CS2911 Lab 1 Feedback Summary

20q1 Suggestions for improvement

- A video introduction to the prelab
  - *This is a great idea! However, it will take a significant time investment to make this happen. It also forces us to keep doing the lab essentially the same way we do it now (to be able to keep using the video).*
- Sending a custom message would be more interesting
  - *This is an interesting idea! I like the idea of students making their own messages.*
- (8) "Directions could be more organized as the directions pointed you all over the page"
  - (4) Or, alternatively, simplified or clearer or shorter
  - (2) Or, alternatively, *more*, instructions
  - Making the lab more self-explanator
  - *These instructions are somewhat conflicting – the lab cannot be both shortened and lengthened. However, there may be some KEY ideas to add, and some ideas to remove. Do you have specific ideas?*
  - *The prelab instructions point forward to the in-lab instructions, which I feel is necessary.*
  - *Are there other sections that can be re-arranged to be followed in a straight-forward manner? Could you point these out?*
- (5) The TCP example made the lab harder.
  - More clearly specify that this is TCP instead of UDP
  - *I have attempted to address this by making a large-font note in the TCP example. Thank you for the suggestion!*
- (6) Introduction to UDP
  - (5) Letting us see how UDP is formatted instead of TCP
  - *I think the problem here is that I did not walk through the TCP example using a TCP header. I cannot use the UDP header, because interpreting that header is a key part of the lab.*
- Improving the document
  - *I'm not sure what this refers to – The lab page? The TCP example? Etc.*
- More info on proto-header
  - *This is a just-for-fun exercise, so I will leave it as is.*
- A more thorough description of how the internet works and of web protocols before the lab
  - *We used to do this in the past, but we found it difficult to get through enough material (especially for Lab 2) before the lab is due.*

20q1 Things that students liked

Of the nearly fifty responses, the majority chose not to suggest ANY improvement to the lab. Most students enjoyed predicting the packet contents or seeing the actual packet go over the network.

19q1 Suggestions for improvement

- Go over prelab earlier

- (2) More time and better explanation of how each field is derived. The example on the board was very confusing. *(Perhaps taking the TCP example slower and emphasizing the high-level differences between TCP and UDP would help students with the lab. Energetic students going above and beyond had difficulty wrapping their minds around the subtle distinctions between port number and IP address. Discussin the IP and UDP protocols/layers at a VERY high level, and spending more time discussing (e.g.) how to convert a numeric field to raw binary might help students. I think decoding the IP address confuses students, because then they think they have to decode IP addresses, too.)*
- More explanation of which hex bytes to take from the Wireshark packet
- Hint to turn off firewall
- (6) Write the code ourselves.
    - Encourage people to play around more! *(We could designate a "chat" channel with a different port number so it didn't disrupt those working the lab. Students had fun spamming the whole room, sending files, responding to received messages, etc.)*
    - (2) To get better understanding of Python socket code
    - Have users send their own customized message and have receiver decode it
    - Contact a server on the WWW
    - Send more complicated packet (image or sound) and see in Wireshark

19q1 Things like (that stand out)

- "Liked the very clear demonstration of demonstration and transmission of real packet"