Assignment 3: Simulation of Congestion Control in TCP

Due date: Friday, May 29, 2020 at 22:00

This is an individual assignment. You may discuss it with others, but your code and documentation must be written on your own.

Write a simulation of the TCP transport protocol that implements multiplexing/de-multiplexing, and a basic reliable stream, including congestion control. Do that by completing the simulation you have written for the second assignment.[1] In particular, add the congestion-control features of TCP based on the proper control of the congestion window, as well as the estimation of the round-trip time.

Submission Instructions

Package all the source files plus a README file in a single zip or tar archive. Make sure that you include all the necessary components to build and run your solution on a standard installation of a C, C++, Java, or Python environment. In particular, make sure your solution works with the most basic command-line tool, outside of any integrated development environment.

Add comments to your code to explain sections of the code that might not be clear. Use the README file to add general comments to properly acknowledge any and all external sources of information you may have used, including code, suggestions, and comments from other students. If your implementation has limitations and errors you are aware of (and were unable to fix), then list those as well in the README file.

Submit your solution package through the iCorsi system.

---

[1] https://www.inf.usi.ch/carzaniga/edu/adv-ntw/assignment2.pdf