**Summary:**

This week’s project was a lot to take in since I never used the Python oriented-object programing language before. I know that most of the programing languages utilize the same methods to conduct logic and code, it just seems to be written differently when applying it. To complete this assignment, I had to use various websites to see exactly what I needed to do to get my program up and running. I utilize the [w3schools.com](https://www.w3schools.com/python/) website to find out how to open a file on my server (SSH), create a list, apply if statements and conditions, sorting list, appending a list, closing a file on my server, utilize strings, conduct for loops and other various methods. The most difficult part about this assignment was finding the invalid username, I needed to find how many characters were between the invalid user name. It took me the longest time to figure out there were 14 (remembering to count the spaces). I had to type invalid user name exactly how it was when I processed the /var/log/auth.log file and search to see the invalid users. I found the solution very confusing at first, before figuring it out. I had to use split() to separate the Invalid usernames from the list. The split() method splits a string into a list. You can specify the separator; default separator is any whitespace. Then I used append() to add the invalid usernames to the userlist. The append() method appends an element to the end of the list.

The one thing I liked about this assignment is that I got to work with a programing language I never worked with before, got an insight of how to use code to interact with files in directories, and how to use code to read and open a path. If I could improve my code if I had another couple of hours, I would find a shorter way to write it, instead of having a total of 28 lines. I would combine line 13 and 14 into one by writing “line[index+offset:].split(“ “)[0]. I believe I would’ve got the same output. I need to read more on python to become more fluent with using its logic. I believe the w3schools website will help me with that.