TryHackMe Lab Report

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Date: 01/04/2026
Course / Platform: TryHackMe
Room: Linux Fundamentals Part 1
Operating System: Ubuntu 20.04 LTS

Objective

The objective of this lab was to build foundational Linux command-line skills by interacting directly with a live Linux operating system. The lab focused on understanding Linux basics, navigating the filesystem, managing files, searching logs, and controlling command execution using operators.

All tasks were completed using a real Ubuntu Linux machine deployed in-browser through TryHackMe.

Tools & Environment Used

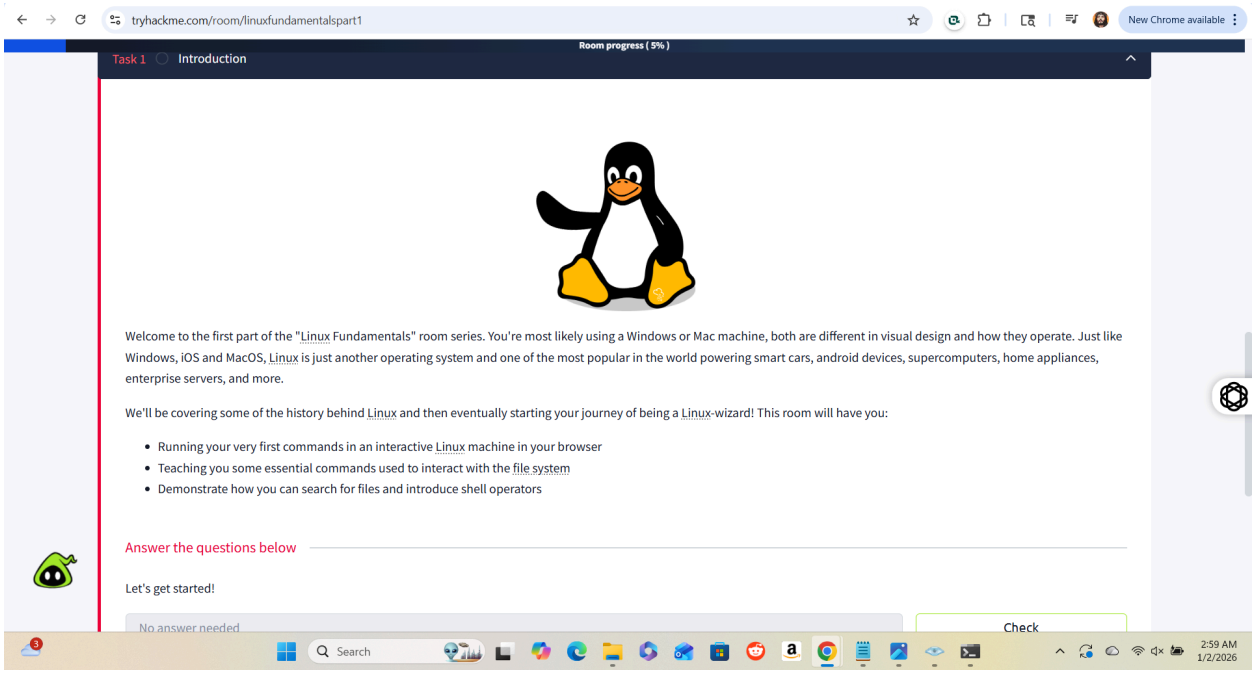
- Ubuntu 20.04 LTS (TryHackMe In-Browser Machine)
- Bash Shell
- Linux Command Line Utilities (echo, whoami, ls, cd, pwd, cat, grep)
- Shell Operators (>, >>, &&, &)

Step 1: Introduction to Linux

Linux was introduced as an open-source operating system widely used across servers, cloud environments, embedded systems, websites, point-of-sale systems, and critical infrastructure. Unlike Windows and macOS, Linux is commonly interacted with through the command line, especially in professional and security-focused environments.

I learned that Linux is not a single operating system, but an umbrella term for many distributions (distros) such as Ubuntu and Debian. For this lab, Ubuntu was used.

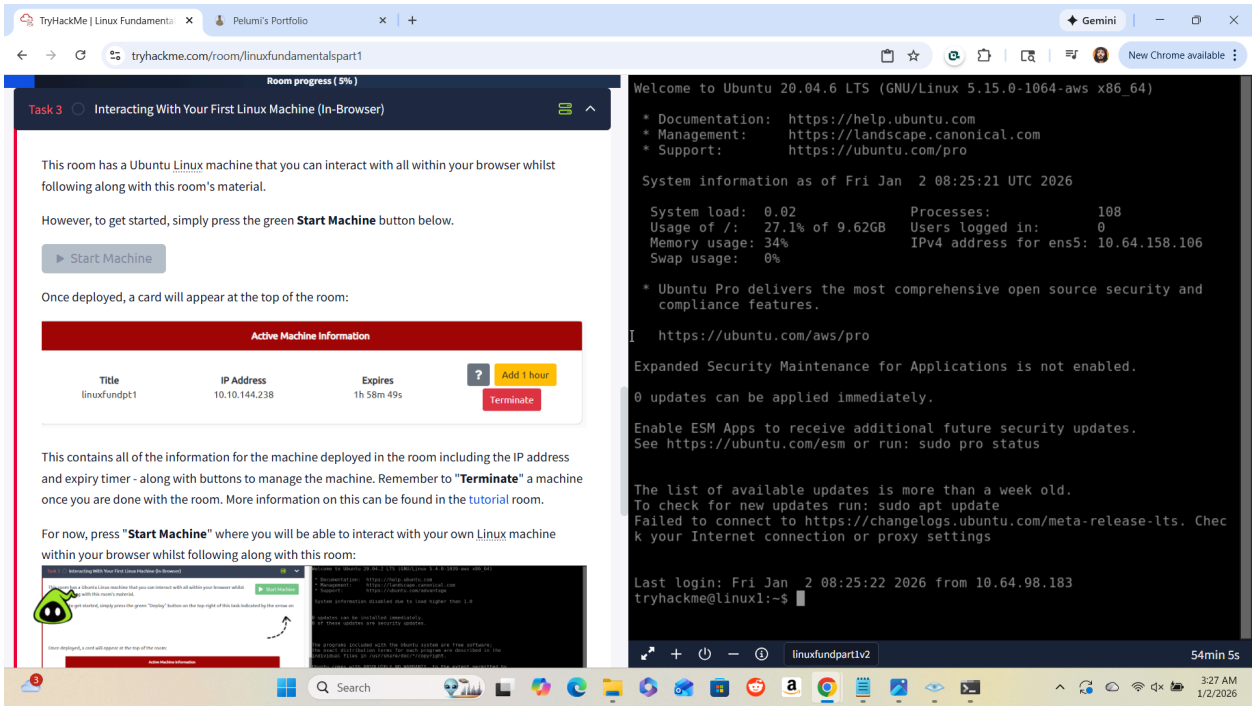
I also researched the history of Linux and confirmed that the first Linux operating system was released in 1991.



Step 2: Deploying the Linux Machine

I deployed the Ubuntu Linux machine provided by TryHackMe directly in the browser. Once deployed, I was given access to a live terminal session.

This demonstrated how Linux servers are commonly accessed remotely and reinforced the importance of terminal-based interaction in real-world environments.



Step 3: Basic Command Interaction

I practiced issuing basic commands to understand how the Linux terminal works.

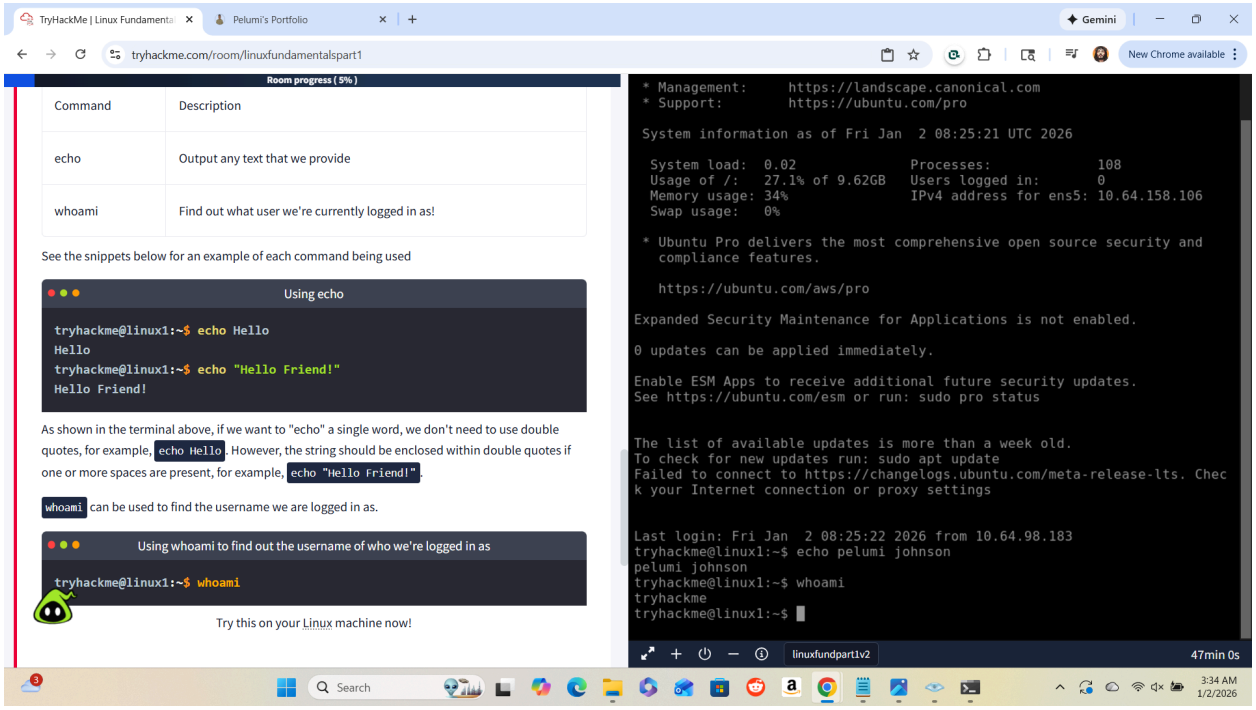
Commands used:

- Echo
- whoami

Using the echo command, I printed text to the terminal to confirm command execution.
Using the whoami command, I identified the active user account.

The output confirmed that I was logged in as the user:
tryhackme

This step reinforced the importance of understanding user context when operating within Linux systems.



Step 4: Navigating the Linux Filesystem

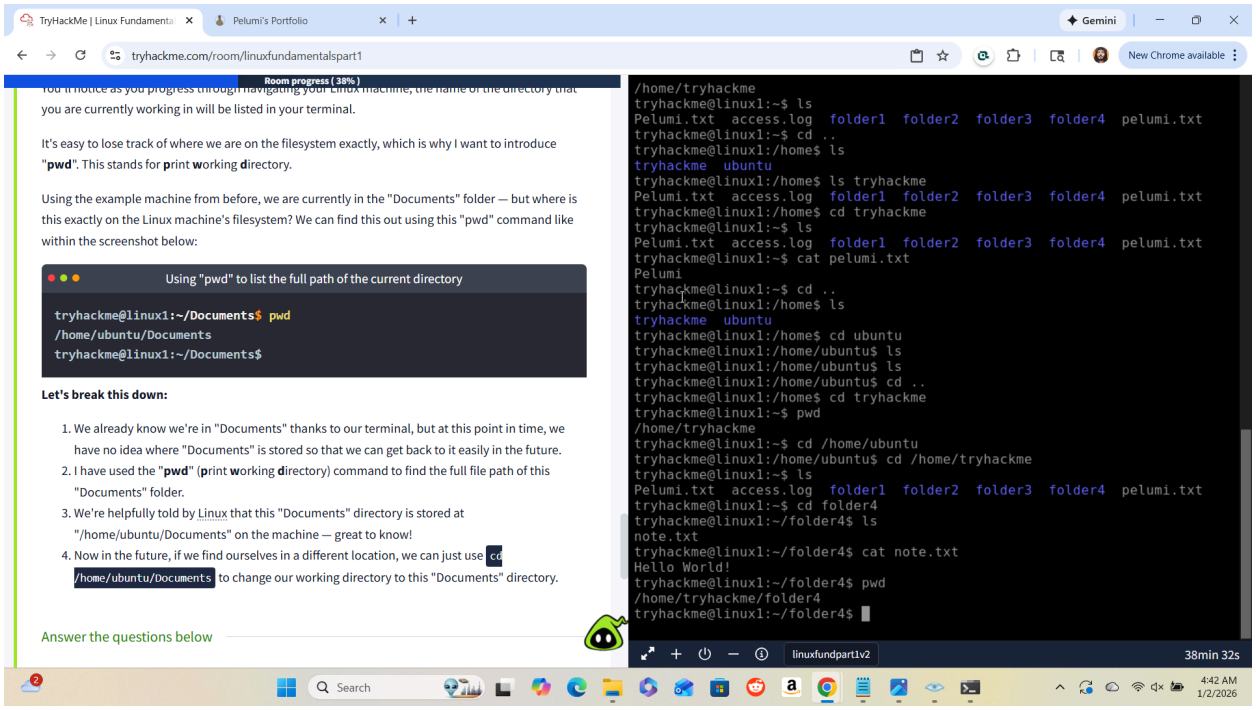
I learned how Linux organizes files and directories and how to navigate the filesystem using terminal commands.

Commands used:

- Pwd
- Ls
- Cd
- cd ..

Using pwd, I displayed the full path of my current working directory.
Using ls, I listed files and folders within directories.
Using cd, I moved into specific directories.
Using cd .., I returned to the parent directory.

This helped me understand Linux directory structure and paths such as /home/tryhackme.



Step 5: Creating and Viewing Files

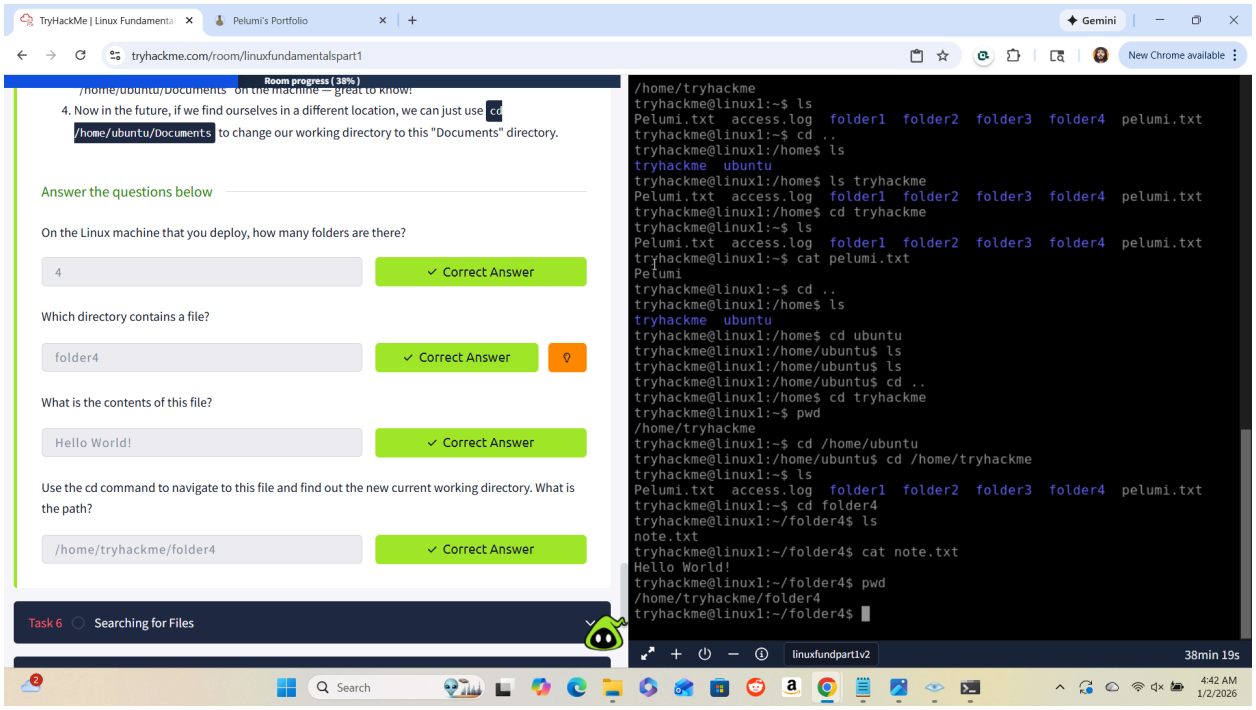
I practiced creating files and viewing their contents directly from the command line.

Commands used:

- echo "text" > filename
- cat filename

Using output redirection (>), I created files and wrote text into them.
Using cat, I displayed the contents of files directly in the terminal.

This demonstrated how Linux treats nearly everything as a file and how command output can be redirected into files.



Step 6: Searching Files and Logs with grep

I learned how to search through files efficiently using the grep command, which is essential when working with log files.

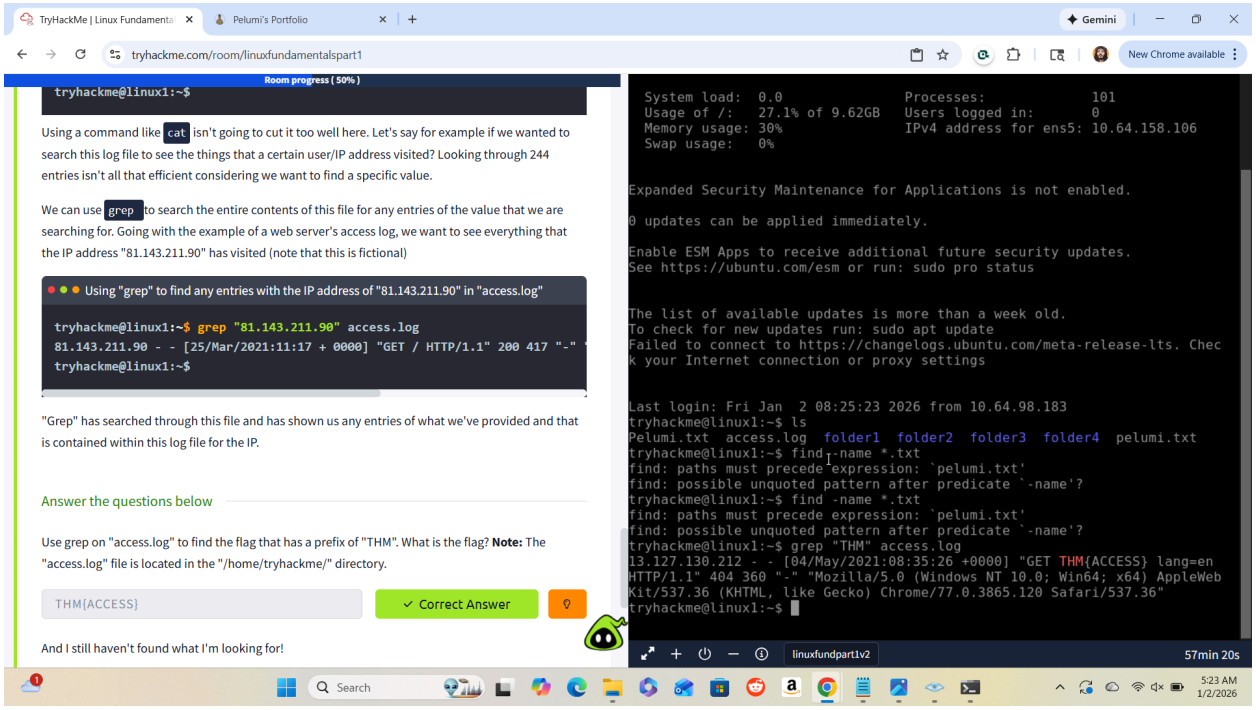
Command used:

- grep "THM" access.log

Using grep, I searched a web server access log to find entries containing a specific pattern. This allowed me to successfully locate the embedded flag:

THM{ACCESS}

This step highlighted the importance of log analysis in cybersecurity monitoring and incident response.



Step 7: Output Redirection and Command Operators

I learned how Linux handles command output and how that output can be redirected or controlled using shell operators.

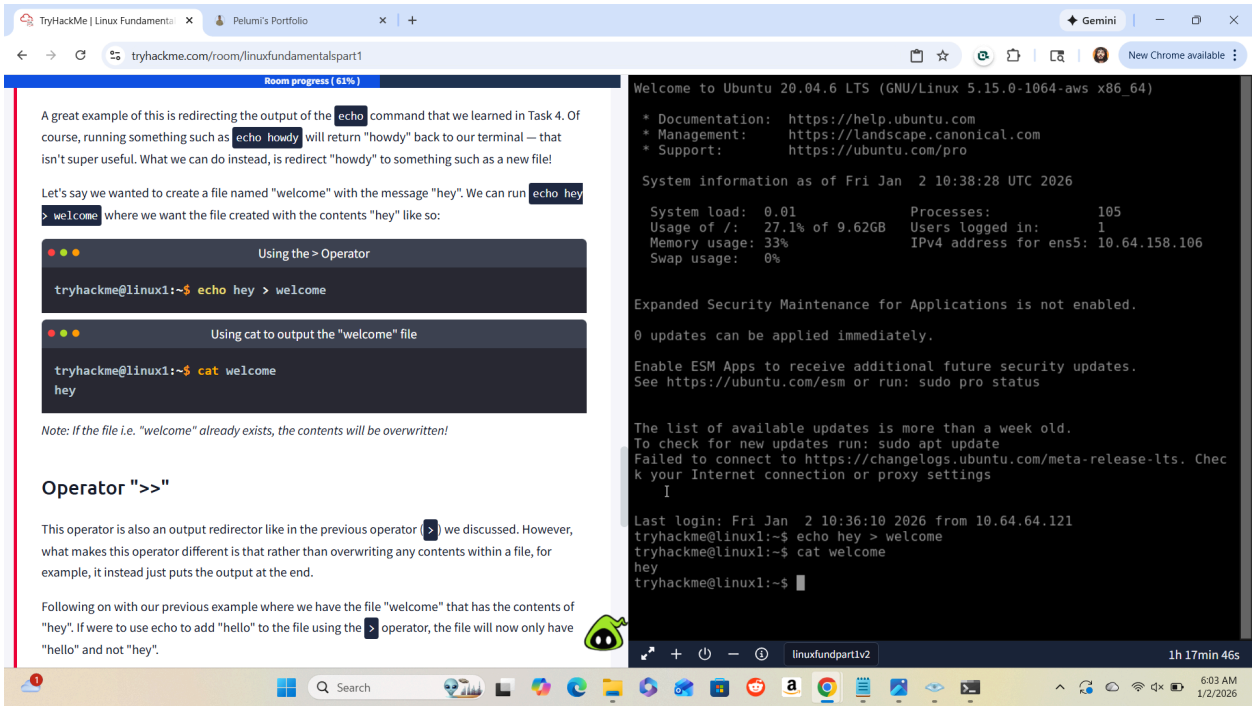
Operators learned:

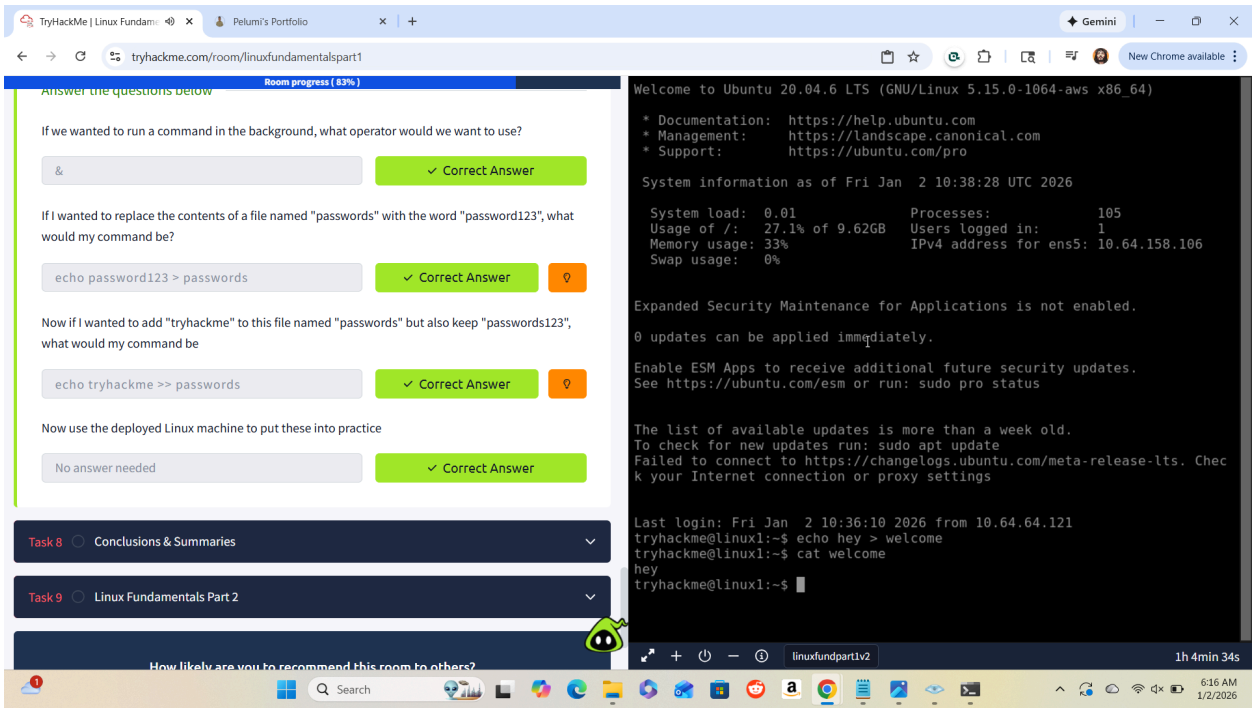
- > Overwrites file contents
- >> Appends to file contents
- ; connect multiple commands
- && Runs the next command only if the previous command succeeds
- & Runs a command in the background

Commands used:

- echo password123 > passwords
- echo tryhackme >> passwords

Using the > operator, I replaced the contents of a file.
Using the >> operator, I appended new content without overwriting existing data.





Step 8: Command Chaining with the Semicolon (;)

I learned how to connect multiple commands using the semicolon operator.

Example:
commandA ; commandB

Command A runs first, followed immediately by command B, regardless of whether command A succeeds or fails. This is useful when running independent commands sequentially.

Step 9: Conditional Command Execution with &&

I learned how to chain commands conditionally using the && operator.

Example:
Command A && command B {sudo apt update && sudo apt upgrade -y}

This allows for running multiple commands on a go. With this operator, command B only runs if command A completes successfully. This ensures controlled execution and is commonly used in installations, updates, and automation scripts.

Step 10: Background Execution with &

I learned how to run commands in the background while continuing to use the terminal.

Example:
command &

This allows a command to run asynchronously, meaning I could continue executing other commands while a process was running in the background. This demonstrated Linux's multitasking capabilities.

Step 11: Practical Reinforcement

I applied all learned commands directly on the live Linux machine, reinforcing:

- User awareness

- Directory navigation
- File creation and modification
- Log searching
- Output redirection
- Command chaining and background execution

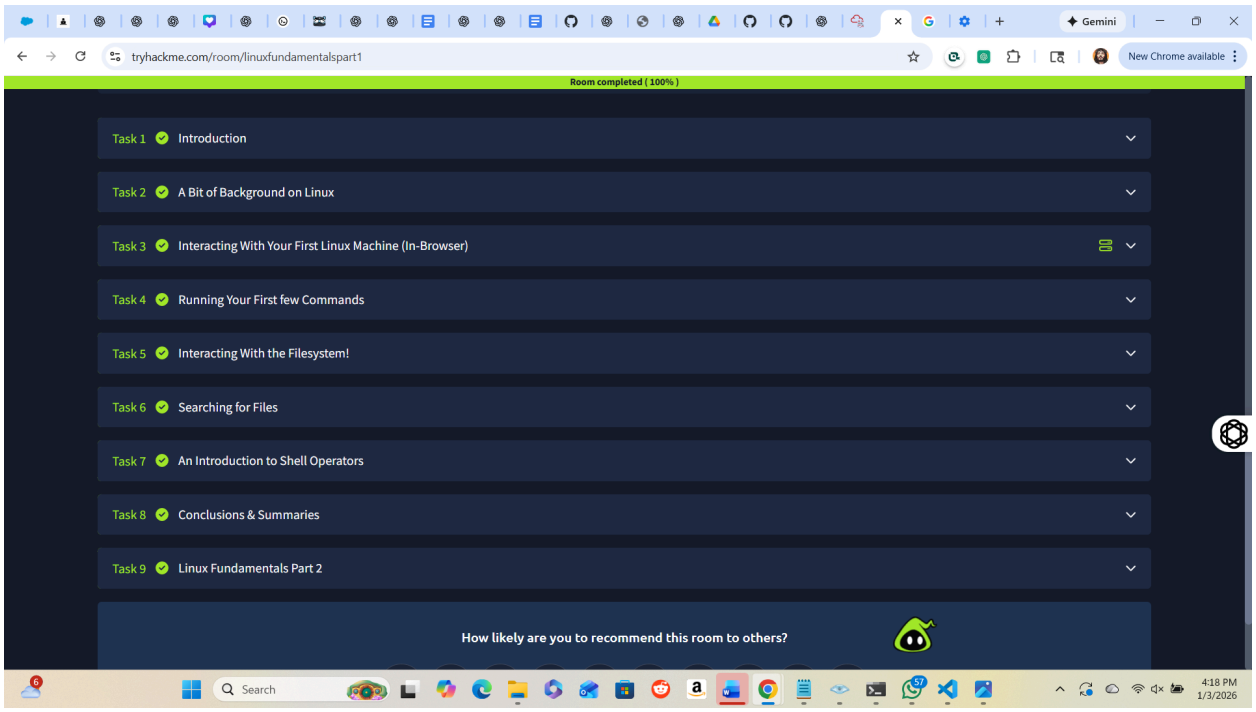
Each task was validated through TryHackMe's built-in checks.

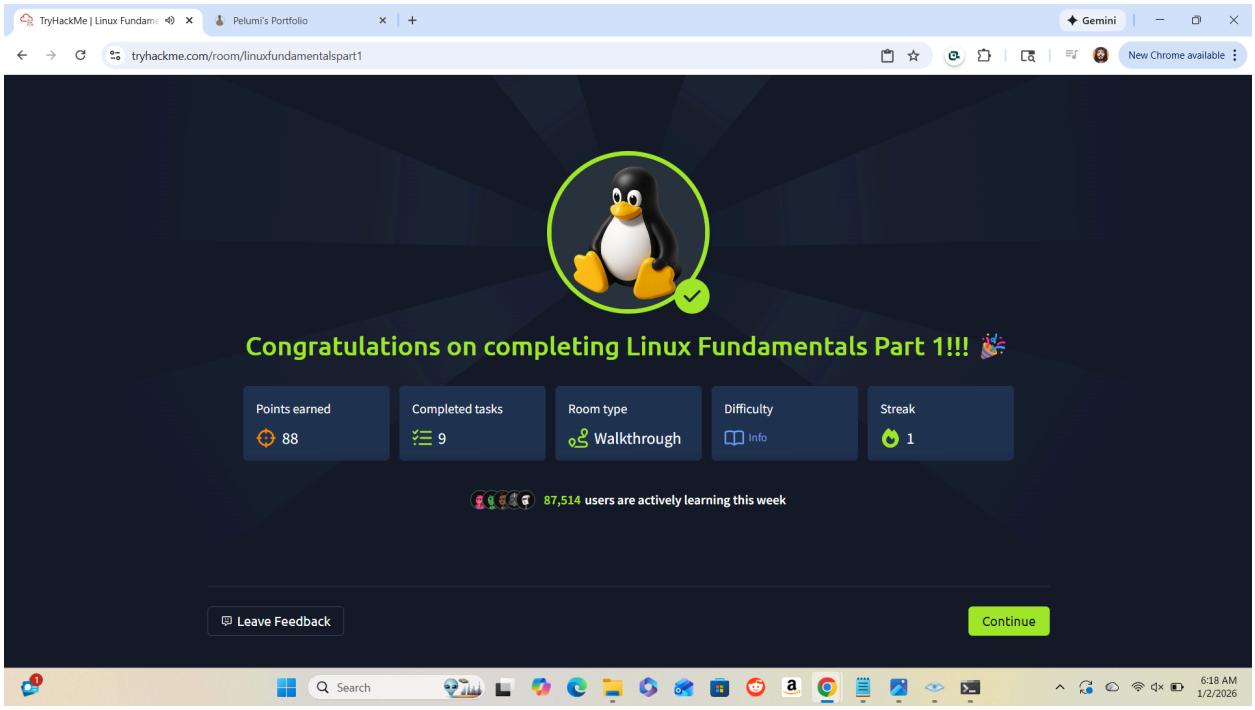
Completion

I successfully completed all tasks in the TryHackMe Linux Fundamentals Part 1 room. The completion screen confirmed that all exercises were validated and points were awarded.

Key Takeaways

- Linux is precise and unforgiving, but extremely powerful when used intentionally
- The command line becomes approachable once its structure is understood
- Logs contain valuable information, and tools like grep help uncover it
- Small command-line skills form the foundation for advanced cybersecurity operations

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New Chrome available
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88
Completed tasks
9
Room type
Walkthrough
Difficulty
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87,514 users are actively learning this week
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