

# QUESTION 1

ITLXA0-44

## VIRTUAL MACHINE AND OS CONFIGURATION

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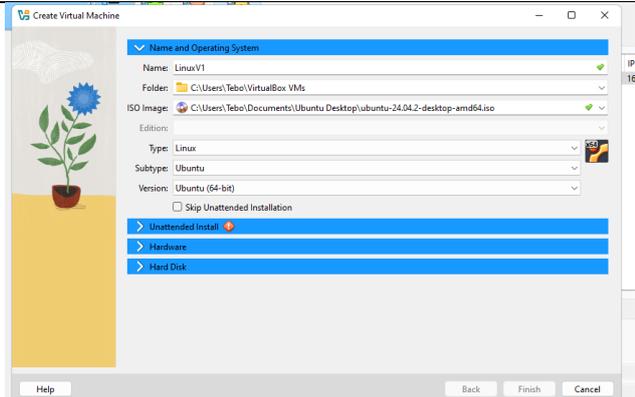
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## Introduction

This project involves creating and managing two Linux virtual machines using Oracle VirtualBox. We'll perform basic file and directory management tasks entirely through the terminal on the first virtual machine.

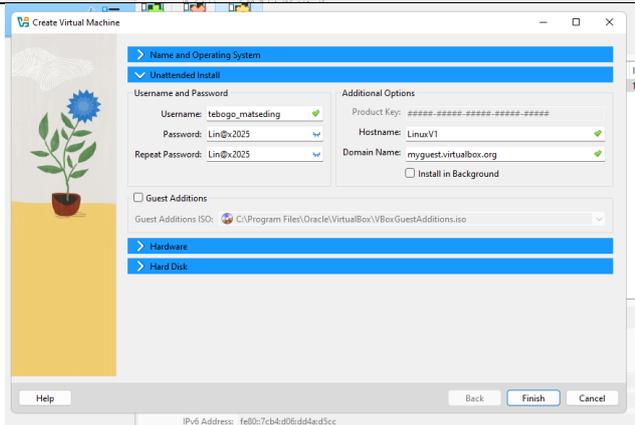
## VM1 Name Config

Open Oracle VirtualBox and start creating a new virtual machine.  
Enter LinuxV1 as the name. This helps identify it easily during setup and later tasks.



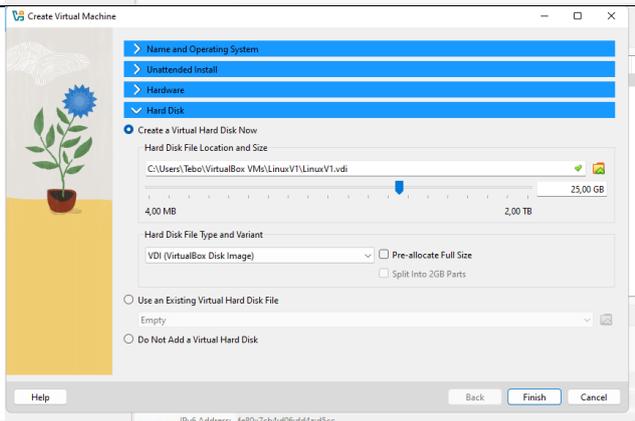
## VM1 Username & Password

When setting up the virtual machine, create your admin account using your first name as the username.  
Set the password to Lin@x2025 you'll use this password to log in whenever you start the machine.



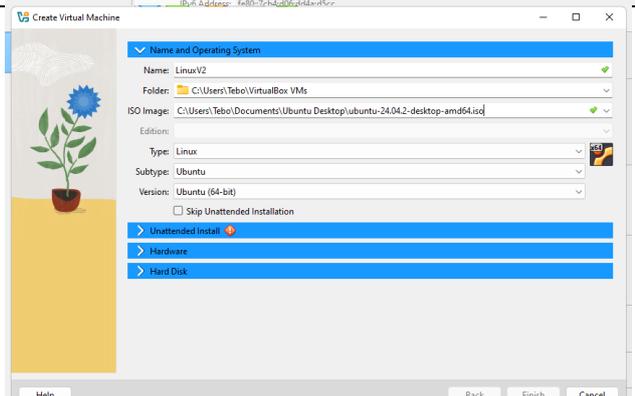
## VM1 Storage Config

Assign 25 GB of total storage to this virtual machine.



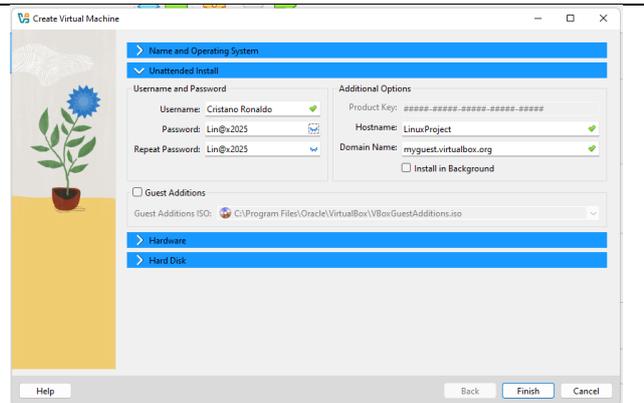
## VM2 Name Config

Create another virtual machine and name it LinuxV2.  
This second machine will be used to perform similar tasks or comparisons later.



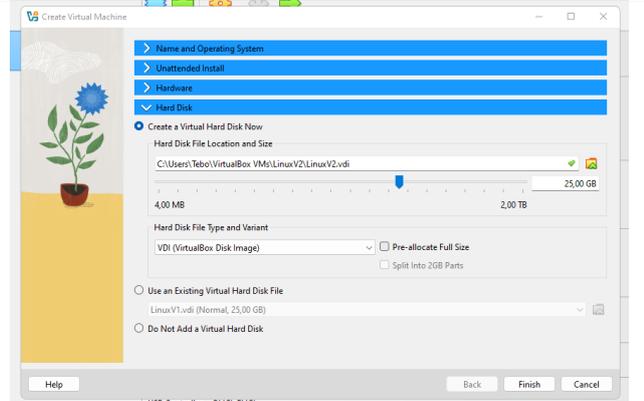
## VM2 Username & Password

For this machine, set the username to Cristiano Ronaldo and the computer name to LinuxProject. Use the same password, Lin@x2025, to keep things simple and consistent between both virtual machines.

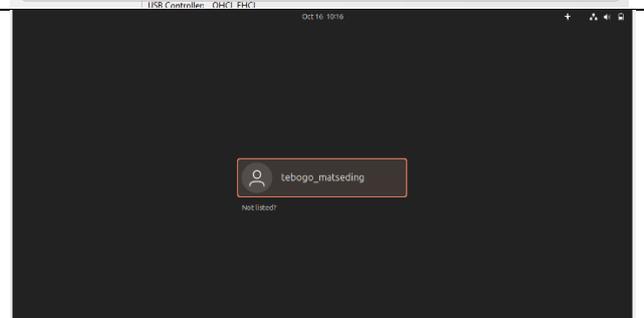


## VM2 Storage Config

Give this virtual machine 25 GB of storage as well.

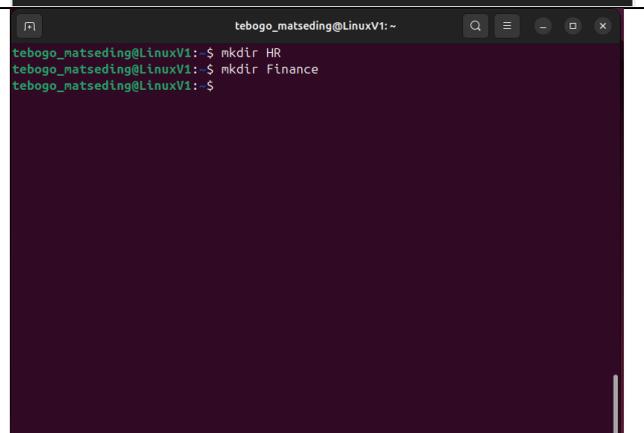


Installation Complete



## Create Directories in Terminal

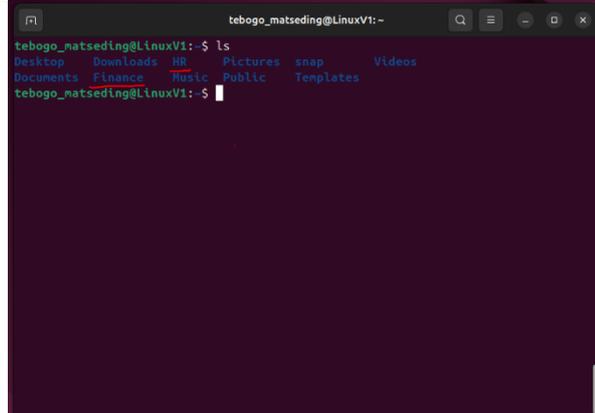
On VM1, open the terminal and navigate to your home directory. Create two new directories in the home directory named Finance and HR using the mkdir command.



## List New Directories

Use the ls command to list the contents of your home directory.

If you have successfully created the new folders you should see that both Finance and HR directories appear in the list.

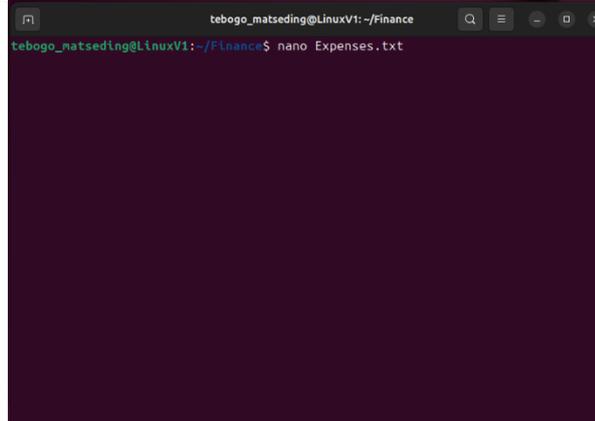


```
tebogo_matseding@LinuxV1: ~  
$ ls  
Desktop  Downloads  HR          Pictures  snap      Videos  
Documents Finance     Music       Public    Templates  
tebogo_matseding@LinuxV1: ~$
```

## Create Document in Finance Directory

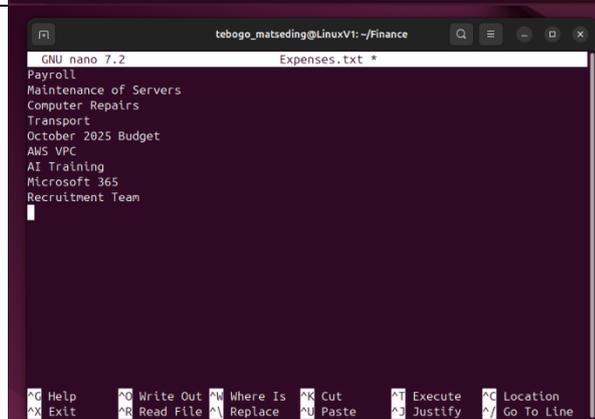
Navigate to the Finance directory using the command cd.

Create a new text file named Expenses.txt with the nano command this will store your list of expenses of your choosing.



```
tebogo_matseding@LinuxV1: ~/Finance  
$ nano Expenses.txt
```

## Add List of Expenses Using Nano

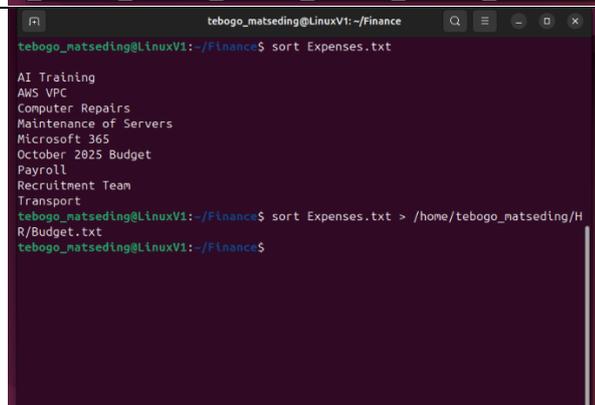


```
GNU nano 7.2 Expenses.txt *  
Payroll  
Maintenance of Servers  
Computer Repairs  
Transport  
October 2025 Budget  
AWS VPC  
AI Training  
Microsoft 365  
Recruitment Team  
|
```

## Sort Expenses and Send Output to HR Directory

While still inside the Finance directory, sort the contents of Expenses.txt alphabetically using the sort command.

Use output redirection ">" to save the sorted list as a new file named Budget inside the HR directory.



```
tebogo_matseding@LinuxV1: ~/Finance  
$ sort Expenses.txt  
AI Training  
AWS VPC  
Computer Repairs  
Maintenance of Servers  
Microsoft 365  
October 2025 Budget  
Payroll  
Recruitment Team  
Transport  
tebogo_matseding@LinuxV1: ~/Finance$ sort Expenses.txt > /home/tebogo_matseding/HR/Budget.txt  
tebogo_matseding@LinuxV1: ~/Finance$
```

## Verify Document Creation

Navigate to the HR directory and use the ls command to confirm that the Budget file exists.

Open it to ensure the items are alphabetically sorted using the cat command.

```
tebogo_matseding@LinuxV1: ~/Finance
tebogo_matseding@LinuxV1:~/Finance$ ls /home/tebogo_matseding/HR
Budget.txt
tebogo_matseding@LinuxV1:~/Finance$
```

## Conduct a word count of

Expenses.txt

Still in the Finance directory.

Use the wc command to display the number of lines, words, and characters in Expenses.txt.

```
tebogo_matseding@LinuxV1: ~/Finance
tebogo_matseding@LinuxV1:~/Finance$ wc Expenses.txt
10 18 133 Expenses.txt
tebogo_matseding@LinuxV1:~/Finance$
```