TOWSON UNIVERSITY

Application Software Security
General Instructions

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Students are expected to bring their laptops/computers to lab sessions.

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Lab instructions

We will be using lab material provided by the SEED project (http://www.cis.syr.edu/~wedu/seed/all_labs.html). To obtain the lab environment, visit the Lab Environment page at http://www.cis.syr.edu/~wedu/seed/lab_env.html and download the latest image SEEDUbuntu12.04.zip. The following core applications, mostly free, are expected to be installed in the computer

- VMWare Player (Virtual Machine Player - http://www.vmware.com/go/downloadplayer/) or Virtual Box (https://www.virtualbox.org/)
- SEED Ubuntu image 12.04

Lab sessions

In lab sessions, students will be experimenting software application vulnerabilities according to the instructor's guideline. **Lab report, one for each group, is due within 04 days of the session (unless extended by the instructor) and will consist of 30% of the homework assigned to it**.

Lab report:

The lab report should address the following questions:

1. What were the environment and attack set up? What is/are the ultimate goal(s) for this lab?
2. What were the steps that you take in order to launch the attack? (Note: Make sure your include the shell commands, GDB debugger commands and screenshots of your computer to demonstrate it.)
3. What have you learned from this lab? Make at least 3 bullets.

Textbook Live CD instructions

Please download the following LiveCD that goes with the book and setup it so that you can access it at boot time

1. Dowload the LiveCD (https://drive.google.com/file/d/0B0VUUqxOyFjEd0RZdjdfQkIwVmM/view?usp=sharing). This is the same CD that was included in the textbook. Put it in the same folder as you SEEDUbuntu12.04 folder.
2. Open VMWarePlayer, choose SEEDUbuntu12.04 in the left panel.
3. Choose to edit settings for this virutal machine
4. Change CD to Hacking Source ISO files, Choose Connect On Power On
5. Add 2 lines to the Virtual Image .vmx file
   bios.forceSetupOnce = "TRUE"
   bios.bootDelay = "10000"
6. Reboot your virtual machine. Choose CD when boot (Press ESC)

Literature review instructions

1. What is the paper about? What is/are the vulnerability? What cause the vulnerability?
2. What is/are the contributions of the paper? How was the vulnerability or insecurity discovered?
3. The detailed techniques to solve the problem.
4 What are the strength/weaknesses of the paper?
5. What can you do better?

Project report instructions

For the first report (Report 1), I want to know

1. 1. What your topic is about. And what have you read/done so far.
2. 2. What has been done in the past? You should read at least 3-4 articles/papers about the topic. Cite them.
3. 3. What do you expect for Report 2 and the timeline. What do you expect for the final report?

For the second report (Report 2), I want to know

4. What have been done from report 1?
5. What technique that you use/develop/discover? How are you implementing it, and on which platform?

6. Are you on schedule? What do you expect for your final report.

The final report should be the summary of all report 1 and 2, and it should include

7. What is the topic of interest? Why do you want to do that?
8. Literature review: What has been done on this research?
9. What do you think you can do better? How does that work?
10. What is/are the techniques that you use? Explain.
11. How the techniques are implemented? What language did you use? Which platform (PC, Mobile device)?
12. Demo (optional).