Programming Assignment #2

Sell Your Book Online!

CS 1428.006 and 007, Fall 2017
Instructor: Jill Seaman

Due: in class Thursday, 9/21/2017 (upload electronic copy by 9:00am)

Problem:

You just sold a used textbook on ebay and you want to know how much your profit will be. Write a C++ program that will calculate the profit.

Input: The user should be prompted to input the selling price of the book and how much it weighs, in pounds. Both price and weight may contain fractional parts.

Processing: Your buyer paid $3.99 for shipping when your book was sold. ebay takes a commission of 15% of the selling price of the book. Your buyer paid using PayPal, which takes 2.9% of the selling price of the book AND the shipping together. You will ship the book using the US Postal Service, which charges $2.14 plus 49 cents per pound (so a 2 pound book costs $3.12 to ship). If the weight is entered with a fractional part, it must be rounded up to the next full pound (so a 2.2 pound book is charged the rate for 3 pounds). The revenue is the selling price of the book and the shipping paid by the buyer. The expenses include the two commissions and the USPS shipping cost. Your profit is the revenue minus the expenses.

Output: The program should print the amount of the ebay commission, the amount of the PayPal commission, the USPS shipping cost, and the profit for the book. All output should be clearly labeled, include a dollar sign ($) and be formatted to exactly 2 decimal places.

Sample output:

```
Enter the selling price of the book: 32.50
Enter the weight of the book in pounds: 1.9
ebay commission: $4.88
PayPal commission: $1.06
USPS Shipping cost: $3.12
Total Profit: $27.44
```

Additional Requirements:

- Your program **must compile** and run, otherwise you will receive a score of 0!!
- Use the function ceil(x) to round a number up to the next integer (it's in <cmath>).
- Don't worry if your final profit is off by .01. This is due to a rounding error.

Style:

See the Style Guidelines document on the class website. In particular:

- Include the Header comments, like last time, including your name!
- Variable names: Use meaningful variable names and use camel case.
- Each variable definition must be on a separate line with a descriptive comment.
- Named constants: use these for numeric literals, and use uppercase and underscores in their names.

Logistics:

Name your file **assign2_xxxxx.cpp** where xxxxx is your TX State NetID (your txstate.edu email id). The file name should look something like this: assign2_js236.cpp

There are two steps to the turn-in process:

1. Submit an **electronic copy** using the Assignments tool on the TRACS website for this class (tracs.txstate.edu). Submit the .cpp file, (NOT a .cbp file!).

2. Submit a **printout** of the .cpp file at the beginning of class on the day the assignment is due. Please print your name on the front page.

See the assignment turn-in policy on the course website (cs.txstate.edu/~js236/cs1428) for more details.