

## Homework 3

### Objective:

Answer the following research-based questions with explanations.

1. Explain the differences between viruses, worms, and Trojan programs. In your response, describe how each type spreads, whether user interaction is required, and the potential impact on an organization if infected.
2. Describe how a Distributed Denial-of-Service (DDoS) attack differs from a traditional Denial-of-Service (DoS) attack. Why are DDoS attacks more difficult to defend against, and what effects can they have on legitimate users and network performance?
3. What is a buffer overflow vulnerability, and why is it considered dangerous? Explain how poorly written code can lead to buffer overflow attacks and describe one way organizations can reduce the risk of these vulnerabilities during software development.