Programming II
Comp 111
Spring 2022

Department of Computer Science
Forman Christian College University

Lab 5

Question #	Total Marks
Question 1	15

Lab Problem

a. Define a class named ***Classroom*** that has an instance variable for the ***classroom ID*** number and an instance variable for how many students the classroom contains. There should be a list as an instance variable to store the student's name for each student in a classroom.

b. Create a ***constructor*** that allows a user of the class to initialize all instance variables.
c. Also create a function named ***StudentAdded*** that increments the number of students the classroom has and store the student's name in the list. This function will be invoked each time the student is added to the classroom so that you can track the total number of students in a classroom and store the student's name.
d. Add another function ***getStudentCount*** that returns the number of students in a classroom.
e. Add a ***DisplayClassroom*** function to display all the student names in a classroom.
f. Finally, add a ***class variable*** that tracks the total number of students in all classrooms at a school and a function ***getTotalStudentCount*** that returns the value of this variable.
g. Write a main function to test your class. Create at least three classrooms with different numbers of students and store them in a list. Your main program should call all the functions and display data for each classroom.