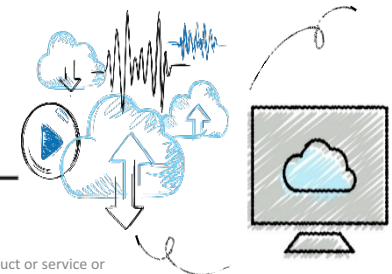# Shelly Cashman: Microsoft Access 2016

Module 1: Databases and Database Objects: An Introduction

- Describe the features of the Access window

- Create a database

- Create tables in Datasheet and Design views

- Add records to a table

- Close a database

- Open a database

- Print the contents of a table

- Create and use a query

- Create and use a form

- Create and print custom reports

- Modify a report in Layout view

- Perform special database operations

- Design a database to satisfy a collection of requirements

Project – Database Creation

caption for Account Number field

fields

AC #	Account Name	Street	City	State	Postal Code	Amount Paid	Current Due	AM #
AC001	Avondale Community Bank	256 Main St.	Avondale	IL	60311	$24,752.25	$3,875.25	31
BL235	Bland Corp.	100 Granger Hwy.	Granger	IL	60314	$29,836.65	$2,765.30	35
CA043	Carlton Regional Clinic	589 Central Ave.	Carlton	IL	60313	$30,841.05	$3,074.30	58
CO621	Codder Plastics Co.	421 First Ave.	Bremerton	IN	46003	$27,152.25	$2,875.00	35
EC010	Eco Clothes Inc.	120 Pine St.	Davidson	IN	46010	$19,620.00	$1,875.00	58
HL111	Halko Legal Associates	321 Feathering Rd.	Gleneagle	IL	60319	$25,702.20	$3,016.75	58
JM323	JSP Manufacturing Inc.	1200 Franklin Blvd.	Wells	IN	46007	$19,739.70	$2,095.00	31
KC156	Key Community College System	35 Indiana Ave.	Walker	IN	46004	$10,952.25	$0.00	31
KV089	KAL Veterinary Services	116 Pine St.	Granger	IL	60314	$34,036.50	$580.00	35
LC005	Lancaster County Hospital	215 River St.	Granger	IL	46004	$44,025.60	$3,590.80	58
LI268	Lars-Idsen Inc.	829 Wooster Rd.	Davidson	IN	46010	$0.00	$1,280.75	35
MI345	Midwest Library Consortium	3400 Metro Pkwy.	Bremerton	IN	46003	$21,769.20	$2,890.60	31
ML008	Mums Landscaping Co.	865 Ridge Rd.	Wells	IN	46007	$13,097.10	$2,450.00	35
TP098	TAL Packaging Systems	12 Polk Ave.	Carlton	IL	60313	$22,696.95	$3,480.45	58
TW001	Tri-County Waste Disposal	345 Central Blvd.	Rushton	IL	60321	$15,345.00	$2,875.50	31

records

Figure 1–1a Account Table

AM # (Account Manager Number) is 35

AM #	Last Name	First Name	Street	City	State	Postal Code	Start Date	Salary	Bonus Rate
31	Rivera	Haydee	325 Twiddy St.	Avondale	IL	60311	6/3/2013	$48,750.00	0.15
35	Simson	Mark	1467 Hartwell St.	Walker	IN	46004	5/19/2014	$40,500.00	0.12
42	Lu	Peter	5624 Murray Ave.	Davidson	IN	46007	8/3/2015	$36,750.00	0.09
58	Murowski	Karen	168 Truesdale Dr.	Carlton	IL	60313	11/9/2016	$24,000.00	0.08

Figure 1–1b Account Manager Table
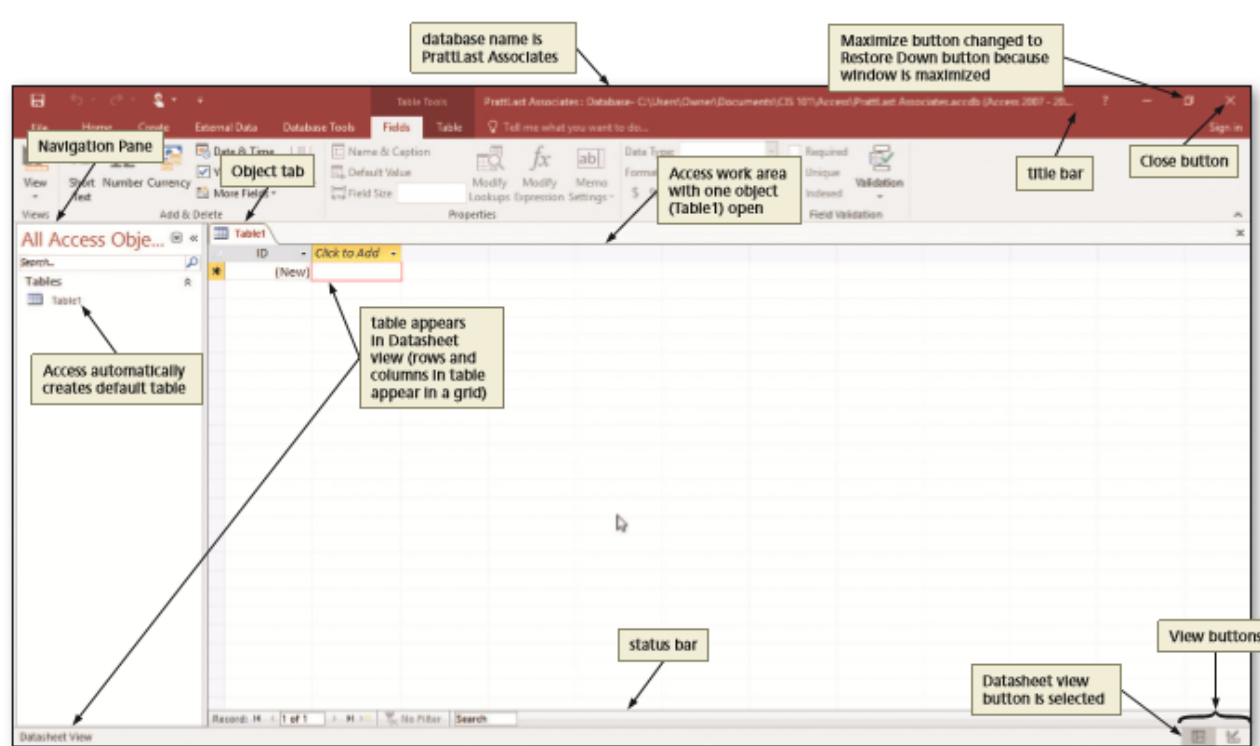
AM # (Account Manager Number) for Mark Simson is 35

- Create the first table, Account Manager, using Datasheet view

- Add records to the Account Manager table

- Print the contents of the Account Manager table

- Import records into the second table, Account

- Modify the second table using Design view

- Create a query for the Account table

- Create a form for the Account table

- Create a report for the Account table

Creating a Database (Slide 1 of 2)

- To Create a Database
  - Run Access
  - Using the steps in the "To Create an Access Database" section in the Office and Windows module, create the database on your hard disk, OneDrive, or other storage location using the desired file name

- To Create a Database Using a Template
    - If you have another database open, close it withot exiting Access by clicking File on the ribbon to open the Backstage view, and then clicking Close
    - If you do not see a template that you want, you can search Microsoft Office onlin for additional templates
    - Click the template you want to use. Be sure you have selected one that indicates it is for a desktop database
    - Enter a file name and select a location for the database
    - Click the Create button to create the database

The Access Window

- Navigation Pane and Access Work Area
  - Define the following
    - Access work area
    - Object tabs
    - Navigation Pane
    - Status bar
    - Datasheet view
    - Datasheet

- Naming Tables and Fields
  - Names can be us to 64 characters in length
  - Names can contain letters, digits, and spaces, as well as most of the punctuation symbols
  - Names cannot contain periods (.), exclamation point (!), accent graves (`), or square brackets ([])
  - Each field in a table must have a unique name

- Determining the Primary Key
  - Unique identifier
  - Field called ID
  - Autonumber field

- Determining Data Types for the Fields
  - Data type
    - Short Text
    - Number
    - Currency
    - Date & Time

- Datasheet view – rows and columns, like a spreadsheet

- Design view – only used to create a table or to modify the structure of a table

- Caption – an assigned value to a field

- To Modify the Primary Key
    - Click the Field Size text box to select the current field size, use either the DELETE or BACKSPACE keys to erase the current field size, and then type the new field size
    - Click the Name & Caption button to display the Enter Field Properties dialog box
    - Click the Caption text box, and then type the desired caption
    - Click the Description text box, and then type the desired description
    - Click the OK button to change the caption and description

- To Define the Renaming Fields in a Table
  - Click the 'Click to Add' column heading to display a menu of available data types
  - Click the desired data type
  - Type the desired field name
  - Click the blank space below the field name to complete the change of the name. Click the blank space a second time to select the field
  - Change the field size, if necessary

- Click the Save button on the Quick Access Toolbar to display the Save As dialog box

- Type the desired table name

- Click the OK button (Save As dialog box) to save the table

Figure 1–13

- To View the Table in Design View
  - Click the View button arrow to display the View menu
  - Click Design View on the View menu to view the table in Design view
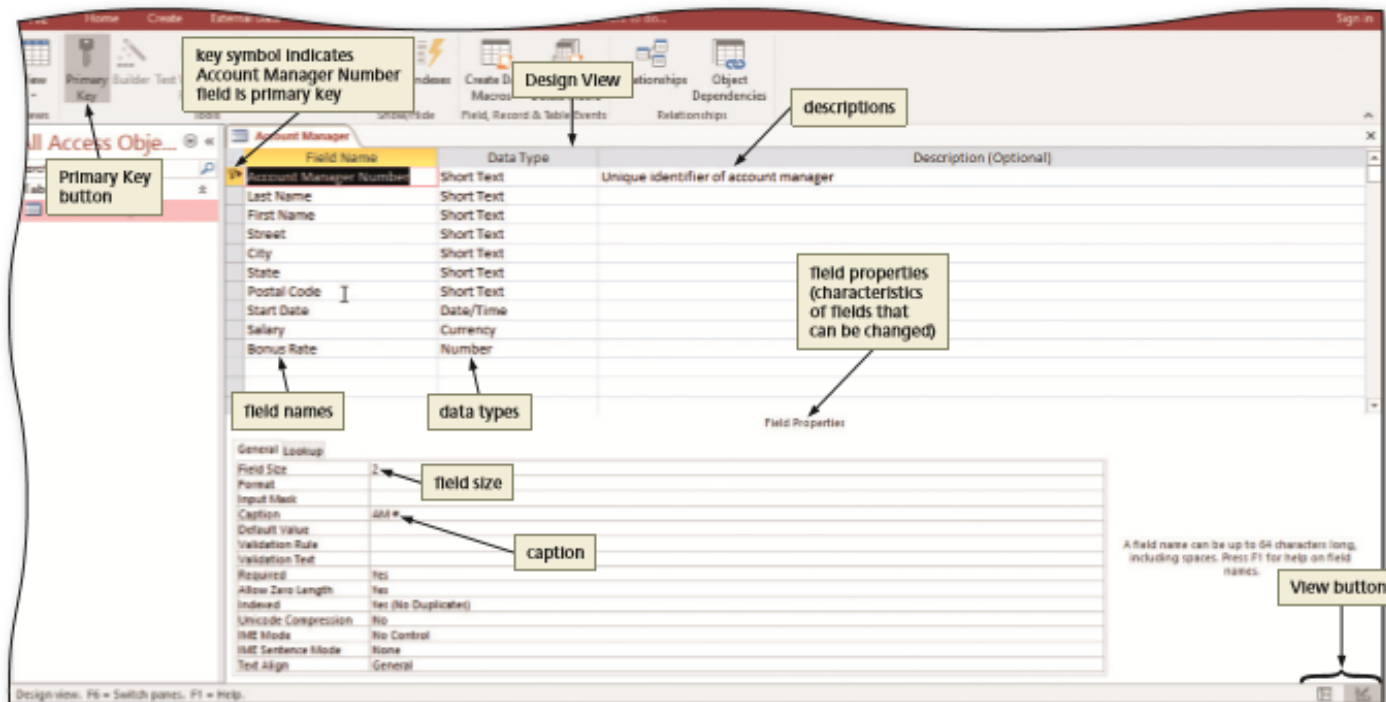
- To Change a Field Size in Design View
  - If necessary, click the vertical scroll bar to display the desired field. Click the row selector for the desired field to select the field
  - Click the Field Size box to display the Field Size arrow
  - Click the Field Size arrow to display the Field Size menu
  - Click the desired field size
  - Click the Format box to display the Format arrow
  - Click the Format arrow to open the Format menu
  - Click the Save button to save your changes

- To Close the Table
  - Click the Close button for the open table to close the table

- To Add Record to a Table
  - Right-click the table in the Navigation Pane to display the shortcut menu
  - Click Open on the shortcut menu to open the table in Datasheet view
  - Click the Shutter Bar Open/Close Button to close the Navigation Pane
  - Type the desired values in each field, pressing the TAB key to move to the next field

- Making Changes to the Data
  - Undo
  - Add a record
  - Delete a record
  - Change the contents of a field

- To Add Records to a Table that Contains Data
  - Run Access
  - Open desired database
  - Open the Navigation Pane
  - Click Open on the shortcut menu to open the table in Datasheet view
  - Close the Navigation Pane
  - Click the 'New (blank) record' button to move t a position to enter a new record
  - Close the table

- To Resize Columns in a Datasheet
  - Point to the right boundary of the field selector so that the mouse pointer becomes a two-headed arrow
  - Double-click the right boundary of the field selector to resize the field so that it best fits the data
  - Save the changes to the layout by clicking the Save button on the Quick Access Toolbar
  - Click the table's Close button to close the table

Previewing and Printing the Contents of a Table

- To Preview and Print the Contents of a Table
  - If necessary, open the Navigation Pane and select the table you wish to preview and print
  - Click FILE on the ribbon to open the Backstage view
  - Click the Print tab in the Backstage view to display the Print gallery
  - Click the Print Preview button in the Print gallery to display a preview of what the table will look like when printed
  - Click the Print button to display the Print dialog box
  - Click the OK button to print the table
  - When the printer stops, retrieve the hard copy
  - Click the Close Print Preview button to close the Print Preview window

- To Import an Excel Worksheet
  - Click EXTERNAL DATA on the ribbon to display the EXTERNAL DATA tab
  - Click the Excel button to display the Get External Data – Excel Spreadsheet dialog box
  - Click the Browse button in the Get External Data – Excel Spreadsheet dialog box
  - Navigate to and select the desired file
  - Click the Open button
  - With the option button to import the source data to a new table elected, click the OK button to display the Import Spreadsheet Wizard dialog box
  - Be sure the 'First Row Contains Column Headings' check box is selected
  - Click the Next button
  - Click the 'Choose my own primary key' option button
  - Click the Finish button
 - Click the Save Import button to save the import steps

- To Modify a Table in Design View
  - Right-click the desired table in the Navigation Pane to display the shortcut menu, and then click Design View on the shortcut menu to open the table in Design View
  - Click the Description box for the desired field and then type the desired text
  - Click the Save button on the Quick Access Toolbar to save your changes

- To Use the Simple Query Wizard to Create a Query
  - If necessary, open the Navigation Pane
  - Select the table you wish to query
  - Click CREATE on the ribbon to display the CREATE tab
  - Click the Query Wizard button to display the New Query dialog box
  - Be sure Simple Query Wizard is selected, and then click the OK button (New Query dialog box) to display the Simple Query Wizard dialog box
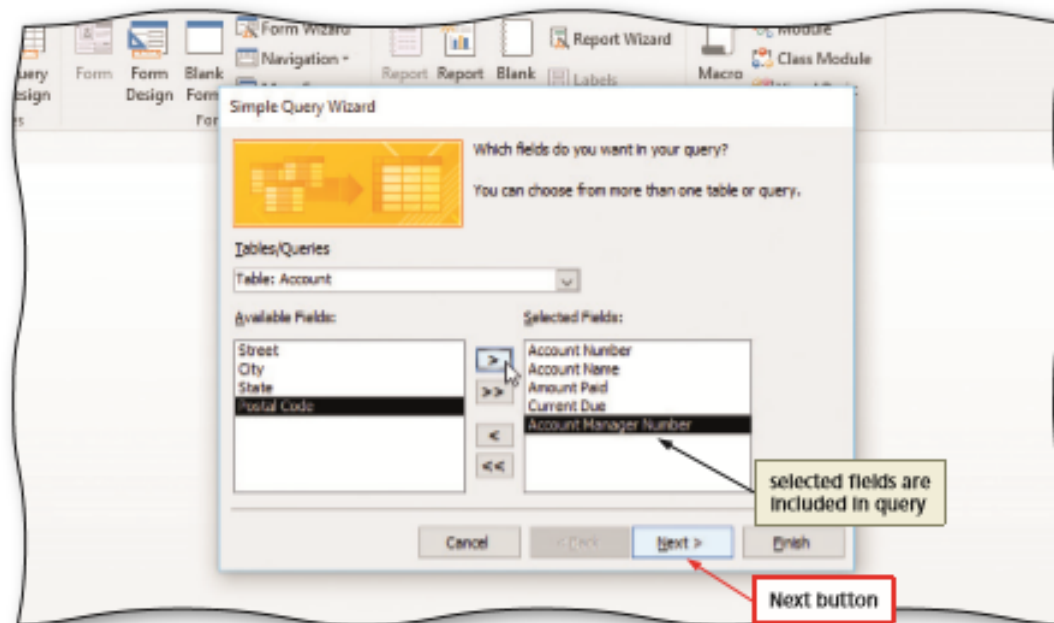
- To Use a Criterion in a Query
  - Right-click the query to open in the Navigation Pane to produce a shortcut menu
  - Click Design View on the shortcut menu to open the query in Design view
  - Click the Criteria row in the column for the field for which you want to specify the criteria, and then type the criteria
  - Click the Run button to run the query and display the results in Datasheet view

- To Create a Form
    - Select the table in the Navigation Pane for which you want to create a form
    - If necessary, click CREATE on the ribbon to display the CREATE tab
    - Click the Form button to create a simple form
    - Click the Form View button on the Access status bar to display the form in Form view
    - Click the Next record button to move to the next record
    - Click the Save button on the Quick Access Toolbar to display the Save As dialog box
    - Type the desired form name, and then click the OK button to save the form
    - Click the Close button for the form to close the form

- To Create a Report
  - Select the table in the Navigation Pane for which you want to create the report
  - Click CREATE on the ribbon to display the CREATE tab
  - Click the Report button to create the report
  - Click the Save button on the Quick Access Toolbar to display the Save As dialog box and then type the name of the report
  - Click the OK button (Save As dialog box) to save the report
  - Close the report by tapping or clicking its Close button

- To Modify Report Column Headings and Resize Columns

    - Right-click the report in the Navigation Pane you wish to modify and then click Layout View on the shortcut menu

    - If a Field list appears, click the Add Existing Fields button to remove the Field list from the screen

    - Close the Navigation Pane

    - Click the column heading you wish to modify two times

    - Type the new column heading

    - Point to the right boundary of the heading for the column you wish to resize until the mouse pointer changes to a two-headed arrow and then drag the right boundary to the desired position

- To Add Totals to a Report
    - Click the field you want to total
    - Click DESIGN on the ribbon to display the DESIGN tab
    - Click the Totals button to display the list of available calculations
    - Click Sum to calculate the sum of the amount of paid values
    - Click the Save button on the Quick Access Toolbar to save your changes to the report layout
    - Close the report

Database Properties

- To Change Database Properties
    - Click FILE on the ribbon to open the Backstage view
    - If necessary, click the Info tab in the Backstage view to display the Info gallery
    - Click the 'View and edit database properties' link in the right pane of the Info gallery
    - Enter the desired database properties
    - Click the OK button to save your changes

- To Back Up a Database
  - Open the database to be backed up
  - Click FILE on the ribbon to open the Backstage view, and then tap or click the Save As tab
  - With Save Database As selected in the File Types area, click 'Back Up Database' in the Save Database As area, and then click the Save As button
  - Navigate to the desired location in the Save As box. If you do not want the name Access has suggested, enter the desired name in the File name text box
  - Click the Save button to back up the database

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- To Compact and Repair a Database
    - Open the database to be compacted
    - Click FILE on the ribbon to open the Backstage view, and then, if necessary, select the Info tab
    - Click the 'Compact & Repair Database' button in the Info gallery to compact and repair the database

- Additional Operations
  - Closing a database without exiting Access
  - Saving a database with another name
  - Deleting a table or other object in the database
  - Renaming an object in the database

Database Design

- Database Design Process
  - Identify the Tables
  - Determine the Primary Keys
  - Determine Additional Fields
  - Determine and Implement Relationships between the Tables
  - Assign Data Types to the Fields
  - Identify and Remove Redundancy