

CS361 Questions: Week 3

Type your answers and submit them via turnin on Canvas by 5pm on Friday, February 14, 2020.

1. Suppose you wanted to build a (library) system in which all subjects had read access to all files, but write access to none of them. What levels might you give to subjects and objects.
2. Given any two labels in a BLP system, what is the algorithm for finding their LUB and GLB?
3. Given our BLP covert channel (slide 12), what are the pre-conditions? That is, what has to be true for it to work?
4. Why is the DESTROY statement there?
5. Are the contents of any files different in the two paths?
6. Why does L do the same thing in both cases? Must it?
7. Why does H do different things? Must it?
8. Is the following a covert channel? Why or why not?

Send 0		Send 1

Write (SH, F0, 0)		Write (SH, F0, 1)
Read (SL, F0)		Read (SL, F0)

9. Where does the bit of information transmitted “reside” in Sample Covert Channel #1?
10. In Covert Channel #2?
11. In Covert Channel #3?
12. Why would it be infeasible to eliminate every potential covert channel?
13. Why wouldn't the “create” operation have an R in the SRMM for the “file existence” attribute in our BLP covert channel?
14. Why does an R and M in the same row of an SRMM table indicate a potential channel?
15. If an R and M are in the same column of an SRMM table, does this also indicate a potential covert channel? Why or why not?