# Lab 6: Creating the Museum Gift Shop Database

Note: This is the first in a series of Database (Access) labs that build on each other. We will create a single database file and keep adding to that file as the labs progress. Please submit the version of the file as it exists after each lab is complete.

**Problem:**  The local science museum operates a gift shop that sells science-related items. The gift shop purchases the items from vendors that deal in science-related games, toys, and other merchandise. Each item is produced by a single vendor, but one vendor may produce several different items. Currently, the information about the items and the vendors is stored in two Excel workbooks, but the museum is getting more sophisticated, and has asked you to provide a database to help manage the items and the vendors. You have already determined that you need two tables, a *Vendors* table and an *Items* table, in which to store the information.

**Instructions:**
1. Download the two spreadsheet files that contain the current information about vendors and items. These can be found at Class Web Page - Lab Assignments - lab06 files.
2. Open MS Access. Use the Blank desktop database option to create a new database in which to store all objects related to the problem. Call the database *Lab 6 Museum Gift Shop* when you create it. NOTE: Access may ask you to save a specific table or other object when you move to a new object. This does not mean you have to save the entire database to disk. However, your updates are not saved to disk until you save the entire Access database.
3. Go to the External Data tab on the ribbon. Use the "New Data Source / From File / Excel" icon to open the "Get External Data – Excel Spreadsheet" dialog.
   a. Click on the "Browse" button at the top right to select the "Lab_6_Vendors.xlsx" file that you downloaded.
   b. Make sure the "Import the source data into a new table in the current database" item is selected.
   c. Click on "OK" to bring up the "Import Spreadsheet Wizard" dialog.
   d. Click on the "First Row Contains Column Headings" box, and then click on "Next".
   e. Make the Vendor Code field "Indexed" option "Yes (No Duplicates)". Then click "Next". Make sure you specify "No duplicates". If you don't it will cause problems! (On this screen, we could select different fields and modify their properties, but we don't need to do that in this lab.)
   f. Select the "Choose my own primary key" option and select "Vendor Code" as the primary key in the pull-down field next to that option. Then click "Next" again.
   g. In the "Import to Table:" field, specify "Vendor" to create the Vendor table. Do not check the "I would like a wizard to analyze my table after importing the data" option. Then click on the "Finish" button.
   h. You don't need to save the Import steps. We won't need to import this spreadsheet again. Just close the wizard.

   Once you are done, the "Vendor" table should show up in the list of Tables at the left side of the Access window.
4. Select "Table 1" from the list of Tables at the left side of the Access Window. Then close the Table1 tab in the center field of the Access window. The center window should be blank and grey. Make sure "Table1" is selected in the list of tables at the left, then right mouse and hit "Delete". You will get a popup that asks if you are sure… respond "Yes". This should remove Table1 from the list of tables.
5. Select the "Vendor" table from the list of tables, right click and select "open". This will open the Vendor table in the datasheet view by default.
6. Select the design view from the home tab, Views list of icons. This will display the list of fields in the Vendor table in the center pane of the Access window. The properties of the selected field show up at the bottom pane. Change the following properties:
   a. The field size for the Vendor Code field to 2;
   b. The caption for the Vendor Code field to *VC;*
   c. The field size for the Vendor Name field to 25;
   d. The field size for the Telephone Number field to 12;
   e. Save the changes to the table design by switching to the Datasheet view. You will see a popup asking if you want to save your changes. You may also see a prompt that tells you some data may be lost. Since none of the field values exceed the new field sizes we specified, you can respond "Yes" to this prompt.
7. In the Datasheet view of the Vendor table, add the following New record:
   a. Vendor Code:                       XX
   b. Vendor name:                       YOUR last name followed by the word "Widgets"
   c. Telephone number:          607-555-1212
8. Repeat the import of Excel data for the "Lab_6_Items.xlsx" file, (as in step 3 above) using "Item Number" as the primary key after specifying that it should be indexed without duplicates. Save this as the "Items" table.
9. Open the *Items* table in Design view. Change
   a. the field size for the Item Number field to 4;
   b. the field size for the Description field to 28;
   c. the caption for the Wholesale Cost field to *Wholesale*,
   d. the caption for the Retail Price field to *Retail*;

e.  caption for the vendor code to VC;

f.  the On Hand field *size* to Integer;

g.  the field size for the Vendor Code same as the field size for the Vendor Code in the Vendor table;

10. Save the changes to the Items table design by switching to the Datasheet view.

11. In the "Items" table datasheet view, resize the Description, Retail and VC columns to best fit the data. Also, change the vendor code for items 5923 and 7934 to XX.  Save your changes using the "Save" icon in the Records group of the Home tab.

12. On the Create tab, select the "Query Wizard" icon with the Items table still open to create a new query. This will start the "New Query" dialog.

    a.  Select "Simple Query Wizard", and click on "OK"

    b.  Select fields: Item Number, Description, Wholesale Cost, Retail Price, and Vendor Code from the list, and select "Next".

    c.  Select the "Detail" option and hit "Next"

    d.  Use the default title, "Items Query", and the default option "Open the query to view information" and hit "Finish".

    You should now have a third, temporary table named "Items Query" displayed on the center pane of the Access window, along with the "Vendor" and "Items" tables (displayed as separate tabs on the center pane.) You should also see an "Items Query" object in the left-hand list of objects, along with the Items and Vendors tables. The "Items Query" table is a temporary derived table that is not kept in the database. What is kept instead is the information about how to derive the "Items Query" table from the existing tables (Vendors and Items) that are already in the database.

13. Close the "Items Query" tab on the central panel. This should bring you back to the "Items" table in the Datasheet view.

14. On the Create tab, select the "Form Wizard" icon to create a simple form for the *Items* table. Include all fields from the item table.

    a.  Select all Available Fields from the Items table and hit "Next".

    b.  Choose the "Columnar" option for the layout and hit "Next".

    c.  Use the default title "Items" for the form, select the "Open the form to view or enter information" option, and click on "Finish".

    You should now see and "Items" tab with a form icon instead of a datasheet icon, and in the center panel, you should see all the fields for the first item in the items table (3663 Agate Bookends). You should also see a new object in the object list at the left under "Forms" called "Items".

15. Scroll to Item Number 5923 using the "Record:" field at the bottom left of the central pane of the Access display.

16. Close the "Items" Form tab in the central panel. You should again be back to the "Items" table datasheet view in the central panel.

17. On the "Create" tab, select the "Report Wizard" icon. This will bring up the "Report Wizard" dialog.

    a.  For the "Table: Items" table, select fields: Item Number, Description, On Hand, and Wholesale Cost, and click on "Next"

    b.  Do not add any grouping levels… just hit "Next".

    c.  Sort by "Description" (Ascending, which is A -> Z), and hit "Next"

    d.  Use the default lay out options, Tabular and Portrait, and select "Adjust the field width…" option and hit "Next".

    e.  Change the title to "Item Status Report" but leave the "Preview the report" option selected and hit "Finish".

    You should now be seeing a screen that looks like the following, including the new Reports object titled "Item Status Report":



18. Save your "Lab 6 Museum Gift Shop" database and submit it on myCourses in CS-105-B-1 under Content/Lab 6 Museum Gift Shop.