAccess2016\Objective1** practice file folder. The folder also contains a result file that you can use to check your work.

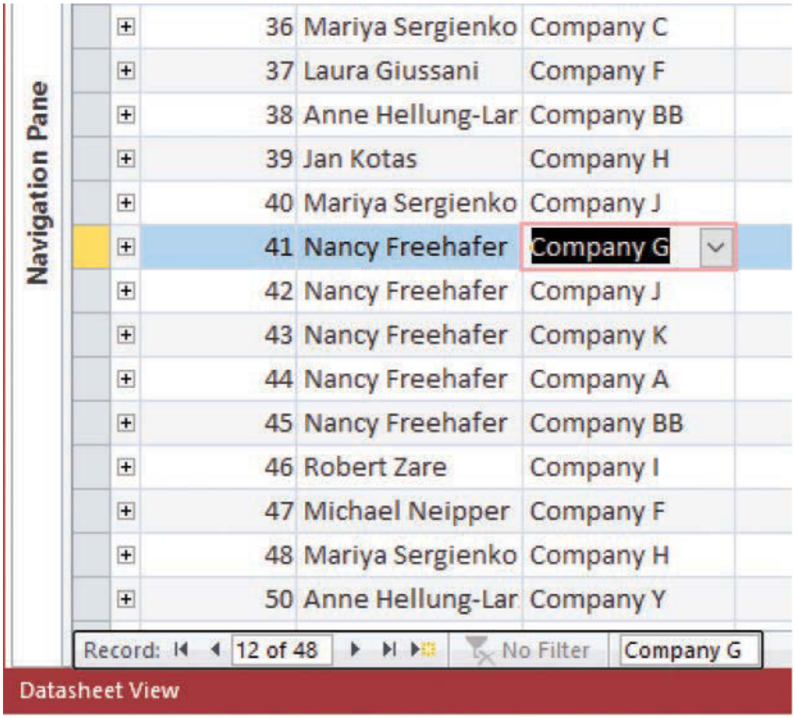
- ➤ Open the **Access_1-2** database from the practice file folder, and then do the following:
  - ☐ Open the Status table in Design view.
  - ☐ Set the StatusID field as the table's primary key.
  - ☐ Save the changes to the table.
- ➤ Open the Relationships window and do the following:
  - ☐ Display the Tasks and Status tables in the window.
  - ☐ Create a relationship between the Status table (StatusID field) and the Tasks table (Status field).
  - ☐ Use the Show Table command to add the Compensation table to the Relationships window.
  - ☐ Edit the relationship between the Compensation table and the Employees table to enforce referential integrity.
- ➤ Open the **Access_1-2_results** database. Compare the two databases to check your work. Then close the open databases.

Objective 1.3: Navigate through a database

In an Access database, navigational features can be different for users who are responsible for designing and maintaining the database and for users whose role is only to enter, edit, and view data. Later in this topic, you examine how to create a navigation form that greets database users when they open a database and provides a set of controls for opening forms, running queries, and viewing and printing reports. In this topic, you also study how to find specific records, set up different views in the Navigation Pane, and work with basic Access views.

Navigate specific records

You have a choice of tools when you need to find a specific record in a table or in the results of a query, or when you're working with a form or report. Navigation buttons that appear at the bottom of a form or a table in Datasheet view move from record to record or to the first or last record. The record indicator displays which record is selected. The navigation area also includes a simple search box in which you can enter the text you want to search for. Access finds the first instance of that text in any of the object's fields.



36	Mariya Sergienko	Company C
37	Laura Giussani	Company F
38	Anne Hellung-Lar	Company BB
39	Jan Kotas	Company H
40	Mariya Sergienko	Company J
41	Nancy Freehafer	Company G
42	Nancy Freehafer	Company J
43	Nancy Freehafer	Company K
44	Nancy Freehafer	Company A
45	Nancy Freehafer	Company BB
46	Robert Zare	Company I
47	Michael Neipper	Company F
48	Mariya Sergienko	Company H
50	Anne Hellung-Lar	Company Y

Record: 12 of 48 No Filter Company G

Use the search box in the navigation area to find specific records

On the Home tab, commands in the Find group help you locate records, perform find-and-replace operations, and move between records by using the Go To options. In the Find dialog box, you can select an option to search the current field or the current document (the full database). The Match box provides options for matching the whole field, any part of the field, or the start of the field. For example, if you were searching for records for *pasta*, you could enter pasta and match the whole field, pa and match the start of the field, or st and match any part of the field. You can also conduct case-sensitive searches. The Search Fields As Formatted check box is selected by default. You can clear this option to search for values as Access stores them rather than as they are formatted in the database.

Another approach for navigating to a specific record is to use the options that Access provides for sorting and filtering records. You can sort the records in text fields in ascending or descending order, and in number fields from smallest to largest or largest to smallest. When you filter records, only the records that match the filter's criteria are displayed. This reduces a long list of records to just a few records among many.

See Also For information about sorting and filtering records, see "Find, sort, and filter data" in "Objective 2.3: Manage records in tables."

To use the navigation area

- ➜ In the navigation area at the bottom of a table, query, or form, use the arrows to move to the first, next, previous, or last record in the record set.
- ➜ To find a specific record, in the navigation area's search box, enter text related to the record.

To go to a record

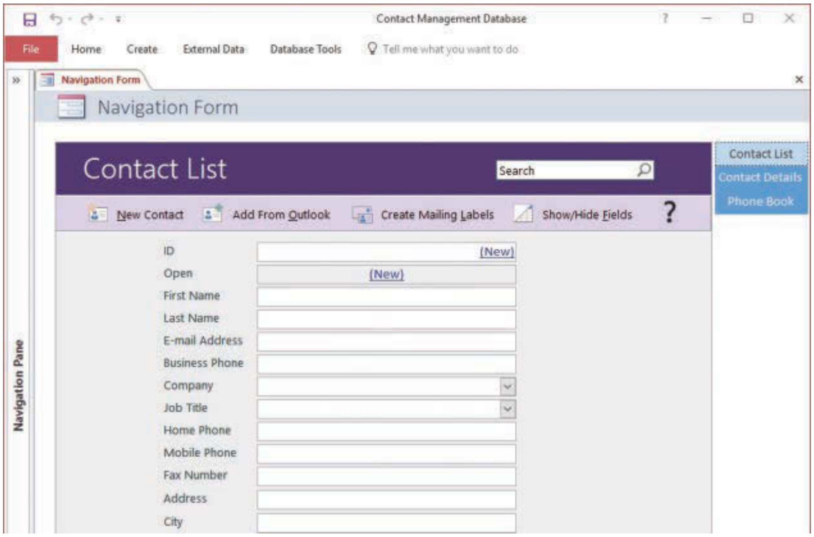
- ➜ On the **Home** tab, in the **Find** group, click **Go To**, and then click **First**, **Previous**, **Next**, or **Last**.

To find records

1. On the **Home** tab, in the **Find** group, click **Find**.
2. In the **Find And Replace** dialog box, in the **Find What** box, enter text related to the record you want to locate.
3. Use the **Look In**, **Match**, and **Search** lists and the **Match Case** option to specify conditions that Access will use to locate records.
4. Click **Find Next**.

Create and modify navigation forms

To augment or replace the Navigation Pane, you can build a form that database users use to open forms, run queries, view reports, and perform other database operations.


Contact Management Database
File
Home
Create
External Data
Database Tools
Tell me what you want to do
Navigation Form
Navigation Form
Contact List
Search
New Contact
Add From Outlook
Create Mailing Labels
Show/Hide Fields
?
Contact List
Contact Details
Phone Book
ID
(New)
Open
(New)
First Name
Last Name
E-mail Address
Business Phone
Company
Job Title
Home Phone
Mobile Phone
Fax Number
Address
City
Navigation Pane

A simple navigation form

Access provides several default layouts for navigation forms. Each of the built-in layouts provides tabs (in various locations and orientations) that users click to display the object they want to use. You can add other forms and reports to the navigation form to complete it. As you add objects to the navigation form's tabs, Access duplicates the Add New tab, to mark where the next object tab will appear. You can also insert a navigation button to add a link in a specific position.

To create a navigation form

1. On the **Create** tab, in the **Forms** group, click **Navigation**, and then click the layout you want to use.
2. Expand the **Navigation Pane** if it is collapsed.
3. Drag the first database object (a form or report, for example) that you want to add to the navigation form from the **Navigation Pane** to the **Add New** area of the navigation form.
4. For each additional object that you want to add to the form, drag the object from the **Navigation Pane** and drop it before or after an existing tab.

5. To create a navigation tab that isn't linked to a specific object, do either of the following:
    - To insert a tab after the existing tabs, double-click the **[Add New]** tab, and then click away from it.
    - To insert a tab between others, right-click the tab that is currently in the position you want for the new tab, and then click **Insert Navigation button**.
6. In the content area of the program window, right-click the form tab, and then click **Save**.

Set a form as the startup option

After you create a navigation form, you can select it as the default form that Access displays when you open the database. You can use this option to designate any form in your database as the default form to display. You don't need to select a navigation form.

To specify a startup form

1. Open the **Access Options** dialog box and display the **Current Database** page.
2. In the **Application Options** section, open the **Display Form** list, and click the form you want to use.

Display objects in the Navigation Pane

This section focuses on the Access Navigation Pane and how you can modify and organize it to display different views of the objects in a database. The ability to modify the Navigation Pane means that it can serve the needs of a range of users—from a database's designer to its casual users.

The Northwind sample database provides examples of how you can configure the Navigation Pane. In the Northwind database, objects by default are arranged within several categories, not by object name or object type. Objects are grouped under headings such as Customers & Orders, Suppliers, and Shippers instead of headings such as Tables, Queries, and Forms. Headings such as Customers & Orders help clarify functional areas of the database and help users find forms and queries related to the area they are working with.

When you change how database objects are displayed in the Navigation Pane, you work with a menu that has several options. This menu arranges commands in two areas, marked by the shaded labels Navigate To Category and Filter By Group. The Navigate To Category area includes categories such as Object Type, Tables And Related Views, Created Date, and Modified Date. For each category, the Filter By

Group area provides options that you can apply to display a subset of objects. For example, if you select Modified Date in the Navigate To Category area, you can then filter the list by selecting Today, Three Weeks Ago, Yesterday, Older, or All Dates. For the Object Type category, you can filter the Navigation Pane to view only objects of a specific type or view all objects.

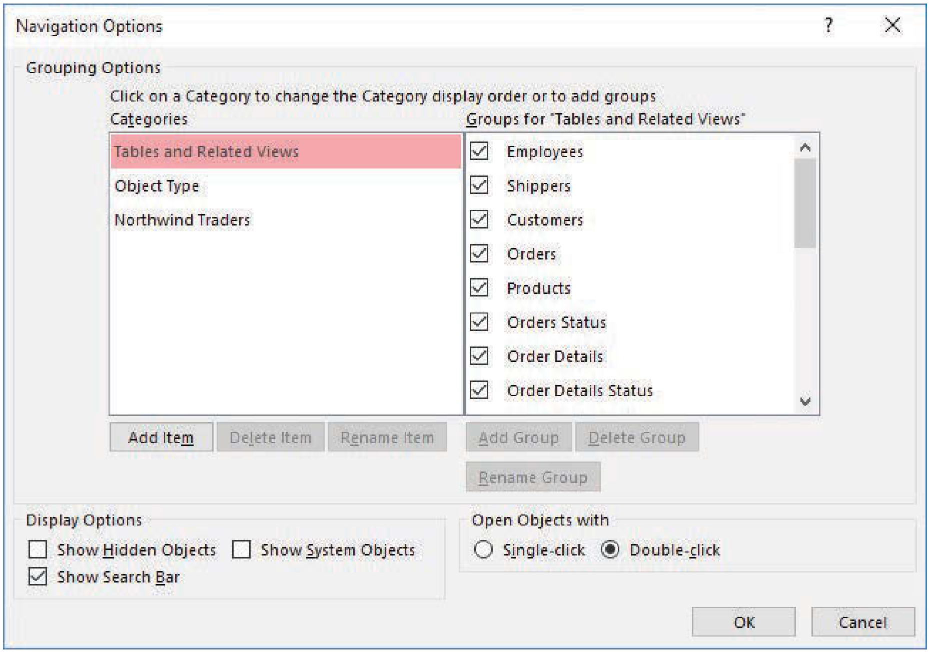
The Tables And Related Views category displays each table in the database together with other database objects that depend on it. Using this view is helpful when you make changes to a table's design. For example, by choosing the Tables And Related Views category and then choosing a single table in the Filter By Group area, you can see which objects depend on the table, and you can review the design of those objects to be sure that the changes you want to make to the table won't affect the other objects in ways you don't intend.

You can also sort the list of objects in a category, showing them in ascending or descending order or by name, type, and date criteria. You can also change the level of detail that is shown for objects in the Navigation Pane. You can display a list of names with a small icon, show a larger icon next to the name of the object, or show details such as the created and modified date for the object.

The search bar at the top of the Navigation Pane helps you locate a specific object (or group of objects) by name. As you enter a text string, Access filters the list of objects and displays those that match.

As with the Northwind sample database, database templates often provide a specific category for viewing database objects by functional role. For example, the Task Management template provides a category called *Tasks Navigation*, which lets you filter by groups such as tasks and contacts. A blank desktop database includes a category named *Custom* that you can rename and use to build your own Navigation Pane view.

You can set up Navigation Pane categories and groups of your own in the Navigation Options dialog box.



Click on a Category to change the Category display order or to add groups

Categories
- Tables and Related Views
- Object Type
- Northwind Traders

Groups for "Tables and Related Views"
- ☑ Employees
- ☑ Shippers
- ☑ Customers
- ☑ Orders
- ☑ Products
- ☑ Orders Status
- ☑ Order Details
- ☑ Order Details Status

☐ Show Hidden Objects ☐ Show System Objects
☑ Show Search Bar

○ Single-click ● Double-click

Organize the Navigation Pane into categories and groups

The categories defined for the database appear in the list at the left, and each group defined for a category appears in the list at the right. You can hide a group from being displayed in the Navigation Pane, or select display options to show hidden and system objects in the Navigation Pane or to show or hide the search bar. By using the Open Objects With options, you can control whether an object opens when it is clicked (similar to a hyperlink) or double-clicked.

In the Groups For list is a group named *Unassigned Objects*, which is a built-in group that contains all the objects in a database. When you work with the default Custom category in a blank database, Access also provides a group named *Custom Group 1*.

Tip You can reposition a custom category or group by using the arrows that appear beside an item's name when you select it. You cannot place a custom category above the two built-in categories or place a custom group below the built-in group Unassigned Objects.

When you add a database object to a custom group, you add only a shortcut to that object, not the object itself. This means that you can delete a shortcut from a custom group without deleting the database object.

To create and modify Navigation Pane categories and groups

1. Right-click the **Navigation Pane** title bar, and then click **Navigation Options**.
2. In the **Navigation Options** dialog box, do any of the following, and then click **OK**:
   - To add a category, click **Add Item** and then enter a name for the category.
   - To rename the selected category, click **Rename Item**, edit the name, and then press **Enter**.
   - To delete the selected category, click **Delete Item**, and then in the message box asking you to confirm the deletion, click **OK**.
   - To add a group to the selected category, click **Add Group**, and then enter a name for the group.
   - To rename the selected group, click **Rename Group**, edit the name, and then press **Enter**.
   - To delete the selected group, click **Delete Group**, and then in the message box asking you to confirm the deletion, click **OK**.

   Tip You can rename and delete only custom groups.

   - In the **Display Options** area, select or clear the check boxes for showing hidden objects, system objects, and the search bar.
   - In the **Open Objects With** area, click **Single-click** or **Double-click**.

To add objects to a group

1. In the **Navigation Pane**, display the **Unassigned Objects** group.
2. Right-click the object you want to add to the group, click **Add to group**, and then select the group.

Change object views

You work with database objects in a variety of views. Each type of object (tables, queries, forms, and reports) can be opened in Design view. In Design view, you can add and define fields and field properties for a table; add fields to a query; add command buttons, list boxes, and other controls to a form; and apply formatting, group records, add calculated fields, and complete other tasks when you work with reports.

Forms and reports can also be opened in Layout view. In Layout view, you can design and modify a form or report while viewing the actual data. In Design view, data is not displayed. When you work with a form (for data entry or when searching for a specific record), the form is displayed in Form view. When you view a completed report, the report is displayed in Report view.

When you open a table for data entry or view the results that a query returns, you work with the table or query in Datasheet view.

To change object views

- ➜ In the **Navigation Pane**, right-click the object and then choose the view you want to use. (Not every object view is available on the menu.)
- ➜ With the database object open, right-click the object's tab in the Access design window, and then select the view you want to use.
- ➜ With the database object open, click **View** on the object's **Design** tool tab, and then select the view you want to use. (For tables, the View command appears on the Fields tool tab.)

Objective 1.3 practice tasks

The practice file for these tasks is located in the **MOSAccess2016\Objective1** practice file folder. The folder also contains a result file that you can use to check your work.

- ➤ Open the **Access_1-3** database from the practice file folder, and then do the following:
    - ☐ Open the Customers table in Datasheet view. Use the search box to locate the record for *The Big Cheese*.
    - ☐ Create a Navigation Pane category named Campaigns, and groups named Campaign Details, Products, and Employees.
    - ☐ Add the Campaign Expenses, CampaignLanguages, and Marketing Campaigns tables to the Campaign Details group. Add the Orders and Products tables to the Products group, and add the Employees table to the Employees group.
    - ☐ Create a navigation form that has the Vertical Tabs, Left layout. Add the TaskDetails form to the navigation form. Save the form (use the default name for this practice task), and then set the form as the startup form.
- ➤ Open the **Access_1-3_results** database. Compare the two databases to check your work. Then close the open databases.

Objective 1.4: Protect and maintain databases

Access provides several options for maintaining and protecting a database. The first of these—Compact & Repair—can help improve the performance of a database and can repair database files in the event of a problem. You can use the Encrypt With Password option to restrict database access to only those users who know the password.

This topic describes these options and other tasks you perform to protect and maintain a database, including backing up a database, recovering data from a backup, and splitting a database—a step that applies especially to a database shared by multiple users.

Compact and repair databases

As you and other users work with an Access database, the database file grows larger as you add data and because Access creates and uses hidden objects to perform its work behind the scenes. Database files can also become corrupt. Frequent use of the database—especially by multiple users working on the database over a network—can result in a corrupted file, which can in some cases result in data loss or affect the ease with which you can change the database's design.

To keep ahead of these potential problems, you can compact and repair a database. You can perform these operations on the current database (the database you have open) or select a different database when you perform these operations.

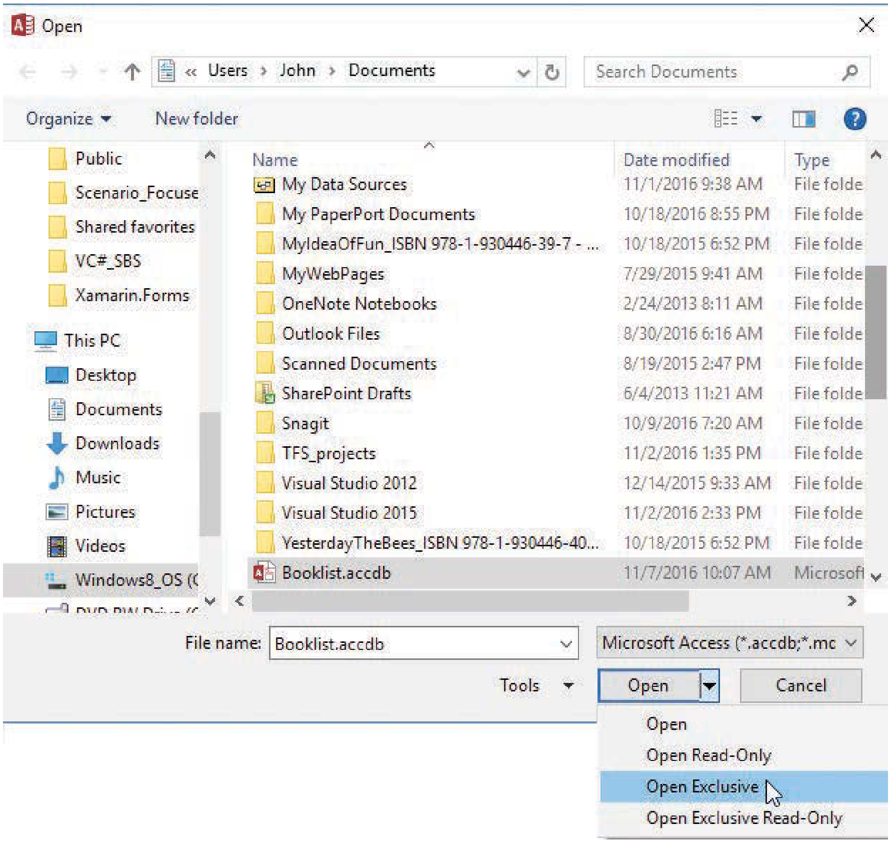
Some restrictions apply to compacting and repairing a database. For example, if more than one person has the database open when you compact or repair it, Access displays a message indicating that you attempted to open a database that is already open. Before you compact a multiuser database, you should be sure that no one has the database open and then open the database for exclusive access.

Tip Select the Compact On Close option on the Current Database page of the Access Options dialog box to compact a database each time you close it.

To open a database for exclusive access

1. If the database is open, click the **File** tab, and then click **Close**. (If other users have the database open, they must also close the database.)
2. Display the **Open** page of the Backstage view. In the **Places** list, click the location where the database is stored, such as This PC. Then click **Browse**.
3. In the **Open** dialog box, navigate to the folder where the database is stored, and then select the database.

4. Click the **Open** arrow, and then click **Open Exclusive**.


Open
« Users › John › Documents
Search Documents
Organize
New folder
Public
Scenario_Focuse
Shared favorites
VC#_SBS
Xamarin.Forms
This PC
Desktop
Documents
Downloads
Music
Pictures
Videos
Windows8_OS (C
Tools
Open
Cancel
Open
Open Read-Only
Open Exclusive
Open Exclusive Read-Only

Name	Date modified	Type
My Data Sources	11/1/2016 9:38 AM	File folde
My PaperPort Documents	10/18/2016 8:55 PM	File folde
MyIdeaOfFun_ISBN 978-1-930446-39-7 - ...	10/18/2015 6:52 PM	File folde
MyWebPages	7/29/2015 9:41 AM	File folde
OneNote Notebooks	2/24/2013 8:11 AM	File folde
Outlook Files	8/30/2016 6:16 AM	File folde
Scanned Documents	8/19/2015 2:47 PM	File folde
SharePoint Drafts	6/4/2013 11:21 AM	File folde
Snagit	10/9/2016 7:20 AM	File folde
TFS_projects	11/2/2016 1:35 PM	File folde
Visual Studio 2012	12/14/2015 9:33 AM	File folde
Visual Studio 2015	11/2/2016 2:33 PM	File folde
YesterdayTheBees_ISBN 978-1-930446-40...	10/18/2015 6:52 PM	File folde
Booklist.accdb	11/7/2016 10:07 AM	Microsoft

File name: Booklist.accdb

Microsoft Access (*.accdb;*.mc

Opening a database for exclusive access

To compact and repair the current database

1. Open the database for exclusive access.
2. On the **Info** page of the Backstage view, click **Compact & Repair Database**.

To compact and repair a database that isn’t currently open

1. Close any open databases.
2. On the **Database Tools** tab, in the **Tools** group, click **Compact and Repair Database**.
3. In the **Database to Compact From** dialog box, select the database you want to compact, and then click **Compact**.

4. In the **Compact Database Into** dialog box, enter a name for the compacted database, and then click **Save**.
5. If you used the current name of the database, click **Yes** in the message box Access displays to confirm that Access should replace the current database file.

Back up and restore databases

Another step in protecting your database files from corruption and the potential loss of data is to perform regular backups. In practice, you need to back up some databases more often than others. A database that serves as an archive, for example, and isn't used frequently, doesn't need to be backed up on a specific schedule. A database that you and others work with nearly every day should be backed up on a regular schedule. You should also follow standard backup procedures such as keeping the backup copies on external media (such as a DVD or a flash drive) and in a secure location.

Exam Strategy The objective domain for this exam includes backing up a database and recovering database objects from a backup. You might be required to demonstrate the recovery of specific objects, such as tables.

When you back up a database, Access appends the current date to the name of the database file. You can retain this date or replace it with an alternative identifier. You might also add "backup" to the file name so that you can identify a backup easily.

If one or more objects in a database become corrupt, if you lose data, or if you need to return to an earlier version of a database for some other reason, you can restore a database by replacing it with a backup file. You can also recover specific database objects by importing them from a recent backup.

IMPORTANT You might be able to at least partially repair a corrupt database by running the Compact & Repair command. For information, see "Compact and repair databases" earlier in this topic.

Recovering an object from a backup doesn't automatically replace the original object. For example, if you restore a table named *Tasks* from a recent backup, Access creates a table named *Tasks1* in the current database. Before you begin the steps to recover a database object, you should delete the object from the current database or rename the original object (by adding an identifier such as "old" or "bad").

To back up a database

1. Display the **Save As** page of the Backstage view.
2. In the **Advanced** area, click **Back Up Database**, and then click **Save As**.
3. In the **Save As** dialog box, modify the file name that Access provides (or accept the default name), and then click **Save**.

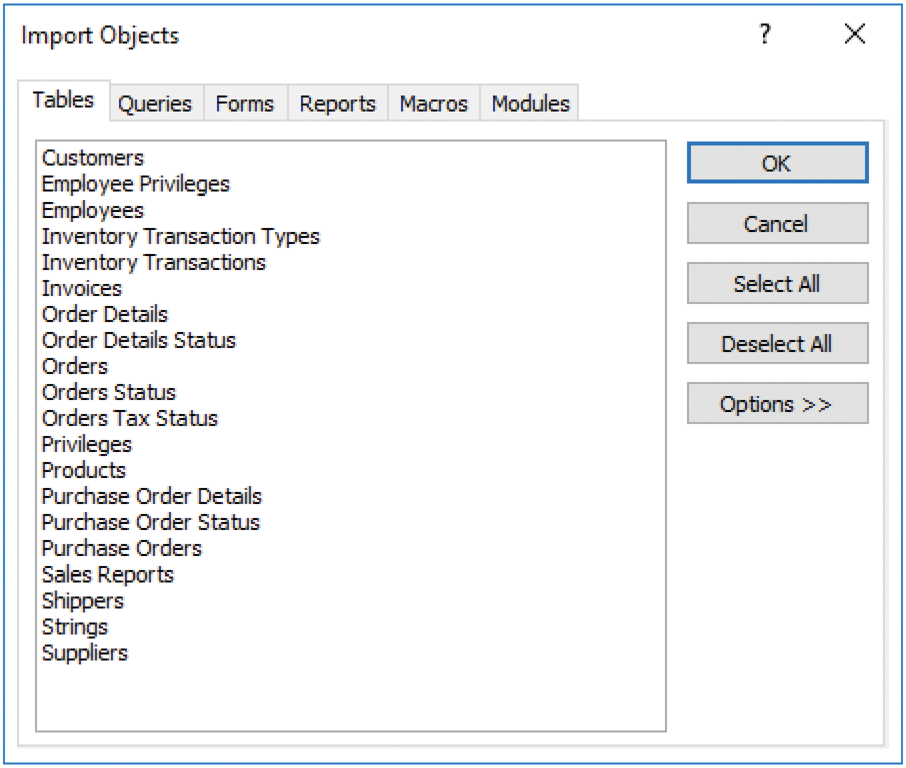
To rename a database object

1. In the **Navigation Pane**, right-click the object, and then click **Rename** to activate the object name for editing.
2. Enter the new object name, and then press **Enter**.

See Also For information about deleting database objects, see "Delete database objects" in "Objective 1.1: Create and modify databases."

To restore database objects from a backup

1. Open the database in which you want to restore an object.
2. In the **Navigation Pane**, rename or delete the current instance of the object. (If you are restoring a missing object, you can ignore this step.)
3. On the **External Data** tab, in the **Import & Link** group, click **Access**.
4. In the **Get External Data** dialog box, click **Import tables, queries, forms, reports, macros, and modules into the current database**.
5. Click **Browse** and navigate to the backup file you want to use. Then click **Open**.
6. In the **Get External Data** dialog box, click **OK**.
7. In the **Import Objects** dialog box, do either of the following, and then click **OK**:
    - Click **Select All** to select all the objects and restore the entire database.
    - Select the object or objects you want to restore.



Customers
Employee Privileges
Employees
Inventory Transaction Types
Inventory Transactions
Invoices
Order Details
Order Details Status
Orders
Orders Status
Orders Tax Status
Privileges
Products
Purchase Order Details
Purchase Order Status
Purchase Orders
Sales Reports
Shippers
Strings
Suppliers

Restoring database objects from a backup

8. In the **Get External Data** dialog box, click **Close**.

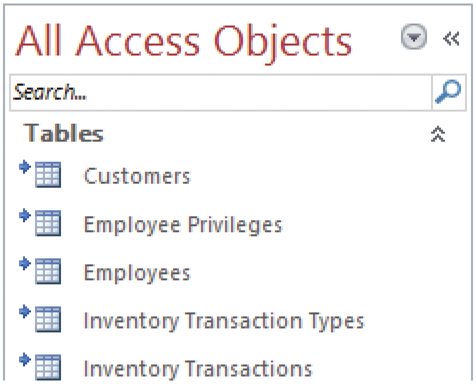
Split a database

You can think of an Access database as composed of two parts. The tables, which define and store the raw data, make up one part (the back end). The second part consists of the queries, forms, reports, and supporting objects that users interact with to enter, edit, and view data (the front end). You can split a database to store the tables in one file and the other database objects in a second file. Splitting a database into a front end and back end allows the database designers and administrators to create new forms or update reports for the front end without interfering with the use of the back-end database while doing so. When the new objects are ready, the administrators can implement the updated front end without affecting the relationships and references in place in the back end.

Another reason to split a database is to reduce network traffic when the database is used by more than one person. The back-end database (the tables) can reside in a shared location, and each person can use a local copy of the front-end database.

Tip You should back up your database before you split it.

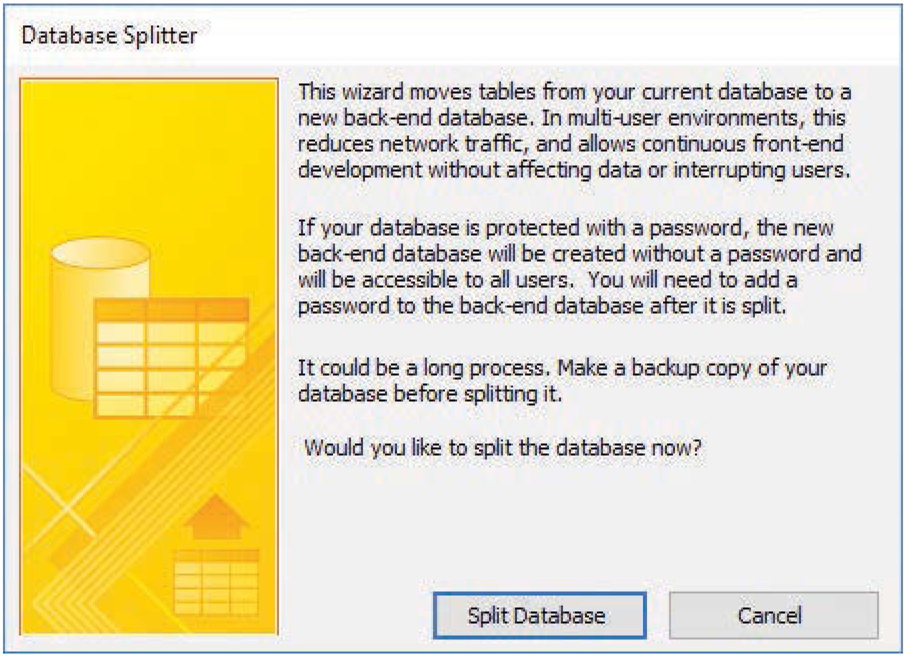
After you split a database, Access displays a small arrow icon in the Navigation Pane next to the names of tables.


All Access Objects
Search...
Tables
Customers
Employee Privileges
Employees
Inventory Transaction Types
Inventory Transactions

The arrows in the Navigation Pane indicate tables that are linked to the back-end database

To split a database

1. Close all open database objects.
2. On the **Database Tools** tab, in the **Move Data** group, click **Access Database**. If Access displays a security notice that shows the path to the file ACWZTOOL.ACCDE, click **Open** to proceed and open the Database Splitter dialog box.
3. In the **Database Splitter** dialog box, read through the information provided, and then click **Split Database**.



Database Splitter

This wizard moves tables from your current database to a new back-end database. In multi-user environments, this reduces network traffic, and allows continuous front-end development without affecting data or interrupting users.

If your database is protected with a password, the new back-end database will be created without a password and will be accessible to all users. You will need to add a password to the back-end database after it is split.

It could be a long process. Make a backup copy of your database before splitting it.

Would you like to split the database now?

The Database Splitter

4. In the **Create Back-end Database** dialog box, choose a location for the back-end file. By default, Access uses the current database name and adds *_be* to the end of the file name.
5. Click **Split** to begin the process. When the process completes, in the **Database Splitter** message box confirming that the database split was successful, click **OK**.

Encrypt database files

When you assign a password to a database, any user who wants to work with the database must enter the password to open the file. You can use this process, for example, to restrict who can open a database that is stored in a location that many users share.

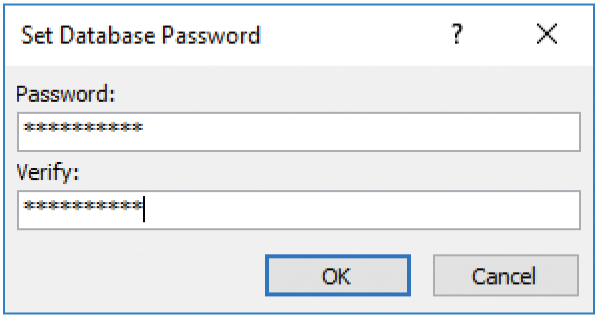
A database must be open for exclusive use before you can encrypt the database by using a password. If you are encrypting the current database, you need to close it before you open it for exclusive use.

IMPORTANT If any properties of the database are incompatible with encryption, Access displays a message box telling you that the feature (such as row-level locking) will be ignored. You can safely dismiss this message and proceed with encryption.

You can also remove a password from a database after you open it for exclusive use.

To encrypt a database with a password

1. Close the database without exiting Access.
2. Display the **Open** page of the Backstage view.
3. In the **Places** list, click the drive where the database is stored, and then click **Browse**.
4. In the **Open** dialog box, navigate to the database storage location and select the database file. Click the **Open** arrow, and then click **Open Exclusive**.
5. On the **Info** page of the Backstage view, click **Encrypt with Password**.
6. In the **Set Database Password** dialog box, enter the password you want to use, enter the password again in the **Verify** box, and then click **OK**.



Password: **********

Verify: **********

Enter a password to protect the database

To remove a database password

1. Open the database for exclusive access, and enter the database password.
2. On the **Info** page of the Backstage view, click **Decrypt Database**.
3. In the **Unset Database Password** dialog box, enter the password applied to the database, and then click **OK**.

Objective 1.4 practice tasks

The practice file for these tasks is located in the **MOSAccess2016\Objective1** practice file folder. The folder also contains a result file that you can use to check your work.

- ➤ Open the **Access_1-4** database from the practice file folder for exclusive use, and then do the following:
  - ☐ Log on by using any user name.
  - ☐ Create a password for the database. Use the password Access2016.
  - ☐ Compact and repair the database.
  - ☐ Create a backup of the database. Name the backup MOSBackup.
  - ☐ Rename the Customer List form as Customer List_old.
  - ☐ Restore the Customer List form from the *MOSBackup* database.
  - ☐ Delete the Customer List_old form.
  - ☐ Split the **Access_1-4** database to create a front-end database and a back-end database. Save the back-end database in the practice file folder using the default name *Access_1-4_be*.
- ➤ Open the **Access_1-4_results** database. Compare the two databases to check your work. Then close the open databases.

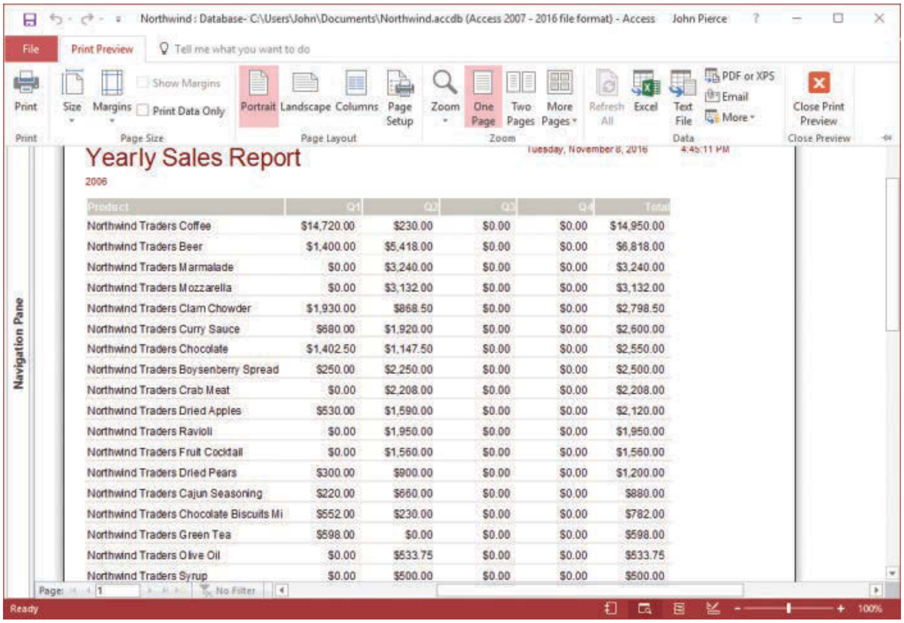
Objective 1.5: Print and export data

You can use the data you store in Access in several ways. Within Access, you can create reports, for example, and distribute the reports in printed or electronic format. You can also export data to formats that are compatible with earlier versions of Access and with other programs, including Microsoft Excel and Word.

This topic first focuses on how to print reports and specific database records. It then describes how to export data from Access and how to save a database as a template.

Print reports and records

When you print a report, you can send the report directly to the default printer (without setting any printing options), use the Print dialog box to select a printer and set printing options, or work in print preview, a view that enables you to refine the report's layout, view the report in different ways, and export the data.


File
Print Preview
Tell me what you want to do
Print
Size
Margins
Show Margins
Print Data Only
Page Size
Portrait
Landscape
Columns
Page Setup
Page Layout
Zoom
One Page
Two Pages
More Pages
Refresh All
Excel
Text File
PDF or XPS
Email
More
Data
Close Print Preview
Close Preview
Navigation Pane
Page: 1
No Filter
Ready
100%

Northwind : Database- C:\Users\John\Documents\Northwind.accdb (Access 2007 - 2016 file format) - Access John Pierce

Yearly Sales Report

2006

Tuesday, November 8, 2016 4:45:11 PM

Product	Q1	Q2	Q3	Q4	Total
Northwind Traders Coffee	$14,720.00	$230.00	$0.00	$0.00	$14,950.00
Northwind Traders Beer	$1,400.00	$5,418.00	$0.00	$0.00	$6,818.00
Northwind Traders Marmalade	$0.00	$3,240.00	$0.00	$0.00	$3,240.00
Northwind Traders Mozzarella	$0.00	$3,132.00	$0.00	$0.00	$3,132.00
Northwind Traders Clam Chowder	$1,930.00	$868.50	$0.00	$0.00	$2,798.50
Northwind Traders Curry Sauce	$680.00	$1,920.00	$0.00	$0.00	$2,600.00
Northwind Traders Chocolate	$1,402.50	$1,147.50	$0.00	$0.00	$2,550.00
Northwind Traders Boysenberry Spread	$250.00	$2,250.00	$0.00	$0.00	$2,500.00
Northwind Traders Crab Meat	$0.00	$2,208.00	$0.00	$0.00	$2,208.00
Northwind Traders Dried Apples	$530.00	$1,590.00	$0.00	$0.00	$2,120.00
Northwind Traders Ravioli	$0.00	$1,950.00	$0.00	$0.00	$1,950.00
Northwind Traders Fruit Cocktail	$0.00	$1,560.00	$0.00	$0.00	$1,560.00
Northwind Traders Dried Pears	$300.00	$900.00	$0.00	$0.00	$1,200.00
Northwind Traders Cajun Seasoning	$220.00	$660.00	$0.00	$0.00	$880.00
Northwind Traders Chocolate Biscuits Mi	$552.00	$230.00	$0.00	$0.00	$782.00
Northwind Traders Green Tea	$598.00	$0.00	$0.00	$0.00	$598.00
Northwind Traders Olive Oil	$0.00	$533.75	$0.00	$0.00	$533.75
Northwind Traders Syrup	$0.00	$500.00	$0.00	$0.00	$500.00

A report open in print preview

The Print dialog box provides standard options with which you can specify a page range, set the number of copies, and adjust the page setup. It also provides an option for printing selected records. You must select the records you want to print before opening the Print dialog box. In general, you will print records that you select in a table or query that is open in Datasheet view.

When you display a report in print preview, Access provides commands to adjust page size and margins, change the page layout and page orientation (switching from portrait to landscape, for example), set up the report in columns, and view the report by zooming in and out or by displaying one or more pages. With these views, you can assess whether the report's formatting is consistent, for example, or whether any important data might be missing. Many of the commands on the Print Preview tab are also available when you design and format a report in Design view or Layout view.

Tip The Print Preview tab also provides a set of options (in the Data group) for exporting data to other programs or in various formats. These options are described in "Export data" later in this topic.

In the Page Size group on the Print Preview tab, the Show Margins option displays or hides the report's margins, and the Print Data Only option removes elements such as column headings and information in page headers and footers from the report that Access prints. You can open the Page Setup dialog box from the Page Size group, but many of the options in the Page Size and Page Layout groups duplicate options that the dialog box provides.

The range of zoom levels in print preview extends from 10 percent to a maximum of 1,000 percent (not all zoom levels apply to every object), but you can choose only preset options (such as 75% or 200%). The Zoom slider, in the lower-right corner of the Access window, adjusts the zoom level with greater flexibility. The Zoom group also lets you choose how many pages to display in a multipage report or printout. By default, one page is displayed. You can also display 2, 4, 8, or 12 pages.

To print a report directly to the default printer

➜ Right-click the report, and then click **Print**.

Or

1. Open the report from the **Navigation Pane**.
2. On the **Print** page of the Backstage view, click **Quick Print**.

To set printing options and print a report

1. Open the report from the **Navigation Pane**.
2. On the **Print** page of the Backstage view, click **Print**.
3. In the **Print** dialog box, set options for the print range, number of copies, and other printer properties. Then click **OK**.

To print selected records from a table or a query

1. Open the table or query in Datasheet view.
2. Select the records you want to print.
3. On the **Print** page of the Backstage view, click **Print**.
4. In the **Print** dialog box, do the following:
    a. In the **Print range** area, click **Selected Records**. (If you don't click **Selected Records**, Access prints all the records in the datasheet.)
    b. Click **OK**.

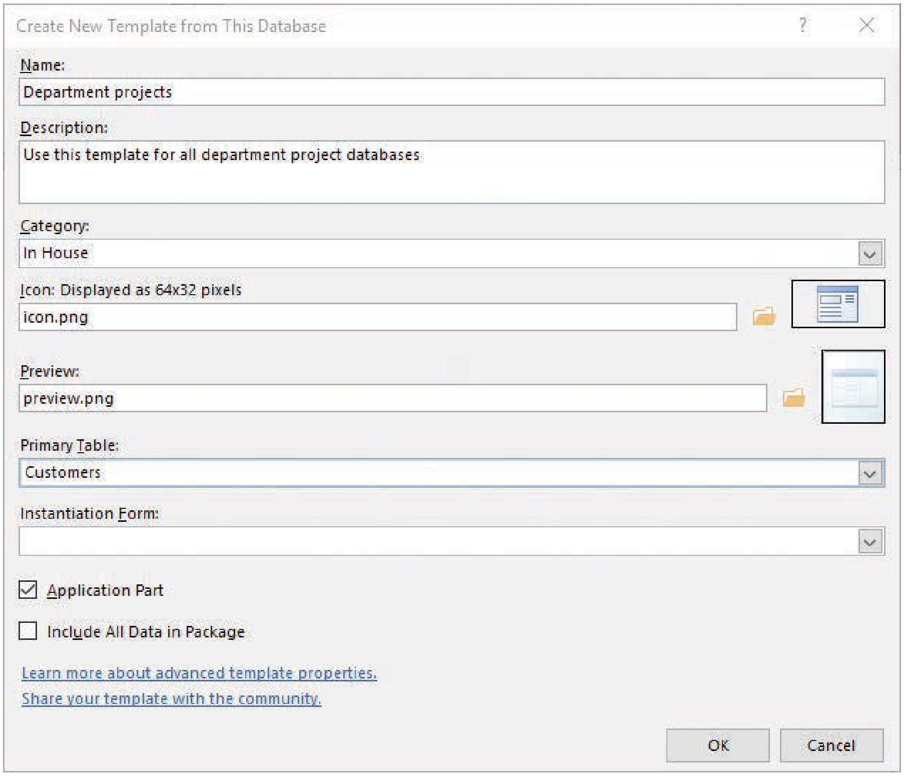
To manage print and page setup options for a database object in print preview

1. Open the database object you want to print, if it is not already open.
2. On the **Print** page of the Backstage view, click **Print Preview**.
3. In the **Page Size** group, adjust paper size and margins and specify whether only data should be printed.
4. In the **Page Layout** group, set the page orientation, columns, and other page setup options.
5. In the **Print** group, click **Print**.
6. In the **Print** dialog box, set options for the number of copies and other printing options, and then click **OK.**

Save a database as a template

As described earlier in this chapter, you can use a template as the basis for a new database. The template can provide a set of default database objects (tables, forms, and reports, for example) that you customize for the needs of a specific database.

You can also save a database that you create (either from scratch or by using a template) as a template. You might use this option to save a basic contact database that includes information you need in more than one database. You might also create a set of forms with a look and feel that you want each database to include and then save those forms as a template. By default, templates are stored in your user profile, in \AppData\Roaming\Microsoft\Templates\Access.



Create New Template from This Database
?

Name:
Department projects

Description:
Use this template for all department project databases

Category:
In House

Icon: Displayed as 64x32 pixels
icon.png

Preview:
preview.png

Primary Table:
Customers

Instantiation Form:

☑ Application Part

☐ Include All Data in Package

Learn more about advanced template properties.
Share your template with the community.
OK
Cancel

Settings for a user-defined database template

In the Create New Template From This Database dialog box, you can categorize the templates you create. Access sets the Category box to User Templates by default, but you can define a category of your own and assign a template to it. If you plan to share this template with other users or just want to add a professional touch to a template you're creating for yourself, you can specify an image file to use as an icon for the template. This icon replaces the standard Access icon in the program's application window and as the thumbnail preview of the template that appears in the Backstage view. You can also specify a preview image and a form that appears when the database opens. If the database you are saving as a template already includes data, you can include that data in the template or include only the database objects themselves, without any data.

The Instantiation Form list specifies the form you want to display as a splash screen, for example. Access displays the form you select in this list only once and then deletes the form. Be careful not to confuse this option with a startup form, which you can specify for the current database by using the Access Options dialog box.

You can include the template as an application part, which makes it available in the Application Parts gallery on the Create tab. The application part appears under the heading you provide in the Category box in the Create New Template From This Database dialog box. The template is also available on the Access startup screen or on the New page in the Backstage view.

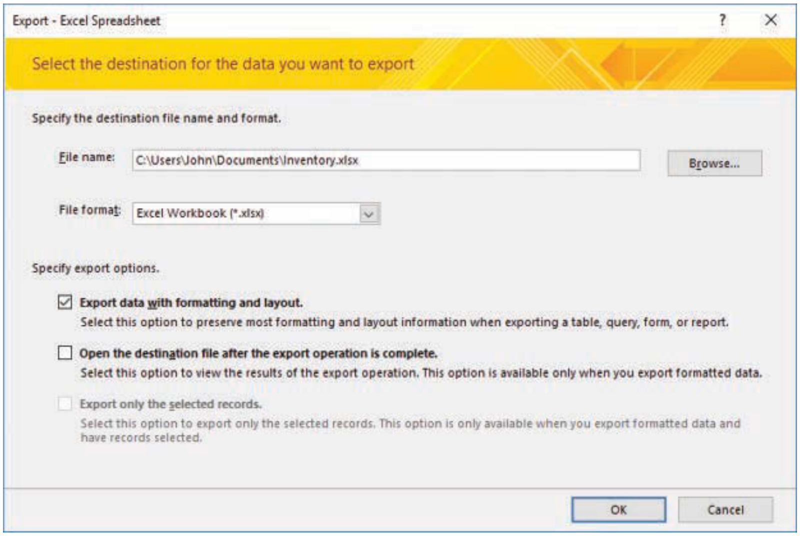
To save a database as a template

1. Create and format the database objects you want to include in the template. Enter any data you want the template to store by default.
2. Click the **File** tab, and then click **Save As**. In the **Database File Types** list, click **Template**, and then click **Save As**.
3. In the **Create New Template from This Database** dialog box, enter a name and description for the database, and then specify a category, icon image, preview image, and instantiation form (if you want to use one).
4. Select the **Application Part** check box to add this template to the Application Parts gallery, and then specify a primary table for the template.
5. Select **Include All Data in Package** as applicable.

Export data

One of the advantages of entering and maintaining data in a database is the capability to make the data available in other formats. For example, you can export data to use it in other programs and in other contexts. Data related to sales, budgets, orders, and other financial records can be exported to Excel for analysis. A list of contacts can be exported to a list in a SharePoint site or used in a mail merge in Word. Exporting data to a text file or to an XML file puts the data in a format that is compatible with other database and spreadsheet programs, and creating a PDF or an XPS file by using an export operation lets you distribute data in formats designed for review instead of analysis and editing.

The Export dialog box provides options to maintain an object’s formatting and layout when you export it, view the exported file when the operation is complete, and export only selected records (in lieu of the complete record set that is contained in a specific table or query, for example). Specific operations, such as exporting to a text file, require you to set additional options that control where and how data is exported. You can also save export settings and then repeat an export operation in a single step.



Select the destination for the data you want to export

Specify the destination file name and format.

File name: C:\Users\John\Documents\Inventory.xlsx

File format: Excel Workbook (*.xlsx)

Specify export options.

☑ **Export data with formatting and layout.**
Select this option to preserve most formatting and layout information when exporting a table, query, form, or report.

☐ **Open the destination file after the export operation is complete.**
Select this option to view the results of the export operation. This option is available only when you export formatted data.

☐ Export only the selected records.
Select this option to export only the selected records. This option is only available when you export formatted data and have records selected.

Exporting data to an Excel workbook

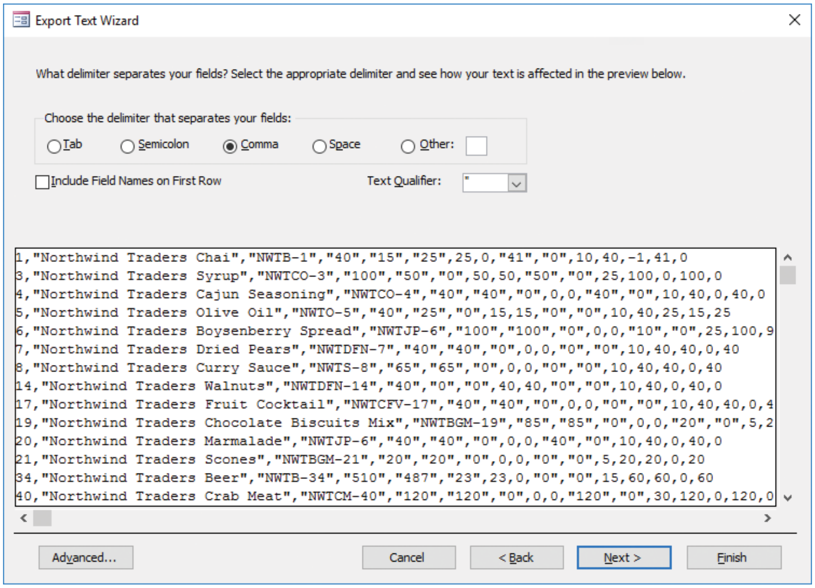
The default setting for exporting data to Excel is the Excel Workbook file format (.xlsx). The options you can choose for a file format depend on the type of object you export. When you export records from a query, for example, you can keep Excel Workbook (.xlsx) or choose Excel Binary Workbook, Microsoft Excel 5.0/95 Workbook, or Excel 97–Excel 2003 Workbook. If you export a report, the file formats are limited to Microsoft Excel 5.0/95 Workbook and Excel 97–Excel 2003 Workbook.

The availability of export options also depends on the type of object. If you export a report, the Export Data With Formatting And Layout check box is selected by default and cannot be cleared. If you export a query or a table, you can select or clear the formatting and layout check box. By selecting that check box, you can open the destination file, and if you selected a subset of the records, you can then select the option to export only those records.

If you export an object's complete record set, Access displays another dialog box, which has an option for saving the export steps. Saving the export steps saves time if you expect to run this export operation again using the same object and the same export settings.

When you export data to a text file, the steps you follow depend on whether you select the Export Data With Formatting And Layout option. When you select this option, Access displays the Encode As dialog box, which provides a choice of encoding schemes: Windows (Default), MS-DOS, Unicode, or Unicode (UTF-8). The Windows (Default) and MS-DOS options apply to text files that will be used only in programs that support these formats. Most programs consuming text files can use files encoded with the Unicode option. Unicode (UTF-8) is a format used widely on the web.

If you don't select the Export Data With Formatting And Layout option, Access displays the Export Text Wizard. In export operations that rely on the Export Text Wizard, you specify whether to export the data as a delimited text file or as a fixed-width text file.



What delimiter separates your fields? Select the appropriate delimiter and see how your text is affected in the preview below.

Choose the delimiter that separates your fields:

○ Tab ○ Semicolon ● Comma ○ Space ○ Other: ☐

☐ Include Field Names on First Row

Text Qualifier: "

```
1,"Northwind Traders Chai","NWTB-1","40","15","25",25,0,"41","0",10,40,-1,41,0
3,"Northwind Traders Syrup","NWTCO-3","100","50","0",50,50,"50","0",25,100,0,100,0
4,"Northwind Traders Cajun Seasoning","NWTCO-4","40","40","0",0,0,"40","0",10,40,0,40,0
5,"Northwind Traders Olive Oil","NWTO-5","40","25","0",15,15,"0","0",10,40,25,15,25
6,"Northwind Traders Boysenberry Spread","NWTJP-6","100","100","0",0,0,"10","0",25,100,9
7,"Northwind Traders Dried Pears","NWTDFN-7","40","40","0",0,0,"0","0",10,40,40,0,40
8,"Northwind Traders Curry Sauce","NWTS-8","65","65","0",0,0,"0","0",10,40,40,0,40
14,"Northwind Traders Walnuts","NWTDFN-14","40","0","0",40,40,"0","0",10,40,0,40,0
17,"Northwind Traders Fruit Cocktail","NWTCFV-17","40","40","0",0,0,"0","0",10,40,40,0,4
19,"Northwind Traders Chocolate Biscuits Mix","NWTBGM-19","85","85","0",0,0,"20","0",5,2
20,"Northwind Traders Marmalade","NWTJP-6","40","40","0",0,0,"40","0",10,40,0,40,0
21,"Northwind Traders Scones","NWTBGM-21","20","20","0",0,0,"0","0",5,20,20,0,20
34,"Northwind Traders Beer","NWTB-34","510","487","23",23,0,"0","0",15,60,60,0,60
40,"Northwind Traders Crab Meat","NWTCM-40","120","120","0",0,0,"120","0",30,120,0,120,0
```

The Export Text Wizard

From this point, the Export Text Wizard displays screens that refine your initial choice. For example, for delimited text files, you specify the character that separates fields in each record (often a comma), whether to include field names in the first row of the exported file, and the text qualifier character (which is used to handle instances of the delimiting character that appear in actual values). For fixed-width exports, you use the wizard to indicate where field breaks occur by dragging lines to create columns.

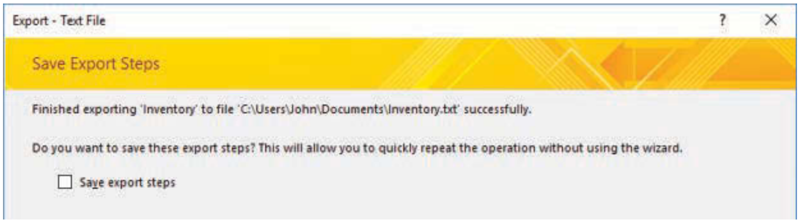
When you export data to an XML file, you have the option to also export the schema for the data (an XSD file) and the presentation of the data (which is defined in an XSL file). For the data, you can export records in related tables in addition to the data in the object you selected. You can also specify an encoding scheme (UTF-8) or (UTF-16).

Among the options related to exporting the schema are whether to include table and field properties and whether to embed the schema in the XML file or create a separate schema document. Presentation options include the location where the XLS file is stored, where related images are stored, and whether the XSL transformation is run from a client or a server computer. In the Run From area, the Client option creates an HTML file on the local computer that programmatically merges the XSL file and the data (XML) file. This option does not embed the presentation information in the data, which lets you update either the XSL file or the XML file without having to run the export operation again. The Server (ASP) option creates an Active Server Pages (ASP) file that merges the presentation with the data and sends the HTML file that is created to the local computer.

You can export database objects to another Access database or in the following formats:

- For a PDF or XPS file, you can export all the object's data, selected records, or specific pages from a report. Both formats also provide options for accessibility.
- The Email option in the Export group attaches a database object to email messages in a format that you select.
- You can export the data in an object to use in a mail-merge operation in Word (the data becomes the recipient list associated with the mail merge) or save the data as a rich-text format (RTF) document.

If you expect to use an export operation regularly, you can save the export steps you defined. By saving the export steps, you can run the operation in a single step.



Finished exporting 'Inventory' to file 'C:\Users\John\Documents\Inventory.txt' successfully.

Do you want to save these export steps? This will allow you to quickly repeat the operation without using the wizard.

☐ Save export steps

Select the Save Export Steps check box to later perform the export in a single step

When you want to run a saved export in Access, on the External Data tab, in the Export group, click Saved Exports. Access opens the Manage Data Tasks dialog box. This dialog box provides options to run the export, create an Outlook task, modify the name or description provided earlier, and delete any saved exports (or saved imports) that you no longer need.

To export data from Access

1. Open the object that contains the data you want to export.
2. On the **External Data** tab, in the **Export** group, click the format or program you want to export to.
3. In the **Export** dialog box, specify the file name and location, and select the export options you want to use: to include formatting and layout, to view the exported file, and to export only selected records.
4. Depending on the export option you select in step 2, use the options in the dialog boxes and the wizards Access provides to specify file format and related export options.

To save export steps

1. In the **Export** dialog box, select **Save export steps**.
2. Enter a name for the export steps (or accept the default name) and enter a description.
3. If you want, select **Create Outlook Task**.
4. Click **Save Export**.

To run a saved export

1. On the **External Data** tab, in the **Export** group, click **Saved Exports**.
2. In the **Manage Data Tasks** dialog box, select the export operation you want to run, and then click **Run**.

Objective 1.5 practice tasks

The practice file for these tasks is located in the **MOSAccess2016\Objective1** practice file folder. The folder also contains a result file that you can use to check your work.

- ➤ Open the **Access_1-5** database from the practice file folder and do the following:
  - ☐ Open the Customers report from the Navigation Pane, and then display the report in print preview. Change the margins to Wide.
  - ☐ Export the Customers report to Word (use the Rich Text format option).
  - ☐ Export the Customers table to Excel.
  - ☐ Save the **Access_1-5** database as a template. Save the template in a custom category you create named MOSAccessSamples.
- ➤ Open the **Access_1-5_results** database. Compare the two databases to check your work. Then close the open databases.

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