

VETERANS UPWARD BOUND

~Educating America's Best~

Objectives-Working with Large Worksheets Charting and What-If Analysis

Students will have mastered the material in this project when they can:

- Rotate text in a cell
- Use the fill handle to create a series of month names
- Copy a cell's format to another cell using the Format Painter button
- Copy a range of cells to a nonadjacent paste area
- Freeze column and row titles
- Insert and delete cells
- Format numbers using format symbols
- Use the NOW function to display the system date
- Format the system date
- Use absolute cell references in a formula
- Use the IF function to enter one value or another in a cell on the basis of a logical test
- Copy absolute cell references
- Create and format a chart on a separate sheet
- Use sparklines
- Rearrange sheets in a workbook
- Preview and print multiple sheets
- Use the Zoom box to change the appearance of the worksheet
- View different parts of the worksheet through window panes
- Use Excel to answer what-if questions
- Use the Goal Seek command to analyze worksheet data
- Turn protection on/off
- Add a comment

Overview

In creating the workbook for this project, students learn how to work with large worksheets that extend beyond the window and how to use the fill handle to create a series. The difference between absolute and relative cell references and how to use the IF function are explained. Students discover how to rotate text in a cell, generate a series, freeze titles, change the magnification of the worksheet, display different parts of the worksheet through panes, improve the appearance of a chart, and use sparklines. Finally, this project introduces using Excel to do what-if analyzes by changing values in cells and goal seeking.

Background: Hyperlink.com is a global provider of various hardware and software for the internet. Every six months, the CEO must submit a plan to the board of directors to show projected revenues, expenses, and net income for the next six months. As lead spreadsheet specialist, you've been asked to create a spreadsheet which will show these projections, along with a 3-D pie chart, showing the Projected Net Income.

Basic Solution:

1. Open Hyperlink-Class from Moodle:

	A	B	C	D	E	F	G	H	I
1	Hyperlink.com								
2	Six-Month Projected Revenue, Expenses, and Net Income								
3									
4	Revenue	8754250	4978200	5250000	7554875	4768300	6550700		
5									
6	Expenses								
7	Administrative								
8	Marketing								
9	Commission								
10	Bonus								
11	Technical Support								
12	Equipment								
13	Total Expenses								
14	Net Income								
15									
16	Assumptions								
17		0.1325							
18		0.095							
19		0.0175							
20		75000							
21		5000000							
22		0.2875							
23		0.3125							
24									
25									

2. Change the font of the entire worksheet to bold.
3. In cell B3, type July, then press the enter key. Click the Orientation button in the Alignment group and change the orientation to 45°. To use the autofill feature of Excel, point to the fill handle and drag it to the right to select the range C3:G3.
4. Enter the column title, Total in cell H4.
5. Rather than retype the assumptions titles, select the range A7:A12, and then click the copy button. Click cell A17 and press the paste button to complete the copy.
6. Since the expenses titles do not exactly match the assumptions titles, select the range A21:A22 and click the cut button. Click cell A22 and press the paste button to complete the move.
7. In cell A21, type Revenue for Bonus.
8. Freezing worksheet titles is a useful technique for viewing large worksheets that extend beyond the window. Click cell B4, the cell below the column headings and to the right of the row titles you want to freeze. On the View ribbon click on Freeze Panes. (This is a “toggle switch”. The next time you follow the same process, your selection will be Unfreeze Panes.)
9. In cell H2, type the function =NOW(). This function will return the current system date each time you open the file. Format the cell with the date/time format you prefer.
10. To keep a cell reference constant when it copies a formula or function, Excel uses a technique called absolute referencing. To specify an absolute reference in a formula,

enter a dollar sign (\$) before any column letters or row numbers you want to keep constant. With this in mind, enter the following formulas in cells B7:B14:

- a. Administrative =B17*B4
- b. Marketing =B18*B4
- c. Commission =B19*B4
- d. Bonus =IF(B4>=B21, B20, 0)
- e. Technical Support =B22*B4
- f. Equipment =B23*B4
- g. Total Expenses = SUM(B7:B12)
- h. Net Income =B4-B13

11. Select the range B7:B14, then point to the fill handle in the lower right corner of B14. Drag the fill handle to select the paste area range C7:G14.
12. Select the range H7:H14 and click the Autosum button the Standard Toolbar.
13. Format the numbers as follows:
 - a. Assign currency style to rows 4, 7, 13, and 14
 - b. Assign a comma style to rows 8 through 12 and 20 through 21
 - c. Assign a percent style to rows 17 through 19 and 22 through 23
14. Format the Worksheet Titles as follows:
 - a. Select cell A1 and choose the font Lucida Calligraphy, size 26
 - b. Select cell A2 and choose Bookman Old Style, size 16
 - c. Select the range A1:H2 and fill with green, using the fill color button the Formatting Toolbar. Click the font color button arrow and choose white as the font color
15. Change the font size in cells A4, A6, A13 and A14 to 12 point, then add the light yellow background.
16. Format the Assumptions table as follows:
 - a. In cell A16, size the font to 16 and make it italicized and underlined.
 - b. Select the range A16:A23 and fill with green. Change the font color to white.
17. To add a 3-D pie chart which will show the projected net income, select cells B3:G3 and cells B14:G14 (use CTRL key to select non adjacent cells). Inert a 3-D pie chart. Change Chart title to Projected Net Income. Click the Legend and use the delete key to remove it from the chart. Click the Chart Elements button and check Data Labels, then move the mouse to get more option. Choose Category Name and Percentage. On the Design ribbon, click on the Move Chart button and choose new sheet for the location of your chart.
18. Even though charts appear to be one element, they are actually made up of multiple items. Click on the chart title and change the font size to 36. Change the font color to Red.
19. Change the colors of the pie as follows:
 - a. July-Red
 - b. August-Purple
 - c. September-Blue
 - d. October-Yellow
 - e. November-Orange
 - f. December-Green

20. Click on the July slice twice to select it. Drag the slice to the desired position and release it.
21. With the July slice selected, right click on the chart and choose 3-D view. Here you are able to rotate and tilt your chart. Click on the up arrow for Perspective until the box displays 25. For the Rotation, click on the up arrow on X Rotation until the box displays 80.
22. Click on the July label twice and drag it away from the July slice. Do the same for each of the remaining labels.
23. Rename the sheet from Chart 1 to 3-D Pie Chart. Move the chart to the end of the workbook.
24. Return to the Hyperlink worksheet by clicking on Data. Rename Data as Hyperlink.
25. In order to protect the formulas in this worksheet, it is advisable to turn on protection. To do this, select the cells that should not be protected. Go to Cells, Format, and Lock cell. Then go to Cells, Format, and Protect Sheet to turn the protection on. Now try typing something in a cell that is protected.
26. Add a comment to cell B7 by going to the Review Ribbon and selecting New Comment.

	A	B	C	D	E	F	G	H
1	<i>Hyperlink.com</i>							3/4/2015
2	Six-Month Projected Revenue, Expenses, and Net Income							
3		<i>July</i>	<i>August</i>	<i>September</i>	<i>October</i>	<i>November</i>	<i>December</i>	<i>Total</i>
4	Revenue	\$8,754,250.00	\$4,978,200.00	\$5,250,000.00	\$7,554,875.00	\$4,768,300.00	\$6,550,700.00	\$37,856,325.00
5								
6	Expenses							
7	Administrative	\$1,159,938.13	\$659,611.50	\$695,625.00	\$1,001,020.94	\$631,799.75	\$867,967.75	\$5,015,963.06
8	Marketing	831,653.75	472,929.00	498,750.00	717,713.13	452,988.50	622,316.50	3,596,350.88
9	Commission	153,199.38	87,118.50	91,875.00	132,210.31	83,445.25	114,637.25	662,485.69
10	Bonus	75,000.00	0.00	75,000.00	75,000.00	0.00	75,000.00	300,000.00
11	Technical Support	2,516,846.88	1,431,232.50	1,509,375.00	2,172,026.56	1,370,886.25	1,883,326.25	10,883,693.44
12	Equipment	2,735,703.13	1,555,687.50	1,640,625.00	2,360,898.44	1,490,093.75	2,047,093.75	11,830,101.56
13	Total Expenses	\$7,472,341.25	\$4,206,579.00	\$4,511,250.00	\$6,458,869.38	\$4,029,213.50	\$5,610,341.50	\$32,288,594.63
14	Net Income	\$1,281,908.75	\$771,621.00	\$738,750.00	\$1,096,005.63	\$739,086.50	\$940,358.50	\$5,567,730.38
15								
16	Assumptions							
17	Administrative	13.25%						
18	Marketing	9.50%						
19	Commission	1.75%						
20	Bonus	75,000.00						
21	Revenue for Bonus	5,000,000.00						
22	Technical Support	28.75%						
23	Equipment	31.25%						

Projected Net Income

