Design Document: MS Excel – Working with Tables

Class Description

Learn how to create tables and pivot tables, sort and filter data, work with large spreadsheets, and more in this class.

**Curriculum Track**

Microsoft Tools

**Audience**

Adults

**Course Length**

90 minutes

**Training Method**

Instructor-led hands-on

**Purpose**

To introduce users to tables, sorting and filtering, and multiple spreadsheets within a workbook

Equipment Requirements

Projector and projection screen; computers with internet access for the instructor and each participant; laser pointer (recommended)

Software Requirements

Windows 7, Microsoft Excel 2010 or 2013

Material Requirements

Pens or pencils, *Market Orders* Practice File, *Names List* Practice File, *Vehicles* Practice File, handouts, participant surveys

**Learning Objectives**

At the end of the session, learners will be able to:

* Create a structured range from a data set
* Sort and filter items in a list
* Create a table
* Create a pivot table
* Apply a style to a pivot table
* Update a pivot table

**Assessment Technique(s)**

Successful completion of class activities

Content Outline

**Agenda (2 mins.)**

* Outline the following topics that will be covered in class
  + About pivot tables
  + Creating a structured range
  + Sorting and filtering items in a list
  + Adding a repeating column header
  + Creating a table
  + Creating a pivot table
  + Applying a style to a pivot table
  + Updating a pivot table

**Topics, Talking Points, and Activities (85 mins.)**

* About pivot tables
  + Explain that a pivot table is a tool that allows users to summarize and better interpret large sets of data
  + As an example, share that a pivot table can allow users to view a company’s overall sales numbers for the year, then quickly view only the sales figures for each district within the region using filters
* Creating a structured range
  + Explain that a structured range is a list that contains a set of data, such as an invoice numbers and amounts
  + Pull up the *Market Orders* Practice File and show an example of each of the following as you explain the guidelines:
* Have a column label for each column in the list. The labels should be formatted differently than the rest of the data (usually Bold)
* The same type of data should be in each column, such as all text or all numbers in a column
* Avoid blank rows or blank columns in the list
* Don't insert extra spaces at the beginning of a cell; extra spaces affect sorting and searching
* Avoid having more than one list on a worksheet because some features, such as filtering, can be used on only one list at a time

**ACTIVITY**: Have participants complete **Activity #**1 on the *Activity Sheet*

* Sorting and filtering items in a list
  + Explain that the term “sort” refers to the process of arranging data in a list in Excel
    1. Share that common sorting options include alphabetically (from A to Z or Z to A), numerically (small to large or large to small), and date (earliest to latest or latest to earliest)
    2. Outline these steps to sort information in a single column as you demonstrate the process in the *Market Orders* Practice File
  + Explain that the term “filter” refers to the process of displaying certain data in a list while hiding other data
    1. Use the example of sales numbers from the previous section to explain that a filter allows the Midwest district manager to view only his sales results within the larger regional sales results workbook
    2. Demonstrate how to use a filter using the *Market Orders* Practice File as you walk through the following steps:

1. Click on a cell in the list you want to filter
2. Click on the **Filter** button under the **Data** tab
3. Click the **Filter arrow** button in the column that contains the data you want to filter
4. Uncheck the boxes next to the values you do not want to include

Note: For more options choose **Text Filters** or **Number Filters**

1. Click the **OK** button
   * 1. Next, share that a filter can be removed at any time by following these steps:
2. Click the **Filter arrow** button in the column where the filter has been applied
3. In the Sort/Filter window, click on **Clear Filter from “”**

**ACTIVITY**: Have participants complete **Activity #2** on the *Activity Sheet*

* Adding a repeating column header
  + Share that sometimes it’s useful to add a consistent header throughout a spreadsheet, especially when working with lengthy columns of data. Point out that Excel provides an easy way to do this with its **Rows to repeat at top** option in the **Page Setup** window
  + Demonstrate the feature on your Market Orders Practice File worksheet as you outline the following steps:
  1. Click the **Print Titles** button in the **Page Setup** group on the **Page Layout** tab
  2. When the **Page Setup** window opens, click on the **Sheet** tab
  3. In the **Print Titles** section, click inside the **Rows** **to repeat at top box**
  4. Use your mouse to click on the cells you would like to include as headers on all worksheets (usually, the first row)
  5. Click the **OK** button

**ACTIVITY**: Have participants complete **Activity #3** on the *Activity Sheet*

* Creating a table
  + Explain that Excel’s table feature allows users to insert pre-designed table templates to create tables out of their data
  + Use the *Market Orders* Practice File to demonstrate as you walk learners through the following steps to insert a table:
  1. Click on a single cell in the data list
  2. Click on the **Table** button on the **Insert** tab
  3. Verify that the data range is correct, and then click the **OK** button
* Share that once a table is inserted into a spreadsheet, users will see the **Table Tools**, **Design** tab appear. Explain that this tab allows users to customize the table using a variety of options ranging from **Table Styles** to **Properties**
* Next, point out that Excel has a feature that will automatically calculate and show totals for data within a table
* Walk learners through the following steps to use this feature:

1. Click anywhere in the table
2. Check the **Total Row** box on the **Table Tools**, **Design** tab
3. Users will see the total for the last column; to get a total for a different column, click the **Total Row** box and select **Sum** from the drop-down list of options
4. Add that to remove the calculation, users need only to uncheck the **Total Row** box
   * Finally, share the following steps to remove a table as you demonstrate them:
5. Click somewhere in the table
6. Remove the every-other-row shading by doing one of the following:
7. Uncheck the **Banded Rows** box
8. Choose **Simple** in the **Table Style** group on the **Table Tools**, **Design** tab
9. Click on the **Convert to Range** button on the **Table Tools**, **Design** tab
10. Click the **OK** button

**ACTIVITY**: Have participants complete **Activity #4** on the *Activity Sheet*

* Creating a pivot table
  + Explain that a pivot table is a tool that allows users to summarize and cross-tabulate large amounts of data
  + Explain that it differs from a regular table in that it is interactive and allows users to expand and collapse data and apply filters
  + Show participants how to insert a pivot table by walking through the following steps:
    1. Click in a list
    2. Click on the **Pivot Table** button on the **Insert** tab
    3. Verify that the range is correct and click the **OK** button
    4. Check the boxes next to the fields that should be included in the table

NOTES: Point out that pivot tables will open in separate worksheets and that users can see their data by clicking on the sheet tabs at the bottom of the screen.

Also point out that users can drag fields between the boxes at the bottom of the **PivotTable Field List** window if they want to rearrange items.

* Applying a style to a pivot table
  + Share that there are various designs (styles) that can be applied to a pivot table to make it more visually interesting
  + Provide these instructions to participants for applying a style to a pivot table:
    1. Click somewhere inside the pivot table (if it isn’t selected already)
    2. Choose one of the styles in the **PivotTable Styles** group on the **PivotTable Tools**, **Design** tab
  + To format the numbers in a pivot table, outline these steps for participants:
    1. Right-click on any number in the group
    2. Select **Number** in the **Category** section of the **Format Cells** window
    3. Choose the desired options for **Decimal places**, **1,000 Separators**, and **Negative** **numbers**
    4. Click the **OK** button

**ACTIVITY**: Have participants complete **Activity #5** on the *Activity Sheet*

* Updating a pivot table
  + Explain that updating a pivot table usually occurs when you have to make a change to the data that is included in the table
  + Share that Excel makes it really easy to update a pivot table using the following two steps:
    1. Click anywhere inside the pivot table
    2. Click on the **Refresh** button on the **Pivot Tables Tools**, **Options** tab

**ACTIVITY**: Have participants complete **Activity #6** on the *Activity Sheet (if time permits)*

**Wrap Up/Closing (3 mins.)**

* Highlight the upcoming technology classes and share the types of topics that will be covered
* Ask if there are questions and answer any that were “parked” during the session
* Thank participants for coming and ask them to complete the class survey before leaving