EEL3834 - Programming for Electrical Engineers
Fall 2016
Programming Assignment 2
Assigned: 9/9/2016 Due: 9/16/2016 @ 4:00PM
To be done individually

Programming Project 3 from Chapter 2 of Absolute C++ 5th ed. (Savitch), pg. 94:
"Suppose you can buy a chocolate bar from the vending machine for $1 each. Inside every chocolate bar is a coupon. You can redeem seven coupons for one chocolate bar from the machine. You would like to know how many chocolate bars you can eat, including those redeemed via coupon, if you have *n* dollars.

For example, if you have 20 dollars then you can initially buy 20 chocolate bars. This gives you 20 coupons. You can redeem 14 coupons for two additional chocolate bars. These two additional chocolate bars give you two more coupons, so you now have a total of eight coupons. This gives you enough to redeem for one final chocolate bar. As a result you now have 23 chocolate bars and two leftover coupons.

Write a program that inputs the number of dollars and outputs how many chocolate bars you can collect after spending all your money and redeeming as many coupons as possible. Also output the number of leftover coupons. The easiest way to solve this problem is to use a loop."

Your program should ask the user for the number of dollars they have to spend on chocolate. Then it should print out "You can buy ***number_of_chocolates*** chocolates" followed by (on a new line) "You will have ***number_of_leftover_coupons*** leftover".

A sample run of the program is shown on the next page:

This is what a sample run of your program should look like:

```
How much would you like to spend on chocolates? 20
You can buy 23 chocolates
You will have 2 leftover coupons
Would you like to use this program again? (y/n) y
How much would you like to spend on chocolates? 20
You can buy 23 chocolates
You will have 2 leftover coupons
Would you like to use this program again? (y/n) n
```

Call your source file ***assignment2***.cpp

It is imperative that you follow the output format and filename convention shown above, as the execution will be graded automatically. So do not have any input/output that is not shown above.

Your grade will be subject to the following condition(s):

- Submission:
  The submission deadline is **4:00PM** on **9/16/16**. You will be penalized in increments of 25% per day late (regardless of the time). A submission at 4:01PM on 9/16/16 will result in a 25% penalty, as will a submission at 4:00PM on 9/17/16. A submission at 4:01PM on 9/17/16 will result in a 50% penalty, and so on. We will go by the timestamp on Canvas, so be sure to submit early.

  Submit your code on Canvas. You just need to **upload** your .cpp file, not copy and paste your code. In addition, you will need to write in the text entry box which version of g++ you used. This can be found from the terminal by typing: **`g++ -v`**.

Your grade will be calculated based on the following (total 10 points)

- Compilation: **4 pts**
  Your code MUST compile in a Linux environment (namely using g++ 4.8.2 or g++ 4.4.7 or newer), since that is the environment in which it will be graded. There is no partial creditavailable here, either your code compiles or it doesn't.

- Execution: **4 pts**
  Your program will be tested against 8 cases, each worth 0.5 points. You can earn partial credit here if your code doesn't work for every single case. If it does work for every case, you will get the full 4 points. Note, for this assignment, the test cases will be slightly tougher, so make sure to account for all scenarios.

- Style: **2 pts**
  Your code will also be graded on its style. This includes things like using meaningful variable names (0.75 pts), useful comments (0.75 pts), and proper indentation and spacing (0.5 pts). All of these things make your code easy to read and maintain. Partial credit will be available here.