

# Introduction to Programming

Labs – Week 7

## Exercise 1

Bubble Sort (as discussed in the class)

## Exercise 2

Merging two arrays in an ascending order Sort (as discussed in the class)

## Exercise 3

Reversing an array without using 2<sup>nd</sup> array (as discussed in the class)

## Exercise 4

Write a program `hellos.cpp` that takes a positive integer `n` as input and print "Hello" `n` times, each on a separate line. You may assume that the input is less than 1000.

Hint: Consider using `i % 10` and `i % 100` to determine whether to use "st", "nd", "rd", or "th" for printing the `i`-th hello.

Example: With `n = 4`, the program should output the following.

1st Hello

2nd Hello

3rd Hello

4th Hello

## Exercise 5

Write a C++ program to find a number that occurs an odd number of times in a given array of positive integers. In the array, all numbers occur an even number of times.

Original array: 5 7 8 8 5 8 7 7

Number which occurs odd number of times: 7