

# WAPH-Web Application Programming and Hacking

**Instructor:** Dr. Phu Phung

## **Student**

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**Short-bio:** I am in my second semester of the MSIT, I have interest in web development.



Figure 1: Divakar's headshot

## **Repository Information**

Repository's URL: <https://github.com/Sai-Divakar-Reddy-Gali/waph-galisy.git>

This is a private repository for Divakar to store all code from the course. The organization of this repository is as follows.

## The lab's overview

This lab, discussed in Lecture 2 with preparatory homework from Lecture 1, comprises two main parts. In Part I, the task involves deploying an Ubuntu 22.04 Virtual Machine within the designated online environment. Following the deployment, the focus is on installing necessary software and applications. Moving on to Part II, will engage in activities such as cloning both the course repository and the private repository. This step is pivotal for completing Git exercises aimed at compiling the content required for the final report.

Here is the link to the Github repository <https://github.com/Sai-Divakar-Reddy-Gali/waph-galisy.git>.

## Part I - Ubuntu Virtual Machine & Software Installation

Certainly! To begin, log in to the sandbox server using your UC credentials. Following this, submit a request under the relevant course name to deploy the virtual machine. Head to the “Deployments” tab and find your course page. Click on “Connect to remote Console” to access the virtual machine console. Use the instructor-provided password to log in. After successfully logging in, you'll find that the Ubuntu system is now ready for your use.

Upon successfully logging into Ubuntu, I utilized the command line to install several essential tools, including Apache 2, Git, Sublime Text editor, and Pandoc. Additionally, I downloaded Google Chrome using Mozilla Firefox and proceeded to install it on the system.

## Apache Web Server Testing

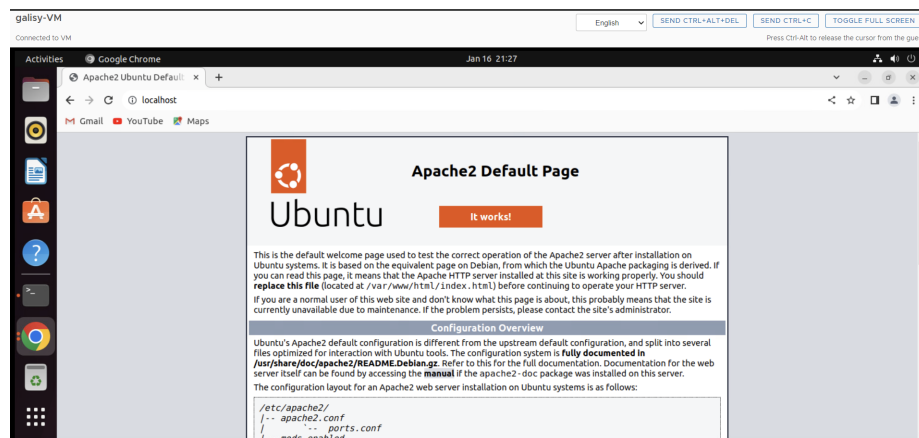
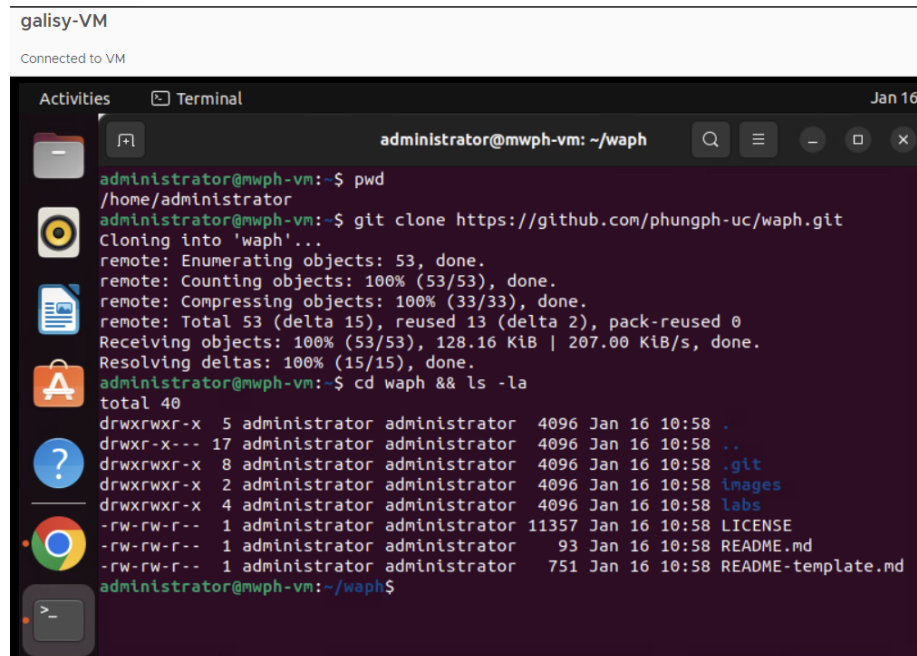


Figure 2: Apache\_web\_server\_testing

## Part II - git Repositories and Exercises

### The course repository



The screenshot shows a terminal window titled "galisy-VM" with a subtitle "Connected to VM". The terminal is running a series of commands to clone a repository. The first command is `pwd`, which returns `/home/administrator`. The second command is `git clone https://github.com/phungph-uc/waph.git`, which clones the repository into a directory named `waph`. The output shows the progress of cloning, including enumerating objects, counting objects, compressing objects, and receiving objects. The final command is `cd waph && ls -la`, which lists the contents of the `waph` directory. The output shows a total of 40 files and directories, including `admin`, `images`, `labs`, `LICENSE`, `README.md`, and `README-template.md`.

```
administrator@mwph-vm:~$ pwd
/home/administrator
administrator@mwph-vm:~$ git clone https://github.com/phungph-uc/waph.git
Cloning into 'waph'...
remote: Enumerating objects: 53, done.
remote: Counting objects: 100% (53/53), done.
remote: Compressing objects: 100% (33/33), done.
remote: Total 53 (delta 15), reused 13 (delta 2), pack-reused 0
Receiving objects: 100% (53/53), 128.16 KiB | 207.00 KiB/s, done.
Resolving deltas: 100% (15/15), done.
administrator@mwph-vm:~$ cd waph && ls -la
total 40
drwxrwxr-x 5 administrator administrator 4096 Jan 16 10:58 .
drwxr-x-- 17 administrator administrator 4096 Jan 16 10:58 ..
drwxrwxr-x 8 administrator administrator 4096 Jan 16 10:58 .git
drwxrwxr-x 2 administrator administrator 4096 Jan 16 10:58 images
drwxrwxr-x 4 administrator administrator 4096 Jan 16 10:58 labs
-rw-rw-r-- 1 administrator administrator 11357 Jan 16 10:58 LICENSE
-rw-rw-r-- 1 administrator administrator 93 Jan 16 10:58 README.md
-rw-rw-r-- 1 administrator administrator 751 Jan 16 10:58 README-template.md
administrator@mwph-vm:~/waph$
```

Figure 3: Repository cloning photo

### Private Repository

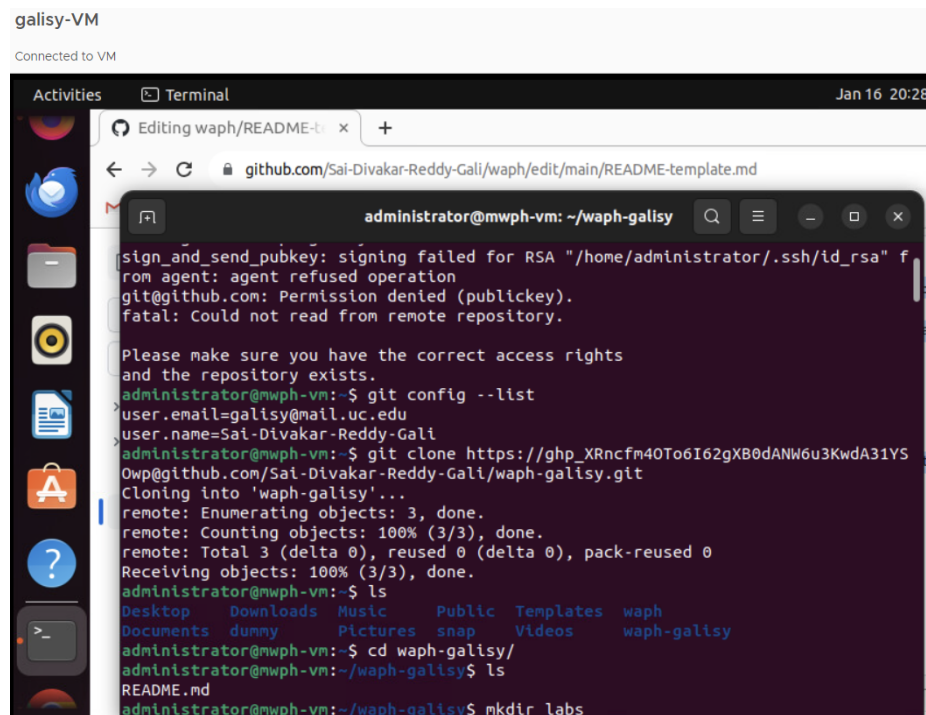
- Once logged in, go to the GitHub profile by clicking on the profile picture at the top right corner of the GitHub interface.
- In profile, find the “Repositories” tab and click on it. This will take to a page displaying the repositories.
- On the repositories page, look for the green “New” button and click on it. This will initiate the process of creating a new repository.
- Enter a name for the repository.
- Select “Private” to make the repository accessible only to specified collaborators.
- Click the option to initialize the repository with a README file.
- add a `.gitignore` file to specify which files and directories should be ignored in the repository. You can also choose a license for your project.
- Click on the “Create repository” button to finalize the creation of your private repository.

I added the contributor to the private repository, By Going to the “Settings” tab of the repository, select “Manage access,” and invited collaborator `phung-waph`

by entering the GitHub usernames.

Here is the link to the Github repository <https://github.com/Sai-Divakar-Reddy-Gali/waph-galisy.git>.

1. Generating SSH keys and adding SSH key to the Github Generate SSH keys using ssh-keygen, press Enter for default location, and set a passphrase if needed. Access the key files at “~/.ssh” with ls ~/.ssh and copy the public key content from “id\_rsa.pub” to add to the GitHub account for remote repository manipulation.
2. Cloning Remote repository Using the SSH key, clone the remote GitHub repository onto our virtual machine. This ensures that we have a local copy of the repository to work with. I have encountered an authentication issue while cloning the repository using the SSH key so I have used the alternative approach to clone the repository by using the tokens. Reference: Clone a Remote Repository



```
galisy-VM
Connected to VM

Activities Terminal Jan 16 20:28

Editing waph/README-... x +
github.com/Sai-Divakar-Reddy-Gali/waph/edit/main/README-template.md

administrator@mwph-vm: ~/waph-galisy
sign_and_send_pubkey: signing failed for RSA "/home/administrator/.ssh/id_rsa" f
rom agent: agent refused operation
git@github.com: Permission denied (publickey).
fatal: Could not read from remote repository.

Please make sure you have the correct access rights
and the repository exists.
administrator@mwph-vm: $ git config --list
user.email=galisy@mail.uc.edu
user.name=Sai-Divakar-Reddy-Gali
administrator@mwph-vm: $ git clone https://ghp_XRncfm40To6I62gXB0dANW6u3KwdA31YS
Owp@github.com/Sai-Divakar-Reddy-Gali/waph-galisy.git
Cloning into 'waph-galisy'...
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
Receiving objects: 100% (3/3), done.
administrator@mwph-vm: $ ls
Desktop Downloads Music Public Templates waph
Documents dummy Pictures snap Videos waph-galisy
administrator@mwph-vm: $ cd waph-galisy/
administrator@mwph-vm: ~/waph-galisy$ ls
README.md
administrator@mwph-vm: ~/waph-galisy$ mkdir labs
```

Figure 4: Remote repository cloning

3. Editing README file Open the README.md file in the cloned repository and made edits following the provided template and push the changes to the remote repository.

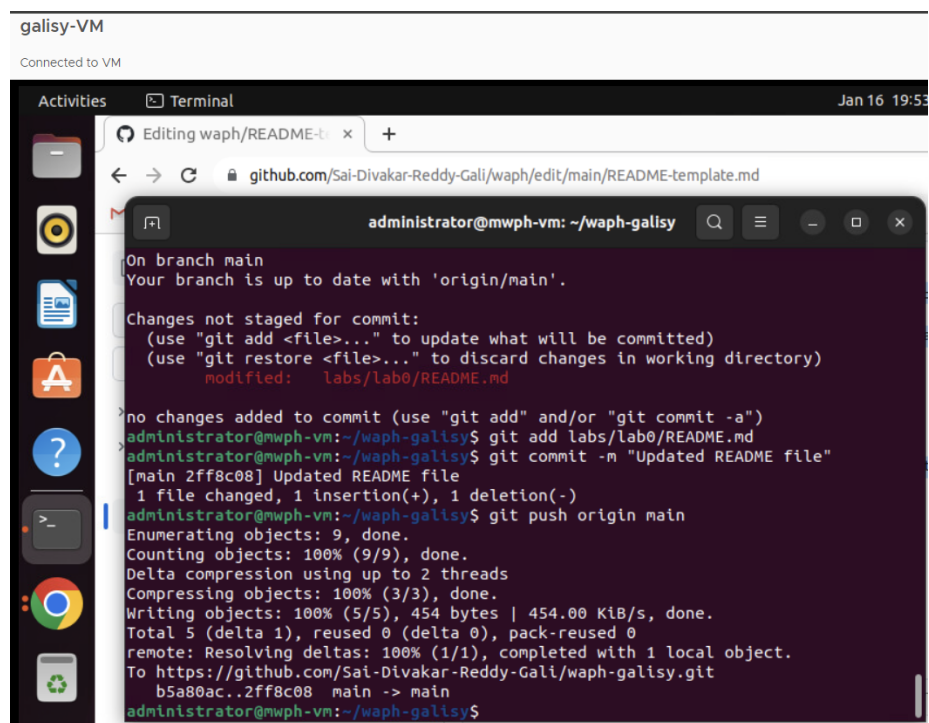


Figure 5: Pushing to the remote repository