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I confirm that I understand my proposal needs to be submitted online via College's MST PORTAL under the relevant module page before the deadline 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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Introduction

Ubuntu is an open-source Linux based operating system developed by Canonical. It is Designed for simplicity, security and scalability supplying various needs such as desktop usage, server deployment, and cloud infrastructure. Ubuntu supports desktop, server, and IOT applications. Versions like ubuntu Desktop and Ubuntu Core cater to different user needs. The Terminal in Ubuntu is powerful, enabling developers and administrators to execute scripts and manages the system efficiently.

Ubuntu's Long-Term Support (LTS) versions offer security patches and updates for five years, ensuring stability. Ubuntu contains built in firewalls and encryption for security and updates prioritizes vulnerability spots. Ubuntu works seamlessly in virtual environments like Virtual Box, providing a sandbox for testing and development.

Objective

The objective of this Workshop is to familiarize users with basic Linux commands and the Ubuntu Terminal on how to manage file, view system information and other essential command line operation. Specifically, this workshop focuses on the following tasks:

1. Starting a Terminal Session

2. Viewing information system: Commands like Whoami, who, and fingers help to identify the user and provide account details.

3. Exploring files and Directories: Using variation of 1s to understand file visibility.

4. Working with Files: viewing system configuration, creating new files and combining and displaying file contents.

5. Understanding Command Outputs: Interpreting results of commands to gain insights into the system and file system.

Required Tools and Concepts

1. **VirtualBox**: VirtualBox is a platform to create Virtual Machine (VM) for running ubuntu alongside the existing operating system.

2. **Ubuntu iso File:** An installation image of ubuntu is required for setting up the Operating System in VirtualBox.

3. **Terminal**: pre-installed in ubuntu, used to execute commands during workshop.

4. **System Requirements:**
   I. Processor: 2GHZ dual core or better
   II. RAM: At least 4 GB or 8 GB or higher for smooth multitasking

Steps of Replicate:

1.Opening Script

Type script a1script **at the prompt.**

That's the digit one (1) after the letter "a"- this is assignment one, not assignment el. The system will respond with

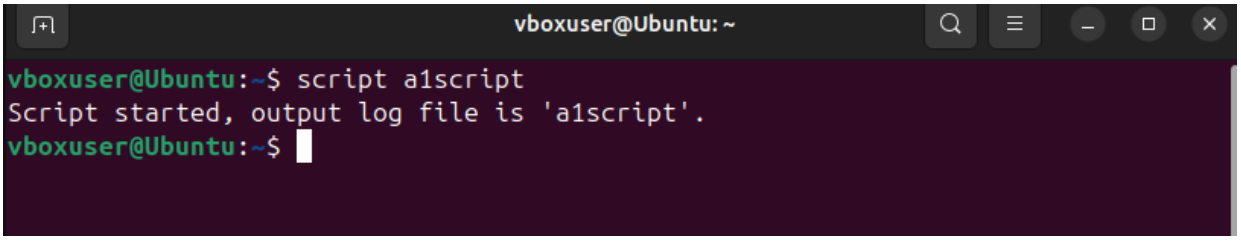

Figure 1: Opening Script

2.Viewing Username

Type whoami **to see your username**

```
vboxuser@Ubuntu:~$ whoami
vboxuser
vboxuser@Ubuntu:~$
```

Figure 2: Viewing Username

3.Viewing everyone on the system

Type who **to see a list of everyone on the system.**

```
vboxuser@Ubuntu:~$ who
vboxuser seat0        2024-12-08 12:11 (login screen)
vboxuser tty2         2024-12-08 12:11 (tty2)
vboxuser@Ubuntu:~$
```

Figure 3: Viewing everyone on system

4.Viewing information about accounts

Type finger linuxnnn, **(Where linuxnnn is your username) to see more information about your account.**

```
vboxuser@Ubuntu:~$ finger vboxuser
finger: /dev//seat0: No such file or directory
Login: vboxuser                         Name: vboxuser
Directory: /home/vboxuser               Shell: /bin/bash
On since Sun Dec  8 12:11 (UTC) on seat0 from login screen
On since Sun Dec  8 12:11 (UTC) on tty2 from tty2
    3 hours 36 minutes idle
No mail.
No Plan.
```

Figure 4: Viewing information about accounts

5.Viewing today's date and time

Type date to see today's date and the current time.

```
vboxuser@Ubuntu:~$ date
Sun Dec  8 12:35:56 PM UTC 2024
vboxuser@Ubuntu:~$
```

Figure 5: Viewing date and current time

6.What file do you have with different commands

What files do you have? Type these three commands. Each one produces a different output.

ls

ls -a

ls -a -l

What's the difference?

6.1. l.s

```
vboxuser@Ubuntu:~$ ls
a1script  Desktop    Downloads  Pictures  snap       Videos
alscript  Documents  Music      Public    Templates
vboxuser@Ubuntu:~$
```

Figure 6 : Command ls

If we type ls it lists all the files and directories in the current directory.

6.2. ls-a

```
vboxuser@Ubuntu:~$ ls -a
.              .bash_logout  Documents  Pictures  .sudo_as_admin_successful
..             .bashrc       Downloads  .profile  Templates
a1script       .cache        .gnupg     Public    Videos
alscript       .config       .local     snap
.bash_history  Desktop       Music      .ssh
vboxuser@Ubuntu:~$
```

Figure 7: Command ls -a

If we type ls -a it lists all files, including hidden files (those starting with a dot.)

6.3. ls-a-1

```
vboxuser@Ubuntu:~$ ls -a -1
.
..
a1script
alscript
.bash_history
.bash_logout
.bashrc
.cache
.config
Desktop
Documents
Downloads
.gnupg
.local
Music
Pictures
.profile
Public
snap
.ssh
.sudo_as_admin_successful
Templates
Videos
```

Figure 8: Command ls -a -1

If we type ls -a -1 it includes hidden files with detailed information like permissions, owner and size.

7.Whats in file with different commands

What's in a file? Type below commands.

Cat / etc / passwd

```
vboxuser@Ubuntu:~$ etc
Command 'etc' not found, did you mean:
  command 'dtc' from snap device-tree-compiler (1.6.1)
  command 'etw' from deb etw (3.6+svn162-6)
  command 'htc' from deb httptunnel (3.3+dfsg-4)
  command 'etcd' from deb etcd-server (3.4.30-1ubuntu0.24.04.1)
  command 'etm' from deb etm (3.2.39-1)
  command 'eta' from deb eta (1.0.1-1)
  command 'etr' from deb extremetuxracer (0.8.3-1)
  command 'rtc' from deb nvram-wakeup (1.1-4build1)
  command 'dtc' from deb device-tree-compiler (1.7.0-1)
  command 'atc' from deb bsdgames (2.17-30)
  command 'tc' from deb iproute2 (6.1.0-1ubuntu2)
See 'snap info <snapname>' for additional versions.
```

Figure 9: Command cat

It displays the content of a configuration file and contains user account information.

8.Creating Test 1

Create a file named test1 by typing this:

echo “This is a one-line file” > test1

```
vboxuser@Ubuntu:~$ echo "This is one-line file" >test1
vboxuser@Ubuntu:~$
```

Figure 10: Creating file Test 1

9.Creating Test 2

Create another file by typing the following, where ^D means CTRL-D

Cat > test 2

This is file two.

It has several lines.

Three lines, in fact.

^D

```
vboxuser@Ubuntu:~$ cat > test2
this is file two.
It has several lines.
Three lines, in fact.
vboxuser@Ubuntu:~$
```

Figure 11: Creating file Test 2

10.Showing file exists and what it contains

Show that file exists, and what it contains.

```
vboxuser@Ubuntu:~$ cat test1
This is a one-line file
vboxuser@Ubuntu:~$
```

Figure 12: Test 1 file

```
vboxuser@Ubuntu:~$ cat test2
This is file two.
It has several lines.
Three lines, in fact.
vboxuser@Ubuntu:~$
```

Figure 13: Test 2 file

11.Combining Test1 and Test2

Combine test1 and test2 file.

```
vboxuser@Ubuntu:~$ cat test1 test2
This is a one-line file
This is file two.
It has several lines.
Three lines, in fact.
vboxuser@Ubuntu:~$
```

Figure 14: Combining Test 1 and Test 2

12.Existing the Script

Exit the script.

```
vboxuser@Ubuntu:~$ exit
exit
Script done.
vboxuser@Ubuntu:~$
```

Figure 15: Exiting Script

Reference:

1. Official Ubuntu Documentation:

Ubuntu provides official documentation for users to understand system commands and administration.

URL: https://help.ubuntu.com/

2. Ubuntu Manuals:

Each command in Ubuntu has a manual page accessible via the man command.

Example: man chmod, man cp, man mv