

## Fundamentals of Computer Programming

### Lab 4 - Functions II, Arrays, and structures

Spring 2019

Solve the following problems from text book:

"Y. Daniel Liang, Introduction to Programming with C++, Pearson Educational Limited 2014."

#### Chapter 6 "Functions" – Problems:

6.11 Display ASCII values

6.13 Estimate pi

6.31 Multiply by a constant value

6.32 Algebra: solve quadratic equations

6.44 Occurrences of a specified character

6.46 Swap case

#### Chapter 7 "Single Dimensional Arrays and C-Strings" – Problems:

7.1 Assign Grades

7.8 Product of an array (passing array to a function)

7.27 Sorted? *bool isSorted(const int list[], int size);*

7.30 Replace: space with underscore

7.31 Common elements

7.23 Identical arrays: *bool isEqual(const int list1[], const int list2[], int size)*

7.24 Pattern recognition: consecutive four equal numbers  
*bool isConsecutiveFour(const int values[], int size)*

7.26 Merge two sorted  
*void merge(const int list1[], int size1, const int list2[], int size2, int list3[])*

7.28 Partition of a list  
*int partition(int list[], int size)*

**Solve the following problems from text book:**  
**" Tony Gaddis, starting out with c++ from control structures to objects**  
**8th edition, Pearson Educational Limited 2015"**

**Chapter 11 “Structured Data” – Problems:**

11.1 Movie Data

11.4 Weather Statistics

11.5 Weather Statistics Modification