Math 107 - Financing your new car!

In this problem you are to write up a written report comparing different methods for financing your new car. The first thing you need to do is choose a NEW car (no used cars for you!) to finance. I suggest going to the Kelley Blue Book car site on the internet (www.KBB.com) and selecting a new car model. Make note of the new car models price and the options you decide to include. Suppose you have the money to make a 10% down payment on the car and you will have to finance the rest. You go to a lending institution and decide to investigate loans. Your lending institution offers loans for new cars for 3 year, 4 years or 5 years. As you know the type of interest rate you will receive depends on your credit rating. Your lending institution give you the following table giving the APR you will receive depending on the loan term (3, 4 or 5 years) and your credit rating (good, very good or excellent)

	Credit Rating		
Loan Term	Good	Very Good	Excellent
3 year	7.5%	5.5%	2.5%
4 year	8.5%	6.5%	3.5%
5 year	9.5%	7.5%	4.5%

So here is what you need to do

1) Select a credit rating for yourself (good, very good or excellent)
2) Create an amortization table for each loan term under your credit rating. Make sure you answer the following questions for each table – what is the monthly payment for your loan and what is the total amount you will pay for the loan if you pay off the loan as scheduled?
3) Which loan would you choose? What factors should you consider in making your decision?
4) Now suppose also they have a special offer! They have a variable rate loan! For example suppose you selected a 3 year loan and you have a good credit rating. Your interest rate the first year will be 1% higher than the published rate (in this case 8.5%) then it will go down to be 7.5% for the second year, but go down another 1% for the third year. If you choose a 4 year loan, it will be 1% higher for the first two years and the 1% lower for the last two. If you choose a five year loan it will be 2% higher than the published rate for the first year, then 1% for year two and the published rate for year 3 and 1% lower for year 4 and 2% lower for year 5. Create an amortization schedule for this special offer using the loan terms you answered in part 3. The monthly payment will stay the same each year. What is the monthly payment for your loan and what is the total amount you will pay for the loan if you pay off the loan as scheduled? Does this loan offer make sense for you? Why or why not?

Things you will be graded on.

- An introduction to the problem which states what the problem is about, what car you chose to purchase (and the options), the price of the new car, the down payment and the amount financed.
- Snippets from three amortization tables for your credit rating.
- An explanation of the special offer and a snippet of new amortization table.
- Your answers to the questions should be accurate to the nearest cent. You should round up your payments (again to the nearest cent) so that your last payment should be slightly smaller than all of the previous payments.
- How well you answer the questions, including how well you explain why you chose your loan option.
- How well the information is presented. Is it easy to compare the various options? Is your writing clear?