CS361 Questions: Week 2

These questions relate to Module(s) 2. Type your answers and submit them on Canvas.

**Lecture 5**

1. Describe a possible metapolicy for a cell phone network? A military database?
2. Why do you need a policy if you have a metapolicy?
3. Give three possible rules within a policy concerning students’ academic records.
5. For the example given involving student SSNs, state the likely metapolicy.
6. Explain the statement: "If you don’t understand the metapolicy, it becomes difficult to justify and evaluate the policy."

**Lecture 6**

1. Why is military security mainly about confidentiality? Are there also aspects of integrity and availability?
2. Describe the major threat in our MLS thought experiment.
3. Why do you think the proviso is there?
4. Explain the form of the labels we’re using.
5. Why do you suppose we’re not concerned with how the labels get there?
6. Rank the facts listed on slide 6 by sensitivity.
7. Invent labels for documents containing each of those facts.
8. Justify the rules for “mixed” documents.

**Lecture 7**

1. Document labels are stamped on the outside. How are “labels” affixed to humans?
2. Explain the difference in semantics of labels for documents and labels for humans.

3. In the context of computers what do you think are the analogues of documents? Of humans?

4. Explain why the Principle of Least Privilege makes sense.

5. For each of the pairs of labels on slide 6, explain why the answers in the third column do or do not make sense.

**Lecture 8:**

1. Why do you think we introduced the vocabulary terms: objects, subjects, actions?

2. Prove that dominates is a partial order (reflexive, transitive, antisymmetric).

3. Show that dominates is not a total order.

4. What would have to be true for two labels to dominate each other?

5. State informally what the the Simple Security property says.

6. Explain why it’s “only if” and not “if and only if.”

**Lecture 9**

1. Why isn’t Simple Security enough to ensure confidentiality?

2. Why do we need constraints on write access?

3. What is it about computers, as opposed to human beings, that makes that particularly important?

4. State informally what the *-Property says.

5. What must be true for a subject to have both read and write access to an object?

6. How could we deal with the problem that the General (top secret) can’t send orders to the private (Unclassified)?

7. Isn’t it a problem that a corporal can overwrite the war plan? Suggest how we might deal with that.
Lecture 10:

1. Evaluate changing a subject’s level (up or down) in light of weak tranquility.
2. Why not just use strong tranquility all the time?
3. Explain why lowering the level of an object may be dangerous.
4. Explain what conditions must hold for a downgrade (lowering object level) to be secure.