

# Lab Number: 2

## Room Calculator

NOTE: Points should be awarded for items that are written correctly in themselves, but don't actually work because other things are broken. There is a total of 10 points available for this lab.

**Task:** Calculate the perimeter and area of various classrooms at Grand Circus. Calculate how much paint ( 1 can per 5 sq foot ) and carpet ( 1 carpet tile per 5 sq foot ) you will need.

### What will the application do?

- **1 Point:** The application prompts the user to enter values of length and width of the classroom.
- **1 Point:** The application displays the area and perimeter of that classroom.
- **1 Point:** The application displays how much paint containers and squares of carpet you will need.
- **1 Point:** The application prompts the user to continue (keep measuring rooms!).

### Build Specifications:

- **1 Point:** Assume that the rooms are perfect rectangles.
- **1 Point:** Assume that the user will enter valid numeric data for length and width.
- **1 Point:** The application should accept decimal entries.

### Additional Requirements

- **1 Point:** For answering the Lab Summary while submitting to the LMS.
- **-2 Points:** if there are any syntax errors or if the program does not run (for example, in a Main method).

### Extended Exercises:

- **1 Point:** The application should continue only if the user agrees to.
- **1 Point:** Calculate the volume of the rooms

### Hints:

- Don't mess up the formulas for perimeter or area of a rectangle!
- The Snug is 24'6" x 20'0". The Penthouse is 42'6" x 16'6".

**E:** 10-9 **M:** 6 - 8 **D:** 0 - 5

**Console Preview:**

Welcome to the Grand Circus Room Detail Generator!

Enter Length: 5

Enter Width: 5

Area: 25

Perimeter: 20

Carpet Tiles: 5

Paint: 4

Continue? (y/n)

Enter Length: 3

Enter Width: 3

Area: 9

Perimeter: 12

Carpet Tiles: 1.8

Paint: 2.4

**E:** 10-9 **M:** 6 - 8 **D:** 0 - 5