ITBU 443: Threats ad Counter Measures, Homework 04

Chapter 04, *Computer Security, Principles and Practices*

Readings

Read chapter 04 in the *Computer Security, Principles and Practices* book.

Discussion Questions

Answer the discussion questions in writing.

1. Reflect on the two definitions of *access control*. Which do you prefer? Why?

2. What are the principle objectives of computer security?

3. What different concerns do authentication, authorization, and audit entail?

4. Compare discretionary access control and mandatory access control. Mandatory access control is not covered in this chapter.

5. Justify the three kinds of users: owner, group, others. How does the `chmod` command (in UNIX/Linux) work? Explain this example: `chmod 644 itbu313hw-10.pdf`.

6. See the discussion in the book about the decomposition of an access matrix by rows and columns. Explain *access control lists* and *capability tickets*.

7. Explain the difference between user mode and kernel mode. This is an important question.

8. Give an example of *role based access*, describing in your example how RBAC works.

9. Give an example of *attribute based access*, describing in your example how ABAC works.

10. What are subject attributes, object attributes, and environmental attributes?

11. Describe the concept of *identity federation*.

12. What are the benefits of a trust framework? What are the disadvantages?