Homework #2 (due on 10/19)

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1. Calculate/estimate the header overhead of the TCP/IP communication, such as (length of headers) / (overall packet size) *100%.
    a. Assuming uniform distribution of packet size (i.e. use average packet size);
    b. Search for some facts (statistics) and make up your own assumptions of mixed Internet packet header size.

2. Some say the maximum packet size is 1518 bytes, others use other numbers, such as 1500 or even 1540, why?

3. Design a firewall MAC-IP binding implementation with **optional** automatic MAC-IP pair collection **and** binding. A high level programming flowchart and description of the implementation will be fine. No actual coding is needed.

4. (Bonus) When there is client side NAT and NPAT, how do you suggest we handle "dynamic protocols" such as Active FTP? Describe your method in details but no coding necessary.

- Don't forget to write done your comments and ideas from textbook chapter(s) reading.