Networking for Software Developers

# Lab 4 – Using threads.

This lab is a warm-up for the next assignment. We will learn to build a multi-threaded application. You will write a function that will simulate a long task. You will call the first method a number of times sequentially and record the time it takes to complete. They will call the first method again but in a threaded manner and time the execution and then compare the two times.

## Description

Create three functions:

1. Create a function to the following:
   1. Take a string argument (name).
   2. Create a loop that will run for 100\_000 time. In this loop, the program will sleep 0.000\_1 seconds.
   3. After the completion of the loop, prints its name and a brief message.
2. Create a second function to do the following:
   1. Takes a number argument (times to execute the loop).
   2. Store the current time.
   3. Call the function in step 1 the required number of times (sequentially).
   4. Check the elapse time after the above calls complete.
   5. Print the results as well as a brief message.
3. Create a third function to do the following:
   1. Takes a number argument (times to execute the loop).
   2. Store the current time.
   3. Call the function in step 1 the required number of times (as threads).
   4. Check the elapse time after the above calls complete
   5. Print the results as well as a brief message
4. Write the statements
   1. To call the function in step 2 ten times
   2. To call the function in step 3 ten times

#### Submission

1. Your code file will be named «your\_first\_name».py [Do not zip your file].
2. Must be uploaded to course dropbox before the deadline.
3. See schedule for due date.