CS361 Questions: Week 4

Type your answers and submit them on Canvas by midnight on the due date.

1. If a computer system complies with the BLP model, does it necessarily comply with non-interference? Why or why not?

2. What would the NI policy be for a BLP system with subjects: A at (Secret: Crypto), B at (Secret: Nuclear)?

3. If the NI policy is $A^- > B$, in a BLP system what combinations of the levels “high” and “low” could A and B have?

4. What is difficult about proving NI for realistic systems?

5. Explain the importance of integrity in various contexts.

6. Explain the difference between separation of duty and separation of function.

7. What are the underlying ideas that raise the integrity concerns of Lipner?

8. Name a common scenario where integrity would be more important than confidentiality.

9. Give examples of information that is highly reliable with little sensitivity and information that is not so highly reliable but with greater sensitivity.

10. Construct the NI policy for the integrity metapolicy.

11. What does it mean that confidentiality and integrity are “orthogonal issues?”

12. Why is Biba Integrity called the “dual” of the BLP model?

13. If a subject satisfies confidentiality requirements but fails integrity requirements of an object, can the subject access the object?

14. What is the assumption about subjects in Biba’s low water mark policy?

15. Are the subjects considered trustworthy?

16. Does the Ring Policy make some assumption about the subject that the LWM policy does not?

17. Are the subjects in the Ring Policy considered trustworthy?