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## **E7: Introduction to Computer Programming for Scientists and Engineers**

University of California at Berkeley, Spring 2017

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### **Lab Assignment 01: Arithmetic Expressions, Logical Expressions, and Variables**

Version: release

#### **Contributors:**

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**Due date:** Friday January 27<sup>th</sup> 2017 at 12 pm.

#### **1. Quiz (70 points)**

Take the bCourses quiz named “Lab 01 – Q1 (Quiz)”. This quiz consists of 14 questions, each worth 5 points. You can take this quiz as many times as you like before the due date of this lab assignment. Your highest scoring attempt that is submitted on time will be used for grading.

This quiz is designed to make you review and practice the following concepts:

- Using Matlab as a calculator
- Arithmetic operators and expressions
- Relational operators; Logical operators and expressions
- Order of operations
- Variables and assignment
- The Matlab workspace

To maximize the learning value of working on this quiz, we recommend you to:

- First, try to answer the questions by using what you know about programming and Matlab, but without actually using the Matlab software (*i.e.* without typing anything in Matlab).
- Once you have found the correct answer, whether with one attempt or more, try to replicate the result in Matlab.
- Experiment with the code in Matlab by making your own modifications to it, and paying attention to when you get different results than you expected.

#### **2. Submit two m-files “as is” on bCourses (30 points)**

In subsequent Lab Assignments, you will have to write your own Matlab functions (you will learn what Matlab functions are in lecture soon). These Matlab functions are text files which have the extension `.m` and which contain Matlab code. We will generally refer to these files

as “m-files”.

This part of the assignment is purely an exercise in learning to upload m-files correctly on bCourses. To obtain full credit for this question, you must:

1. Download the following files from bCourses:

- `my_test_function.m`
- `my_other_test_function.m`

These files should be available on bCourses, alongside these instructions.

2. As your submission for this part of the exercise, submit the two m-files files **without any modification** on bCourses. To obtain full credit, you **must neither modify nor rename the files**. You are encouraged to practice re-uploading each file more than once. If you re-submit a file that you have already submitted, bCourses may rename the file by adding a number to the file’s name (*e.g.*, rename `my_test_function.m` into `my_test_function-01.m`). This behavior is okay and should be handled seamlessly by our automatic grading system, as long as you do not rename files yourself as a response to this behavior. Now and in the future, **you must always submit files that are named exactly as requested by the Lab Assignment instructions**.

For this assignment, you do not have to understand the content of these files, although you should understand it soon, when working on Lab Assignment 02! This question is designed to (i) have you practice uploading m-files on bCourses and (ii) give us a chance to test our automatic grading system.