	**Computer Science Department/College of Engineering and Computer Science** **CSc 020: Programming Concepts and Methodology II** **Lab 5**

Objective:

In this lab, you will work with Object Oriented Programming (OOP) concepts. You are given with 3 Java class files. The first is the CsusStudent class with provided attributes and methods. The second class, Csc20Student, will be derived from the CsusStudent. The third is a class, Lab5Tester, which has a main method for testing of the first 2 classes.

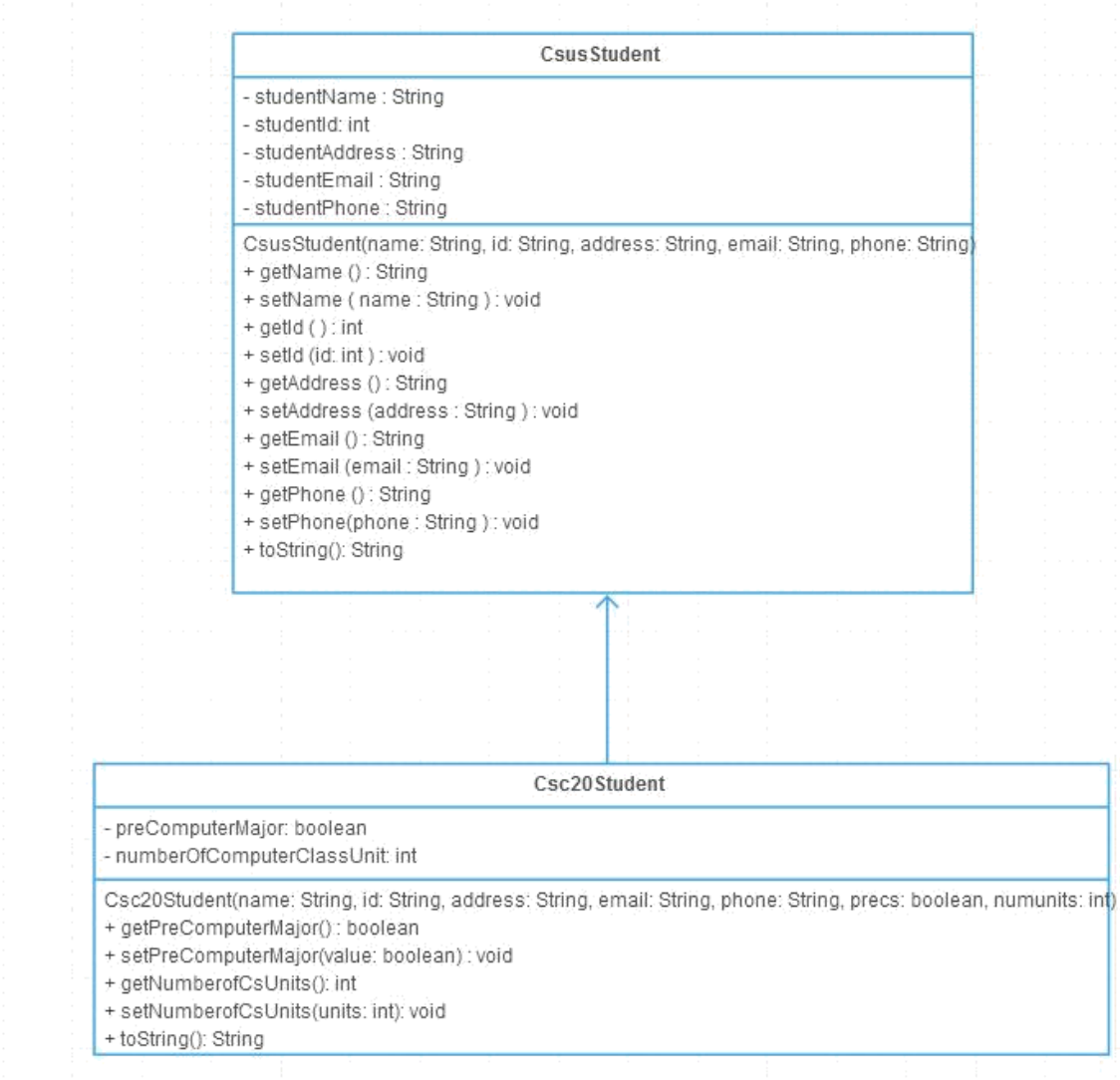
Overview:

This lab's objective is to practice building new classes:

a. To define constructors.
b. To define methods.
c. To build a new class from a super class.

We also will learn how to use **junit** to perform unit testing.

The two classes CsusStudent and Csc20Student specification (in UML notation – to be discussed in the lab) are given below:



Activities:

1. Copy instructor's classes from SacCT into your working directory.

2. Develop your program according the pseudo code given in these classes.

3. Test your program by running the main method in Lab5Tester.

4. Run a sample of your instructor's unit test to validate your work.

Deliverables:

Turn in your modified java programs

CsusStudent.java, Csc20Student.java, Lab5Tester.java, and output file in MS Doc or PDF format to SacCT.

Note on installing Junit:

1. Add a **new folder** to your CSc 20 Jcrasp directory (where you stored your previous lab assignments). Named **junit.**
2. Download junit (from https://sourceforge.net/projects/junit/files/junit/4.10/ and save the **junit-4.10.jar Basic jar** file into this new **junit** folder
    - A jar file is a Java Archive file containing multiple Java files in one zipped file. You do **not** need to extract the individual files.
    2. Add the junit jar file to your jGRASP:
        1. In jGRASP, Click the Tools -> Junit -> Configure
    3. Browse to your **junit directory**, click OK

You only need to set up **jUnit** one time.