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Student Name: Dishant Giri

London Met ID: 23048800

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Submitted To: Mr. Prashant Adhikari

Word Count (Where Required):

I confirm that I understand my coursework needs to be submitted online via Google Classroom under the relevant module page before the deadline in order for my assignment to be accepted and marked. I am fully aware that late submissions will be treated as non-submission and a mark of zero will be awarded.

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1. Introduction

Unix is a powerful, multiuser, multitasking operating system initially developed in the 1960s by Ken Thompson, Dennis Ritchie. Unix is known for its simplicity, portability and robust security features. Later on Unix become the foundation tor popular OS like linux and macOS.

The concepts of hierarchical file systems, process management and inter process communication was introduced by Unix. Unix empowers users to perform complex operations by combining commands and its legacy is still continues to influence operating systems globally. (Abraham Silberschatz, 2021)

2. Objectives

The aim of this report is to check some basic and essential Linux commands that will assist in interacting with the system, detecting the user, and file management. In this practical exercise, you will try to master the basic of such operations in linux as creating or editing files, concatenating multiple files, fetching information about the system and utilizing logging utilities like the script command efficiently. The steps documented in the report will also aid in understanding and replicating these tasks in similar environments.

To use ls, ls -a and ls -al command to understand the file listing including hidden files and detailed information about files.

To check for the file existences and contents.

To learn to merge multiple files into one.

To use the date command to display the current date and time.

To understand how to finish and save the session using the script command.

3. Required tools and software’s

3.1 kali Linux

kali Linux is a Debian-based GNU/Linux distribution to be used for penetration testing, digital forensics and ethical hacking. Originally created by offensive security and released in 2013 as the replacement for BackTrack, Kal Linux provides an extensive collection for tools used for penetration testing, security auditing, and more all of which come pre-installed. Because of its missing lettuce, extensive compatibility and support for a broad variety of hardware platforms Kali has been one of the go to platforms for security test research for both academic and profession world. (Wills, 2020)

3.2 Oracle VirtualBox

Oracle VirtualBox is a powerful open source virtualization program that allows to run multiple operating systems at the same time on one piece of hardware. It's versatile for testing, development and deployment, supporting multiple host and guest Operating Systems and is developed and supported by Oracle Corporation. (VirtualBox, n.d.)

4. Task in detail:

Here, we will do the task in prompt given by our tutor.

4.1 Giving script commands to save input and output terminal commands

The script command starts logging a terminal session. It saves the input and output of a terminal session into a file, the system will respond "Script started, Output log file is 'alscript'."

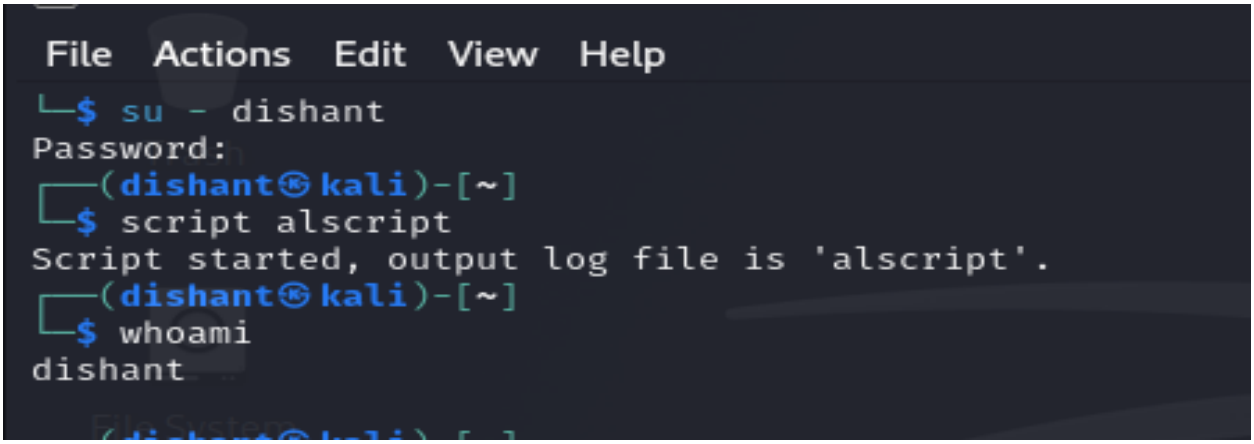

Figure 1: Typing script alscript

4.2 Typing whoami command

Whoami command shows the name of the current user running in OS.

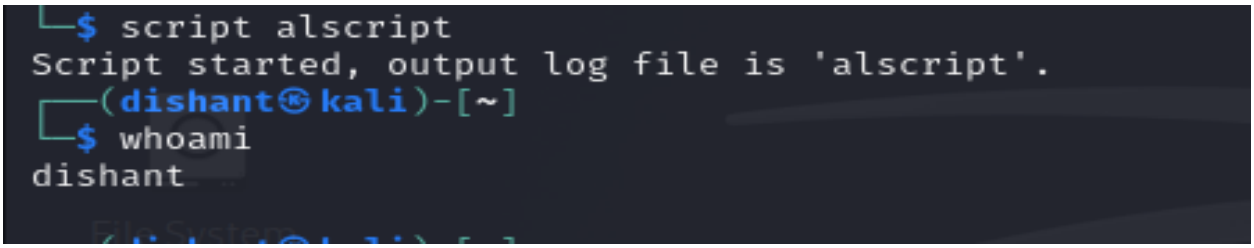

Figure 2: Typing whoami command

4.3 Typing who command

Who command shows the name of the all users in OS.

Figure 3: Typing who command

4.4 Typing the finger command

The finger command is used to see the more information about your account.

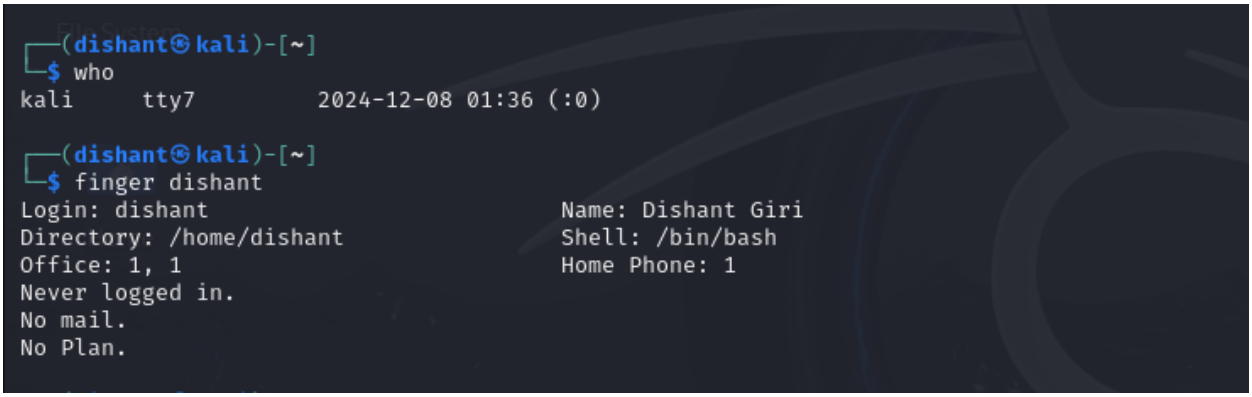

Figure 4: Typing the finger command

4.5 Date command

Date command sows the current date and time.

Figure 5: Typing date command

4.6 Typing ls, ls -a and ls -al command

ls command will list down or display all visible files and directories within the existing working directory. Hidden files and directories starting with a period simply are not listed.

Figure 6: Typing ls command

ls -a command will list down all visible and hidden files and directories within the existing working directory.

Figure 7: Typing ls -a command

ls -al command gives a detailed listing of all visible and hidden files and directories. It will display permissions to files, ownership, size and last modification date.

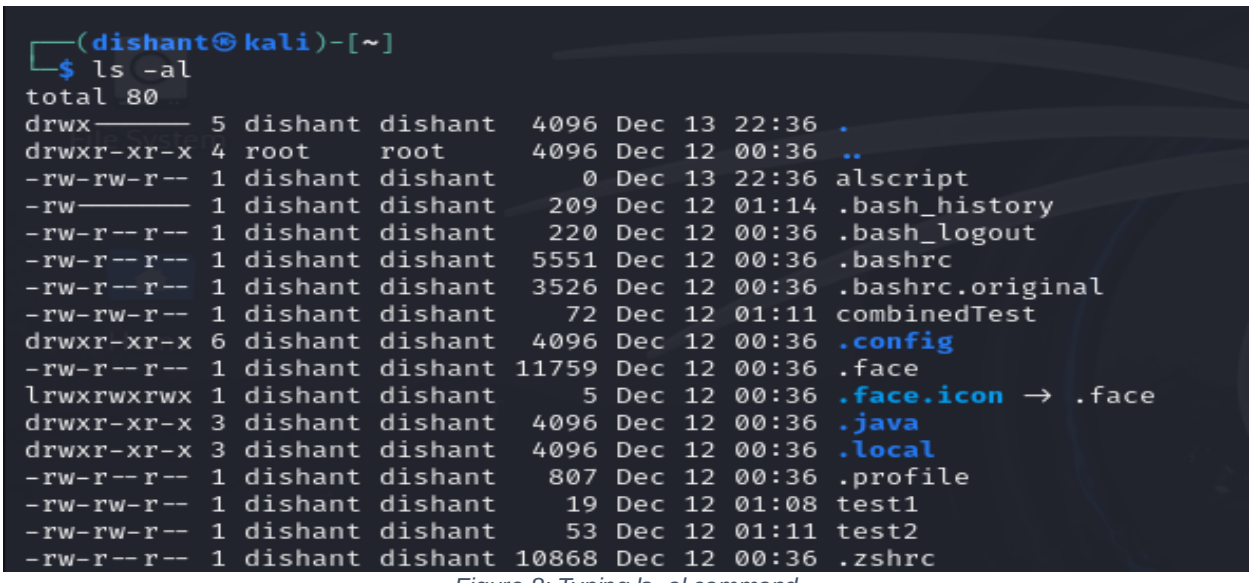

Figure 8: Typing ls -al command

4.7 Typing the ‘cat /etc/passwd’ command

The command cat stands for concatenate. This command is very versatile and is used for the display as well as manipulation of a file’s contents. ‘cat/etc/passwd’: when this command is executed the file ‘passwd’ is mentioned. So, this file contains the details of user accounts on the computer.

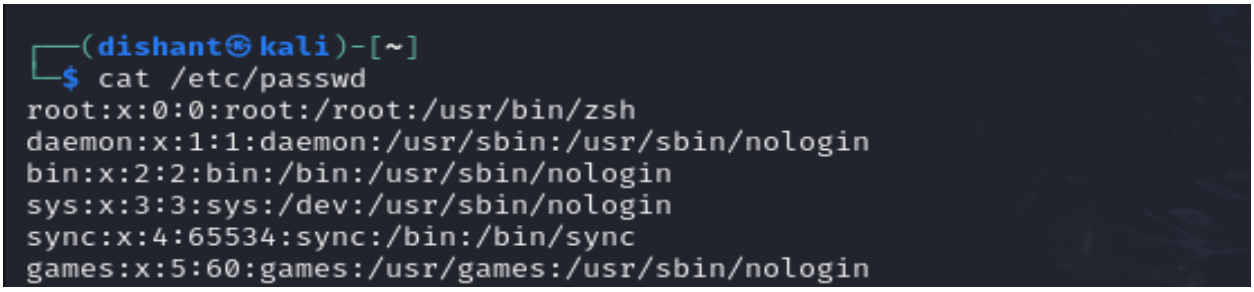

Figure 9: Typing 'cat /etc/passwd' command

4.8 Creating file named file1

Creating a file named file1 using echo command.

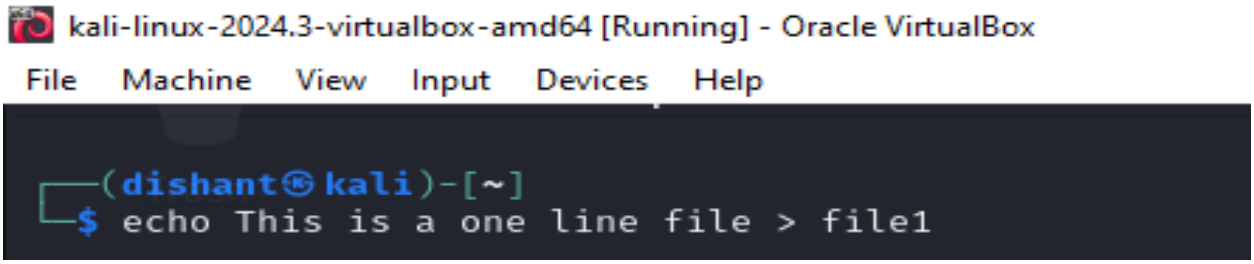

Figure 10: creating file using echo command

4.9 Creating multi line file using cat command

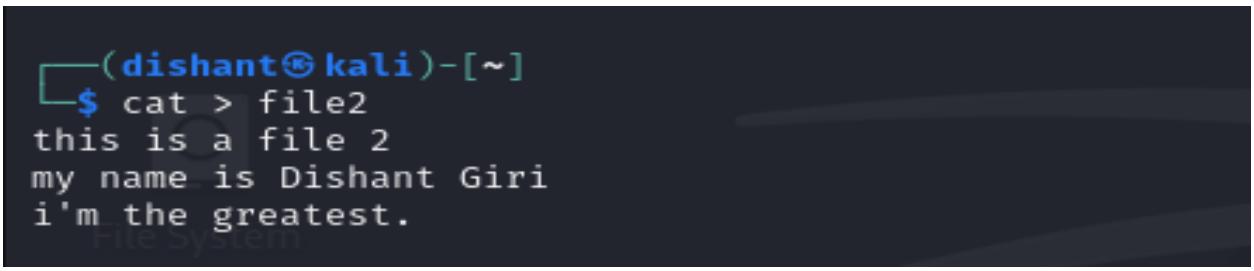

Figure 11: creating multiline file

4.10 Showing the file exist and what it contains

Figure 12: files directory

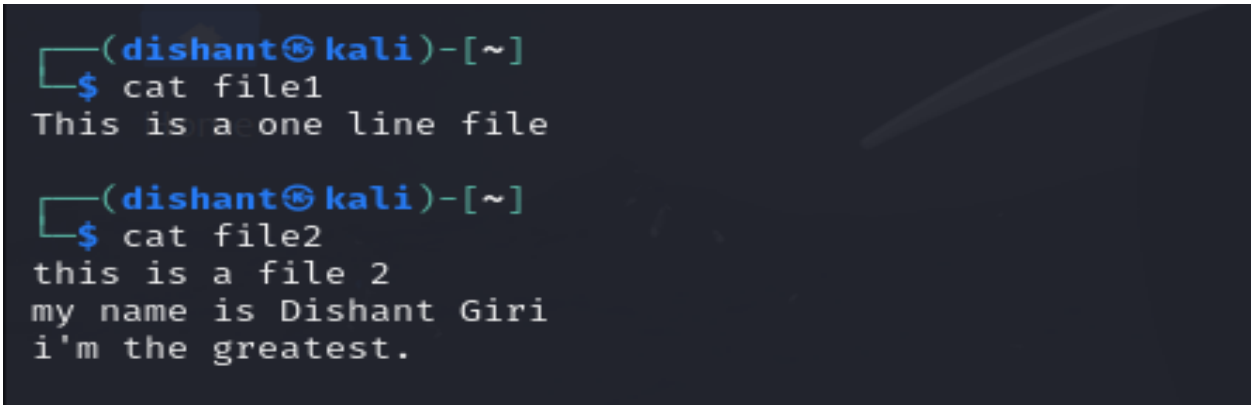

Figure 13: file contains

4.11 Combining file1 and file2

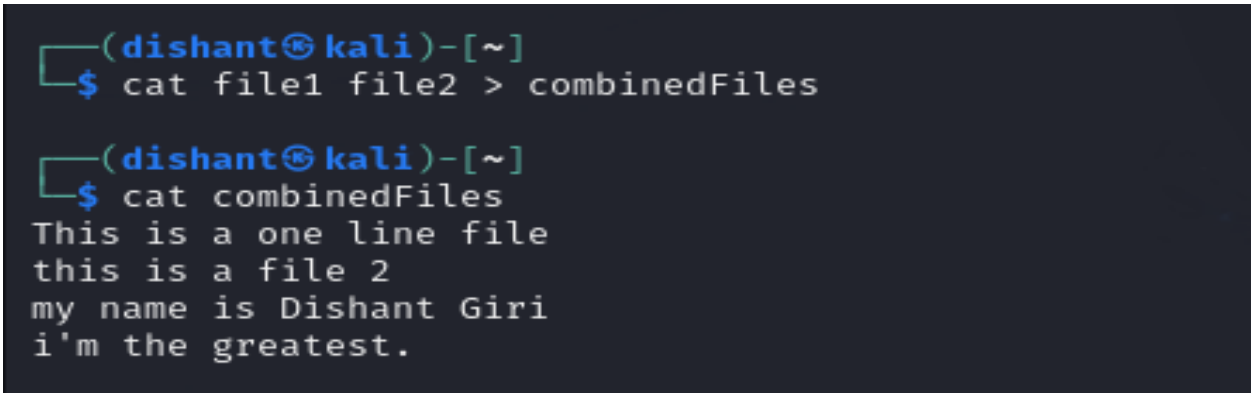

Figure 14: Combining file1 and file2

4.12 Exiting a script using ‘Exit’ command

Figure 15: Exiting the script

5. Conclusion

The workshop provided hands-on experience with essential Linux terminal commands, focusing on user activities, system management, and file operations. Essential utilities such as the script command enabled the logging of sessions, while commands like whoami, who, and finger showcased the multiuser aspect of Linux. Commands related to files (for example ls, ls -a, ls -a -l, LH) were used to provide file attributes, and echo and cat (for creating, updating, or combining files). The same session detailed system files such as /etc/passwd, providing insight into how Linux is structured. The information shared in the workshop returned to the idea of effective communication, which is paramount for ensuring that accurate documentation and clear directions are provided.

6. Bibliography

Abraham Silberschatz, P. B. (2021). *Operating System Concepts .*

VirtualBox. (n.d.). Retrieved from VirtualBox: https://www.virtualbox.org/

Wills, J. W. (2020). *Mastering Kali Linux for Advanded Penetration Testing (3rd edition).* packet publishing.