Zergmap Writeup

Project Goals

The objective of this project was to read in PCAPs and for any Zerg GPS/Status data, determine if the zerg are fully connected or not. If they are not fully connected, output the fewest amount of zerg that would need to be removed to make it fully connected. Also, output any zerg that have low HP.

Challenges/Successes

The project was at first very challenging for me because was trying to avoid running every node against every other node (an o(N^2) operation). I was able to figure out how to run this program in a o(N) way but then on one of the last days we were given a PCAP that ruined all my test cases. So, I changed my program to run in an o(N^2) way.

After changing my program to run in an o(N^2) way, the project was pretty simple. Nothing else was really challenging, it just takes time to write everything out and do the testing to make sure everything is working without memory leaks.

Since I did extra features the on my decode project, I already had support for Big-endian, IPV6 and 802.1Q. This helped me because it already completes some of the extra features for this project. I also added a man page and support for 6in4 on this project. They were both easy to implement and gave me the full amount of extra feature points for this project.

Lessons Learned

1. Inefficient programs are easier to write
2. Sometimes it's better to be inefficient

Conclusion

This was a solid project that built upon our previous projects very well. I feel like this should be a very easy project for everyone in the class to do if they made their decode and maze projects correctly. The only thing I would recommend is maybe hint/go over the decode and maze projects with people that sucked on it. That way, they can have a good starting place.