

**CECS 130-01**  
**Spring 2017**  
**Lab 10**

**Lab Assignment due between 2:30 - 4:00 pm Tuesday, April 4, 2017**

Please and follow the instructions below very carefully

**Demos** (To be done by lab Instructors):

1. Write a class that represent a room:
  - a. it has three dimensions: length, width, and height ,
  - b. It has a constructor that uses initialization list to initialize the dimensions.
  - c. it has a setter and a getter for each of the attributes
  - d. Must have a method to calculate the floor area (for carpeting) and a method to calculate surface area (fro painting).
  - e. a method to set the dimensions
  - f. Write a main that creates a living room with dimensions (L,W,H) as (20,10,8).
  - g. Change the dimensions to (11.4, 34.2, 12.1) and verify that the changes took place.
  - h. Calculate and print the floor area and the surface area of the room.

**Lab Assignment** (To be uploaded by the student prior to leaving the lab):

Write a **complete** that:

1. Modify the Room class to have the constructor not use an initialization list but to set the room dimensions to the passed parameters inside the constructor..
2. Add a method that calculates the volume of the room (volum = wlh).
3. Write a main that creates a “playRoom” with dimensions (10,5,8) and make sure it got created correctly.
4. Update the dimensions to 20,10,12
5. Calculate and print the floor area, surface area, and volume of the palyRoom

**A note about assignments and reports:**

Your presentation in your reports and assignments reflects great deal about you, your understanding of the assignment and on how much this course means to you. I try very hard to look at the substance of the report but I will be lying if I said that presentation does not influence my judgment. It would be wise on your part to assume that this true in every course at school and in real life/work. I expect your reports to be well formed and conform to the following rules:

1. **First and above all, I will not accept any late assignments and I will not accept any assignments by email. All submissions must be via Blackboard and on time.**
2. All reports have to be submitted as a **PDF** report that contains:
  - 2.1. Title page with your name, assignment number and the day you are actually submitting this report (Not the assignment due date)
  - 2.2. A comprehensive set of snapshots showing the inputs submitted and outputs obtained in the case of a successful output or a failure.
3. A C/CPP source code file for each programming problem and each must be named problem\_n.cpp where nn is the problem number.
4. Make sure that you include as a comment at the top of your file your name and section:

As an example:

```
/* **** */
/* John Q. Public      */
/* CECS 130-11         */
/* Assignment 35        */
/* **** */
```

Failure to do this will cost you points.

5. Please zip both the PDF document with the source code files in one zip files that must be named as lastName\_firstName\_nn.zip where nn is the assignment number, e.g. my zip file for assignment 3 should be called "imam\_ibrahim\_03.zip".
6. Please do not submit your eclipse or bloodshed project or any IDE project that you may be using. I will be compiling and testing your source code from the text file in part 2 above to test running your applications and to verify that they run.
7. If you do not follow the instructions above I will not grade your homework and you will get a grade of 0 (zero)