

ACCESS 2007: ADVANCED EXERCISES

EXERCISE 1 Define Data Needs, p.1

Teaching Tip This exercise uses Excel to illustrate the concepts of stored fields and calculated fields. Explain to students that the Excel data can be imported to Access and that Access data can be exported to Excel.

Teaching Tip Remind students that Microsoft will allow them to import data to create a table from outside sources, such as an Excel spreadsheet. Point out that Excel is also helpful when determining how to organize the tables and define the data needs of a database.

Teaching Tip Ask students to explain why the data in the worksheet in Figure 1.1 is considered stored data and then ask them to come up with examples of calculated data that they might include in a database.

Solution The solution file for this activity is **Product Info-SF.xlsx**.

EXERCISE 3 Modify Field Properties, p.5

Teaching Tip Ask students to come up with examples of when a field should be set to **Allow Zero Length**. Ask them to think of forms they have filled out and what they have encountered when they know that no value exists for a field. For example, an online form might request a cell phone number or e-mail address. If someone does not have, or does not want to share, this information, could he or she insert a null value, such as a space? Students may mention surveys, online charitable donation sites, membership forms for sites that require users to register, streaming music and video sites, and other examples.

EXERCISE 4 Set Validation Rules, p.6

Step-By-Step Tip Point out to students that Step 4 creates what is called a *Boolean operator*, or *conditional expression*. This expression ensures that the data entered in the **DateAdded** field is a date that occurred after Jan. 1, 2009. Ask students to come up with examples of other search tools they may have used that offer some type of Boolean search option. Some examples include Internet search engines, online library catalogs, and online shopping sites.

Teaching Tip Ask students to come up with validation messages for the **Validation Rules** in Table 1.4. For example, the validation text for >0 could be *Enter a positive value*; OR *Value must be positive*; OR *Value must be greater than zero*. Ask students to share their examples with the class.

Differentiated Instruction/Advanced Students Encourage advanced students to create a new table in their database. Have them set the **Validation Rules** and create validation messages for each of the examples in the table.

EXERCISE 5 Define and Modify Primary Keys, p.8

NCLB/Language Arts (NCTE 11) Students may answer that streets, cities, states, product names, and price fields would be bad choices for primary keys. Point out examples of primary keys that might be used to identify them: computer user names, student ID numbers, driver's license numbers, and social security numbers. Point out that this some of these types of identifying information can be important to keep private.

Troubleshooting Point out to students that if they attempt to delete a field that is a primary key, Access will ask them to confirm the deletion.

EXERCISE 6 Define and Modify Multi-Field Primary Keys, p.9

Teaching Tip Discuss multi-field primary keys with students. Tell students that a primary key should include the fewest number of fields possible. Point out to students that they can always create a primary key by inserting an AutoNumber field. This will guarantee that each entry has a unique primary key.

Teaching Tip Point out to students that a key icon appears beside each record that is part of the *multi-field*, or composite key.

EXERCISE 7 Define Tables in Databases, p.10

Teaching Tip Discuss the normalization example used in this exercise with students. Ask them to come up with two other examples for the normalization rules in Table 1.5. Ask them to explain why their examples comply with the normalization rule. Have them share their examples with the class.

Solution The solution file for this activity is the **Sales table** located in the **Phil's Pick-a-Part-SF.accdb** file.

EXERCISE 8: Create Tables Based on the Structure of Other Tables, p.12

Step-By-Step Tip In Step 5, point out to students that the **Paste Table As** dialog box allows them to choose whether they want to copy the structure only, or the structure and data of a table. Ask students to think of examples of why a company might want to use the structure only and why a company might want to use both the structure and data of an existing table.

Differentiated Instruction/Advanced Students Encourage advanced students to practice copying the structure of another table in this database. Have them rename the table.

Solution The solution file for this activity is the **Customer Contacts table** located in the **Phil's Pick-a-Part-SF.accdb** file.

EXERCISE 9 Create and Modify Queries, p.13

Step-By-Step Tip In Step 9, point out to students where the asterisk is located.

Differentiated Instruction/Advanced Students Have advanced students practice entering new values for another record in **Datasheet View** and ask them to save the query result. Then, have them open the table where the field is located to view the changes they made.

Teaching Tip Point out to students that the data in a query is still connected to the tables that they have used in the query, and that editing the results of a query will update the corresponding data in the query's tables.

Solution The solution file for this activity is the **Sales query** located in the **Phil's Pick-a-Part-SF.accdb** file.

EXERCISE 10 Open Databases, p.16

Teaching Tip Point out to students that the **Open Read-Only** option will allow them to open a database without editing it. Other users can still access and edit the database. Ask them when this option might be helpful.

Teaching Tip Ask students to identify the other ways to open an existing database (excluding **CTRL + O**). For example, **Office>Open** or clicking on the database name in the **Open Recent Database** pane.

EXERCISE 11 Format and Modify a Chart, p.17

Teaching Tip In Step 19, explain to students that when they choose **Design>Tools>Property Sheet**, the **Properties** dialog box closes automatically.

EXERCISE 12 Import and Export Data, p.18

Teaching Tip Point out that Access allows you to set up and save **export specifications** so that you can run them later. Explain to students that if they plan to repeat the export process more than a few times, export specifications can be very useful.

Troubleshooting Remind students that *PDF* stands for *Portable Document Format* and *XPS* stands for *XML Paper Specification*. Explain that both are electronic file formats that preserve document formatting when sharing files.

Solution The first solution file for this activity is the **Quick Customer Contacts table** located in the **Phil's Pick-a-Part-SF.accdb** file. The second is the **Car-SF.jpg** file. The final solution file for this activity is the **Customer Info-SF.xps** file.

EXERCISE 13 Set Printing Options, p.22

Teaching Tip Point out to students that when they open a report in Access, it automatically opens in **Report View**.

Teaching Tip Ask students why they might want to print a particular section of data on a separate page. Students may answer that page breaks make pages easier to read, records will not be broken over two pages, and individual records can be separated more easily.

Solution Use the file **Phil's Pick-a-Part.accdb** as a solution file for **Exercises 1 through 13**.