

Homework 2

1. What does the principle of least privilege say?
2. In which of the following situations can the access control mechanism of Unix file permissions be used?
 - (a) Alice wants to have her files readable, except for her office mates.
 - (b) Bob and Sam want to share some secret files.
 - (c) Root wants some of her files to be public.
3. What should be the architecture of a network application under Unix be that processes potentially hostile data?
4. How can you exploit the fact that every night root has a cron job that delete the files in /tmp?
5. What does it mean that the program passwd has the setuid bit be set? Why is this necessary?
6. What does the Bell — La Padula model ensure? Similarly, what does the Biba model ensure?