**NEW YORK CITY COLLEGE OF TECHNOLOGY**

THE CITY UNIVERSITY OF NEW YORK

**Department of Computer Engineering Technology**

*300 Jay Street, Brooklyn, NY 11201-1909*

**CET3640 – Software for Computer Control**

**Lab #3**

**Objective:** The objective of this lab is to learn how to break down a program into classes, create classes with the appropriate fields and methods, use method overloading, and object instantiation. This lab assumes student is familiar with a text editor and the Java compiler or is using an IDE such as Eclipse. It also assumes that the student completed the previous labs.

**Instructions:**

In this lab you will create a class NumberStats that will provide the methods to compute several statistics. This class should have methods to compute:

1. First number entered
2. Last number entered
3. Count of number entered
4. Minimum
5. Maximum
6. Total Sum
7. Average

The methods should be overloaded to support floating point numbers as well as integers. The class should have a setter method that will accept a new number, and getter methods for each one of the statistics. You will also create an application class and name it TrainStats with the following menu:

1. One-way trip cost (double)
2. One-way trip time in minutes (integer)

TrainStats will instantiate NumberStats and use it to compute the statistics. Based on the option chosen, the appropriate data type will be used and the right overloaded method should be called. The user should be able to enter as many numbers as wished. The user finishes by entering a zero and final statistics should be displayed.

**Lab Report:**

1. On your OpenLab portfolio create a new page and post the following items:
	1. Description of the lab in your own words.
	2. Source Code
	3. Screenshots of you program running.
2. Your lab report should be organized like the [Lab Report Example](http://openlab.citytech.cuny.edu/cet3640s13/labs/lab-example/).

**Deadline: March 1st , 2013 @ 2:00 P.M.**