EECE.2160: ECE Application Programming

Spring 2016

Lecture 21: Key Questions
March 21, 2016

1. **Example:** Write a function for each of the following:

- Given an array of doubles (`arr`) and the # of elements in the array (`n`), find the average of all array elements

6 (cont.) **Example:** Write a function for each of the following:

- Given an array of ints and the # of elements, find the largest element in the array

- Given an array of test scores (`tests`), the # of elements in the array (`n`), and an amount to scale those scores by (`s`), add `s` to every element in `tests` and print the scaled scores

2. Explain the relationship between pointers and arrays.

3. Explain how 2-D arrays are passed to functions.

4. **Example:** Say we have a program that stores student exam scores in a 2-D array:
   - Each row represents an individual student
   - Each column represents one of the 3 exams

Write functions to:

- Calculate the exam average for each student and store it in a 1-D array that is accessible in the main program
  - Assume all exams have equal weight
- Calculate the average for each exam and store it in a 1-D array that is accessible in the main program
- Each function takes the same arguments:
  - The 2-D array
  - The # of students in the class
  - The 1-D array that will be used to hold the averages

2 (cont.) Extra space to write functions