1. **EXCEL Spreadsheet:** 
   1. **You must use the FINANCIAL FUNCTIONS in EXCEL to calculate your answers.**
   2. **All calculations must be done in Excel**. Do not calculate anything on your calculator and just enter the number into Excel (if you do this, you will not receive credit for this assignment). Do the calculation within the cell.
   3. **You must reference cells from your base case**. (Only input variables that change for each requirement.)
   4. Your spreadsheet should be formatted in a professional manner so it is easy to read. (I did very little formatting on my template, please add borders, text formatting, shading and be sure to format numbers consistently.)
2. **Electronic copy of your EXCEL spreadsheet and Memo.**
   1. You must email me a copy of your EXCEL spreadsheet and Memo.
   2. Use the last name of one or more of your group members to name the excel file. For example: YOURLASTNAMEHW1.xls

**Mortgage Analysis**

**Part I**

You are planning to purchase a house that costs $480,000. You plan to put 20% down and borrow the remainder. Based on your credit score, you believe that you will pay 3.99% on a 30-year mortgage.

1. Use function “PMT” to calculate your mortgage payment.
2. Calculate the total cost of the home purchase. (Down payment plus principle (loan amount) plus interest.)
3. Calculate how much interest you will pay in total?
4. Assume that you plan to pay an extra $300 per month on top of your mortgage payment, calculate how long it will take you to pay off the loan given the higher payment. (Use interest rate of 3.99%). Calculate how much interest you will pay in total? Compare this to the value that you calculated for #3.

**Part II**

You want to determine whether or not you should save some of your money and put only 10% down on your house. Because you are only putting 10% down, lenders require that you purchase private mortgage insurance (PMI). Assume that PMI is 1% of the mortgage amount. (How does PMI work? For example, on a $100,000 loan, 1% PMI means you are paying and additional $1,000 a year or $83.33 a month)

1. Calculate your total monthly payment (mortgage payment plus PMI).
2. Calculate the total cost of the home purchase. (Down payment plus principle (loan amount) plus interest.)
3. Calculate how much interest and PMI you will pay in total?
4. What are the advantage and disadvantages between 20% down payment vs. 10% down payment and PMI? Which one do you pick? Please explain. (**For this question, include a Memo that summarizes your analysis and outcomes in Excel.)**