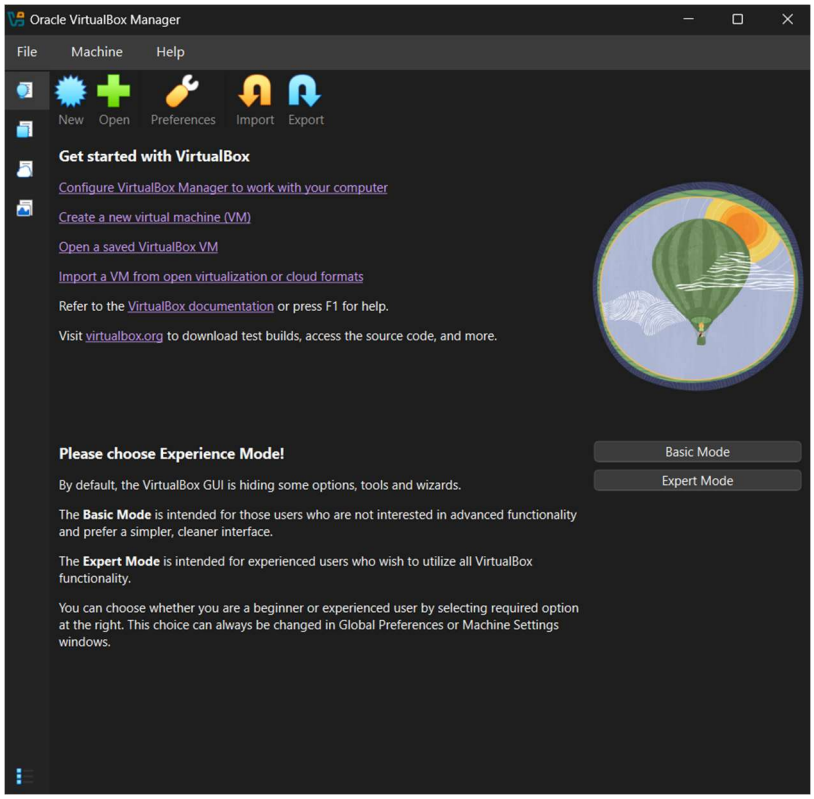
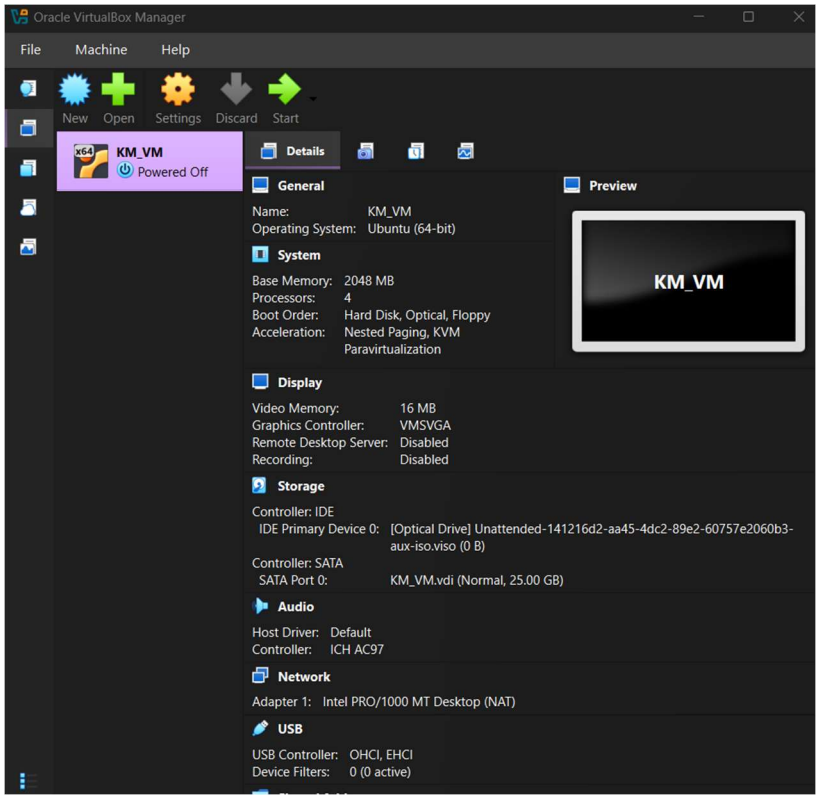
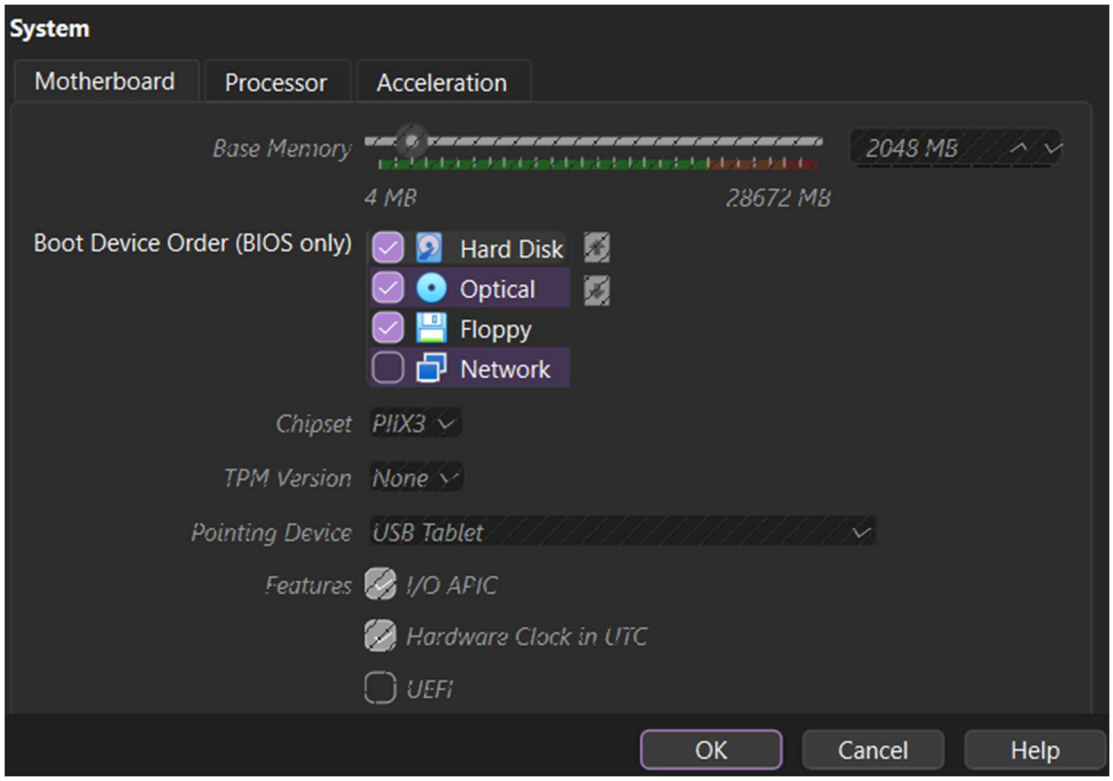
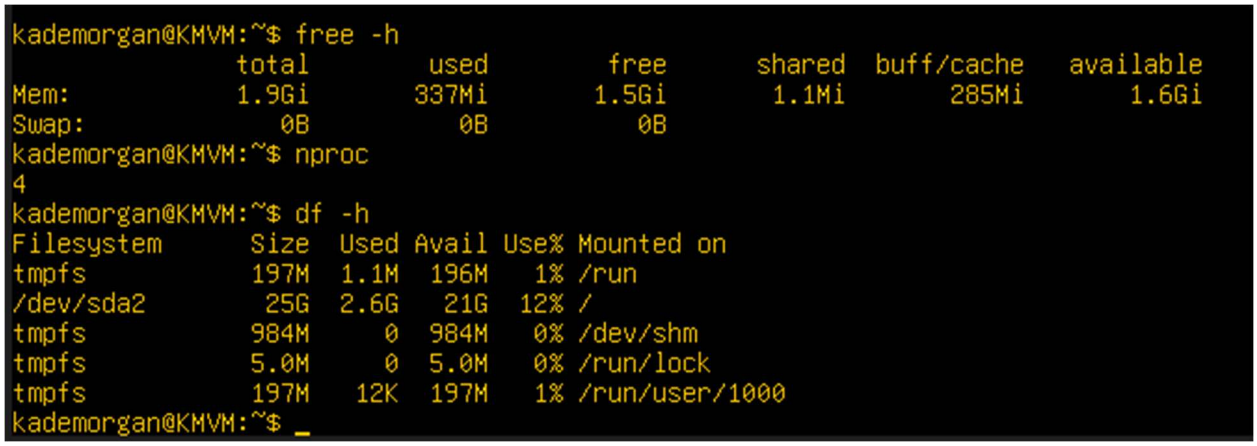
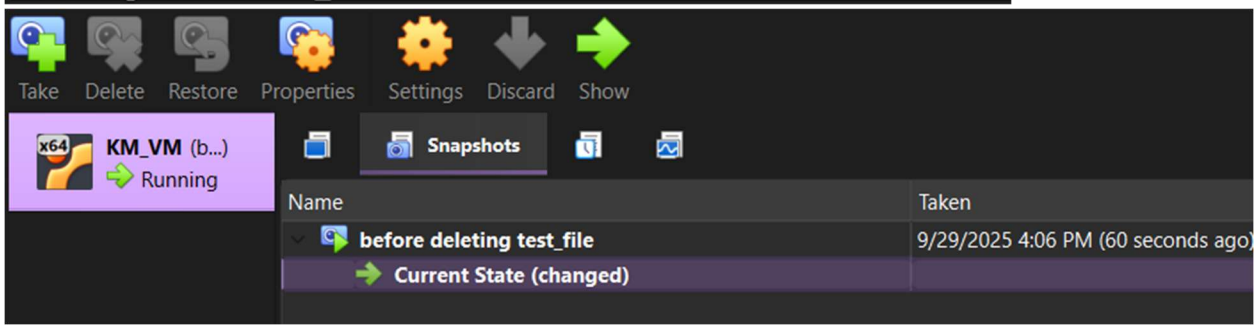
1. 
Oracle VirtualBox Manager
File
Machine
Help
New
Open
Preferences
Import
Export
Get started with VirtualBox
Configure VirtualBox Manager to work with your computer
Create a new virtual machine (VM)
Open a saved VirtualBox VM
Import a VM from open virtualization or cloud formats
Refer to the VirtualBox documentation or press F1 for help.
Visit virtualbox.org to download test builds, access the source code, and more.
Please choose Experience Mode!
Basic Mode
Expert Mode
By default, the VirtualBox GUI is hiding some options, tools and wizards.
The Basic Mode is intended for those users who are not interested in advanced functionality and prefer a simpler, cleaner interface.
The Expert Mode is intended for experienced users who wish to utilize all VirtualBox functionality.
You can choose whether you are a beginner or experienced user by selecting required option at the right. This choice can always be changed in Global Preferences or Machine Settings windows.

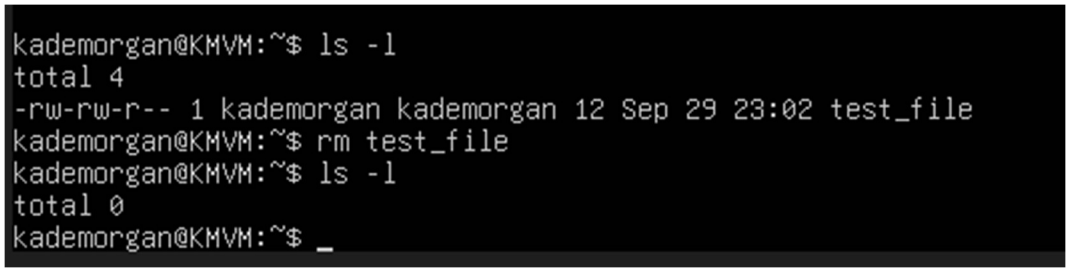
2. 
Oracle VirtualBox Manager
File
Machine
Help
New
Open
Settings
Discard
Start
KM_VM
Powered Off
Details
General
Name: KM_VM
Operating System: Ubuntu (64-bit)
System
Base Memory: 2048 MB
Processors: 4
Boot Order: Hard Disk, Optical, Floppy
Acceleration: Nested Paging, KVM Paravirtualization
Preview
KM_VM
Display
Video Memory: 16 MB
Graphics Controller: VMSVGA
Remote Desktop Server: Disabled
Recording: Disabled
Storage
Controller: IDE
IDE Primary Device 0: [Optical Drive] Unattended-141216d2-aa45-4dc2-89e2-60757e2060b3-aux-iso.viso (0 B)
Controller: SATA
SATA Port 0: KM_VM.vdi (Normal, 25.00 GB)
Audio
Host Driver: Default
Controller: ICH AC97
Network
Adapter 1: Intel PRO/1000 MT Desktop (NAT)
USB
USB Controller: OHCI, EHCI
Device Filters: 0 (0 active)

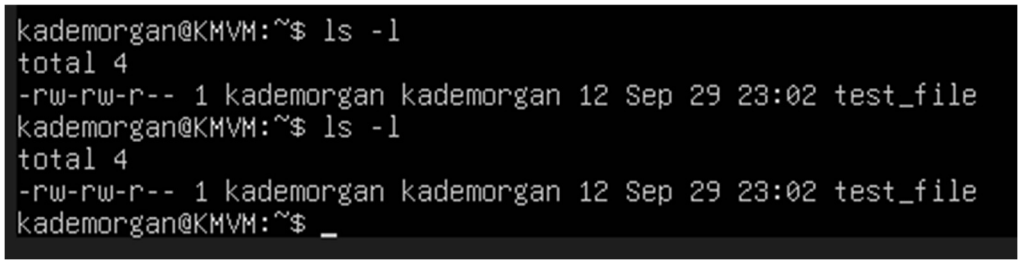
3. 
System
Motherboard
Processor
Acceleration
Base Memory
2048 MB
4 MB
28672 MB
Boot Device Order (BIOS only)
Hard Disk
Optical
Floppy
Network
Chipset
PIIX3
TPM Version
None
Pointing Device
USB Tablet
Features
I/O APIC
Hardware Clock in UTC
UEFI
OK
Cancel
Help

4. 
kademorgan@KMVM:~$ free -h
total used free shared buff/cache available
Mem: 1.9Gi 337Mi 1.5Gi 1.1Mi 285Mi 1.6Gi
Swap: 0B 0B 0B
kademorgan@KMVM:~$ nproc
4
kademorgan@KMVM:~$ df -h
Filesystem Size Used Avail Use% Mounted on
tmpfs 197M 1.1M 196M 1% /run
/dev/sda2 25G 2.6G 21G 12% /
tmpfs 984M 0 984M 0% /dev/shm
tmpfs 5.0M 0 5.0M 0% /run/lock
tmpfs 197M 12K 197M 1% /run/user/1000
kademorgan@KMVM:~$

5. 
kademorgan@KMVM:~$ ls -l
total 4
-rw-rw-r-- 1 kademorgan kademorgan 12 Sep 29 23:02 test_file
kademorgan@KMVM:~$

6. 
Take
Delete
Restore
Properties
Settings
Discard
Show
KM_VM (b...)
Running
Snapshots
Name
Taken
before deleting test_file
9/29/2025 4:06 PM (60 seconds ago)
Current State (changed)

7. 

8. 

Reflection Questions:

1. The use of snapshots allows a software developer to have a “safe” version of the software that can still be used. This can be useful if a developer accidentally removes a file or code snippet that is very valuable to the company, or in the event an update causes many functions of the system to not work correctly. The developer can return the system to a stable state and start from scratch.
2. Limiting resources allows multiple people to utilize resources from the same device, being allocated to accompany the needs of each employee. This is to reduce waste in computing power that normally goes unused. This comes with its disadvantages, however, as any downtime or maintenance for the device will affect more people’s ability to work.
3. In an online retail scenario, a snapshot would be especially useful if high network traffic overloads the servers and causes the site to crash. This scenario, for example on Black Friday, has the potential to lose massive amounts of revenue from lack of availability, potentially several millions of dollars for the largest online retailers like Amazon. A snapshot gives a baseline version of the program that can be quickly reimplemented, however potentially comes at the loss of valuable customer data.
4. Saving a file gives a stable, transportable store of data that can be re-accessed from within the operating system. This preserves data in storage and allows operating systems to function properly. A snapshot preserves the current state of the operating system and running programs, allowing users to go “back in time” and erase all inputs made after the snapshot. This preserves the integrity of the system itself and protects against internal failure. Saving a file would be done more for file editing and use of programs, while snapshots would be used for software development and testing.