Exercise on Virtualization

1. Objective

- Create a virtual machine (VM) and install Ubuntu.
- Set up a shared folder between the host and the VM using VMware Tools.
- Copy a file from the host to the VM.

2. Creating the VM and Installing Ubuntu

I used VMware Workstation as the hypervisor. The VM creation process began by clicking on "Create a New Virtual Machine".

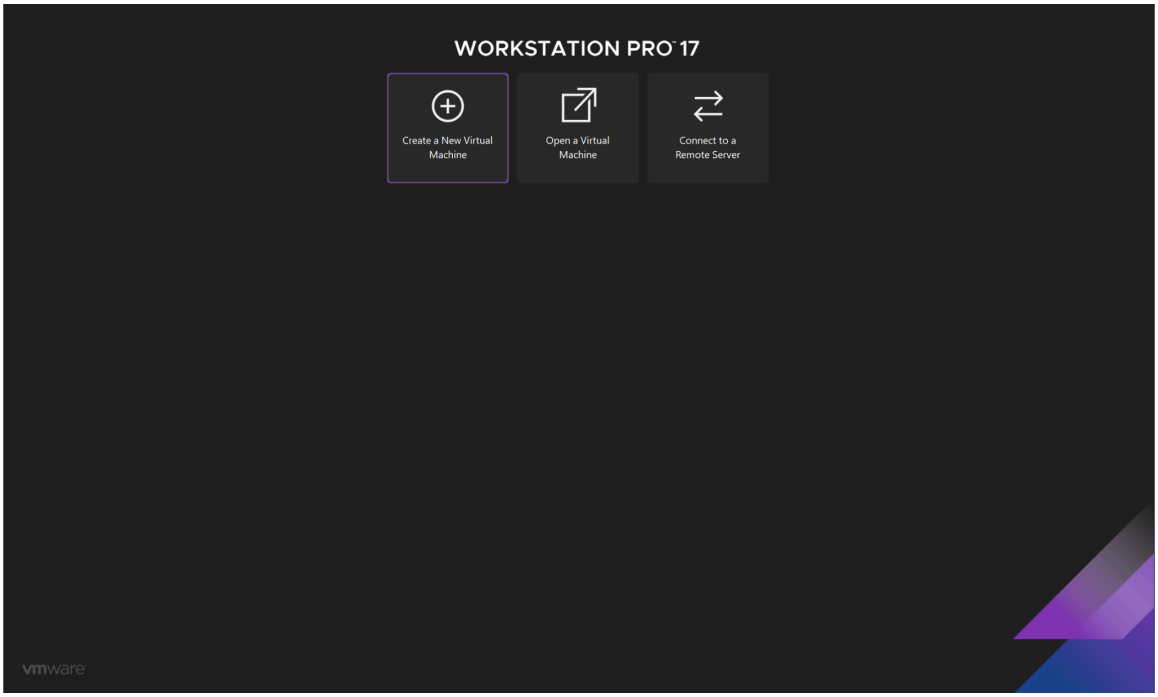


Figure 1: VMware Workstation start screen with the "Create a New Virtual Machine" option.

I downloaded the latest Ubuntu 24.04 LTS ISO from ubuntu.com to use during the installation.

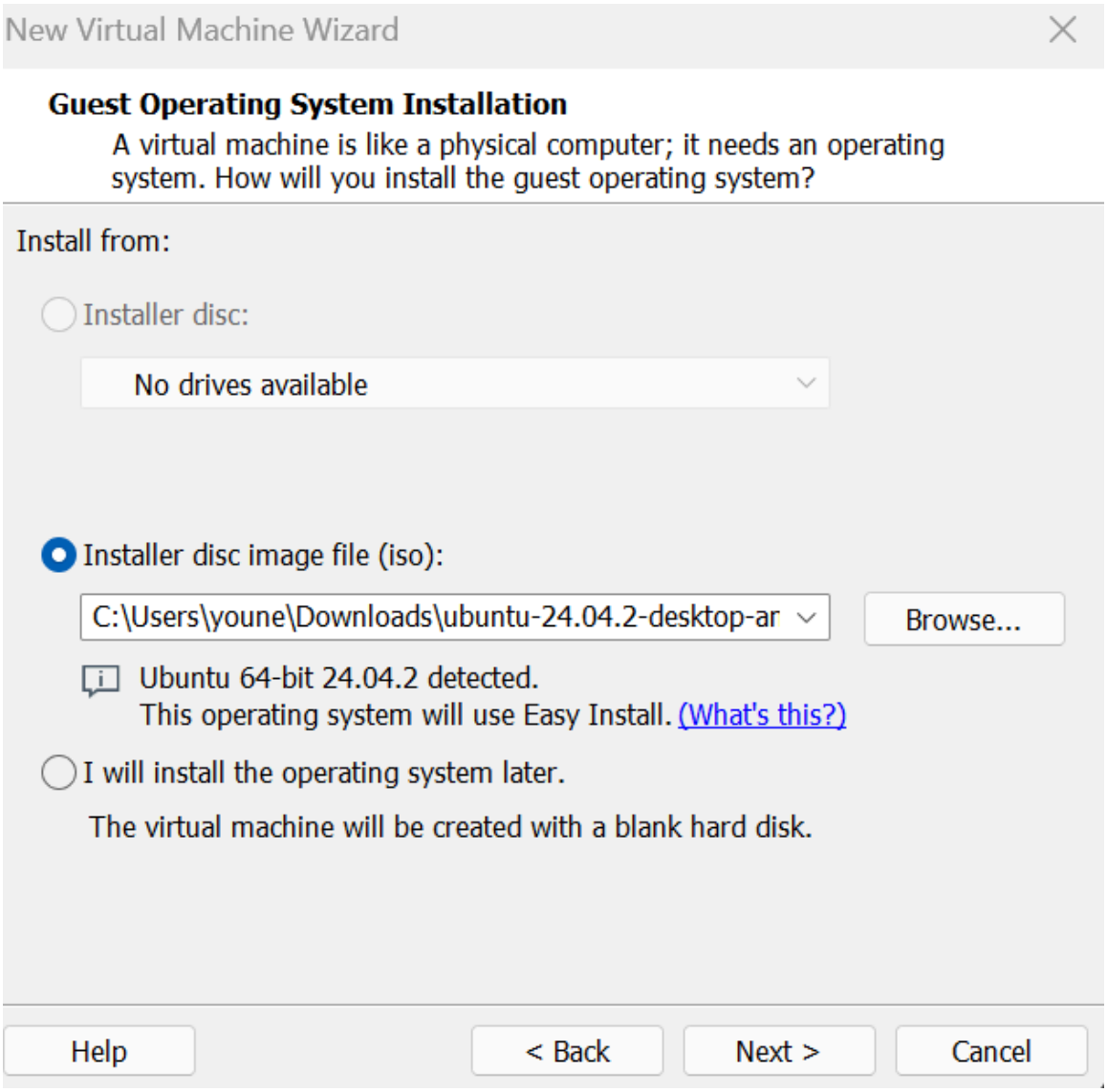


Figure 2: Selecting the Ubuntu ISO file to install the operating system.

After entering my name and username, I allocated disk space from the physical machine to the virtual machine.

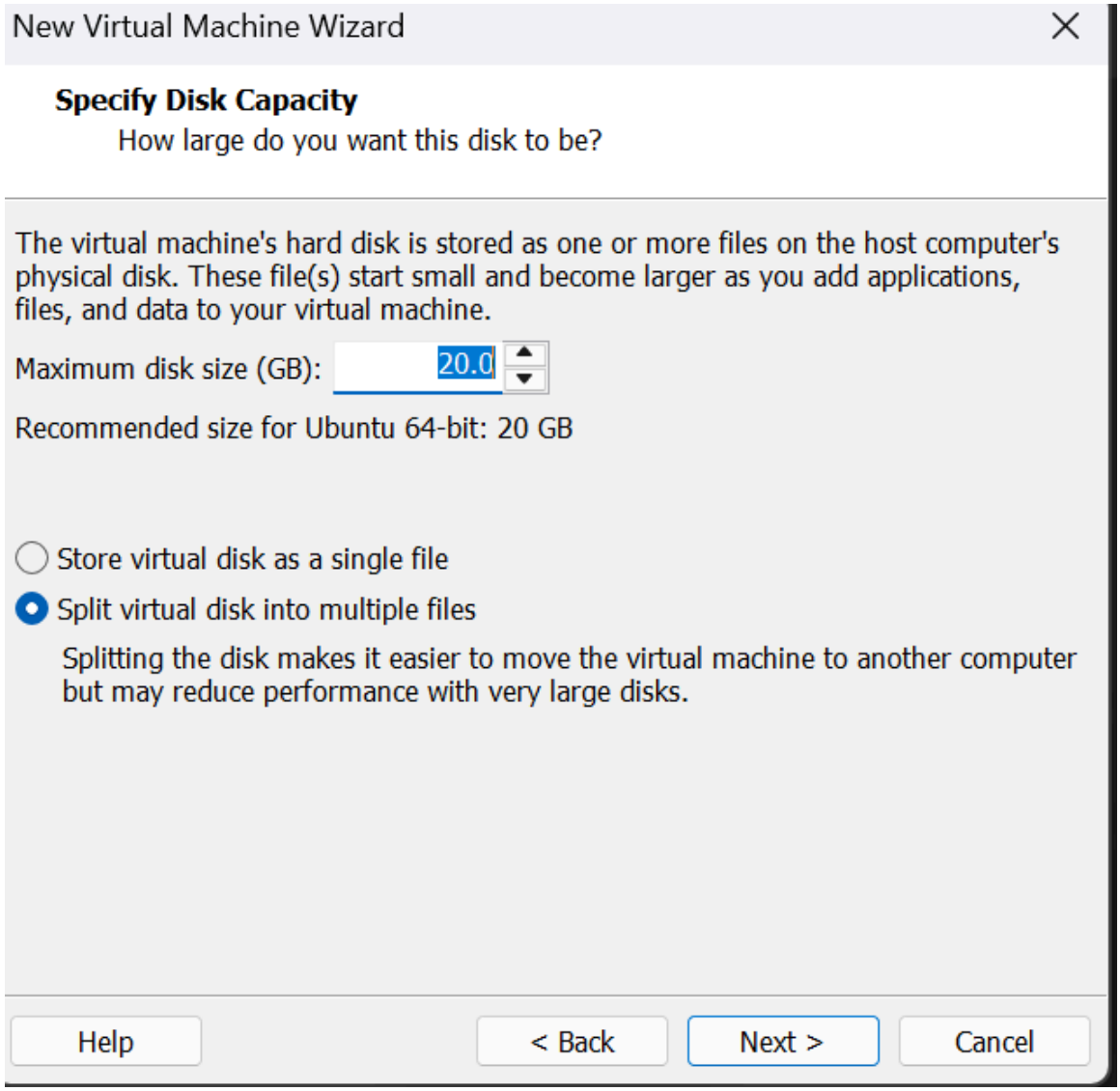
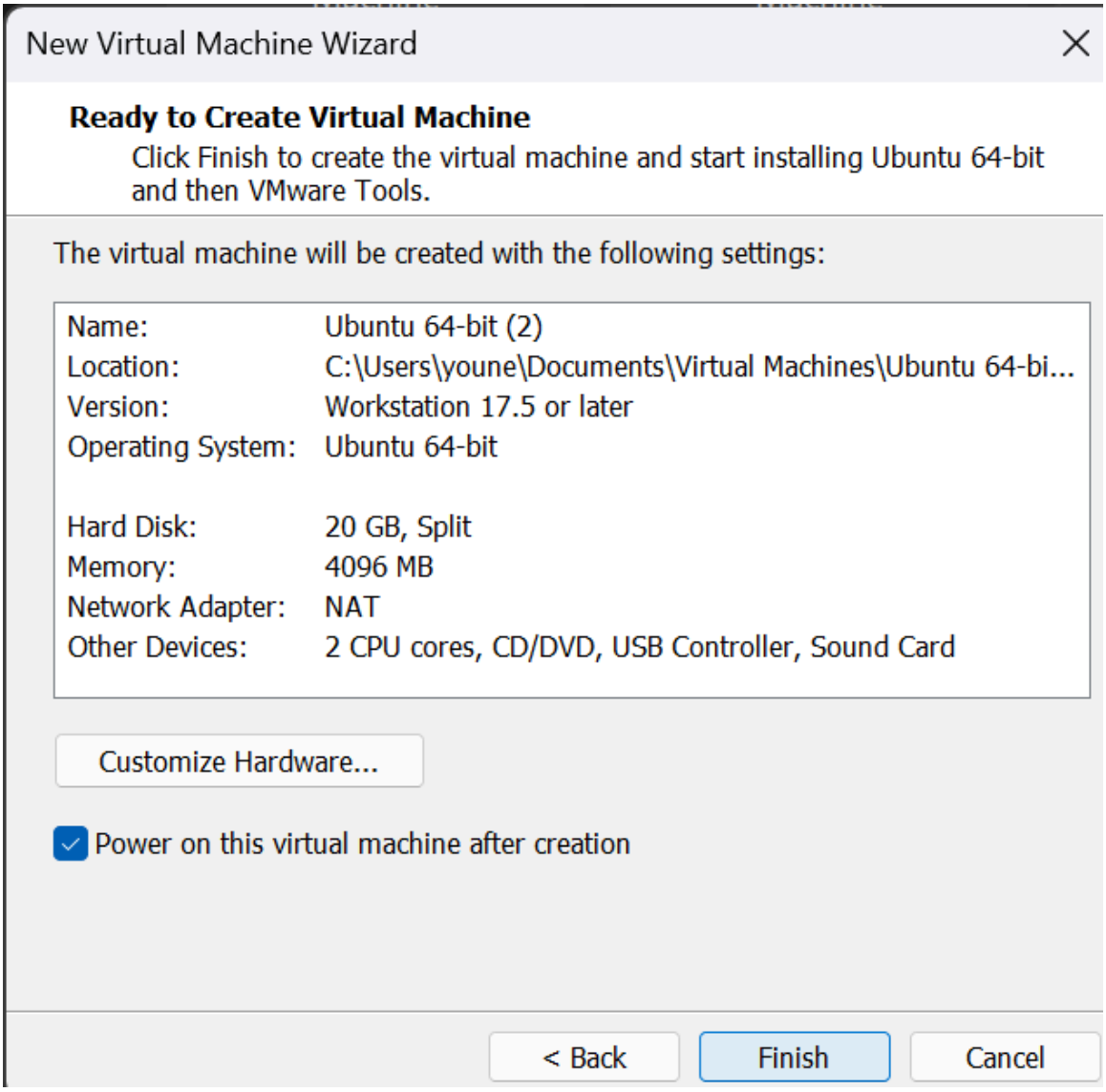


Figure 3: Allocating storage space to the VM.



Once I clicked "Finish", the VM was ready to power on. After powering on the VM, I followed the steps to complete the Ubuntu OS installation.

To finalize the setup, I installed some essential packages using the terminal:

sudo apt update && sudo apt upgrade

sudo apt install vim curl git

3. Creating a Shared Folder Between the Host and the VM

Step 1: Installing VMware Tools

To enable shared folder functionality, I installed the required packages with the following commands:

sudo apt install open-vm-tools open-vm-tools-desktop

After installation, I rebooted the VM.

Step 2: Enabling Shared Folder Access

While the VM was powered off, I went to "Edit virtual machine settings > Options > Shared Folders", enabled it, and selected "Always enabled".

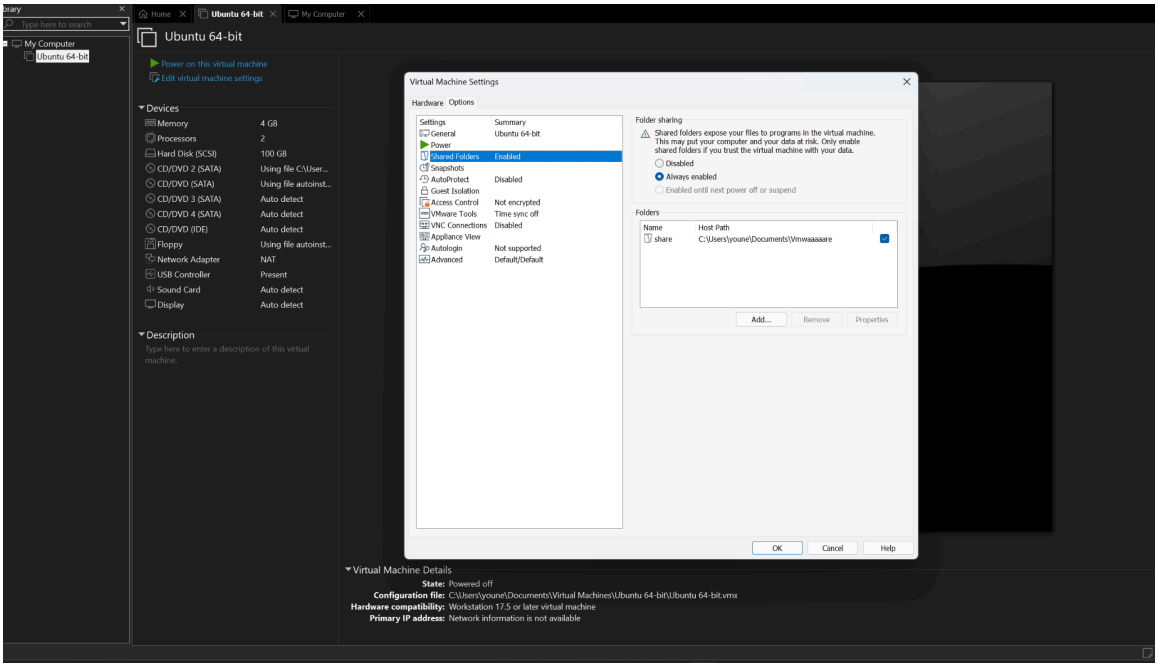
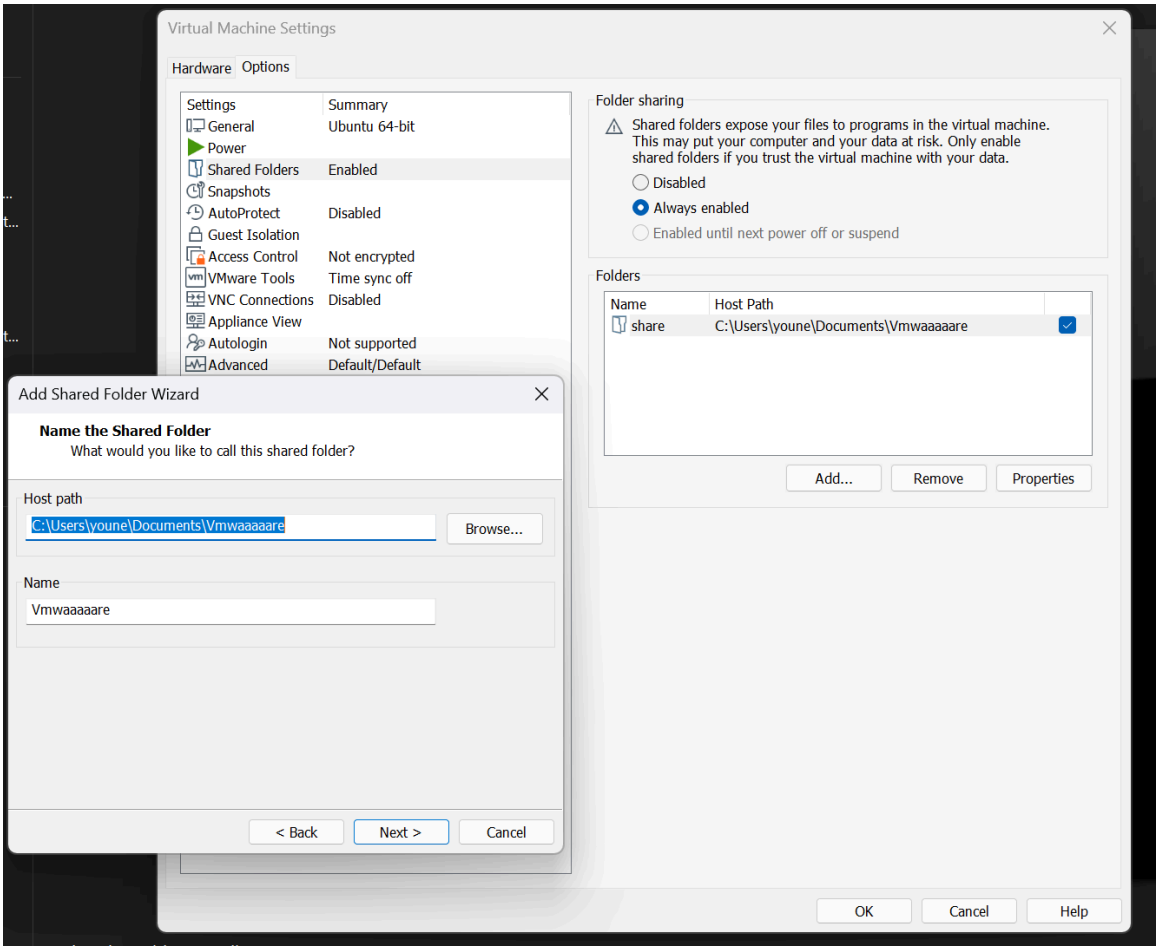


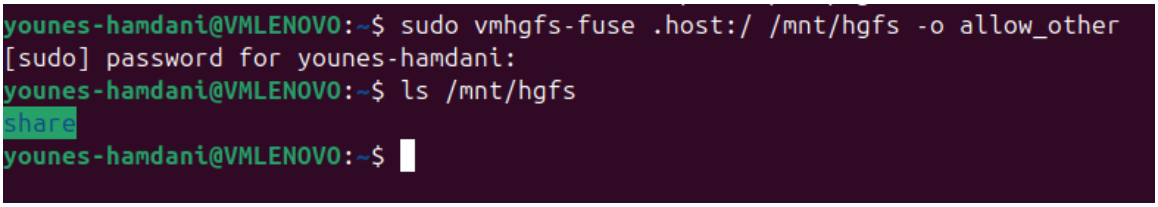
Figure 4: Enabling shared folder settings in VMware.



Next, I created a folder on the host machine, clicked "Add", entered the folder path, and specified a name for the shared folder.

After turning the VM back on, I mounted the shared folder using:

sudo vmhgfs-fuse .host:/ /mnt/hgfs -o allow_other

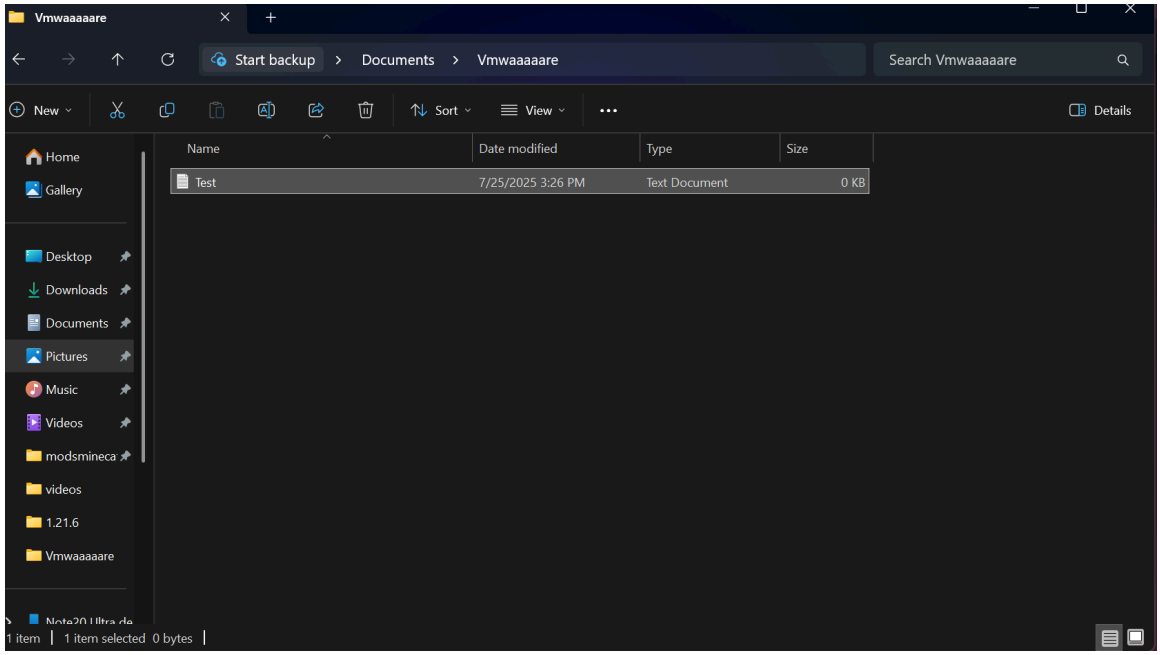


To verify the shared folder was accessible:

ls /mnt/hgfs

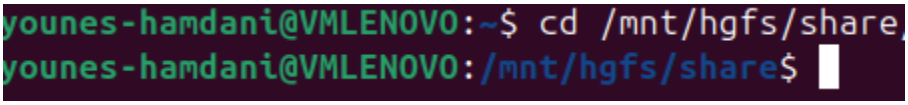
4. Copying a File from Host to VM

Step 1:



Create a file (e.g., test.txt) inside the shared folder on the host machine.

Step 2:

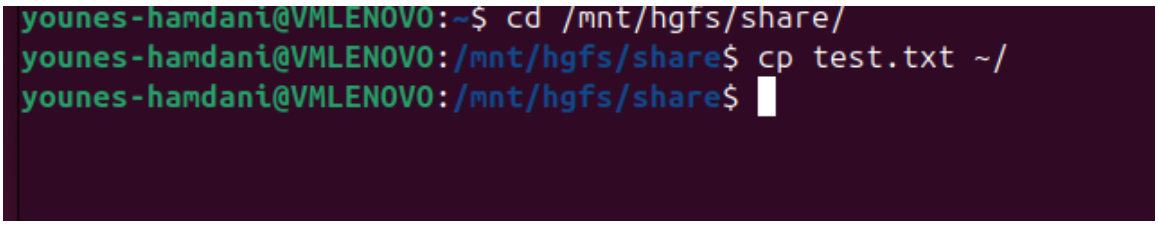


On the terminal, navigate to the shared folder:

cd /mnt/hgfs/[SharedFolderName]

Step 3:
Copy the file to the VM's home directory:

cp test.txt ~/



You can now find the file using the file manager inside the VM.