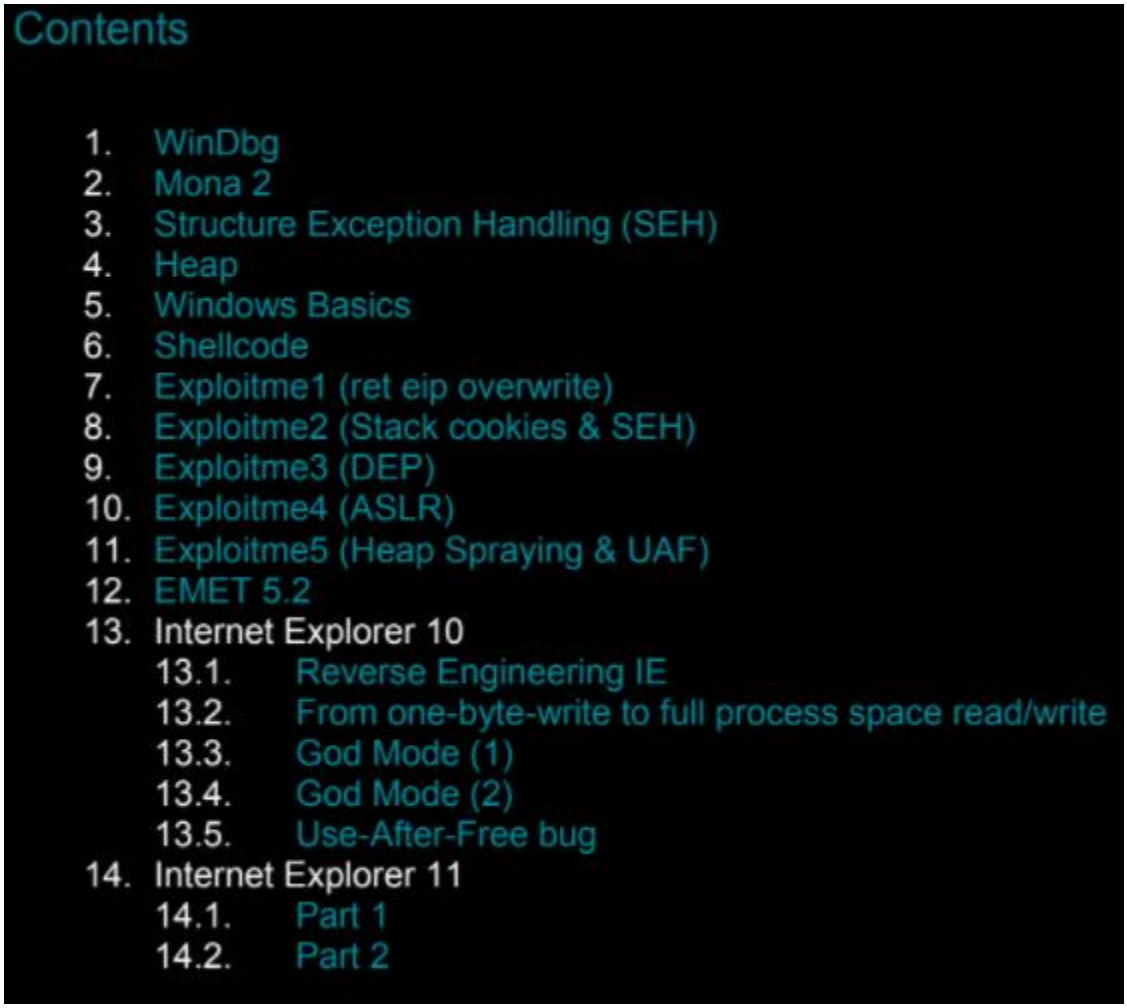
Windows Exploit Development

Books

- Modern Windows Exploit Development

16-week Study plan



Basically, rush through the first 6 chapters in 6 weeks. Then the next 10 weeks are doing the rest of the chapters. I will produce each type of exploit: stack, heap, and ones bypassing DEP&ASLR with detailed procedures to all of them. I can give an oral presentation on how you might go about doing these things at the end of the year. I will work on this course 2 hours per day during the week and have bi-weekly status reports with you. I'll explain: what i've learned, accomplished, and what I could be doing better.

Outcomes

- Proficient debugging skills in WinDBG and mona
- The ability to find and exploit following vulnerabilities: stack overflow, heap overflow, string, integer, and file vulnerabilities while bypassing DEP, ASLR, and SEH
- Use Sonarlint and sonarqube to see if these catch all vulnerabilities
- Strong oral/verbal communication skills in doing the above processes

Week 3- Project 1

- Receive some C/C++ code. Tell the instructor what compiler/linker was used
- Tell him all of the variables
- Write a description of what is going on
- Bypass the authentication by changing the binary
- Bypass the authentication by finding the key

Week 4 - Homework 2

- Fill out chapter 1 in the reverse engineering book

Week 6 - Project 2

- Find the buffer overflow
- Exploit the buffer overflow by popping up the calculator

Week 8 - Homework 3

- Fill out chapter 2 in the reverse engineering book

Week 11 - Project 3

- Exploit a SEH vulnerability

Week 15 - Project 4

- Exploit a heap based buffer overflow that pypasses ASLR