

Networks And System Security – Reflection Week 02

Key Learning Outcomes

Understanding Hybrid Encryption with RSA and AES

Hands-on implementation of a hybrid encryption helped clarify how and why RSA and AES are combined in practice, which effectively highlighted the balance between secure key exchange and efficient data encryption.

Socket Programming for Secure Communication

Building a client-server system with Python Sockets demonstrated how encryption operates with real network communications. This provided practical insight into data transmission and secure exchange processes

The Cryptographic Workflow

Analysing each step of the encryption process clarifies the full cycle of secure communication. Furthermore, this emphasised the importance of key management and proper cryptographic implementation needed for maintaining security

Peer Learning and Career Development

Peer discussions offered valuable insights into cybersecurity career paths, helping identify shared skill gaps and individual strengths, which in turn helped refine and focus my strategy when it comes to applying for jobs

Practical Cryptography Implementation

Hands-on use of the cryptography library highlighted the importance of careful implementation details and reinforced that true security depends on correctly applying cryptographic principles, not just knowing them in theory.

Challenges and Growth

Initially, I found the multiple layers of encryption (RSA for the key, AES for the message) confusing, but working through the code step-by-step clarified why each layer serves a specific purpose. Debugging socket connections taught me patience and systematic troubleshooting.

Moving Forward

This workshop has strengthened my practical cryptography skills and given me a foundation for understanding secure network protocols. The peer feedback has also clarified specific skills I need to prioritize in my learning roadmap.