

## **Homework 2**

### **Objective:**

Answer the following research-based questions with explanations.

1. What is the purpose of the TCP three-way handshake, and what role do the SYN, SYN-ACK, and ACK flags play in establishing a connection?
2. Explain the difference between TCP and UDP. Include one example of when UDP would be preferred over TCP.
3. What is subnetting, and why is it important for both network performance and security?