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By Patricia Cox

## Master Budget Project: Testing and Refining the Database

>>> The master budget database we have been working on has come a long way since we first began in August 2010. We have built it step by step, two pages at a time. As we worked on each item, we made sure that it worked before moving on to the next. But as you build a complex system like this, sometimes you will build an item that actually “breaks” something that worked before. At different points along the way, it’s helpful to conduct some sort of user testing. This helps correct any errors or misunderstandings in the design.

Unit testing, integration testing, and system testing need to be completed to make sure each part works, that the parts work together, and that the system works as a whole. If you’re building this for a team or client, consider user acceptance testing to get users’ approval, test against system requirements, and correct any obvious errors. A usability test also can be completed with users of the database to see if anything needs to be reorganized for ease of use. By completing solid testing, you can make sure that your database is ready to be deployed or put into place for use.

We completed unit testing at each

stage as we completed the parts, but we need to complete some integration and system testing. I went through the database from the beginning, starting with the data input screens and working through all reports. I found a few changes and corrections that were needed.

### Data Entry Forms

The quarter fields initially used in the Product table and the Product Data Entry form became unnecessary when I changed how the quarter data was handled. But they weren’t removed from the form. From the Main Menu, open the Data Entry menu and click on Products. Change the form to Design view. Select and delete the Projected Sales Units for QTR1 to QTR4. While here, you’ll also want to add a Close button to the form. Save and close the form.

Add Close buttons to the Parts Data Entry form, Materials Data Entry form, and the Beginning Balance Sheet as well. These buttons will make the forms more user friendly so that people who don’t know Access can use them with ease.

With the Data Entry Menu open, switch to Design view. Open the Prop-

erty Sheet. Make sure the Selection Type is Form. On the Format tab, change the Record Selectors and Navigation Buttons properties to No. This will give the form a cleaner look like the Main Menu.

### Reports Form

Test each of the buttons for the various reports we created on the Reports Form to make sure they all still work properly.

As we created these reports over time, I noticed that the quarter headings are different. Some show specific years, and some have generic headings, like Q1 to Q4. They should be consistent. To do that, we can add a text box to the Reports form that captures the Budget Year. We can then update each report to refer to that control.

In Design view, add a text box labeled “Budget Year” at the top left of the Reports Menu form (see Figure 1). Move other controls out of the way if you need room. I moved a few buttons down. In the properties for the text box, set the default value to 2015, the format to General Number, and name it BudgetYear. Save the form and change to Form view.

Open each report in Design view and

Figure 1. Budget Year Text Box

add a text box to the Report Header. Set the box's control source to `=[Forms]![Reports Menu]![BudgetYear]`. Once you have added this to one report, you can copy and paste it into the others. If a report is for a year before or after the Budget Year, you can add or subtract one at the end of the formula: `=[Forms]![Reports Menu]![BudgetYear]+1`. Now you have a database that is ready for whatever budget year you are working on.

Thanks for sticking with this project over the last several years. As always, the database is available for download in

LinkUp IMA. Once you have completed all of your testing and refinements, let someone else work with the database to see if there's anything you have missed or need to make clearer so those unfamiliar with Access can use it.

I hope that you all have a wonderful end of the year and get to spend some time with the people you care about most, travel to an exotic vacation site, or even just stay home and get some rest. Next year we will look at adding some enhancements to the budget database and venture into the world of Visual Ba-

sic for Applications to address some of the questions I have been asked in my work world lately. **SF**

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