**CSC 447: Parallel Programming for Multicore and Cluster Systems**

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Spring 2018

Lab 2

Parallel Sorting by Regular Sampling

Due: February 1, 2018

**Count 3s [100 Points]:**

Write a C program that counts the number of three in an array of size 1024. Although this solution may not be test, the purpose is to give you a flavor regarding the use of the fork(), join(), and pid(). Your TA will give you the data for the array.

1. Start by writing the serial code;
2. Write a parallel code using fork/join only. Count the overall number of 3s in process 0.
3. What is your speed-up as the number of processes increases? Does your solution scale?

**Bonus [25 points]**

Rewrite the above program using Pthreads.

**Requirement**

Push your work to your GitHub repository under a folder called “Lab2”