Network Security 2

(SPY 2002)

Assignment 2



Submitted By-

Your Name
University Number: 123456

Submitted To-

Dr. Mohammad Shoab
Department of Computer Science
Shaqra University

Instructions:

- *The assignment must be handwritten.*
- *Use A4 papers to write the assignment.*
- *Draw diagrams wherever relevant. Explain your notations explicitly and clearly.*
- *An incomplete assignment is NOT acceptable for submission.*
- *Arrange all the papers of your assignment into a file to submit.*
- *Once you submit your assignment, you will be expected to answer all the questions there INDEPENDENTLY. You may be asked to answer any question of the assignment in the class.*

Q1. Explain the processes involved in security assessment, analysis, and assurance. How do these processes contribute to maintaining a robust network security posture?

Q2. What are the current challenges facing network security in today's digital landscape? Discuss the impact of emerging technologies such as IoT and cloud computing on network security.

Q3. Describe the function of firewalls in network security. Compare different types of firewalls and explain how they filter traffic to protect network assets.

Q4. What is the role of intrusion detection and prevention systems (IDPS) in securing computer networks? Compare host-based and network-based IDPS with examples.

Q5. Discuss the importance of security protocols in computer networks. Describe how protocols such as SSL/TLS, IPsec, and HTTPS ensure secure data transmission.