Excel 2013 Part 2

1) Create a Chart (review)
   - Open **Budget.xlsx** from Documents folder. Then highlight the range from C5 to L8.
   - Click on the **Insert Tab** on the Ribbon.
   - From the **Charts** click on the dialogue box launcher in the bottom right corner.

   - Click the **All Charts** tab and then click **Line** on the left side of dialogue box.
   - Click on the first line chart with **Markers** then click **OK**.
   - If your chart inserts on top of your budget table, drag it out of the way by clicking and holding inside a blank portion of your chart.
   - You can resize the legend, graph, and the axis. Simply click on the legend, hold down your left mouse button over one of the resize handles, and drag your mouse up or down to a desired size.
   - Now click on text “Chart Title” and rename chart to “Budget.” Click on the outline around the title. Hold mouse button down and notice you can drag the title elsewhere in the chart.

2) Creating Different Charts

   **Exercise:** Create a chart of just the **totals** in each category. Then make design changes to the chart.

   - Highlight cell range C6-C8. Hold down the **Control Key** on your keyboard and highlight the cell range L6-L8. Let go of the **Control Button**. Two separate cell ranges will be highlighted.
   - Click on the **Insert Tab** and then click on the **Pie Button** in the **Charts** Group. Then select **3-D Pie**.
   - Notice that you have three small icons next to your chart.
   - Click the icon that looks like a plus sign. Check the box marked **Data Labels**. Then hover over **Legend**, click the arrow, then click **Left**.
   - Click the “paintbrush” icon, click **Color**, then click the first option under **Monochromatic** (or you can choose any color option you like).
   - Click on the “Plus Sign” icon again, then the arrow next to **Data Labels**, and then **More Options** to bring up a task pane.
   - Check **Percentage** and note that this is now included in the chart. Then uncheck **Value**.
   - Click on Chart Title and rename it to **Budget**.
3) Using Built in Excel Functions

**Exercise:** Locate the built-in Excel function that displays the current date and time.

- Click in cell K2 and then click the **Formulas Tab**.
- Click the **Insert Function** command on upper left.
- From the box near the top **Or select a category**, choose **Date & Time**.
- From the **Select a Function** window choose **Now** and then click **OK**.
- You get receive message stating: **Formula Result = Volatile** in a new menu box titled Function Arguments. This means that the function that will change reflecting each time the document is opened.
- Click **OK**. Expand column K wider and the ###### will change to today’s date.

4) Advanced Formulas

**Exercise:** Create an advanced Excel formula from scratch.

- In cell E11 type the following formula: `=IF(SUM(E6:E8)<2000,"Under Budget","Over Budget")`
  Then hit **Enter**.

- The above uses the **IF** function as well as the **SUM** function. The first part in the parentheses after the IF is a true or false expression. In this case, if the sum of cells E6 through E8 is **less than** 2000 then the expression is true. Otherwise, the expression is false. If the expression is true, then the phrase **Under Budget** will appear in cell E11. If the expression is false, then **Over Budget** will appear. This formula is intended to let you know if you went over your budget of 2000 per month.
- Use the **Fill Handle** to supply the rest of the months.
- Temporarily type the number **10000** in cell H8 and press **Enter**. Not only will the totals and charts change but the IF statement changes as well.
- Change cell H8 back to 200 with the **undo button**.

5) Sorting

**Exercise:** Arrange the figures from the largest to the smallest sorted by column L.

- Highlight cell range C6 – L8, click on the **Data Tab** on the Ribbon. Click on the **Sort** command.
- The **Sort Menu** will appear. In the **Sort By** box, select column L.
- In the **Order** box, select **Largest to Smallest**.
- Click **OK**. All you totals in column L will sort from the largest amount to the smallest.
6) Merge and Center
- You can center text in a row by using the Merge and Center command in the Home Tab.
- Click on cell C2 that contains the word “Budget.”
- Highlight cells C2 through J2. Click on the Merge and Center button to merge the cells to center the text.

7) Changing Colors of Cells
- Highlight the cell that contains the word “Budget.”
- In the Home Tab, on the Ribbon, click the drop down arrow next to the paint pail.
- Click on a color to change the color of the cell.
- You can also change the color of the text in the cell by clicking the drop down arrow next to the letter “A” with a colored line underneath.

8) Text Wrapping, Sheet Options, and Scale to Fit
- Click inside cell A1 (should read: Ela Area Public Library).
- In the Home tab click the Wrap Text command. You will see your text wrap inside the cell.
- You can also use the keyboard to wrap text manually by pressing Alt-Enter.

Exercise: Remove gridlines and headings. Then re-add them and add them so they will print.
- Click on the Page Layout tab and look for Sheet Options.
- Under Gridlines uncheck the View box. Do the same for Headings to see how the worksheet changes. Then re-check View under both.
- From File tab, go into Print to see how the printed document will appear. Then go back to Sheet Options and check the print box under Gridlines and Headings. Go into Print again to see how the document will appear now. (When you check inside the print box, the page breaks appear).

Exercise: Use Scale to Fit group to change page size so all text fits onto a single page.
- Access Scale to Fit group from Page Layout tab.
- Change the width and height to 1 page.
- You can also manually change the percentage to scale your document down to one page with the Scale command.

9) Header & Footer
- Click on the Insert Tab and then the Header and Footer command.
- Your worksheet will separate into different pages. The Header and can be into three text boxes at the top or bottom of page (Right, Center, & Left).
- In the center text box type Ela Area Public Library (use bold and increase the text size). Then Click on the Home tab and increase size of font.
- Above the header, you can access the footer by clicking Click to add footer.
• Click on the Right Text Box. Type **Page** then click the **Page Number** command in the **Header & Footer Elements** group.
• Click outside of the footer on your worksheet. **Page 1** should appear in the Footer.
• After accessing **Header & Footer**, your worksheet will have a different view. To go back to the previous view, click the **View** tab then the **Normal** command.

**10) Inserting and renaming sheets**

• To add a sheet to your workbook, click the **Insert Worksheet** button (plus sign) at the bottom left of your workbook, right next to the tabs for your existing sheet (or sheets).
• To rename a worksheet, **right-click** on the sheet tab at the bottom and click **Rename**.
• **Rename** Sheet 1; name it **Budget**.
• You can also rearrange the order of sheets by clicking on a sheet and dragging it to the order in which you want it to go.

**11) Advanced Formulas Revisited: Entering your own vs. Using the built-in function**

**Exercise:** Create and advanced formula in a cell to calculate a car payment from scratch.
• Click on Sheet 2 in your workbook and click on any empty cell.
• Now we have to find out the monthly payments to see if it is within budget.
  • Price of the car = $18,000
  • APR = 8%, paid once a month (12 times a year)
  • Length of the loan = 5 years or 60 months. (There are 60 months in 5 years).
• **Type:** =PMT(8%/12,60,18000)
• **Press the Enter Key,** and the result should be: 364.98 ($364.98/month).

**Exercise:** Create and advanced formula in a cell to calculate a car payment with the built-in Excel functions.
• Click on the **Formulas Tab** and then click on the **Insert Function** command on the left.
• The **Insert Function** dialogue box will appear.
• In the **Search for a Function** box: Type **Car Payment** and click **Go**.
• All formulas that deal with payments appear. You can read the descriptions to determine which suffix to use for you particular formula.
• Read over the description for PMT (That sounds like a car payment).
• Make sure **PMT** is highlighted and click **OK**.
• The **Function Arguments** box will appear. Fill out the boxes.
  • **Rate**= Interest for period of time. For example, a loan paid monthly with a seven percent interest rate will be 7%/12 (7% interest paid monthly or 12 months in one year).
  • For our particular rate: **Rate= 8%/12**
  • **Nper**= the number of payments that will be made on the loan. For our example: **Nper=60**
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- PV=the present value or cost or price! For our example: PV=18000
- Click the Ok button to get the results (364.86).

12) Writing simple formulas from scratch

- You can write your own simple formulas using ordinary mathematical operators. These are found on the number pad on the right side of your keyboard.
- Click on the Budget sheet in your workbook.
- Let’s write some simple formulas. (Remember, all formulas in Excel must start with the = sign).
- Click in an empty cell, for example, N3. Type =1-2+3*4. Excel follows the standard order of operations and will multiply or divide before adding or subtracting.
- You can also write simple formulas that use numbers from cells. Click on cell N4 and type =E6/4. Excel will take the number from cell E6 – 200 – and divide it by 4. You can add a cell to a formula either by manually typing the cell reference of clicking on the cell.
- You can also write formulas with no typed numbers, only cell references. In cell N5, type =E8-E7-E6.

13) Password Protecting Workbooks

Exercise: Create a password for your Excel worksheet.

- To password protect your document: Click the File tab. Click the Protect Workbook button and then select Encrypt with Password.
- Notice the other options including, Mark as Final and Restrict Access.
- Create a password in the Encrypt Document dialogue box and type it twice.
- To remove the password, begin with the same steps: Click the File tab, Protect Workbook, and then delete password from the Encrypt Document box. After you save the document, it will no longer require a password.

14) Freezing and Unfreezing a Row

- Open the file Census.xlsx from the Documents folder.
- On the left side of your screen, click on the number 11 to select row 11. This will highlight the entire row.

In the View Tab on the Ribbon, click the Freeze Pane command.

- Click anywhere below row 6 and scroll down. Rows 6 and above will remain frozen. Freezing a row allows you to keep specific rows visible when you scroll down the worksheet. This can be especially helpful with long lists.
15) Split Pane
- You can use the Split Pane View to split your view of the worksheet into two or four parts. Split panes can help you compare data in different sections of your worksheet that would not be legible if you zoomed out.
- Click row 33. From the View tab click the Split command. This will split the worksheet into two panes.
- Uncheck Split command. Click on cell Q33 and click Split command again. The worksheet will have four panes.
- You will have two scroll bars on the right of the worksheet.
- Click on the bottom screen and scroll up and down.

16) Filtering

Exercise: Use filtering to find locations in which the median age is 50 or higher.
- Click the number 10 to highlight all of row 10 in the census document.

To Unfreeze the columns and rows click the Freeze Pane command again and then choose Unfreeze Panes.