

CS130 Assignment #2

Date Assigned: Thursday, April 5, 2012

Date Due: Thursday, April 12, 2012 4:30 pm

Points: 50

Goals: Build a worksheet, Charting, What If-Analysis, Goal Seek, Import Data from the Web, If statements, Conditional Formatting.

In a Workbook called **02ExcelPUNetID**, create each of the following worksheets:

| State | Obama / Biden | McCain / Palin | Baldwin / Castle* | Barr / Root | Keys / Rohrbough** | McKinney / Clemente | Nader / Gonzalez | Others | Total Votes | Victor | # victory | % victory |
|-------|---------------|----------------|-------------------|-------------|--------------------|---------------------|------------------|--------|-------------|----------------|-----------|-----------|
| AL | 813,479 | 1,266,546 | 4,310 | 4,991 | - | - | 6,788 | 3,705 | 2,099,819 | McCain / Palin | 453,067 | 21.6% |
| AK | 123,594 | 193,841 | 1,660 | 1,589 | - | - | 3,783 | 1,730 | 326,197 | McCain / Palin | 70,247 | 21.5% |
| AZ | 1,034,707 | 1,230,111 | 1,371 | 12,555 | - | 3,406 | 11,301 | 24 | 2,293,475 | McCain / Palin | 195,404 | 8.5% |
| AR | 422,310 | 638,017 | 4,023 | 4,776 | - | 3,470 | 12,882 | 1,139 | 1,086,617 | McCain / Palin | 215,707 | 19.9% |
| CA | 8,274,473 | 5,011,781 | 3,145 | 67,582 | 40,763 | 38,774 | 10,883 | 17,094 | 13,464,495 | Obama / Biden | 3,262,652 | 24.2% |

Worksheet #1 (Name it Vote2008)

Import the table from the following URL into cell A1.

<http://www.archives.gov/federal-register/electoral-college/2008/popular-vote.html>

Clean up the data. Display the column header for numeric data right justified; display the column headers and state abbreviations in bold text. Display the vote counts using the comma numeric format and with no digits past the decimal point. Display the dashes (which represent zero votes) right justified.

Add a column to the immediate right of Total Votes titled **Victor**. This column must use an If statement to display the team that won the election in that state. Reference the team names at the top of the table to display the team name. Note that only Obama/Biden and McCain/Palin won a state. You do not need to write an If statement that takes into account any other candidate teams. The text in this column and the header of this column must be center-justified.

Add a column to the immediate right of Victor titled **# Victory** that displays the number of votes the victor won by. This number must always be positive and be displayed using the comma format with no digits past the decimal point.

Add a column to the immediate right of # Victory titled **% Victor** that displays the percent of total votes (for that state) the victor won by. This number must always be positive and be displayed as a percent with one digit past the decimal point.

Conditional Formatting

In the **Victor** column, set the background to blue for each row representing a state won by Obama/Biden. In the McCain/Palin column, set the background to red for each row representing a state won by McCain/Palin.

You may add calculations to the spreadsheet to answer the above questions. Add these calculations to the right of the table.

BONUS

Using Conditional Formatting set the background to light green for the candidate team that came in third place in each state. For example, you would set Barr/Root to light green in AZ and Nader/Gonzalez to light green in AL.

Worksheet #2 (Name it Wages)

You need to build a worksheet to keep track of one year (52 weeks) of your wages. The worksheet should be setup as shown below. Allow the user to input how many hours they work each week in cell B2. Allow the user to input their hourly wage in cell B3.

Users also need to input the data in the Taxes per week table. There are three tax brackets, High, Mid, and Low. In the example below, you pay 23% taxes if you earn at least \$500 in a week, and you pay 11% taxes if you earn at least \$200 but less than \$500 in a week. If you earn less than \$200 you pay 3% in taxes.

| | A | B | C | D | E | F | G | H | I | J | K |
|----|----------------|----------|----------|---------------|----------|--------------|----------|------------|-------------------|---------------|---|
| 1 | | | | | | | | | | | |
| 2 | Weekly Hours | 40 | | | | | | | | | |
| 3 | Hourly Wage | \$13.25 | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | Work Schedule | | | | | | | |
| 8 | Taxes per week | | | Week | Vacation | Gross Income | Taxes | Net Income | Net Wages To Date | Taxes to Date | |
| 9 | Gross Income | At Least | Tax Rate | 1 | Full | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | |
| 10 | High Bracket | \$500.00 | 23% | 2 | Half | \$265.00 | \$29.15 | \$235.85 | \$235.85 | \$29.15 | |
| 11 | Mid Bracket | \$200.00 | 11% | 3 | | \$530.00 | \$121.90 | \$408.10 | \$643.95 | \$151.05 | |
| 12 | Low Bracket | \$0.00 | 3% | 4 | | \$530.00 | \$121.90 | \$408.10 | \$1,052.05 | \$272.95 | |
| 13 | | | | 5 | | \$530.00 | \$121.90 | \$408.10 | \$1,460.15 | \$394.85 | |

Finally, you need to build a table of data to represent your pay throughout the entire year. The columns are as follows:

- Vacation:** This can have a value of either **Full** or **Half**. If the value is Full, you worked zero hours that week. If the value is Half, you worked half the number of hours shown in cell B2. If the column is blank, you worked a full week.
- Gross Income:** This is the income you earned this week before taxes are paid.
- Taxes:** The amount of taxes you paid this week.
- Net Income:** This is the income you earned this week after taxes are taken out.
- Net Wages To Date:** Your total net income up to and including this week.
- Taxes to Date:** Your total taxes paid up to and including this week.

Below the table you need to calculate the totals for: Gross Income, Taxes, and Net Income.

Charting:

Below the table build a chart that charts Net Wages To Date and Taxes To Date for each Week. Make sure to properly label the chart and ensure that both datasets are readable.

What If Analysis: The user should be able to change any of the values in cells B2, B3, B10, B11, B12, C10, C11, or C12 and see the Work Schedule table update.

Data: You worked a Half week in week 2 and 19. You had a Full vacation in week 1, 27, 51, and 52. **You must enter this vacation data by hand!**

Formatting:

Be sure to format money and percents correctly. All percents must have no digits past the decimal point. Make sure column headers are justified appropriately. The example above is poorly formatted.

Goal Seek:

Using Goal Seek, determine how much your hourly wage would need to be for you to earn a total net income of \$25,000. Place this number in Cell N2, properly labeled.

Reset the Hourly Wage back to \$13.25. Determine how many hours per week you would need to work to earn a total net income of \$25,000. Place this number in Cell N4, properly labeled.

How to Submit and Grading Policies

A copy of your single Excel file (properly named) with the two worksheets (properly named) is to be placed in the CS130 Drop Box by **4:30pm** on the due date to be considered on time.

Grading will be based on:

- Correctness and Completeness of your results
- Professional look of the worksheets as described above and discussed in class
- Make sure all of your data is properly formatted
- Use Named Cells where appropriate
- Ability to perform a what-if analysis by changing any of the user input data with accurate results computed and displayed in the worksheet.

The formulas and functions on these spreadsheets are trickier than they appear! Start early!

Remember, this is an individual assignment. Do not discuss your solution with other students.