CY350 Lesson 2 In-Class Lab

Name:

Section:

Follow the instructions below to setup your development environment. Type one command at a time. As a best practice, make sure you understand what the command might do before you hit Enter.

Upon the completion of all activities, have your instructor review your work and turn-in this sheet to receive credit.

Install and configure WSL (2 points)

From a Windows Terminal-

```
winget install Microsoft.VisualStudioCode # if needed
winget install Docker.DockerDesktop
winget install Git.Git
winget install WiresharkFoundation.Wireshark
code --install-extension ms-vscode-remote.remote-wsl

wsl --update
wsl --list
wsl --list --online
wsl --install ubuntu

# now enter wsl
wsl
```

Connect vscode to Linux (WSL) (2 points)

From within WSL environment-

```
sudo apt install tcpdump tshark bind9-dnsutils traceroute # network tools
sudo apt install python-is-python3 fish # quality of life upgrades
```

Create your class directory, navigate the filesystem, list contents to confirm-

```
mkdir cy350
cd cy350
ls
pwd
```

Finally, launch vscode from your current directory in Linux-

```
code . # there is a dot after code and a space between code and dot
```

Run python “hello world” on Linux (2 points)

1. Create a new file named `hello.py`
2. Add the following code to it:

```
print("Hello, CY350!")
```

3. Save the file and run it in the Linux terminal-

```
python hello.py
```

Capture packets on Linux (2 points)

In a terminal-

```
sudo tcpdump -i eth0 -c 20 --print -w lab2.pcap
```

Run `man tcpdump` or `tcpdump --help` for an explanation of these command line flags.

In another terminal-

```
curl -v -i httpforever.com
```

Here, `-v` will ensure verbose output and `-i` will display HTTP headers in addition to the content.

Now return to the first terminal and press `Ctrl+C` to stop the packet capture process. Type `ls` to ensure that the captured packets were written to

Bring up your packet capture in Wireshark or Wireview (2 points)

- Locate the PCAP file you created in the previous step (lab2.pcap)
- Open it in Wireshark or Wireview (wireview.github.io)
- Identify the HTTP GET request to `httpforever.com` and the corresponding HTTP response.

Hide AI features in vscode

Features > Chat > Disable AI Features to protect yourself from unintentional AI completions!

Alternatively:

- Press `Ctrl + Shift + P`
- Search for “Hide AI Features”
- Under setting, check the “Disable” box