CNT 4419 Quiz 2/19/25   (20 minutes)   NAME: _____

Instructions: Same standard instructions as before. As always, this quiz is closed everything, including phones and other students. Do not talk to another student during the quiz. Do not look at another student's answers during the quiz. Respond at the level of detail discussed in class.

1. [3 points] Compare and contrast classic ransomware and more modern ransomware attacks. Make the generalizations we made in class, and hit all the main points discussed in class. [2-5 sentences]

2. [3 points] Prove or disprove that properties are *closed* under intersection, which means, given any two properties P1 and P2, P1 ∩ P2 must also be a property.

3. [4 points] Prove or disprove that the following security policy P can be written as the intersection of a safety property and a liveness property. For full credit, a *proof* needs to include formal definitions of safety and liveness properties that intersect to form P. For full credit, a *disproof* needs to show the impossibility of such properties existing.

P = {∅, {read(0), write(0)}}