Learning Objectives
1. **Demonstrate** proper notation for accessing elements from previously assigned one-dimensional arrays (e.g. single elements, list of elements) and two-dimensional arrays (e.g. those with rows and columns).
2. **Recognize** built-in functions in MATLAB and how they can be used with vectors.
3. **Explain** that a string is a one dimensional array and can be used the same way as numeric arrays

Textbook Reading
Chapter 2.5 – 2.10

Topics
This class contains the following topics:
1. Vector addressing/indexing
2. Vector functions
3. Addressing a range of elements
4. Matrix addressing/indexing
5. Strings

Outline
Below is an outline of the topics and the order in which they should be covered:

1. **What is addressing (Classroom Activity - Example 1)**
   a. Each element in a vector has an address, also called an index
   b. Indexing starts at 1 (not 0) in MATLAB
   c. We can access/retrieve/extract the individual elements by referring to their addresses
   d. Useful for transforming data or doing calculations with only part of a vector

2. **Addressing a Range of Elements in a Vector (Classroom Activity - Example 2)**
   a. The colon operator allows us to access a range of elements in a vector
   b. This is useful if we want to extract or alter only a portion of an existing vector.

3. **Matrix Addressing and Indexing (Classroom Activity - Example 3)**
   a. Works very similarly to vector addressing
   b. Individual elements are addressed by their row number and column number
      i. If a matrix has ‘m’ number of rows and ‘n’ number of columns, it’s an m by n matrix (m,n)
c. Addressing a range of elements in a matrix
   i. colon operator

d. Extracting elements from a matrix

4. Vector functions (Classroom Activity – Example 4)
   a. MATLAB has many built-in functions we can use with vectors. For example:
      i. max()
      ii. min()
      iii. length()
      iv. zeros()
      v. ones()

5. Strings (Classroom Activity – Example 5)
   a. Lines of text and can be used instead of numerical values.
   b. Strings can include letters, digits, other symbols, and spaces.
   c. They are defined inside single apostrophes.
   d. When a variable is defined as a string, the characters are stored in an array just as numbers are. Each character, including a space, is an element in the array.

6. Students will complete Part 1 of the assignment to turn in by the end of class. Once finished, students may start on Part 2 due by the next class. Students will submit Part 1 of the assignment to the Carmen dropbox as a PDF.