Date Assigned: Thursday, February 10, 2010
Date Due: FRIDAY, February 18, 2010 4:30 pm
Points: 50

Goals: Charting, What If Analysis, Goal Seek, Import Data from the Web, Conditional Calculations, Conditional Formatting.

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

Worksheet #1 (Name it Misery)
The Misery Index is an economic indicator that is found by adding the unemployment rate to the inflation rate.

Build a worksheet that calculates the Misery Index for the United States for each year 1948 to 2010. The Unemployment Rates and Inflation Rates for those years are available on the following web pages:
        http://www.miseryindex.us/urbyyear.asp
        http://www.miseryindex.us/irbyyear.asp

You need to import those data into Excel. You can Copy & Paste the data or use the web import we used in class for problem 3.6. Either way, you'll need to clean up the data once it is imported into Excel. This is not a trivial task.

Build a table in Excel as shown below. Column E is the Misery Index and needs to be calculated. Column F displays Decrease, Increase, or Same to show that the Misery Index in the current year is less, more, or the same as in the previous year. Column E should be calculated using an If() statement.

	A	B	C	D	E	F
1		Year	Unemployment Rate	Inflation Rate	Misery Index	
2		1948	3.75	7.74	11.49	
3		1949	6.05	-0.95	5.1	Decrease
4		1950	5.21	1.09	6.3	Increase

Below the table, use the countif() function in Excel to display how many times the Misery Index Decreased, Increased, and stayed the same (display three separate values, each properly labeled).

To the Right of the table, build a Line Chart that displays the Unemployment Rate, Inflation Rate, and Misery Index over time. The chart should be properly labeled: A title, x-axis, and y-axis. Make sure that the x-axis is at the bottom of the chart.

Use Conditional Formatting to set a 3-Color Scale for the Misery Index. The Midpoint should be the Number 6.

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 above, 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
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	$0.01	3%	4		$530.00	$121.90	$408.10	$1,052.05	$272.95

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 taken out.
> **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.

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.

Goal Seek:

> Using Goal Seek, determine how much your hourly wage would need to be for you to earn a 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 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 more tricky than they appear! Start early!

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