

# CSCI-101 Programming 1

## Week of Oct 9 - Lab 8b

### INSTRUCTIONS

Include the files for this lab in the **lab8** directory.

Write a class named **Lab8b** that contains the following:

- A method named **print** that takes a 2D array of integers as an argument and prints each integer in the array to the screen on a single line with spaces between them. After all of the elements have been printed, a new line character is printed to the screen.
- A method named **populateFromKeyboard** that has a single parameter that holds a 2D array of integers. The method creates a scanner, asks the user to enter a the number of integers equal to the number of elements that can be stored in the 2D array, reads the values from the keyboard and stores them in the 2D array, then closes the scanner.
- A method named **getMax** that takes a 2D array of integers as an argument and returns the largest value in the 2D array.
- A method named **getMin** that takes a 2D array of integers as an argument and returns the smallest value in the 2D array.
- A method named **getMeanAverage** that takes a 2D array of integers as an argument and returns the mean average of the elements in the 2D array.
- A method named **main** that does the following:
  - Declares a 3x3 2D array named **matrix**.
  - Populates the matrix by calling **populateFromKeyboard**.
  - Prints the elements in the matrix by calling **print**.
  - Uses **getMax** and prints to the screen "**Max:** " followed by the largest element in the 2D array.
  - Uses **getMin** and prints to the screen "**Min:** " followed by the smallest element in the 2D array.
  - Uses **getMeanAverage** and prints to the screen "**Mean:** " followed by the mean average of the elements in the 2D array.