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LINUX ENVIRONMENT SETUP REPORT

Dear Sir,

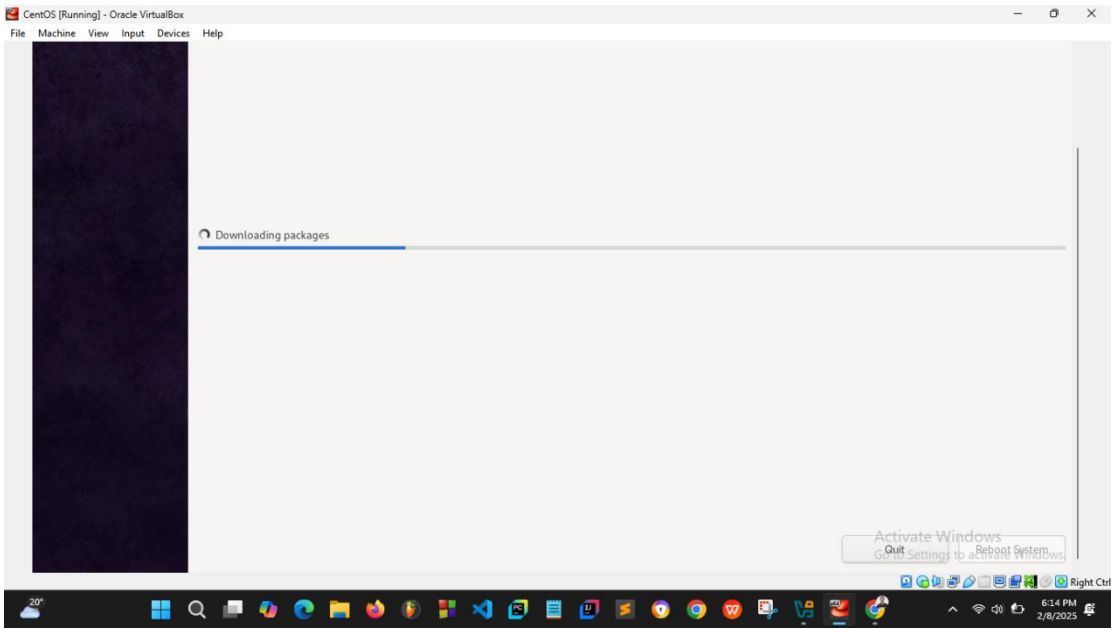
This is Hugues NGABONZIZA (26148), and I hope this message finds you well. This document provides a detailed report on how I set up my environment as required for the Introduction to Linux course. Above each screenshot, I have included explanations of what is displayed, along with the commands used, highlighted in blue for clarity.

I would also like to kindly mention that during the setup process, several steps such as disk partitioning were completed before I was aware that we would need to submit a report. Unfortunately, I did not get the chance to capture screenshots for those steps. However, I have provided explanations and details for all subsequent steps that were documented.

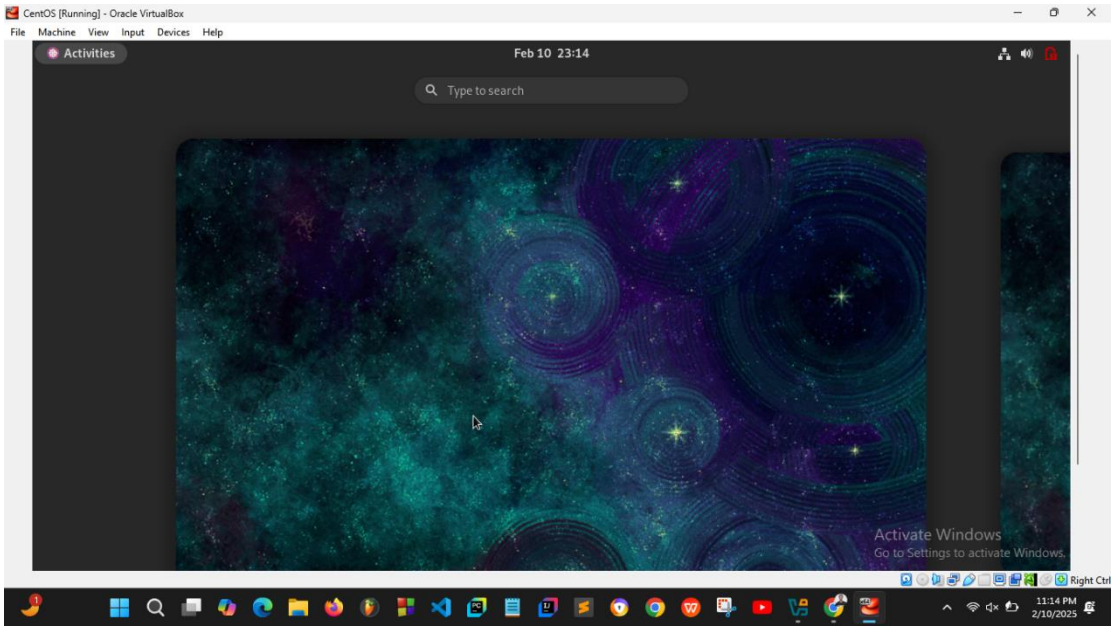
I hope you find the report informative and enjoyable to review.

PHASE 1: CENTOS STREAM 9 INSTALLATION

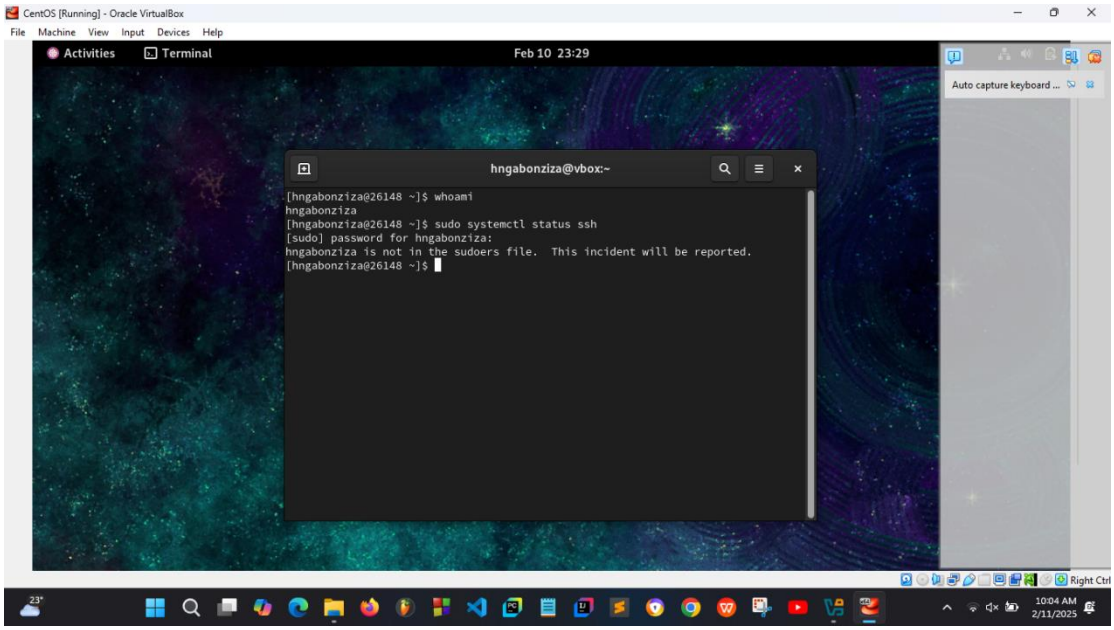
Below is the CentOS Stream 9 Installation and SSH Installation and Activation:
(Screenshot 1 to 4th)



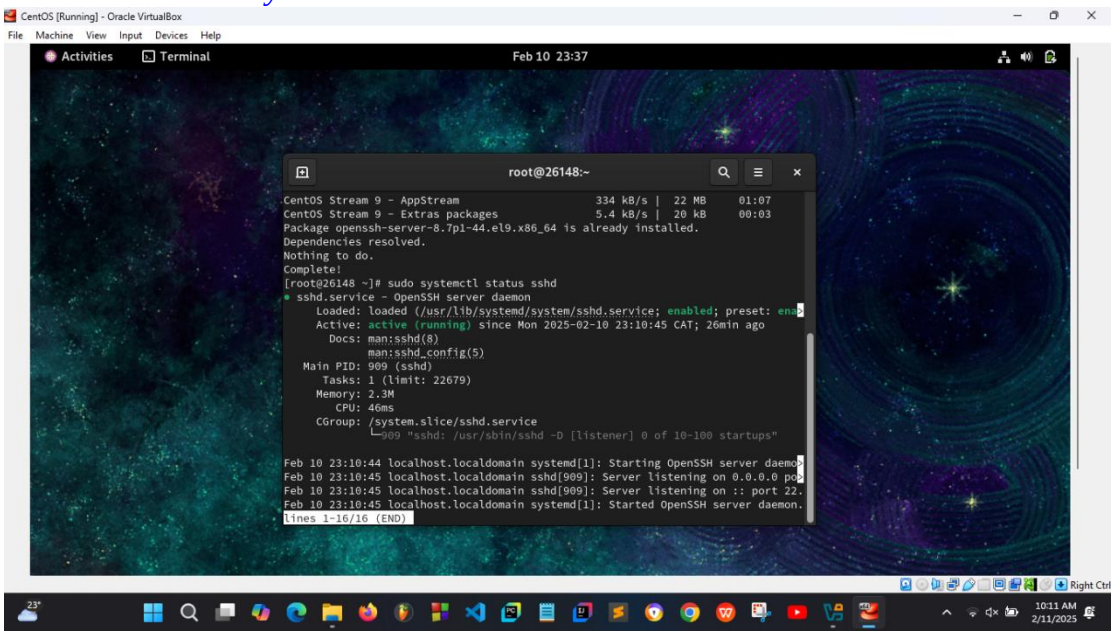
As shown in the screenshot below, CentOS was successfully installed. This part was particularly challenging for me, as it required several sleepless nights trying to get CentOS installed on my computer. I worked on it for five consecutive days, failing repeatedly, but I didn't give up until I finally got it installed.



In CentOS, the command *whoami* was executed to confirm that the user **hngabonziza** was successfully created. The user was created using the command *sudo adduser hngabonziza*, followed by " *sudo passwd hngabonziza"* to set the password. The hostname was changed to **26148** using the command *sudo hostnamectl set-hostname 26148*, as shown in the screenshot below.



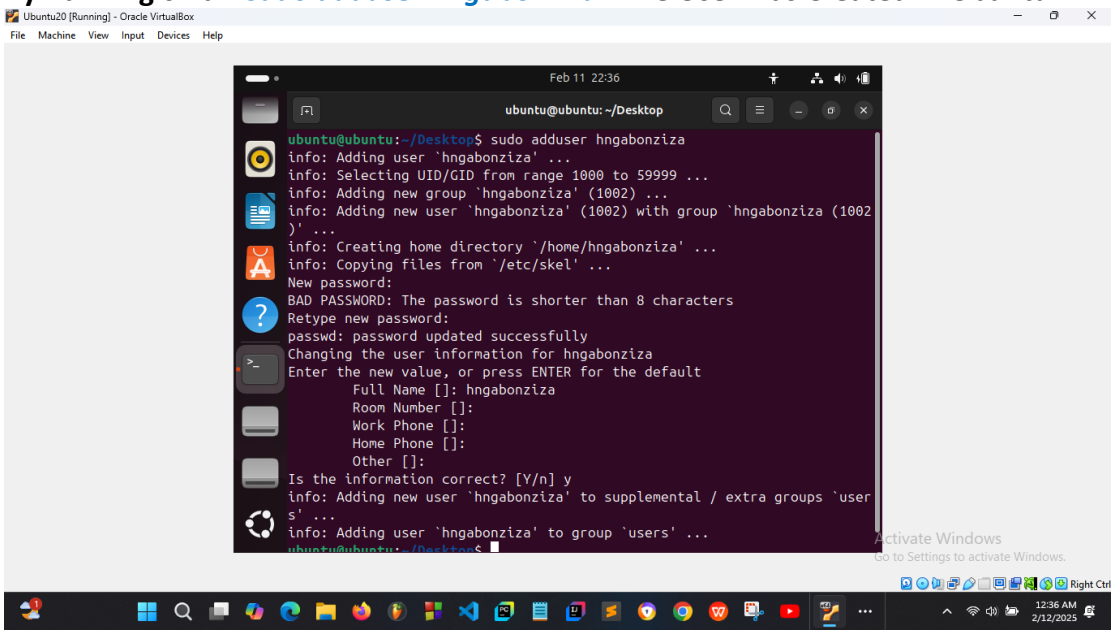
The image below shows the installation of **SSH** in CentOS. The installation was done using the command *sudo yum install -y openssh-serve*r. After installation, I started the SSH service with the command *sudo systemctl start sshd* and verified its status using the command *sudo systemctl status sshd*.



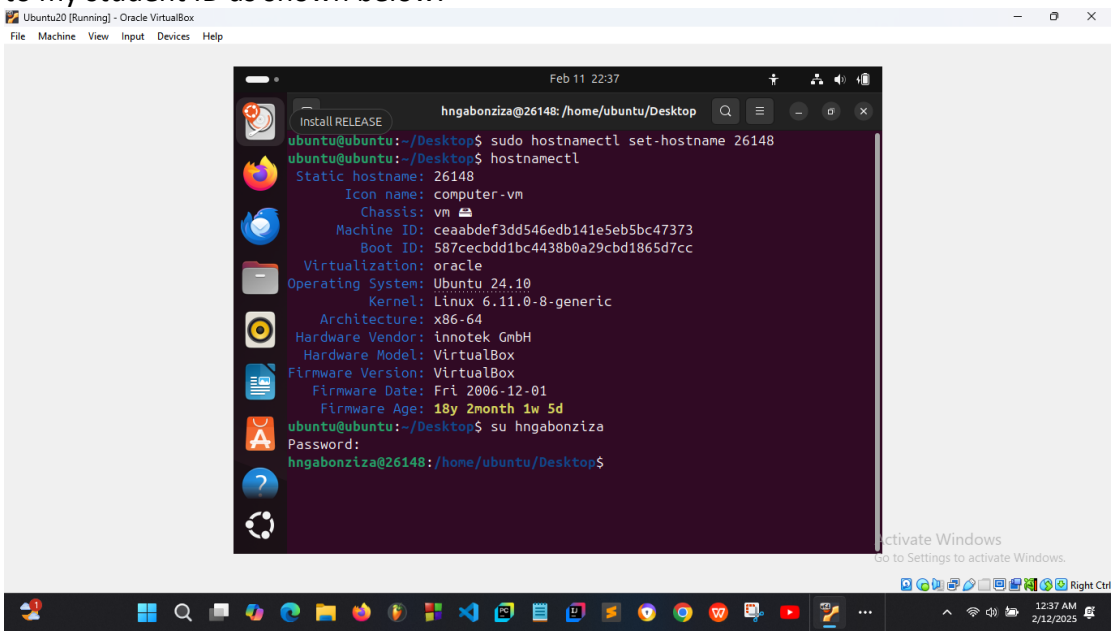
PHASE 2: UBUNTU LINUX SETUP

N. B: The lecturer asked for the environment setup report after I had completed the installation of my Ubuntu. Below are the screenshots provided to highlight the tasks that were done in Ubuntu, as required.

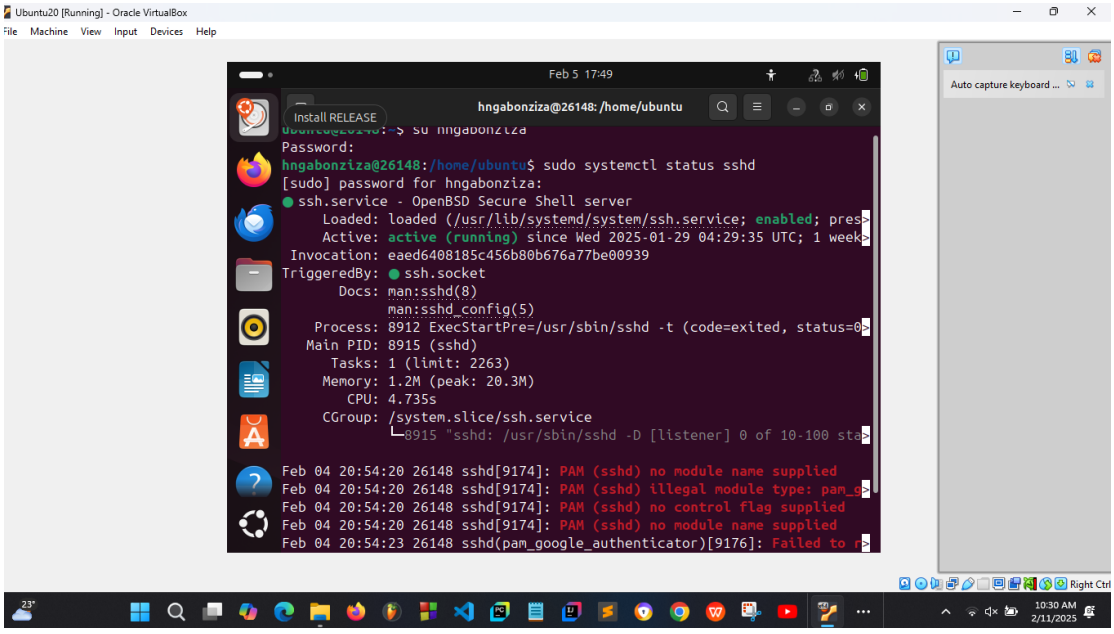
By Running cmd " *sudo adduser hngabonziza*" The User was Created in Ubuntu



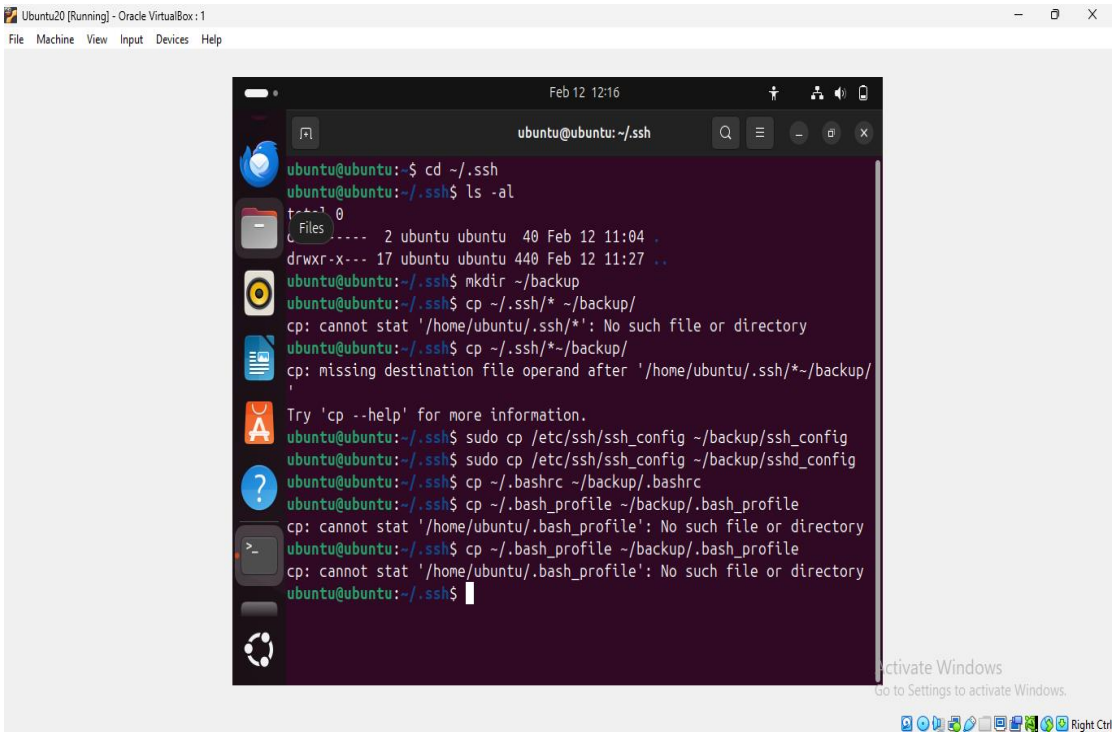
"***sudo hostamectl set-hostname 26148***" was the cmd used to change my hostname to my student ID as shown below:



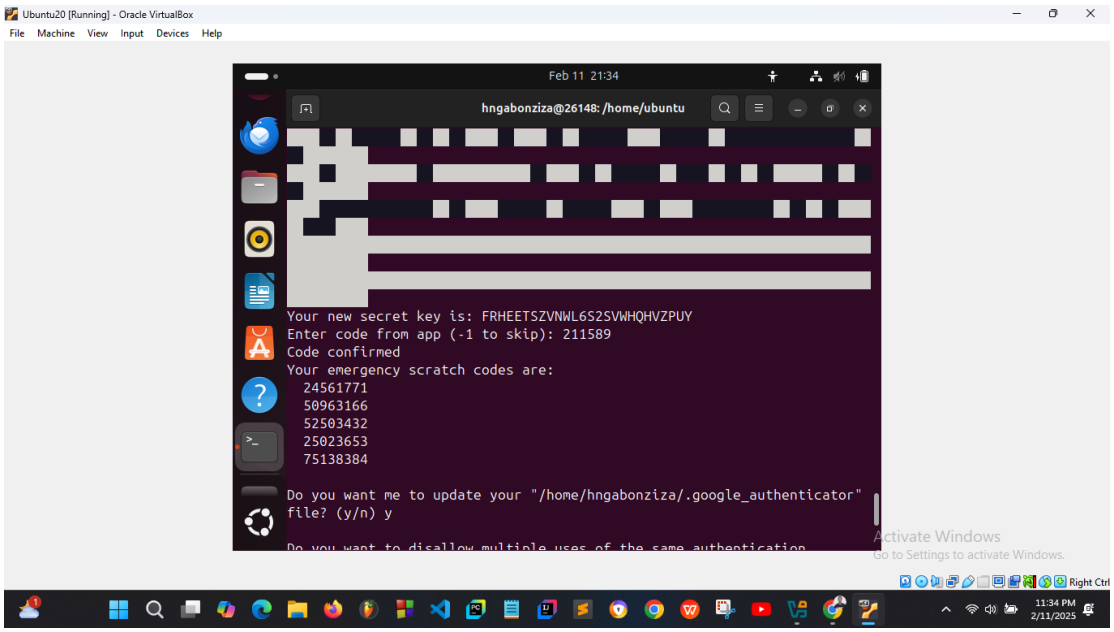
By running command "***sudo apt install openssh-server***" the SSH was installed, the "***sudo systemctl start ssh***" was used to activate SSH



And Below were the commands that were used to save my SSH Configurations and creating my Backup file incase my data's lost

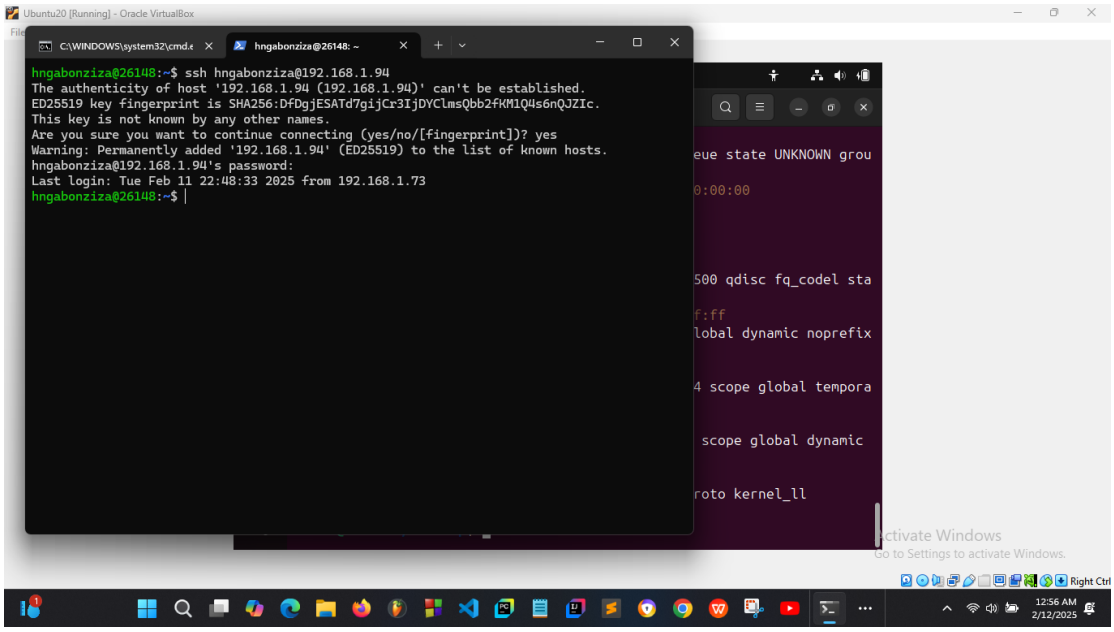


Cmd "*sudo apt update*" || " *sudo apt install libpam-google-authenticator*" ||| *"google-authenticator"* were the commands used to install and actiavte **2FA** or google authentication as the second layer for Login through my phone, the screenshot provided below proves it:

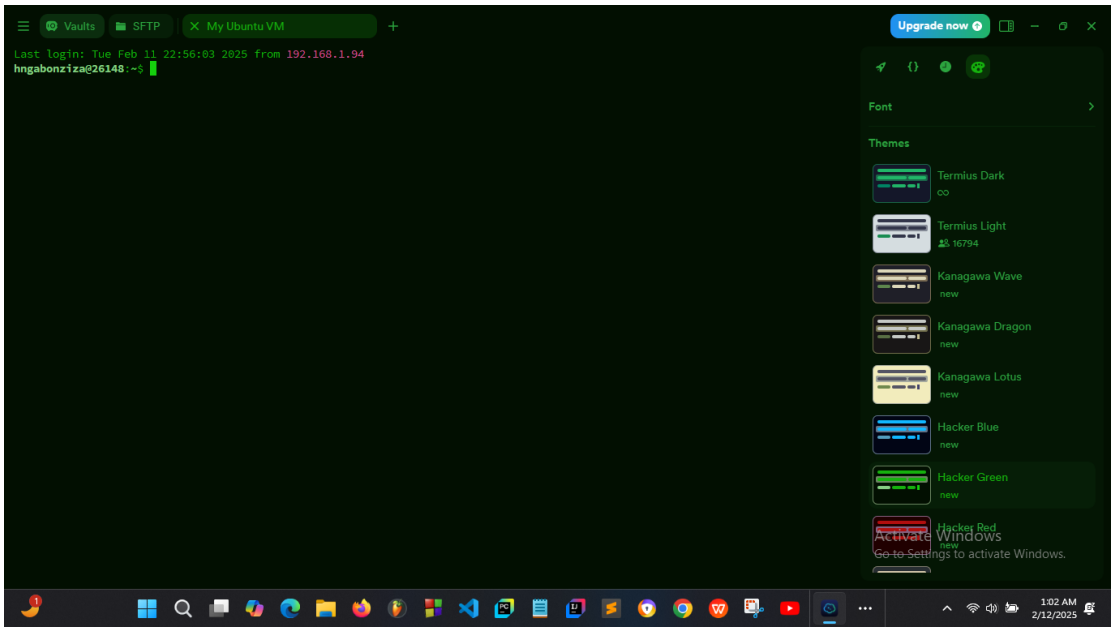


Below Is the screenshot that shows the connection of my Ubuntu virtual Machine to the Host Machine(My Local Machine) using terminal (REMOTE ACCESS)

The following cmd was used "*ssh hngabonziza@192.168.1.94*" and as it appears on screen I was logged in using *2FA/ Fingerprint.*



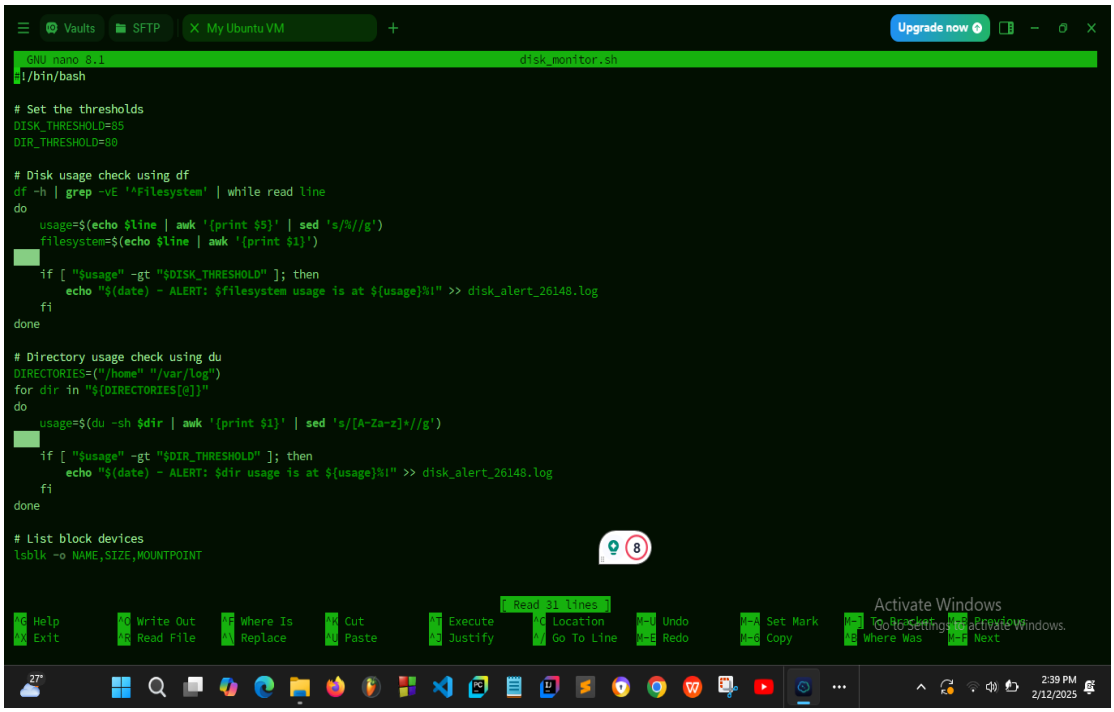
After, I used the same approach to connect my machine to **Termius** for **REMOTE ACCESS.** Now I run my all commands in Termius, its easy to use and very enjoyable.



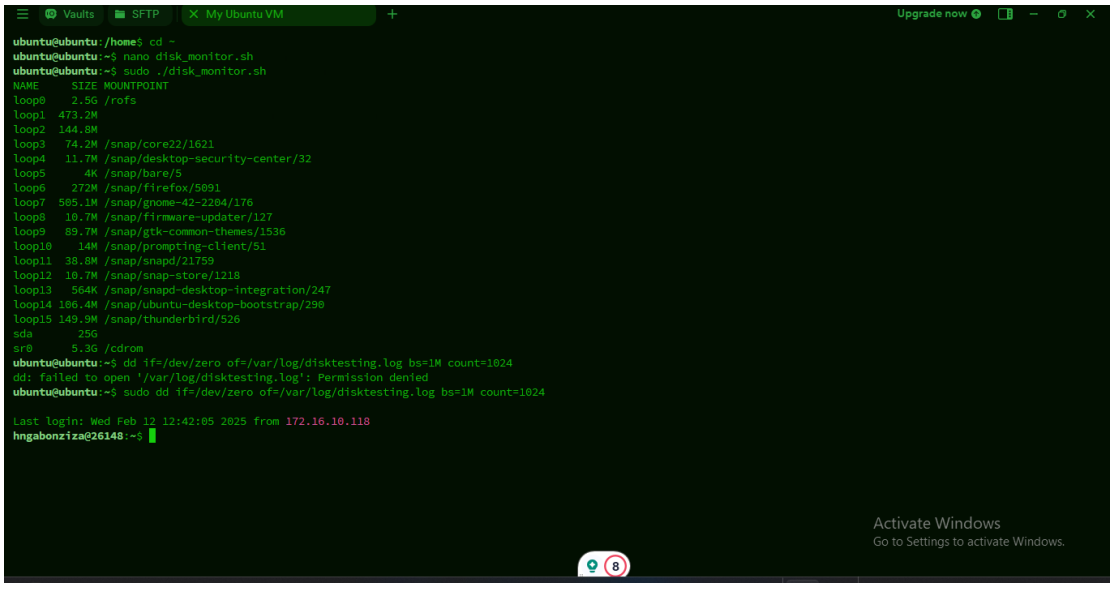
BELOW IS THE DISK MONITORING AND ALERTING

Below is the Script "disk_monitoring.sh" That was used to create the disk alert and there's the comments to explain where "df", "du" and

“lsblk” were used to check the disk(df), directories(du) usage and lsblk for block devices.

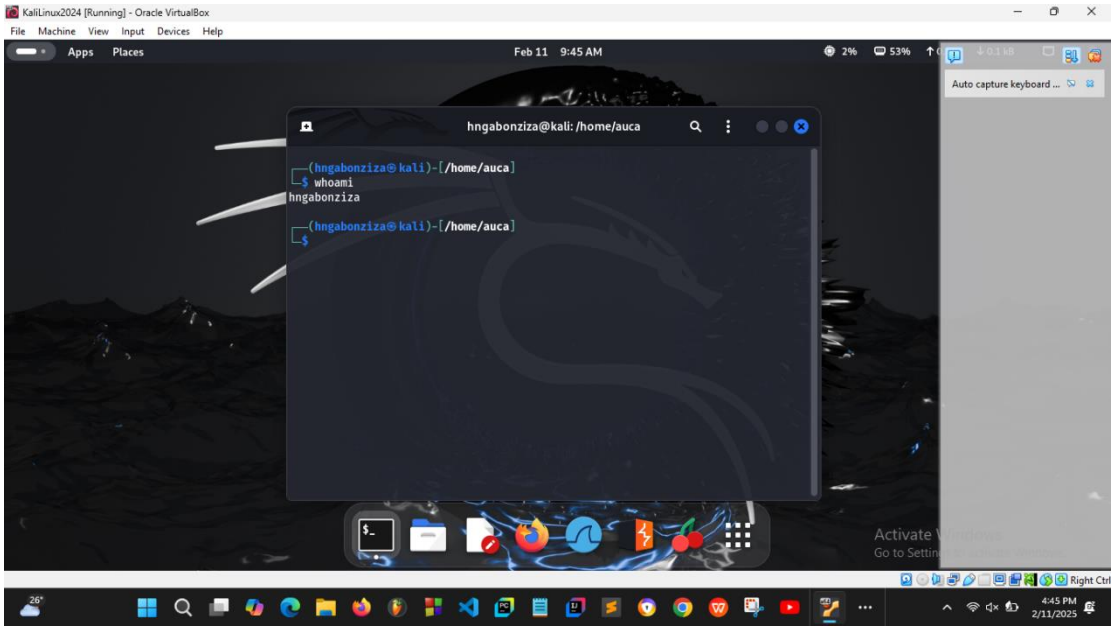


The screenshot below shows how the file *“disk_monitoring.sh”* was executed using sudo privillege and the disk monitoring test was made to show an the disk alert

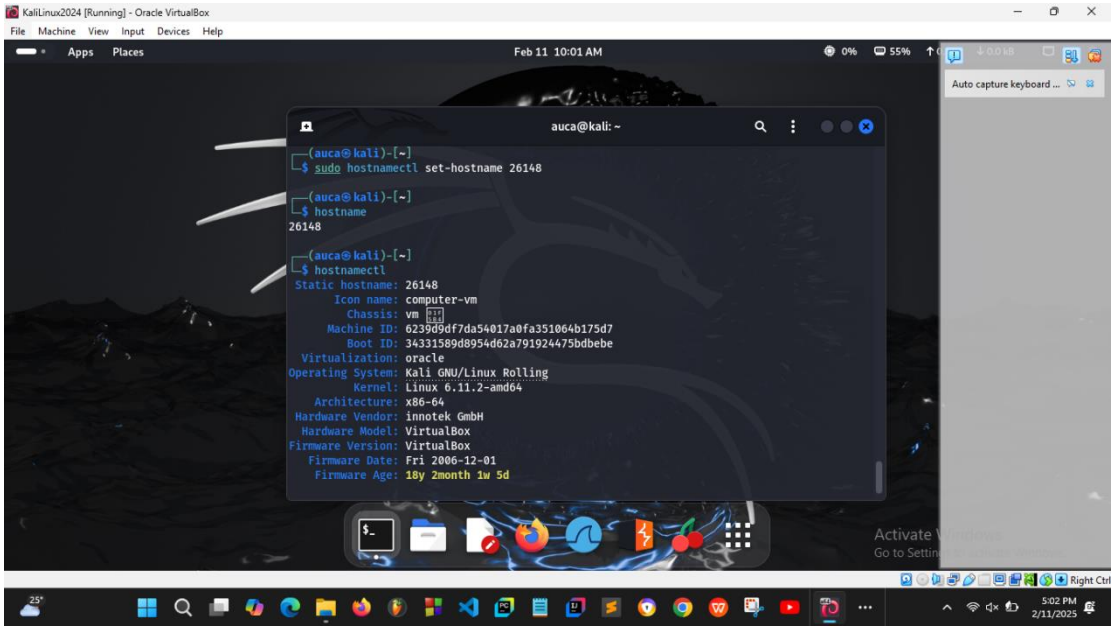


PHASE 3: KALI SETUP

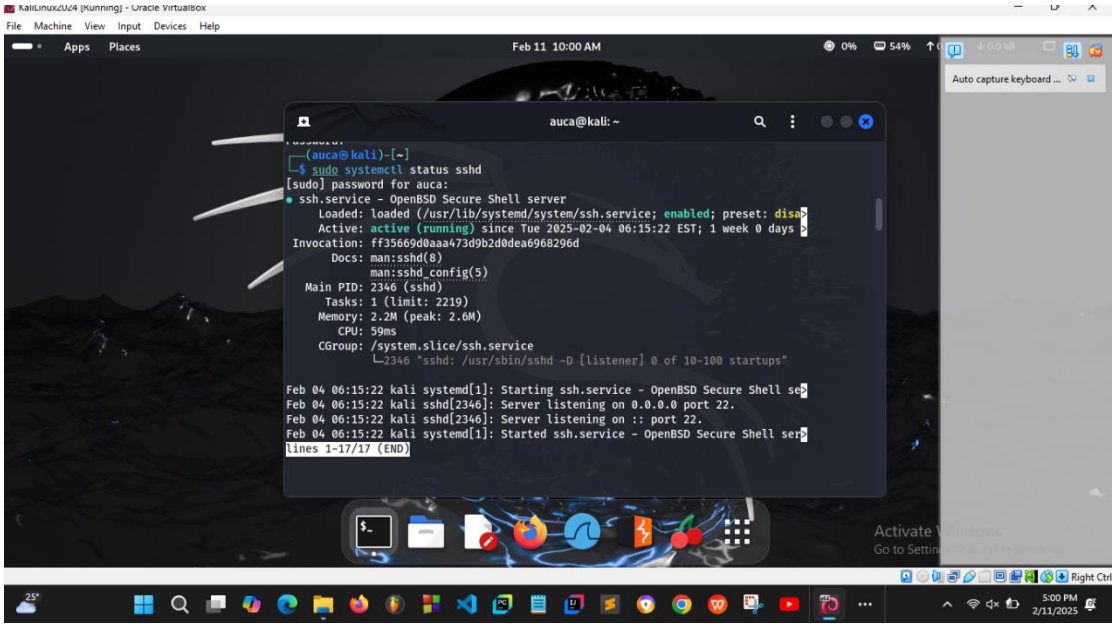
The Screenshot below acts as the proof that shows the user in KALI was created using command "*sudo adduser hngabonziza*" and you can see the user logged in simply by using command "*whoami*"



Below the screenshot shows the hostname being changed to my student ID by simply running command ***"sudo hostnamectl set-hostname 26148"***



Then I actiaved SSH in KALI, using the same commands ***"sudo apt install openssh-server" .*** then *"sudo systemctl start sshd"* command to activate my SSH



That is all for the report Sir and I would like to take a moment to sincerely thank you for the invaluable support and skills you always provides throughout the course. Your dedication and guidance makes a significant impact on our learning journey, and we are truly grateful for your efforts.

Thank you once again for your encouragement and support.