

CSc 74010 Fall 2011, Homework 4

1. Represent the following information in logic. You should try to ensure that your representation allows the appropriate inferences to be made. You are free to interpret the scenario in any reasonable way, but write down any assumptions you are making.

“If a gun is loaded, then pulling the trigger will make a noise. If a gun is not loaded, then pulling the trigger will not make a noise. Usually, if someone loads a gun at one point in time, it will still be loaded at a later point in time, but this is not always the case (because there may be some reason it no longer works, or it may have become unloaded in the meantime).”

While writing your representation, think about the following scenarios:

- Sam loads a gun and puts it in his coat. The trigger is pulled sometime later. Does it make a noise?
- Sam falls into a river between loading the gun and pulling the trigger. Does the gun make a noise when the trigger is pulled?
- Gutman searches Sam between the gun being loaded and the trigger being pulled. Does the gun make a noise when the trigger is pulled?”