# CS172 -- ASSIGNMENT #5

## NAME: DUE: 7 April Received: .

**GRADE:**

|  |  |  |
| --- | --- | --- |
| **CATEGORY** | **POINTS** |  |
| EX05\_01 |  | 20 |
| EX05\_02 |  | 20 |
| EX05\_03 |  | 20 |
| EX05\_04 |  | 20 |
| EX05\_05 |  | 20 |
|  |  |  |
| **TOTAL** |  | 100 |

## Liang Chapters 11

## EXERCISES:

**EX05\_01 –** Liang Programming Exercise 11.1: *Analyze Input* (Note, the code I wrote at the end of the second session on pointers will help you a lot here)

**EX05\_02 –** Liang Programming Exercise 11.3: *Increase array size* (Note, when we talk about Vectors, this code will come in handy.)

**EX05\_03 –** Liang Programming Exercise 11.5: *Find the smallest element*

**EX05\_04 –** Liang Programming Exercise 11.9: *Geometry: The Rectangle2D class* (Don’t forget to turn in the UML diagram)

**EX05\_05 –** Liang Programming Exercise 11.13: *the Course class* (You can re-use your code in EX04\_02 for the first requirement listed)

|  |
| --- |
| Rectangle2D |
| -double xCenter |
| -double yCenter |
| -double width |
| -double height |
|  |
| +Rectangle2D() |
| void setX(double) |
| void setY(double) |
| double getX() const |
| double getY() const |
| void setWidth(double) |
| void setHeight(double) |
| double getWidth() const |
| double getHeight() const |
| double getArea() const |
| double getPerimeter() const |
| bool contains(double, double) const |
| bool contains(const Rectangle2D &r) const |
| bool overlaps(const Rectangle2D &r) const |