Network Applications Programming - Homework 1
(Tracking packets in a LAN)

Motivation:

You have learned how UDP and TCP work in class. This homework asks you to use some analytical tools to track packets in a LAN.

Requirements:

You are asked to use some TCP analytical tools such as ***tcpdump*** (in Linux) or ***wireshark*** (in Windows) to analyze the transport-layer segments received from a LAN. You have to select at least **THREE** network applications for analysis. For example, you can open the FireFox/Chrome browser, connect to a FTP, go chatting on BBS, or watch a video clip from YouTube. However, at least one UDP and one TCP connections should be analyzed (so you need to think about what applications will use UDP or TCP connections). Of course, except for tcpdump and wireshark, you can use other analytical tools in the homework.

Please summarize your analysis and observations in a report. You report should contain the following items:

- Which analytical tool did you use? You need to give some snapshots (from the screen) in your report.
- What kinds of network applications did you analyze? You should give the IP addresses and port numbers of the source (i.e., your PC) and the destination.
- What types of transport-layer segments did you observe (for example, SYN, ACK, DATA, and so on)?
- What interesting things did you observe in your analysis?

Grading Policy:

You need to hand in a report of your analysis result in class. The due day is **03/20** (in class). TAs will check your snapshots and IP addresses, for example, to verify that you complete this homework on your own. There is no need of demonstration in this homework. You can get a higher grade if your report presents interesting results and observations. Discussion among your classmates is welcomed and encouraged. However, plagiarists will get **ZERO point**.