

CS130 Assignment #1

Date Assigned: Monday, February 15, 2010
Date Due: Wednesday, February 24, 2010 4:45 pm
 Points: 50

In a Workbook called 01ExcelPUNetID, create each of the following worksheets:
Worksheet #1 (Name it Basketball)
 You have been hired to run the stats for a Springfield Charity Basketball game.

Charity Game	Value of a 3Pt FG					
						3 Pt Winner
Team Blinky						
Player	2Pt FG	3Pt FG	FT	Block	Total Points	4 Pt Winner
Simpson, M	5	2	6	9		
Simpson, L	3	3	3	1		5 Pt Winner
Flanders, M	2	0	0	2		
Bouvier, S	9	0	5	1		
Krabappel, E	4	1	1	9		
Team Totals						
Average						
Median						
Maximum						
Minimum						
Std Deviation						
Team Isotopes						
Player	2Pt FG	3Pt FG	FT	Block	Total Points	
Frink, P	2	4	1	1		
Simpson, H	1	4	2	2		
Simpson, B	0	3	2	0		
Wigum, C	2	5	5	0		
Chalmers, S	0	1	0	0		
Team Totals						
Average						
Median						
Maximum						
Minimum						
Std Deviation						

You are to complete the spreadsheet by determining the team totals, average, median, max, min, and standard deviation for each category (including Total Points) for each team.

THE TWIST: A 2Pt FG is worth 2 points and a FT is worth 1 point. Normally, a 3Pt FG is worth 3 points, however, the Springfield/Shelbyville Competition committee is looking into making a 3Pt FG worth 4 or 5 points. Write your spreadsheet in such a way that the user can input the value for a 3Pt FG to determine how different scoring methods affect the outcome of the game.

Determine which team would win the above game using a 3, 4, and 5 point shot. List those teams in the upper right corner under the appropriate label.

When you submit your assignment make sure the 3Pt FG value is set to **3**.

The averages and standard deviations are to be displayed to two digits to the right of the decimal place.

Use Named Cells where appropriate.

Worksheet #2 (Name it Debt)

The Project on Student Debt (<http://www.projectonstudentdebt.org>) has put together some interesting statistics on how much debt students leave college with broken down by US state. You can see how much debt the average undergrad at a private university in Oregon will graduate with by downloading the Excel file here:

http://www.projectonstudentdebt.org/state_by_state-data.php

Sallie Mae has a website that shows the interest rate for Federal Stafford loans. Find the rate for Stafford loans first disbursed July 1, 2008–June 30, 2009.

(http://www.salliemae.com/get_student_loan/apply_student_loan/interest_rates_fees)

Design a worksheet that allows the user the ability to input each of the following values in the first row of the worksheet. Be sure to properly label and format the values.

- 1) Student Debt
- 2) Loan Annual Interest Rate
- 3) Years to Pay off the Debt

In the fourth row, compute the monthly payment that is required to pay off the Debt in the given number of years.

Beginning in row seven, you are to create the following table with the heading Beginning Balance in column A, Monthly Interest in column B and so on in the order listed below. Expand this table down the worksheet until the Ending Balance becomes zero.

- 1) Beginning Balance - balance at the beginning of the month
- 2) Monthly Interest - interest charged for the month which is calculated prior to subtracting off the minimum payment
- 3) Payment - monthly payment
- 4) Ending Balance - beginning balance plus monthly interest minus payment.

Note1: Use the data found on the websites above for the Debt, Interest Rate. Assume the student wants to pay off the loan in 10 years.

Note2: Clearly label all the data, and use the cell formatting options to make this spreadsheet easy to read and to give it a professional look.

Note3: Use Named Cells where appropriate.

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 **4:45pm** on the due date to be considered on time.

Grading will be based on:

- Correctness of your results
- Completeness of your results
- Professional look of the worksheets as described above and discussed in class
- Ability to perform a what-if analysis by changing any of the user input data with accurate results computed and displayed in the worksheet.