ITBU 443: Threats and Counter Measures, Homework 10

Chapter 10, *Computer Security, Principles and Practices*

Readings

Read chapter 10 in the *Computer Security, Principles and Practices* book.

Discussion Questions

Answer the discussion questions in writing.

1. What is a *buffer overflow*?

2. Buffer overflows typically attack targets in three locations. Describe these locations.

3. Describe the kinds of damage that buffer overflows can cause.

4. Name the two key elements that must exists for an attacker to implement a buffer overflow.

5. Give an example of a language that is susceptible to a buffer overflow and state why that is so.

6. Give an example of a language that is *not* susceptible to a buffer overflow and state why that is so.

7. What is the *stack* in terms of process execution? How is a stack overflow implemented?

8. What is *shellcode*?

9. What is a NOP sled? What purpose does it serve in a buffer overflow attack?

10. List and describe two kinds of defences to buffer overflow attacks.

11. What is the *heap* in terms of process execution? How is a heap overflow implemented?

12. What is te global data area? How is that subject to attack?