1. SSH Remote Access

This lab taught me about authentication and it's importance in global and local network communication.

The base and foundation for all layers above it. Identification layer, proof of identification is vital as without it, anyone could impersonate and potentially steal data from anyone else.

I already understood the vitality of authentication, but this lab has helped me deepen my understanding and I'll be taking it a lot more seriously in my future practices. I have also gotten a better understanding of utilising the features of SSH remote accessing another device.

2. GPG - GNU Privacy Guard

The CIA Triad – Confidentiality, Integrity, Availability – was the ongoing theme of this session.

These are parts of what enables secure data transferal between devices. Without the triad, it is impossible to ensure the safe and secure exchanging of data anywhere digitally.

I now understand how useful a secure key can be in encrypting and protecting data. I had rarely looked into the use of keys due to a lack of understanding, however, I now expect to make use of this more frequently.

3. E-mail Spoofing

I learned of the importance of baking in security and how it can drastically improve a system's security.

Security is at its strongest where every single operation is security checked. Security measures added, or bolted, on are infinitely easier to crack than a well-integrated security system.

If I come to develop a program where the system's security is essential, I will absolutely ensure I bake in security measures and never bolt on. I have come to learn the significant increase in security of baking in security of tacking it on. I also learned how to better check emails for signs of foul play, by reading into the email's source.

4. Real World Cracking

The importance of validation, specifically when logging in with a password was the key point of focus of the lab.

When you design a program where you rely on trust for a user to use the program as intended, all that stems from that can become compromised. Using any external input within your program, you are trusting it to be used correctly, and that will almost always lead to issues later on.

I learned many useful methods of bypassing passwords in a html environment, and I will use this knowledge to improve my future projects to ensure they are not so easily breachable.