Track A
INFA723 Homework 2

The homework assignment will be graded based on the following criteria:

- Accuracy: 1) the solution meets specific requirements in the problem description; 2) the solution produces correct results; 2) the procedures adopted in the solution are technically sound.
- Efficiency: efficiency will be one of the criteria when grading programing assignment. The solution should produce the desired results efficiently.
- Effort/neatness: the solution includes excellent effort, and all relate work is shown neatly and organized well.

Homework assignment feedback will be available through the DropBox folder on D2L.

This homework includes 4 labs listed as below:

Lab1 Set up OpenSSL Testing Environment (**Optional** if you already have an OpenSSL environment)

Lab2 OpenSSL Command Line

Lab3 Send/Receive a File through a Socket Connection

Lab4 Use OpenSSL Crypto Library to Encrypt/Decrypt a File and Send/Receive through a Socket Connection

If you already have an OpenSSL testing environment on your computer, you do not need to do Lab1. Go to your Linux terminal, and type command

$uname –a

and copy the output to a file. Include the output as part of your homework assignment.

If you do not have a Linux machine or an OpenSSL environment, follow Lab 1 to set up an OpenSSL testing environment. You can **install a Linux virtual machine (e.g., using VMWare Workstation Player)** on your windows computer or request a Linux VM from the IALAB. You need an OpenSSL environment before you can continue Lab2, Lab3, and Lab4.

For each lab (except Lab 1), there are question sections in the end of the labs. You only need to answer all the questions in each lab. The tutorials in the Labs are for your practice. You don't need to include screenshots for your practice in the homework solution.

All the required data files for the labs have been enclosed in the labs1-4.zip file. Copy these data files to you OpenSSL testing environment to finish the labs. Some of the lab folder includes multiple sub-folders for different versions of the OpenSSL. **Based on the OpenSSL version you have, choose the right folder to continue the labs.** Please create a single document to include you answers and submit your work through D2L.