

# EGRE 246 Advanced Engineering Programming Using C++

## Homework #6 – Class and instances of classes

This homework must be your own (individual) work as defined in the course syllabus and discussed in class.

For this homework you will have to implement a “circle” class. You are given a main source file and the circle class definition file. The following members are part of the “circle” class.

radius: radius of the circle

circle(): default constructor

circle(float r): constructor which will set the radius

circle(const circle &obj): copy constructor

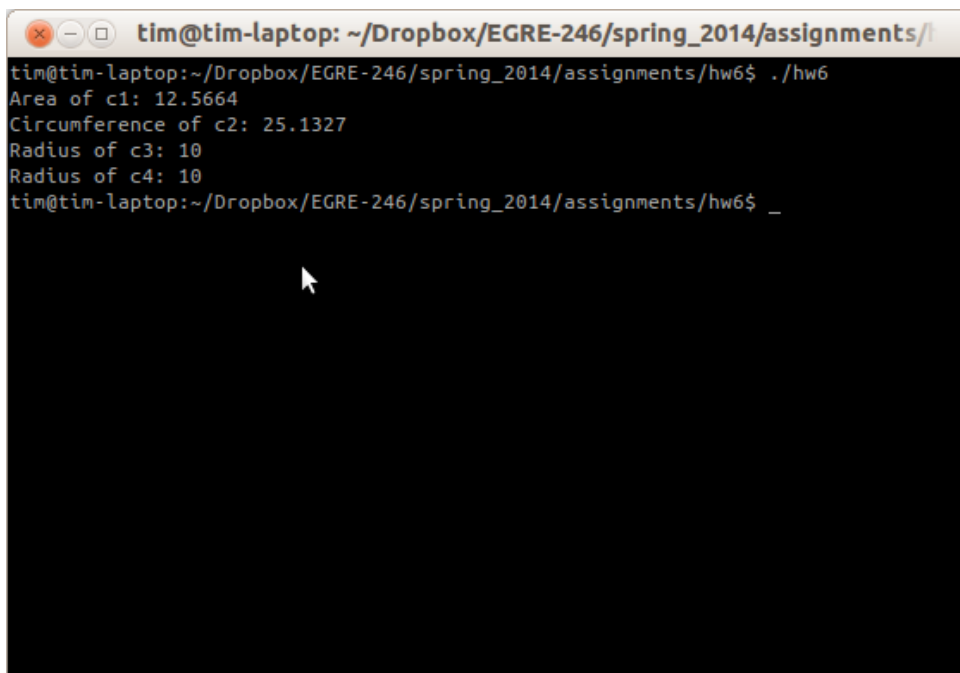
void setRadius(float): method for setting radius

float getRadius(void): Returns radius of circle

float getArea(void): Returns area of circle

float getCircumference(void): Returns circumference of circle

Once you have implemented the circle class and all of its methods, the output of the main function should look like

A terminal window titled "tim@tim-laptop: ~/Dropbox/EGRE-246/spring\_2014/assignments/" displays the output of a program. The output consists of five lines: "Area of c1: 12.5664", "Circumference of c2: 25.1327", "Radius of c3: 10", "Radius of c4: 10", and a prompt "tim@tim-laptop:~/Dropbox/EGRE-246/spring\_2014/assignments/hw6\$ \_".

```
tim@tim-laptop: ~/Dropbox/EGRE-246/spring_2014/assignments/
tim@tim-laptop:~/Dropbox/EGRE-246/spring_2014/assignments/hw6$ ./hw6
Area of c1: 12.5664
Circumference of c2: 25.1327
Radius of c3: 10
Radius of c4: 10
tim@tim-laptop:~/Dropbox/EGRE-246/spring_2014/assignments/hw6$ _
```

The main and the circle class definition files should NOT be altered.

For this homework, submit a zip file with the class definition (circle.h) file, your class implementation (circle.cpp) file, and the main function file. Be sure to include a Makefile that compiles your solution.