Instructions

project creates an application program.

This project can be done on an individual or a group basis. The number of a group SHOULD NOT exceed 3.

In exceptional circumstances you are fulfilling the programming in your own group with a strong relation to the contents of this course.

Note that you must implement the ICMP message sending and receiving yourself and must not rely on any language libraries.

Outcomes

- Source code as a compressed package;
- A concise report analyzing the performance;
- An auxiliary document clarifying the running environment;
- All the above materials should be submitted **in groups with every member's name on the report surface**.
- Possible points: 20

Evaluation

- Functional correctness: 10pts;
- Runnability and robust: 5pts;
- Report writing: 5pts.

PING COMMAND–ICMP ECHO REQUEST/REPLY

- You will program with C or Python to fulfill a PING command;
- **Tasks**: Refer to the example2 in lec #20 handouts. In example2, at the side of the receiver, the ICMP request messages are printed out, but no replies are sent back to the sender. In your project, you are implementing the following functions by modifying and refining example2:
  - The sender sends out 2 ICMP requests constantly with the length of 256 bytes;
  - Receiver sends back replies and print the requests (messages, not the statistics) it receives from the sender to a .txt file;
  - When the sender receives replies, it prints the reply messages (not the statistics) on the screen and in a .txt file as well.
- **Submission**: You need to submit a detailed report, with screenshots, to describe what you have done and what you have observed. You also need to provide explanation to the observations that are interesting or surprising. Please also list the important code snippets followed by explanation. Simply attaching code without any explanation will not receive credits.