CSC 110 - Homework 2 - Programming in Python

1. Suppose you work for an appliance store that gives variable discounts depending on the amount of a total sale. Based on the following table:

Sale	Discount
Over $4000	40%
Between $2000 and $4000	30%
Between $1000 and $2000	20%
$1000 or lower	10%

write a Python program that asks the user for the amount of a sale, and outputs the final sale after the discount is given. Note that "between a and b" in this context means greater than a and less than or equal to b.

NOTE: To ensure that final sale amount is printed with two decimal places, use the following:

```
print("The final sale amount is $", "{:,.2f}".format(finalSale))
```

Your output will look something like this (note the comma notation in the output):

```
>>>
= RESTART: /Users/ldipippo/Documents/csc 110/homev
Enter amount of sale: $4500
The final sale amount is $ 2,700.00
>>>
= RESTART: /Users/ldipippo/Documents/csc 110/homev
Enter amount of sale: $3500
The final sale amount is $ 2,450.00
>>>
= RESTART: /Users/ldipippo/Documents/csc 110/homev
Enter amount of sale: $2000
The final sale amount is $ 1,600.00
>>>
= RESTART: /Users/ldipippo/Documents/csc 110/homev
Enter amount of sale: $1550
The final sale amount is $ 1,240.00
>>>
= RESTART: /Users/ldipippo/Documents/csc 110/homev
Enter amount of sale: $875
The final sale amount is $ 787.50
>>>
```

2. A golfer keeps track of her score over the course of 3 weeks (she plays Mon, Wed and Fri). She wants to know her lowest score for that time period. Write a Python program that asks for the score for each of the days that she plays, finds the lowest score, and prints out the result.

   You may NOT use the built-in Python `min` function.

   Your output will look something like this:

```
Enter score: 89
Enter score: 91
Enter score: 83
Enter score: 99
Enter score: 87
Enter score: 86
Enter score: 90
Enter score: 92
Enter score: 93
Your lowest score for the three weeks is:  83
>>>

==== RESTART: /Users/ldipippo/Documents/csc 110/ho
Enter score: 82
Enter score: 83
Enter score: 84
Enter score: 85
Enter score: 86
Enter score: 87
Enter score: 88
Enter score: 89
Enter score: 90
Your lowest score for the three weeks is:  82
>>>
==== RESTART: /Users/ldipippo/Documents/csc 110/ho
Enter score: 90
Enter score: 89
Enter score: 88
Enter score: 87
Enter score: 86
Enter score: 85
Enter score: 84
Enter score: 83
Enter score: 82
Your lowest score for the three weeks is:  82
>>>
==== RESTART: /Users/ldipippo/Documents/csc 110/ho
Enter score: 85
Enter score: 85
Enter score: 85
Enter score: 85
Enter score: 86
Enter score: 85
Enter score: 85
Enter score: 87
Enter score: 85
Your lowest score for the three weeks is:  85
>>>
```

3. A bug collector collects bugs every day for seven days. Write a program in Python that computes the average of the number of bugs collected during the seven days. The program should ask for the number of bugs collected each day, and when the loop is finished, the program should display the average number of bugs collected per day during that week.

   Your output will look something like this:

   NOTE: You may NOT use the built-in Python `average` function.

   In order to print the day number, you can use an input statement as follows:

   ```
   bugsCollected = int(input("Bugs collected on day" + str(i+1) +
   ":"))
   ```

   where `i` is a counter in your loop.

   Your output will look something like this:

```
>>>
= RESTART: /Users/ldipippo/Documents/csc 110/homework/hw-solu
bugs.py
How many bugs did you collect on day 1? 455
How many bugs did you collect on day 2? 788
How many bugs did you collect on day 3? 345
How many bugs did you collect on day 4? 874
How many bugs did you collect on day 5? 334
How many bugs did you collect on day 6? 875
How many bugs did you collect on day 7? 734
The average number of bugs collected this week is  629.29
>>>
= RESTART: /Users/ldipippo/Documents/csc 110/homework/hw-solu
bugs.py
How many bugs did you collect on day 1? 800
How many bugs did you collect on day 2? 800
How many bugs did you collect on day 3? 800
How many bugs did you collect on day 4? 800
How many bugs did you collect on day 5? 800
How many bugs did you collect on day 6? 800
How many bugs did you collect on day 7? 999
The average number of bugs collected this week is  828.43
>>>
```

Submit each of the exercises in a separate file to the corresponding assignment in Gradescope. Be sure to name the files `hw2_1.py`, `hw2_2.py` and `hw2_3.py`. Use the **Programming Rubric** to be sure you are including all elements of the program that are required.

NOTE: Gradescope is picky about text matching exactly. So make sure that your output looks exactly like the examples above.