# Setup

Create a new project called 2C *yourlastname* in Eclipse. Next, import the assignment files from my inbox as follows:

1. **File/Import**
2. Select **General/File System** (click **Next**)
3. Browse to assignment 2C in my outbox, select it and click **OK**
4. Click the check box for the folder (all items should get selected)
5. Click **Finish**

Open the file [Paint.java](file:///F:\a-oprfhs\09-10\AP%20Computer%20Science\Unit%201-2%2008-09\2C%20Paint\Paint.java). The program is just a skeleton, it doesn’t do anything yet. It also contains the skeleton code for the keyboard stuff.

The program will be used to calculate the number of gallons of paint to buy in order to paint a room as follows:

# Declaring Variables:

1. Declare integers for *length*, *width*, and *height* of the room.
2. Declare a double called *totalSqFt* that will hold the total surface area to be painted in square feet.
3. Declare a double called *paintNeeded* that will hold the number of gallons of paint needed.

# Setting the Variables:

1. Print prompts to the screen, and get numbers from the keyboard for these variables, in the order listed:
   1. *length* of the room
   2. *width of the room*
   3. *height of the room*
2. Calculate total surface area of the walls to be painted; store the result in the variable you declared earlier. Do not count the floor and the ceiling, only the walls.
3. Calculate the amount of paint needed, and store it in the variable you declared earlier. Use the constant, COVERAGE, in the calculation; it is already declared and set for you.

# Print the results:

Now that everything is calculated, print the results so that it looks something like this:

Enter the length: 12

Enter the width: 15

Enter the height: 8

Your room size is 12 x 15 x 8

Gallons of paint needed to paint this room: 1.2342857142857142

# Enhance the program:

Now make some changes. Suppose the room has doors and windows; they don’t get painted. Modify the program, before printing the results, to ask the user to enter the number of doors and number of windows in the room (in that order). Assume that *each* door is 20 square feet and *each* window is 15 square feet. Adjust the total square feet to be painted accordingly. Here’s an example of the enhanced output:

Enter the length: 12

Enter the width: 15

Enter the height: 8

Number of doors? 2

Number of windows? 3

Your room size is 12 x 15 x 8

You have 2 doors and 3 windows.

Gallons of paint needed to paint this room: 0.9914285714285714