CS 485/ECE 440/CS 585 lecture notes for 2 October 2015

Midterm review:

This test is open book and open notes, but closed neighbor and closed everything else except for a pen or pencil. If you are logged into any lab computer or other computer that is connected to the Internet or using any devices such as a cell phone, kindle, or calculator during the exam you will receive a 0 on the exam and I may take further action pursuant to University policy about cheating.

Write all answers on the front or back of this sheet, you will tear off this page and only turn in this page (both front and back). None of these are meant to be trick questions, if the question seems simple it probably is. Assume IPv4 for all questions. If it's not clear which selection you marked, I'll mark it as incorrect.

Questions 1 through 11 are very similar to the questions 1 through 11 on the 2013 midterm I gave you. Also review homework 2. You can use “man 2 syscallname” to write the arguments of important system calls w.r.t. the network socket API in your notes.

You should understand the difference between layer 2 (Ethernet, or the link layer) and layer 3 (IP, or the routing layer) and understand how ARP maps layer 2 to layer 3 *within a subnet*.

You should understand what these three data structures are and what they're used for:

ARP cache
Routing table
File descriptor table

You should understand what goes in each header for layer 2, layer 3, and layer 4.

You should understand how traceroutes work.