

Bishop's University
CS 501 – Internet of Things
Assignment 5: Multi-threading

I. Introduction

The goal of this assignment is to develop a temperature indicator by using multi-threading using Sky mote under Cooja Simulator. This indicator can take four measurements of the temperature every 1 second, average them and print the average value through a separate process thread.

You need to implement a mechanism that will average four temperature measurements and then pass the value to a print process thread. You need to implement two process threads:

- Temperature Process Thread: retrieves four temperature measurements, averages them and pass them to the Print Process Thread.
- Print Process Thread: retrieves the average temperature and prints it.

II. Exercise

The C program is already provided in this assignment. However, you need to create an array of random numbers with a size n , to compute its sum of elements, and to run your program on Sky mote under Cooja Simulator. The aim is to see how temperature evolves when you increase the size of your array. You have to illustrate that in your report by a curve.

Good luck :)