# **Exam 1 Study Guide**

### ♦ Note: Please click <u>here</u> to see a sample exam

#### Chapter 2

- Three phases of a software development process
- Use cases
- CRC card and walk-through
  - o How to improve the initial CRC card while walking through the use cases
- How to draw UML Diagrams: class diagram, sequence diagram, and state diagram
- Relationships among classes: (ex) Exercise 2.8

## Chapter 3

- ♣ 5 C's: Concepts and examples
- Definition of Law of Demeter
- Side effects
  - o Definition of Side effects
  - o Examples of Side effects
- Design by contract:
  - o Pre and post condition
  - Class invariant

#### Chapter 4

- Interfaces
  - o Definition
  - Example
    - Icon interface type
    - Shape interface type
    - Comparable interface type
    - Comparator interface type
  - o Design an interface type (i.e., an user defined interface type)
  - o Implementation (i.e., programming)
- Polymorphism
  - o Definition
  - o Example: Explain how it works
- Anonymous classes
- Factory method
- Timer
- final variable

## **Programming**

- frame
- buttons
- textField
- ActionListener interface and addActionListener() method
- **4** Timer
- Anonymous class
- Factory method