CS130/230 Lecture 5
Review

Wednesday, January 14, 2004

Problem 1

Molly begins her IRA at age 18 and puts $1,000 per year into her IRA at the beginning of each year for eight years. At the end of eight years, she just lets her money accumulate interest until age 65 without putting any more of her money in the IRA. Polly on the other hand begins her IRA at age 31 and puts $1,000 per year into the IRA at the beginning of each year until age 65. If both IRAs pay 10% interest compounded yearly, how much has each person accumulated by age 65 (include age 65 in your accumulation)? Work this out using the repetition method (table method) only. Make this solution so that the user can input the amount invested per year and the interest rate for each person. Place a border around the cell containing Molly's final total and place a border around the cell containing Polly's final total. No other borders are to be in this worksheet. Design this worksheet such that the last row for Molly is age 65 and the last row for Polly is also age 65. That way I can directly compare the ending values. Further, split your screen so that I can input information in the top half of the screen and look at the age 65 results in the bottom half of the screen. Save your file this way.

Problem 2

You have been hired to work for the month of January and have been given the choice of one of two ways to be paid. Method 1: You can receive $500 per day for 20 days. Method 2: You can receive 1 penny the first day, 2 pennies the second, 4 pennies the third, 8 pennies the fourth, and so on. In a worksheet, show side by side comparisons of the money made each day for each of these methods. As a final figure at the bottom of each column, show how many <u>dollars</u> were made for each method. Create a graph (properly labeled) that shows the money made each day of both methods.