

# CS111 Final Exam

## Ethics Material Practice Questions

1. A software company with a widely-used product dismisses calls from consumers to release their source code to be publicly available so that anyone can review it, stating that they will continue to keep their source code private within the company. In 2-4 sentences, identify and describe a *value tension* in this scenario.
2. In lecture, we learned about the Therac-25 radiation therapy machine; here are some key details about it:
  - Due to a race condition, it exposed some patients to radiation overdoses
  - The system had two modes, one to apply low-energy electrons, and one to apply high-energy X-ray beams
  - One of the bugs was in older Therac-20 code, and that code was copied into Therac-25, but Therac-25 replaced Therac-20 hardware safety features (which meant that the issue had never been detected there) with software to reduce costs.
  - The company didn't have independent testers evaluate the software

Define agential gullibility and, using the information above, identify/describe one way the company developing Therac-25 exhibited agential gullibility in the development of its software.

3. In filesystems, filesystem permissions prevent unauthorized users from accessing files. Explain in 2-4 sentences the concept of trust by substitution, and how filesystem permissions are an example of trust by substitution.