**Assignment #1**

**Due Date: Sunday, December 14**

**Total Points: 35**

For each of the programming questions below, submit your answers (in a Word document) by including screenshots of the source code in the BlueJ Editor, and the output window after running the program. Make sure to include print statements in your program that prompt the user for the input(s) and describe what the output(s) are.

**Q1.** Write a program the reads the length and width of rectangle (decimal values) and displays the perimeter and the length of the diagonal.

[10 pts]

**Q2.** Write a program that reads a number between 1,000 and 999,999 from the user, where the user enters a comma in the input. Then print the number without a comma. Here is a sample dialog; the user input is in color:

Please enter an integer between 1,000 and 999,999: **23,456**

The output is: 23456

*Hint:* Read the input as a string. Measure the length of the string. Suppose it contains *n* characters. Then extract substrings consisting of the first *n* – 4 characters and the last three characters.

[10 pts]

**Q3.** Write a program that reads in an integer and breaks it into a sequence of individual digits. For example, the input 16384 is displayed as

1 6 3 8 4

You may assume that the input has no more than five digits and is not negative.

[10 pts]

**Q4.** Write a program that asks the user to enter a price as a decimal number and then extracts the dollars and cents amounts. For example,

Enter a price: **2.95**

The output is: **2**

**95**

[10 pts]