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Course: CS 491 - Intro to Security
Instructor: Dr. Karen L. Karavanic

Homework - 1
ID: 915910838
Term: Fall 2020
Due Date: 07 OCT 20

Question 1:
Written Exercises
Provide 3 references to computer security that you find in the non-technical space. Provide or describe what is said. For each, say how it relates to any of the CIA: confidentiality, integrity, availability. For each, say how it relates to any of the STRIDE categories of threats.

a. Examples might be fiction, tv shows, movies, magazines, blogs, even news.

b. The reference may be technically correct or incorrect, or maybe you don't know which.

c. Include the source – movie name and year; tv name, year, seasons#, episode#; URL, etc. If possible, give a link. A link to an entire movie is NOT useful although your graders would probably enjoy watching all of those movies.

Response:

1) Target Data Breach

a. In late 2013 the credit card and personal data of 110 Million customers was stolen.

b. How does this relate?

CIA: The confidentiality of this data was compromised when it was made available to unauthorized people.

STRIDE: While this was and made possible via tampering, it is an information disclosure at the heart of this event.

c. Wikipedia: Target Data breach

2) WannaCry

a. The EternalBlue exploit allowed WannaCry to infect unpatched older machines to encrypt the system's data rendering it inaccessible to the user until they paid the ransom.

b. How does this relate?

CIA: This is largely an integrity issue and the only way to save yourself from permanent loss is to pay the ransom.

STRIDE: WannaCry is threat of data tampering.

c. Wikipedia: WannaCry

3) Operation Payback

a. A group of hacktivists in response to events they were not happy with recent events used a stress testing application to take control of a voluntary botnet and conduct a series of coordinated DDoS attacks.

b. How does this relate?

CIA: This attack directly hinders the availability of services provided by the victims of these attacks.

STRIDE: This is a was a Threat to denial of service.

c. Wikipedia: Operation Payback

Question 2:

Draw an attack tree that describes a cheating student obtaining the answers to another student's homework. Include all paths you can think of. You may do this electronically, or draw on paper then take a picture with your phone.

Response: Homework cheating attack tree

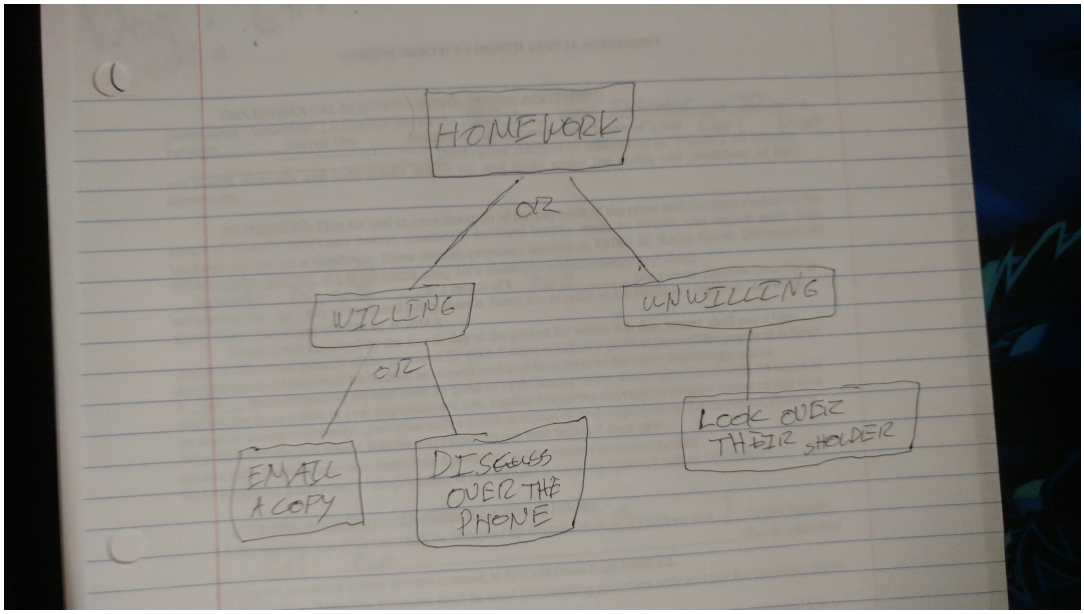

Figure 1: **Homework attack tree**