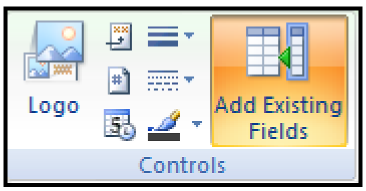
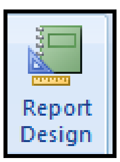
Akron-Summit County Public Library
330-643-9145
Electronic Services Division
60 South High Street, Akron, OH 44326

Microsoft Access 6: Reports & Other Useful Functions

This can be a very quick way to build a report, especially if you plan to put only a few fields on your report. When you click on the **Blank Report** button, a blank report is displayed in Layout view, and the Field List pane is displayed on the right side of the Access window. In the **Field List** pane, click the plus sign next to the *table or tables* containing the fields that you want to see on the report. Drag each field onto the report one at a time or double-click on the field, or hold down CTRL and select several fields, and then drag them onto the report at the same time. You will have to place your own calculated fields to appear on the report.



To enhance your blank report, use the tools in the **Controls** group on the **Format** tab to add a logo, title, page numbers, or the date and time to the report.

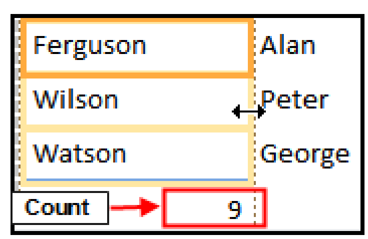


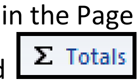
It is similar to the Blank Report button where you can create a customized report from scratch in a Design View. You can create more advanced design changes to a report, such as adding custom control types and writing codes.

Let's create another simple report from one of our queries available: Author Age query.

1. Select the query in the navigation pane and click on Create tab.
2. Click on the "Report" button in the Reports group.

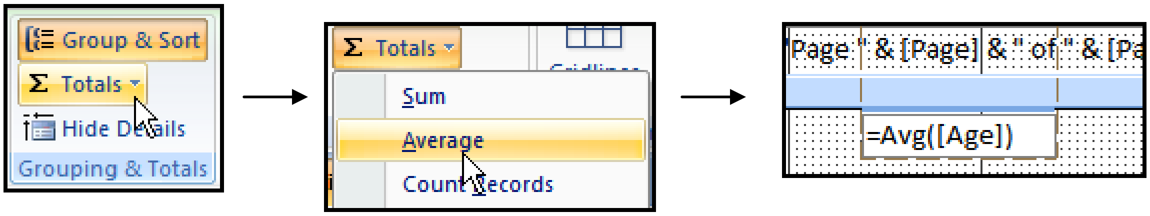
3. A basic report will be presented in Layout View including all the fields in the query. By clicking on any individual field you will select the entire column of that field. Use double-headed arrow to resize the entire column width. You will also notice page headers and footers, and the total count on the number of records in the report footer section.



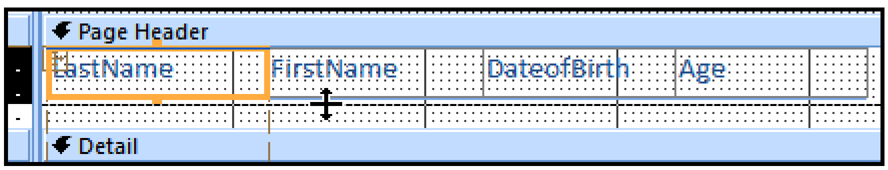
4. Click on the Design View button to add another calculated field in the footer section. Let's say you want to find out the average age of these authors. Click on the label box (Age) in the Page Header section OR the text box (Age) in the Detail section. The Summary command  in the Grouping & Totals group under the Design Tab will become active. Click the drop-down

arrow next to the Summary command and select Average. The average of the 'Age' field is added in the footer section. Create a label box to read "Average" next to it. (**Note**: You could also click on the 

function on the Report Layout View as well; however, you will have to go to the Design View to insert a label box.)

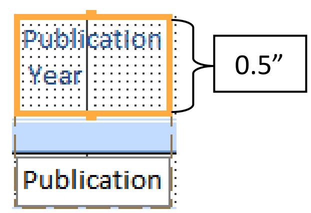


5. You can modify the look of the report by deleting any excessive spaces by nudging the sections between the Page Header and Detail (Detail and Page Footer) together as shown below. Move the Date and Time controls in the Report Header field much closer to the left and delete the excessive page on the right by pulling in the right edge. Go under the "Arrange" tab and select any auto format of your choice.



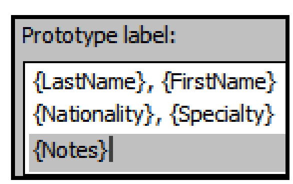
6. Save the report as "Author Age Query".

Practice: Select "Calculate on Title, Author, and Publishers Details" Query in the navigation pane and create a report by using the Report button. Insert a "sum" function for the "Number of Copies" field. Adjust the height of the Label boxes in the Page Header Section to 0.5" in the Property Sheet pane. Use one of the Auto Format Styles under the *Arrange* tab. Save the report under the same name.

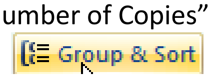
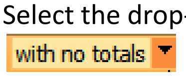


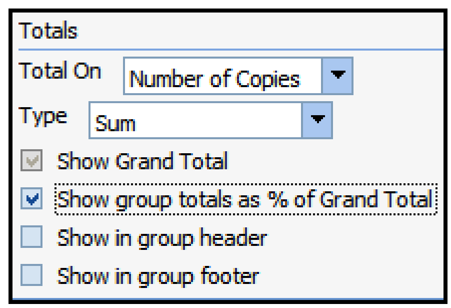
Use this Label Wizard to easily create labels for a wide variety of standard label sizes. In the Navigation Pane, click once on the *table or query* that will be the record source for your labels. On the **Create** tab, in the **Reports** group, click **Labels.** Follow the directions on the pages of the **Label Wizard**. You can customize the display of your label along the way. On the last page, click **Finish**.

Practice: Select the *Author* table in the navigation pane on the left and click on the *Label* command under the *Create* tab in the *Report* group. Follow the directions to use the Avery 5160 Label in the Label wizard. Customize it to include the fields shown on the right by double-clicking on each field. Type in comma(s) and spaces between each field as you would like them to appear on your label. Hit Enter to place a field in the next line. Save the label as "Labels Author". Use Print Preview mode to see how your labels would look before printing.

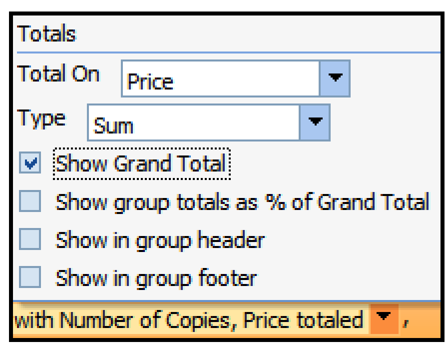


You can use the Report Wizard to be more selective about what fields appear on your report. You can also specify how the data is grouped and sorted, and you can use fields from more than one *table or query*, **provided** you have specified the relationships between the tables and queries beforehand. Let's create a report by using the wizard.

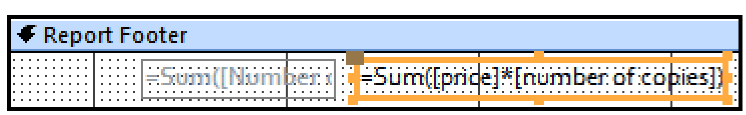
1. On the **Create** tab, in the **Reports** group, click **Report Wizard.**
2. The **Report Wizard** page will open. Include the *Subject Name* field from the *Subject* Table and the *Title, Number of Copes, Price,* and *Publication Year* fields from the *Book* table. (To include multiple tables in your report, do not click **Next** or **Finish** until all additional fields that you want to include in the report are added. Repeat the steps to select additional tables or queries to include all the fields you want to appear in the report.) Then, click **Next** and you will see that your report will be grouped by the *Subject* field, the first field you placed in your choice. Click **Next** twice**.**
3. On the next Sort Order screen, sort by ascending Title and click **Next.**
4. Select one of the layout styles (Stepped, Block or Outline) on the next screen and click **Next.**
5. Select the style of your choice and click **Next.**
6. On the last page, accept the title "Subject" and click **Finish.** You will view the finished report in the Report View.
7. Switch to view the report in the Design view. Adjust the widths of the fields in the header section as needed. Notice, the widths of boxes in both the header and detailed sections will be adjusted as a pair. Let's place the percentage values of collection on the "Number of Copies" field in the Report Footer section.
8. Click on the "Number of Copies" box. Click on the "Group & Sort" button  under the Design tab. Group, Sort and Total commands will open in the lower pane of the window. Click on the "More" button . Select the drop-down arrow next to the "with no totals"  command. Select the "Number of Copies" field in the "Total On" drop-down list and check the box to show group totals as % of Grand Total. The % field should immediately be filled in the Report Footer section. Place a label box and type in "Percentage of Total Collection" in the "Subject ID Footer" section.



9. Next, click on the *Price* field and let's add another group for the price. Click on the "More" button . Select the drop-down arrow next to the "with no totals" command. Select the "Price" field in the "total on" drop-down list and check the boxes to show "Grand Total".



10. Last, change the Grand Total formula to sum up prices for all multiple copies. In the Report



Footer section, in the sum box, change the formula to read:
=sum([price]*[number of copies]); format this box to show “currency”. Align this box with the “price” boxes in the Detailed and the Page Header Sections. Move the associated label box to the furthest left and type in “Grand Total”. Nudge each section as necessary to show the entire report on one page.

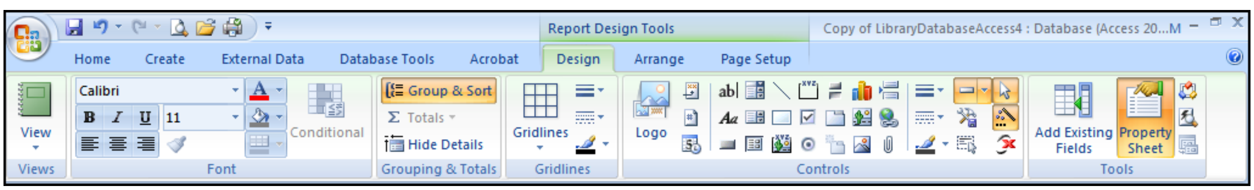
[Alternatively, in the Design View, you can add summary fields by using the 

Summation command. Click on any field that you want to count or sum. Click on the “Number of Copies” field and the “Price” fields one at a time. Then click on the Summation command and select “Sum”. The sum of the number of copies will be added to the Report Footer section. Do the same for the “price” field. You will have a summary field that would add up “Price” fields. Click in that box and type in the remaining part of the formula to look like: =sum([price]*[number of copies]) to multiply with the “Number of Copies” field. Create appropriate label boxes for the “Subtotal” (in the SubjectID Footer section) and the “Grand Total” (in the Report Footer section) to go with these summary fields. See the sample in the “Subject1” report.]

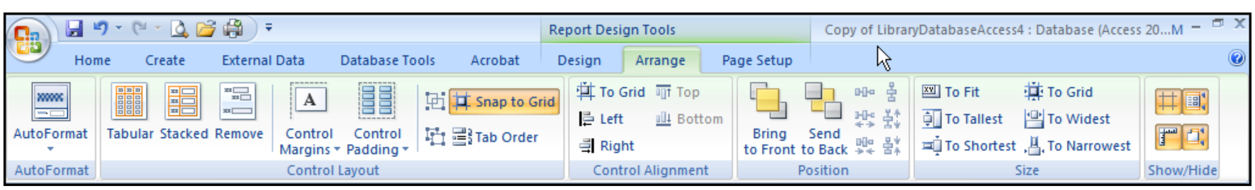
Note that after you place information on footers and headers in Report and Page sections; do not turn off those buttons in the show/hide group under the *Arrange* tab. Doing so will delete all information from those sections permanently.

Report Design Tools

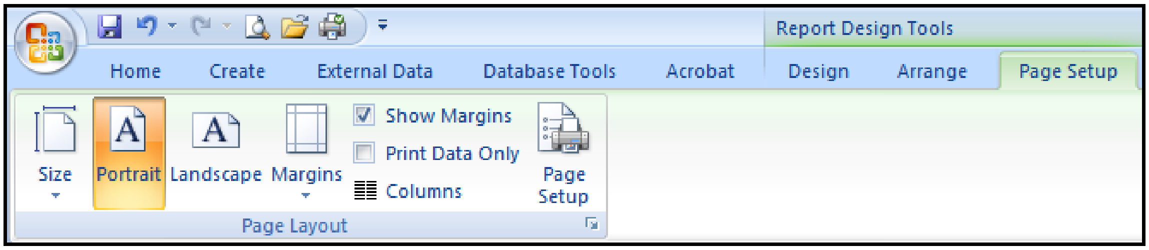
Design Ribbon: All the tools available in Form Design Ribbon are here.



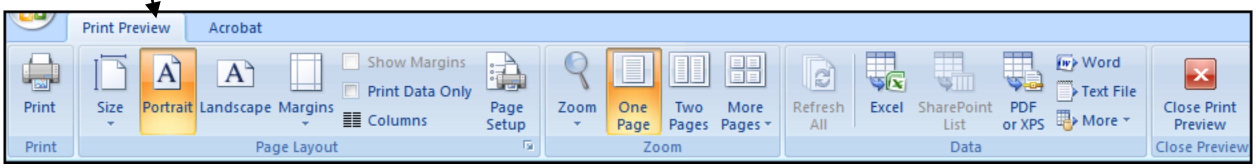
Arrange Ribbon: Same as in the Form Design Ribbon.



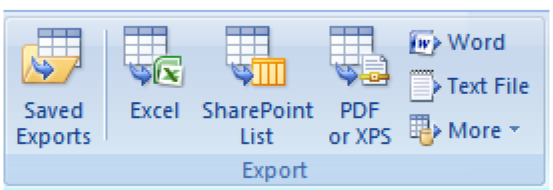
Page Setup Ribbon: This ribbon provides you with many functions available in the Print Layout View Ribbon. See the comparison below. You can change the orientation of the page either here or in the Print Layout View Ribbon.



Print Layout View Ribbon

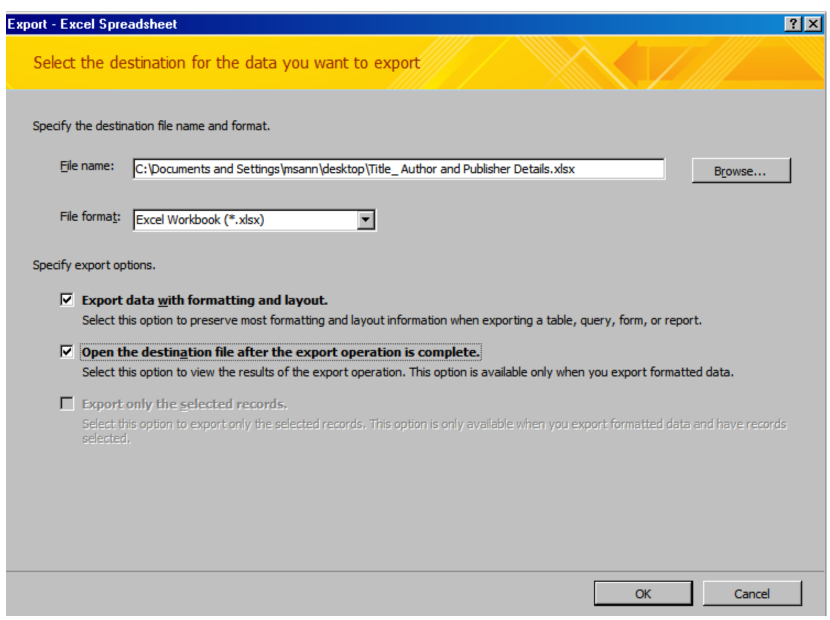


Exporting data to another program



You can export the data you created in a table or query into another program.

- In the database, click on the table or query you want to export.
- Select the External Data Tab. In the *Export* group, select the type of program to which you want to export the data. You may select Excel, Word, etc. Click the More button for a list of other available formats.



- Choose a location to save your exported file.
- Use the Browse button to open a box that lets you navigate to your destination and name the file or accept the name stemmed from your original table or query. Check the checkboxes to select your export options. Click on OK. See the example on the right.
- Before the wizard quits, it will ask you whether you want to save the export steps. If you are repeating the export function regularly, check the check box and close the wizard.

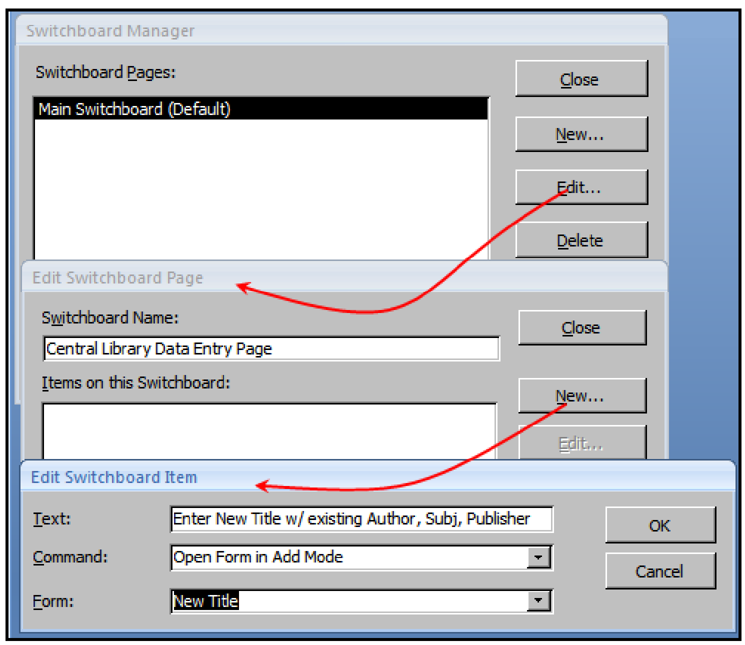
Switchboards

You have learned 4 objects that comprise your Database. You may want to make your day-to-day library database searching and managing tasks even simpler by making the objects you created easier to access. To do so, you can create and manage database switchboards. A *Switchboard* is a MS Office Access 2007 **form** that facilitates navigation and access to different parts of an application. It works as an interface between the user and the application. It can contain command buttons that execute specified actions such as opening a form or a report. It also makes it harder for users to accidentally perform "bad" things such as deleting your data or reorganizing your tables, the essential object of your database. You can modify switchboards by modifying their properties.

Among other forms we created in Access Level 4 and 5, we created 3 New forms as below.

1. New Author
2. New Publisher
3. New Subject

Let's create a primary switchboard using the Switchboard Manager.



1. Click on the Database Tools Ribbon tab, and then click Switchboard Manager in the *Database Tools* group. If you do not already have a switchboard, Access will ask if you want to create one. Click Yes.
2. The Switchboard Manager window opens with the name Main Switchboard as default. You can change the name by clicking on the Edit button.
3. The Edit Switchboard Page window opens. Change the switchboard name to "Central Library Data Entry And Report Page". Click on New button to add new items on that switchboard.
4. The Edit Switchboard Item window opens up. In Text box, type "Enter New Title". Select "Open Form in Add Mode" in the Command box by clicking on the drop-down arrow in that box. (By selecting the "Add Mode", you let users add new entries in forms and allow them to edit the **new entries only** but you will **not** give them access to previous entries.) Select the name of the form – "New Title" in the Form drop-down box.
5. Click OK. You will get back to the "Edit Switchboard Page" window where you can add more objects by clicking on the "New" button each time to add an object.

6. Follow the steps 4 and 5 and add the following objects.
    a. Enter New Author:
        i. Text – Enter New Author
        ii. Command – Open Form in Add Mode
        iii. Form – New Author
    b. Enter New Publisher
        i. Text – Enter New Publisher
        ii. Command – Open Form in Add Mode
        iii. Form – New Publisher
    c. Enter New Subject
        i. Text – Enter New Subject
        ii. Command – Open Form in Add Mode
        iii. Form – New Subject
        (You can rearrange the order of the objects on the Switchboard by using the "Move Up" or "Move Down" buttons.)
7. Click the "Close" button on the "Edit Switchboard Page" window.
8. Click the "Close" button on the "Switchboard Manager" window. You will see a new table that includes "Switchboard items" and a new form named "Switchboard" in your navigation pane. You can open the "Switchboard" form in the Design View and change color and appearance as desired. <u>Do not</u> delete any control boxes in the Design View; doing so will disconnect the underlying data on the switchboard.

You can always add new objects to your switchboard by clicking on the Switchboard Manager command in the *Database Tools group* again. The existing switchboard will open; click Edit to open up the "Edit Switchboard Page" window and then click on "New" button to add more objects on the same switchboard. Practice adding 3 more objects (Reports) at home.

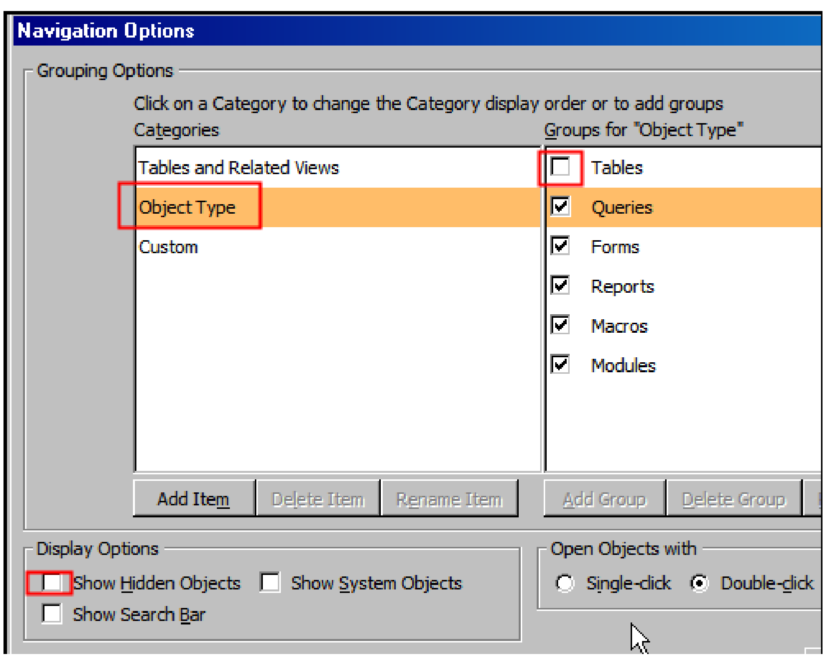
a. Open Total Holding Report
    i. Text – Open Total Holding Report
    ii. Command – Open Report
    iii. Report – Calculate on Title, Author and Publisher Details
b. Open Subject Spending Report
    i. Text – Open Subject Spending Report
    ii. Command – Open Report
    iii. Report – Subject
c. Open Author Report
    i. Text – Open Author Report
    ii. Command – Open Report
    iii. Report – Author w/ Specialty

The entire switchboard appearance can also be built by using the combination of the Form Design and the Button Control to open a form or report or even a query without using the Switchboard Manager. After all, the switchboard built by the Switchboard Manager is simply a form with various controls to pull different data from your objects (Tables, Queries, and Forms.)

[Delete a switchboard: In the Database window, delete <u>both</u> objects: the Switchboard Items <u>Table</u> and the Switchboard <u>Form</u>.]

Let's apply a few more options to safeguard the database from unintentional changes by users. You can apply many useful options under the Access Options button.

1. Click the Microsoft Office Button on the top left.
2. Click on the Access Options Button.
3. Select the Current Database on the left pane.
    a. Application Title: Displays the title in the title bar of the database window. Type in "Central Library Database".
    b. Application Icon: Lets you select an icon button from the .icn files from your computer for your Database.
    c. Display Form: Click the drop-down arrow and select the "Switchboard". Doing so will automatically display the switchboard when the user opens the database.
    d. Document Window Options: Access 2007 uses tabbed documents to easily move between several database objects open at the same time. (If you open 2003 Access with .mdb extension in the Access 2007, the radio button would be at the "overlapping windows". You can select to switch to the "Tabbed Documents".)
    e. Compact on Close: Checking that box will automatically compact the database each time it is closed.
    f. Picture Property Storage Format: Selecting the first option "Preserve source image format" will make the file size smaller and will enable the full use of the new AutoFormats.
    g. Display Navigation Pane: Un-checking the display navigation pane box will hide the navigation pane on the left. Users can still display the pane later by hitting F11 on the keyboard and hide again by hitting F11 again.
        i. Navigation Options Button: Clicking on this will open a window where you can customize your view in the navigation pane. For example, if you want to hide Tables for the users, select **Object Type** under Categories and clear the check box next to **Tables** under Groups. Also clear the check box next to **Show Hidden Objects** under the Display Options. From now on, if a user selects the **Object Type** group, tables are not visible (even with F11).



h. Ribbon and Toolbar Options:
   i. Allow Full Menus: If you clear the **Allow Full Menus** check box, the Office Fluent Ribbon is reduced to the **Home** tab, and other tabs, such as **Create**, **External Data**, and **Database Tools**, are hidden. **Note:** If you had created forms that allow activating another form within the cell, such as "Allow Value List Edits" from another form, by NOT allowing full menus will turn this feature off. So, it's a judgment call for you whether you should activate to open another form within a form from a field or you should simply create a "button" to open the form intended.
   ii. Allow Default Shortcut Menus: If you clear the **Allow Default Shortcut Menus** check box, the next time that you open the database, Access disables all right-click menus. This option might reduce user productivity, so use it with care.

Allow Value List Edits	Yes
List Items Edit Form	New Publisher

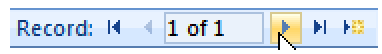
[When you clear the **Allow Full Menus** check box, the **Access Options** are no longer visible from the **Microsoft Office Button**. To retrieve them, you must hold down the **SHIFT** key when you open the database so that you can select the **Allow Full Menus** check box again. **OR**
You can click the drop-down arrow of the Quick Access Toolbar; choose **More Commands** to open up the **Access Options** window again. Then select the **Current Database** to reset your options.]

4. Options under the "Datasheet" let you set colors (such as different background colors or striped datasheets), change how gridlines appear, and set a default font and font sizes.
5. You will be reminded to close and reopen the database for the specified options you just chose to take effect. Click OK and close and reopen the database.

Practice Data Entry

1. Click the button to open the "Enter New Author Form" on the main Switchboard. Hit the tab key to move the data entry to the Last Name field. (Note the AuthorID, PublisherID, and SubjectID fields are auto number fields. Upon entering another field on those forms will insert a new auto number into those fields automatically.) Enter the following Data:
   a. Last Name: Slaughter
   b. First Name: Karen
   c. Date of Birth: 01/06/1971
   d. Date of Death: *leave it blank*
   e. Nationality: American
   f. Specialty: Crime Fiction
   g. Notes: Best known for her "Will Trent" series
2. Click the "Enter New Subject" Form on the main Switchboard and enter "Crime Fiction" under the "Subject Name".
3. Click the "Enter New Publisher" Form on the main Switchboard and enter the following data:
   a. Company: Random House, Inc.
   b. Address 1: 1745 Broadway
   c. Address 2: 3rd Floor
   d. City: New York
   e. Postcode: 10019
   f. Region: *leave it blank*
   g. Country: USA
   h. Business Phone: (212) 782-9000
   i. Business Fax: (212) 572-6066
   j. Email address: ecustomerservice@randomhouse.com
   k. Website: www.randomhouse.com

Upon closing those 3 forms above, all information added on those forms will be saved automatically and now if you open the first button on the Switchboard to enter new title with existing author, subject and publisher names, the added author, subject, and the publisher names should appear on the drop-down lists on those fields.

4. Open the first button to enter the new title and fill in the following data:
   a. ISBN: 978-0-385-34197-4
   b. Title: Broken
   c. Author ID: Select Karen Slaughter's ID from the drop-down menu
   d. Publisher ID: Select Random House from the drop-down menu
   e. Subject ID: Select Crime Fiction from the drop-down menu
   f. Row Number: 22
   g. Shelf Number: 6
   h. Number of Copies: 1
   i. Publication Year: 2010
   j. Price: 26.00 (Total Cost field will automatically be filled upon filling this Price field.)
   k. Lending: check this box.
   l. Clicking on the next record button on the bottom navigation bar 

will complete this entire record entry.
   m. Close this New Title form by clicking on the 'x' on its tab.
5. Open the button to view any Report on the main Switchboard. All reports should display newly added data.

Compact and Repair Database

This function cleans up the database, checks if for data integrity, and decreases the file size. It should be done on a regular basis. This function can only be performed with access to the Full Menus. Reopen the database and hold down the Shift key while opening.

1. Click the Office Button.
2. Point your mouse onto **Manage** and select "Compact and Repair Database" from the sub-menu on the right.