**MIS 6330: IT Security**

**Individual Homework 1**

**(Write in your own words. Do not copy/paste from online resources or the text. This is an individual assignment, so if I receive identical answers, I will treat them as instances of academic dishonesty.)**

1. What is the difference between *passive* and *active* security threats? Classify the following attacks (as *active* or *passive*): *Eavesdropping*, *Replay*, *Intrusion*, and *Inference*.
2. Consider an ATM machine that you access using your ATM card and a pin code. Identify potential *confidentiality*, *integrity*, and *availability* requirements associated with this system. In each case, indicate the degree of importance (*high*, *medium*, *low*) of the requirement. Explain your answer.
3. Explain the difference between *feature* and *assurance*. Why is it important to emphasize the latter?
4. Carefully check <http://www.darkreading.com/vulnerabilities---threats/lessons-from-the-ukraine-electric-grid-hack/d/d-id/1324743> and answer the following.
   1. What was the main target?
   2. What vulnerabilities did the attack exploit?
   3. What countermeasures should have been taken?
   4. What general lessons can be learned from this incident?
5. Why is it important to distinguish between *vulnerability* and *threat* when assessing security risks?