Intermediate Microsoft Access

Parameter Queries

A parameter query is a query that when run displays its own dialog box prompting you for information, such as criteria for retrieving records or a value you want to insert in a field. You can design the query to prompt you for more than one piece of information; for example, you can design it to prompt you for two dates. Microsoft Access can then retrieve all records that fall between those two dates.

Parameter queries are also handy when used as the basis for forms, reports, and data access pages. For example, you can create a monthly earnings report based on a parameter query. When you print the report, Microsoft Access displays a dialog box asking for the month that you want the report to cover. You enter a month and Access prints the appropriate report. You can also create a custom form or dialog box that prompts for a query's parameters instead of using the parameter query's dialog box.

<u>Creating a parameter query that prompts for criteria each time it's run</u>

1. Create a query in exactly the same way that you normally would.
2. In the **Criteria** cell for each field you want to use as a parameter, type a prompt enclosed in square brackets. Microsoft Access will display this prompt when the query is run. The text of the prompt must be different from the field name, although it can include the field name.

> Example 1: For a currency field, you can ask for a list of values above (or below) a specified dollar amount. In the field's **Criteria** cell, type **>[Enter dollar amount:]**.

> Example 2: For a field that displays dates, you can display the prompts "Type the beginning date:" and "Type the ending date:" to specify a range of values. In the field's **Criteria** cell, type **Between [Type the beginning date:] And [Type the ending date:]**.

To prompt the user for one or more characters to search for, and then find records that begin with or contain the characters the user specifies, create a parameter query that uses the LIKE operator and the wildcard symbol (*).

> Example: the statement <u>LIKE [Enter the first character to search by:] & "*"</u> would search for words that begin with a specified letter that was inputted by the user.

> Example: the statement <u>LIKE “*” & [Enter any character to search by:] & "*"</u> would search for words that contain the specified character that was inputted by the user.

Reports

- A way of presenting your data in "hard copy" format (like company invoices)
- Can use Report Wizard, or can create report "from scratch"
- QUICK EXAMPLE: Create a telephone list (for the company) that contains all of the employees and their phone numbers
    - Under the [Create] tab, click <u>Report Wizard</u>
    - Make sure the Employees Table is displayed under "Tables/Queries"
    - Select the following fields to add them to our report - click <u>Next</u> when done
        - LastName
        - FirstName
        - Phone
    - No grouping levels are necessary (click <u>Next</u>)
    - Let's sort by LastName, then click <u>Next</u>
    - Tabular layout will probably look the best, then click <u>Next</u>
    - Let's try the "Office" style, then click <u>Next</u>
    - Give the report a name (such as "Employee Phone List"), then click <u>Finish</u>
- What can we change from here? Go back to Desgin View:
        - Click "Employee Phone List" in Reports Navigation Bar
        - Click triangle in Views button, then select "Design View"
    - Right click on any object
        - All sorts of choices available, most associated with orienting that object within the existing "grid" of the report
    - Right click → Properties
        - Format: colors, fonts, borders, position, size, etc.
        - Data: properties of the data source
        - Event: procedures (usually written in Visual Basic) that execute during specific occurrences (error messages, etc.)
        - Other: anything else
- A report can only have one width that applies to all sections (you cannot change the width of one section without changing it for all sections)
- Reports are divided into several sections:
    - Report Header and Footer: appear only on the first and last page of the report
    - Page Header and Footer: appear at the top and bottom of each page
    - Detail section displays the actual results of the report
- Let's try to do something pretty fancy – let's generate a report of all the Customers and calculate the sum of all the sales from those customers
    - Create the report using the Report Wizard (just need Customer Name and Sales Amount fields)
    - When we get to the end of the wizard, we need to modify the report
    - Change the view to LAYOUT mode
    - Click on the "Last Sales Amount" field to select that field
    - Click the [Formatting] tab, then click {Totals}, then click on the calculation that you want for this field (in this case, "Sum")
    - The total is entered into the report – EXCEPT IT'S NOT IN THE RIGHT FORMAT!!!!
    - Change the view to DESIGN mode
    - Right click the "=Sum(LastSalesAmount) item, then choose Properties
    - Click on the <Format> tab
    - Change the very first two items:
        - "Format" should be "Currency"
        - "Decimal Places" should be "2"
        - Close the formatting box
    - Change the view to REPORT mode, and YOU'RE DONE!!!!

Forms

- Contains “controls” that you can use to enter, view, or edit data in fields
- Can be used to customize a screen and make it more appealing that the “normal” views
- Can be used to enter information into more than one table at the same time (instead of having to open each table individually)
- Steps to create a form using the Form Wizard
    - Click on “Forms” object in the Navigation Pane
    - Click the [Create] tab, then click “More Forms”, then click “Form Wizard”
    - Add the appropriate fields to the form list (moving the field name from the left column to the right column) from the table / query of your choice
    - Select the layout and style you want
    - Name the form, and then click “Modify” to bring the form into Design View
- You can move controls around the form by simply clicking and dragging
    - You can select several controls by clicking one, then SHIFT-clicking others
    - You can select several controls by dragging an outline around many controls
    - You can resize a control by dragging one of its corners
    - Controls and their labels can be moved independently of each other
- Form Header and Form Footer areas are used to display text on screen at the top and bottom of the form (respectively)
- Page Header and Page Footer areas are used in the same way to display text when the form is printed

- Let’s create a form which will allow us to calculate a 20% discount on all Parts that are on sale:
    - Step 1 – Create Query to generate list of items on sale
        1. Pull all fields into query “Items that are on sale”
        2. Set criteria for {on sale} field to TRUE
    - Step 2 – Create Form to calculate discount (and make changes to Parts table)
        1. Pull all fields from query “Items that are on sale”
        2. Choose layout and style, and we want to MODIFY the design
        3. Make more space for additional calculation field:
            - Drag vertical “margin” to the right 2 or 3 inches
        4. Select text box option in the Toolbox [‘ABC’ button]
            - Click and drag mouse where we want the control to appear in the Detail area of the form
            - Select the text in the label field
(*** the field that is SHADED ***), type the words “Special Offer”
            - Select the test in the calculated field
(*** the field with the white background ***), and type “=[cost]*0.80”
            - Right-click the calculated field, then click Properties – set the format of the calculation to Currency and two decimal places