

Java Concurrency Lab Manual

Lab #5 – Building the MasterSensorManager implementation

Interfaces

MasterSensorManager

This is the interface to manage the entire Sensor network. The MasterSensorManager instance will create the SensorContoller instances, which will in turn create the Sensor instances. It will then pull the SensorSummary data for each SensorContoller and write a report summarizing the SensorSummary data to a file. Finally it will shutdown the entire Sensor network.

Lab Assignment

The Master Sensor Manager has a number of phases to perform, each phase must be completed for each SensorContoller before the next phase runs.

1. Create and start each SensorController pass a random number of Sensors to control
2. Wait for the SensorContoller to run for 30 seconds
3. Pull a SensorSummary instance from each SensorController
4. Write the details for each SensorSummary to a shared file
5. Stop all the SensorControllers, thus stopping all the Sensors

As always ask yourself what data structures are shared between threads, and how are you going to synchronize them?

You will need JavaDocs, JUnit test including VMLens tests, and to pass Code Review.