

## COMP 1451 Lab 5-b ( 10 points )

### Take-home lab

This lab requires you to work on your own to create an inheritance hierarchy.

A **Student** has first name, last name, email address, BCIT id, collection of courses (course name and grade – use `HashMap<String, Double>`). This class has a method to put a new course into the student's course collection and a method that calculates and returns the student's average grade. (Be sure not to divide by zero.)

An **Instructor** has first name, last name, email address, BCIT id, hourly wage.

Provide both default and non-default constructors at all levels of the hierarchy. All attributes must have appropriate “get” and “set” methods.

Provide a **Database** class with an `ArrayList` that holds both `Student` and `Instructor` references. This class has a method to add someone to the database, and a method that displays the names and email addresses of everyone in the database.

The take-home lab is due the night before the next class. Upload it to the appropriate D2L dropbox before the deadline.