***In Class 2: Variables***

For each exercise below, submit both the **source code** and **output** through Blackboard. It is best to copy the output to the bottom of the source code. Also be sure to show your code to your professor before leaving the lab.

***Exercise 1***

Write a C++ program that will calculate and print the perimeter and area of a rectangle. The length of the rectangle is 7 (feet) and the width is 4 (feet). Here is a picture of the rectangle.

**Your program should have two variables: length and width.** Assign the value of **7** to **length** and the value of **4** to **width**. Then use mathematical operators to compute the perimeter (length of all the sides together) and area (square feet, which is length multiplied by width). Print the perimeter and area.

***Exercise 2***

Write a C++ program just like in the previous exercise – but this time ***ask the user to enter the* length *and* width *of the rectangle.*** You will have to use the **cin** command to get both numbers from the user.

***Sample Output:***

Enter the width of the rectangle: 8

Enter the length of the rectangle: 9

The perimeter of the rectangle is: 34

The area of the rectangle is: 72

**Extra Credit Exercise:**

Use your code above to compute the cost of carpeting a room. Prompt the user for the **length** and **width** of the room (as in part 2 above!) and the **cost** of the carpet per square foot. Print out the total **cost** of carpeting the room.