

# WAPH-Web Application Programming and Hacking

**Instructor: Dr. Phu Phung**

## Student

**Name:** Sai Sandeep Pasham

**Email:** pashamsp@mail.uc.edu

**Short-bio:** Sai Sandeep is deeply passionate about ethical hacking and the development of secure software.



Figure 1: Sai Sandeep Pasham

## Lab 0 - Development Environment Setup

### Overview

"For Lab 0 in the Web Application Programming and Hacking course, I configured an Ubuntu 22.04 VM in UC Sandbox. I then installed all the specified software, including apache2, git, Sublime Text, along with the necessary fonts, Pandoc, and the Chrome browser.

Furthermore, I established a private Git repository linked to my Git account, registered with my UC email. This repository is a collaboration with the instructor and has been cloned to my local machine. Subsequently, I updated my README.md file and continued with my Lab 0 exercises.

**Repository link:** <https://github.com/pashamsp/waph-pashamsp/tree/main/labs/lab0>

### Part 1 : Ubuntu Virtual Machine and software Installation.

I logged into <https://sandbox02.cech.uc.edu/vcac>

“I requested access to the Web App Programming and Hacking EECE 4005 Virtual Machine. Upon deployment, I accessed the VM through components and established a connection to the Ubuntu 22.04 Virtual Machine via the remote console.”

## Apache Web Server Testing

I tested the Apache2 web server using its IP address on Google Chrome.

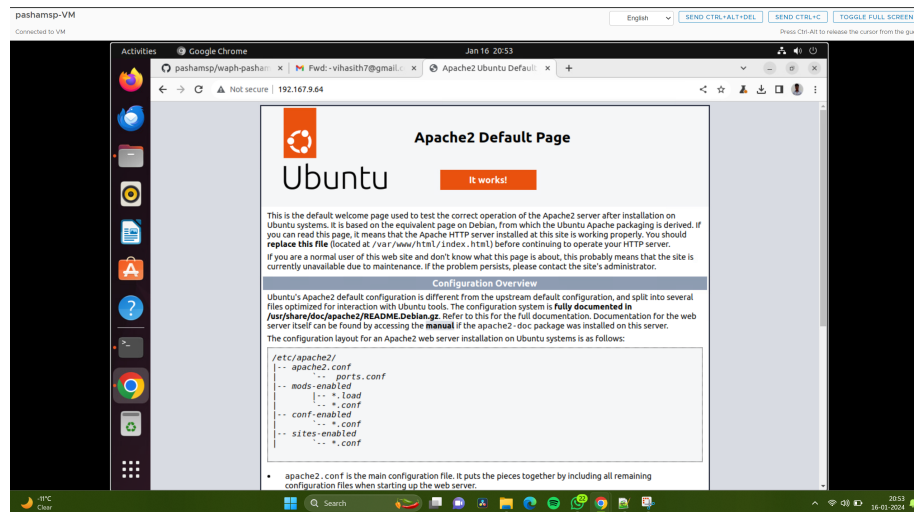


Figure 2: Apache web server testing in chrome

## Part 2 - git Repositories and Exercises

### The course repository

The course repository for Web Application Programming and Hacking is hosted on GitHub under the username phungph-uc with the repository name “waph”.

### Private Repository

I established a private repository on GitHub titled “waph-pashamp.” I initialized it with a README file and extended collaboration privileges to “phung-waph” by navigating to the repository settings, selecting Collaborators, and forwarding a collaboration request.

<https://github.com/Vihasith137/waph-pashamp>.

“To enable SSH authentication, I generated an SSH key on my local machine and included the corresponding public key (id\_rsa.pub) on GitHub by navigating to Settings -> SSH and GPG keys -> New SSH key. Following this, I cloned

```
pashamsp-VM
Connected to VM
English
SEND CTRL+ALT+DEL
SEND CTRL+C
TOGGLE FULL SCREEN
Press Ctrl-Alt to release the cursor from the

Activities Terminal Jan 16 21:00 administrator@meph-vm: -

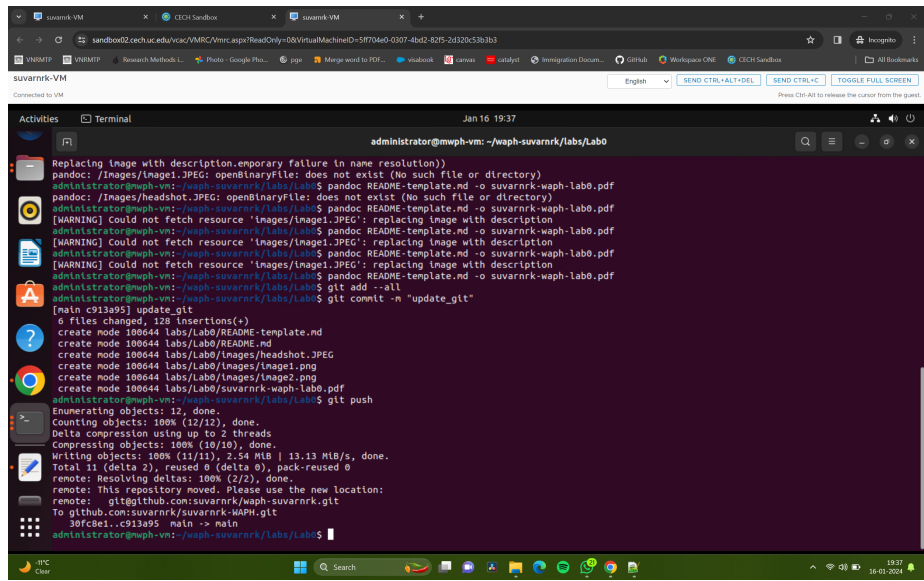
administrator@meph-vm:~$ ip addr
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
        valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
        valid_lft forever preferred_lft forever
2: ens160: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc mq state UP group default qlen 1000
    link/ether 00:50:56:8a:19:d7 brd ff:ff:ff:ff:ff:ff
    altname enp3s0
    inet 192.167.9.64/16 brd 192.167.255.255 scope global dynamic noprefixroute ens160
        valid_lft 82853sec preferred_lft 82853sec
    inet6 fe80::120a:c1b0:bfd5:69/64 scope link noprefixroute
        valid_lft forever preferred_lft forever

administrator@meph-vm:~$ cd
administrator@meph-vm:~$ git clone https://github.com/waph-phung/waph.git
fatal: destination path 'waph' already exists and is not an empty directory.
administrator@meph-vm:~$ git clone https://github.com/waph-phung/waph.git
Cloning into 'waph'...
Username for 'https://github.com':
Password for 'https://github.com':
remote: Repository not found.
fatal: Authentication failed for 'https://github.com/waph-phung/waph.git/'
administrator@meph-vm:~$ git clone https://github.com/phungph-uc/waph.git
Cloning into 'waph'...
remote: Enumerating objects: 58, done.
remote: Counting objects: 100% (58/58), done.
remote: Compressing objects: 100% (37/37), done.
remote: Total 58 (delta 16); reused 13 (delta 2); pack-reused 0
Receiving objects: 100% (58/58), 131.12 KiB | 3.86 MiB/s, done.
Resolving deltas: 100% (16/16), done.
administrator@meph-vm:~$
```

Figure 3: Github Course Repository phungph-uc/waph

the repository using the SSH URL. After cloning, I edited the README.md file based on the provided template and incorporated a headshot image uploaded directly through GitHub, placing it in the images subfolder. I then staged, committed, and pushed these changes to the remote repository. Later, I made additional modifications to the README.md file on GitHub and pulled these changes into the local repository through the terminal.”

Subsequently, I established a “Labs/Lab0” folder to contain the project report, and I pushed these changes to the remote repository.



The screenshot shows a terminal window titled 'suvarnrk-vm' with a dark background. The prompt is 'administrator@waph-vm: ~/waph-suvarnrk/labs/Lab0'. The terminal output shows the execution of 'git add --all' and 'git commit -m "update\_git"', followed by 'git push'. The push output indicates that 12 objects were enumerated, compressed, and written, resulting in a total of 11 deltas. The repository is pushed to 'github.com:suvarnrk/waph-suvarnrk.git'.

```
Replacing image with description.emporary failure (in name resolution))
pandoc: /Images/Inage1.JPEG: openBinaryFile: does not exist (No such file or directory)
administrator@waph-vm: ~/waph-suvarnrk/labs/Lab0$ pandoc README-template.md -o suvarnrk-waph-lab0.pdf
pandoc: /Images/headshot.JPEG: openBinaryFile: does not exist (No such file or directory)
administrator@waph-vm: ~/waph-suvarnrk/labs/Lab0$ pandoc README-template.md -o suvarnrk-waph-lab0.pdf
[WARNING] Could not fetch resource 'Images/Inage1.JPEG': replacing image with description
administrator@waph-vm: ~/waph-suvarnrk/labs/Lab0$ pandoc README-template.md -o suvarnrk-waph-lab0.pdf
[WARNING] Could not fetch resource 'Images/Inage1.JPEG': replacing image with description
administrator@waph-vm: ~/waph-suvarnrk/labs/Lab0$ pandoc README-template.md -o suvarnrk-waph-lab0.pdf
[WARNING] Could not fetch resource 'Images/Inage1.JPEG': replacing image with description
administrator@waph-vm: ~/waph-suvarnrk/labs/Lab0$ git add --all
administrator@waph-vm: ~/waph-suvarnrk/labs/Lab0$ git commit -m "update_git"
[main c913a95] update_git
 6 files changed, 128 insertions(+)
 create mode 100644 labs/Lab0/README-template.md
 create mode 100644 labs/Lab0/README.md
 create mode 100644 labs/Lab0/Images/headshot.JPEG
 create mode 100644 labs/Lab0/Images/Inage1.png
 create mode 100644 labs/Lab0/Images/Inage1.pdf
 create mode 100644 labs/Lab0/suvarnrk-waph-lab0.pdf
administrator@waph-vm: ~/waph-suvarnrk/labs/Lab0$ git push
Enumerating objects: 12, done.
Counting objects: 100% (12/12), done.
Delta compression using up to 2 threads
Compressing objects: 100% (10/10), done.
Writing objects: 100% (11/11), 2.54 MiB | 13.13 MiB/s, done.
Total 11 (delta 2), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (2/2), done.
remote: This repository moved, please use the new location:
remote:   git@github.com:suvarnrk/waph-suvarnrk.git
To github.com:suvarnrk/waph-suvarnrk.git
 30fcd01..c913a95  main -> main
administrator@waph-vm: ~/waph-suvarnrk/labs/Lab0$
```

Figure 4: Repository changes pushed