

# **CSCI 53700 – Fall 2019**

## **Assignment Number 4**

**Due Date: December 3, 2019**

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This assignment is intended to re-enforce the principles of remote method invocations using the Java-RMI model of distributed-object computing. You have to re-implement the first assignment using Java-RMI. Run the distributed system for a substantial period of time. Periodically (and at the end of the execution) compare the values of the logical clocks of DNs. Print out the clock drifts for all DNs. Vary the values of different probabilities (e.g., used for inter-DN communication) and re-execute the system. Analyze the results (as reflected by the values of logical clocks and clock drifts) as a function of these probabilities. Also, create a report that compares your design and the results of this assignment with those obtained in the first assignment.

Please employ good software engineering principles in your design and implementation. You can reuse any code from your first assignment. Provide adequate documentation of your programs. Create a *makefile* for your program. All files (source files, sample input/output files, report, and makefile) should be submitted via the *submitd* command on *tesla.cs.iupui.edu* in a zipped folder with the following format (*LastnameA4.zip*) - e.g., *RajeA4.zip*. Also turn-in a hardcopy of your report, before the beginning of the class on the due date, that briefly discusses your comparison. Your system should run on the CS cluster that has been allocated to us (used for the second and the third assignments).