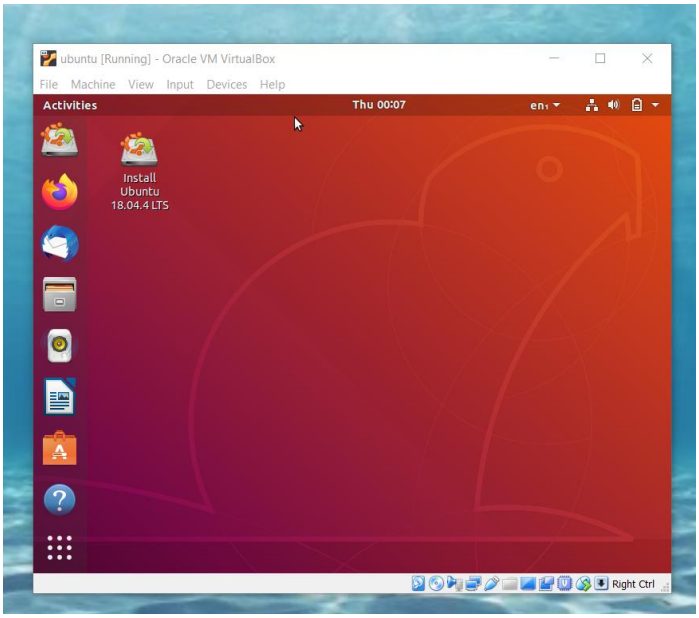
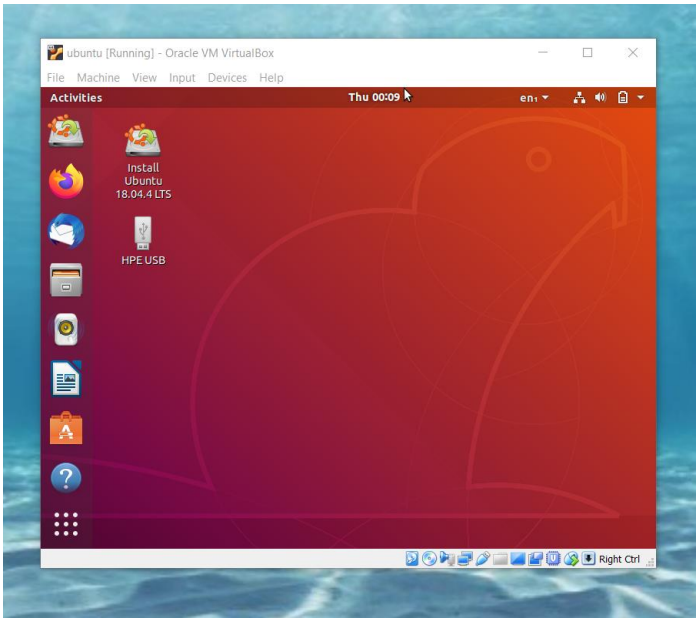
Assignment 2

Sarah Houlton

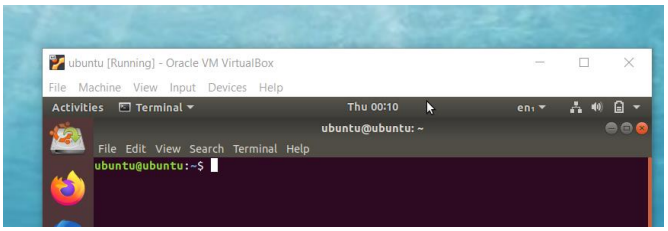
1.1-1.2



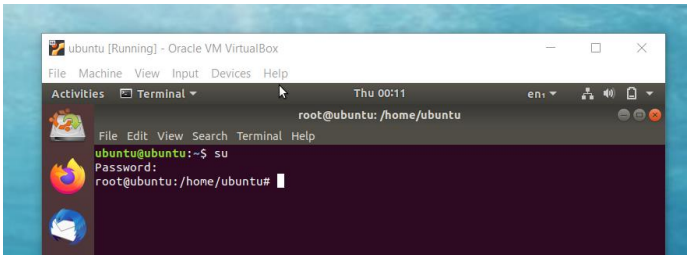
1.3



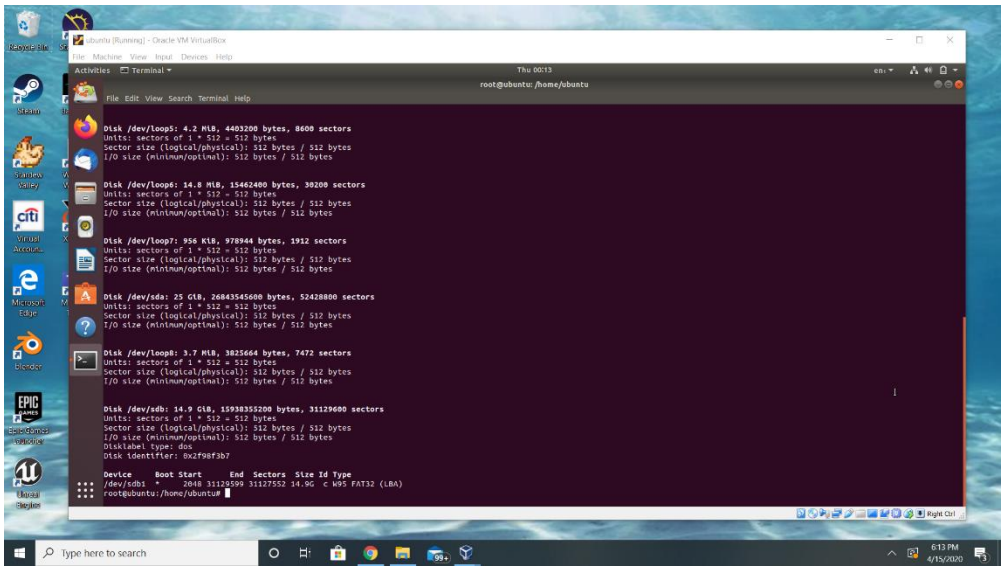
1.4


ubuntu [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Activities Terminal Thu 00:10 en
ubuntu@ubuntu: ~
File Edit View Search Terminal Help
ubuntu@ubuntu:~$

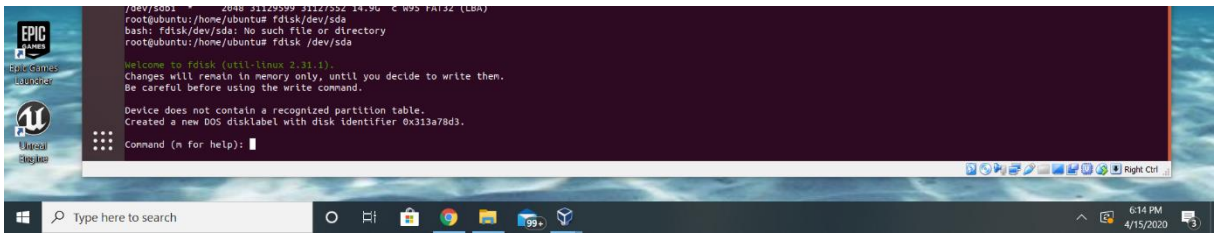
1.5


ubuntu [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Activities Terminal Thu 00:11 en
root@ubuntu: /home/ubuntu
File Edit View Search Terminal Help
ubuntu@ubuntu:~$ su
Password:
root@ubuntu:/home/ubuntu#

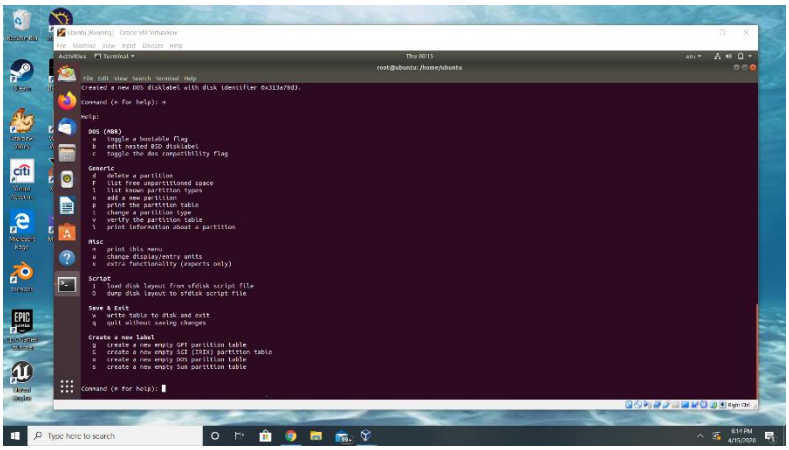
1.6


root@ubuntu: /home/ubuntu
Disk /dev/loop5: 4.2 MiB, 4403200 bytes, 8600 sectors
Disk /dev/loop6: 14.8 MiB, 15462400 bytes, 30200 sectors
Disk /dev/loop7: 956 KiB, 978944 bytes, 1912 sectors
Disk /dev/sda: 25 GiB, 26843545600 bytes, 52428800 sectors
Disk /dev/loop8: 3.7 MiB, 3825664 bytes, 7472 sectors
Disk /dev/sdb: 14.9 GiB, 15938355200 bytes, 31129600 sectors
Disklabel type: dos
Disk identifier: 0x2f98f3b7
Device Boot Start End Sectors Size Id Type
/dev/sdb1 * 2048 31128599 31127552 14.9G c W95 FAT32 (LBA)
root@ubuntu:/home/ubuntu#
Type here to search
6:13 PM
4/15/2020

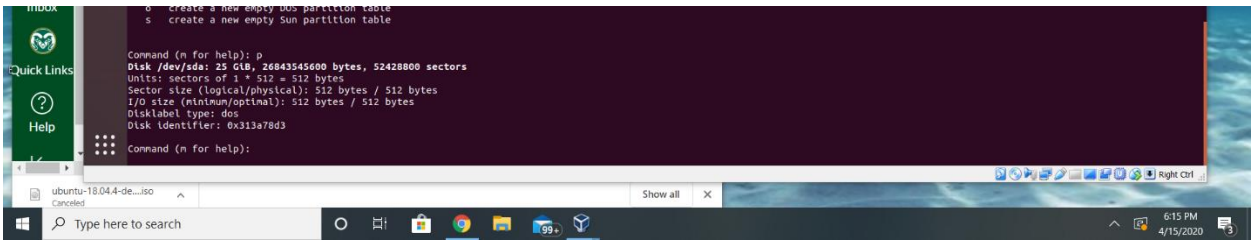
1.7


root@ubuntu:/home/ubuntu# fdisk/dev/sda
bash: fdisk/dev/sda: No such file or directory
root@ubuntu:/home/ubuntu# fdisk /dev/sda
Welcome to fdisk (util-linux 2.31.1).
Changes will remain in memory only, until you decide to write them.
Be careful before using the write command.
Device does not contain a recognized partition table.
Created a new DOS disklabel with disk identifier 0x313a78d3.
Command (m for help):
Type here to search
6:14 PM
4/15/2020

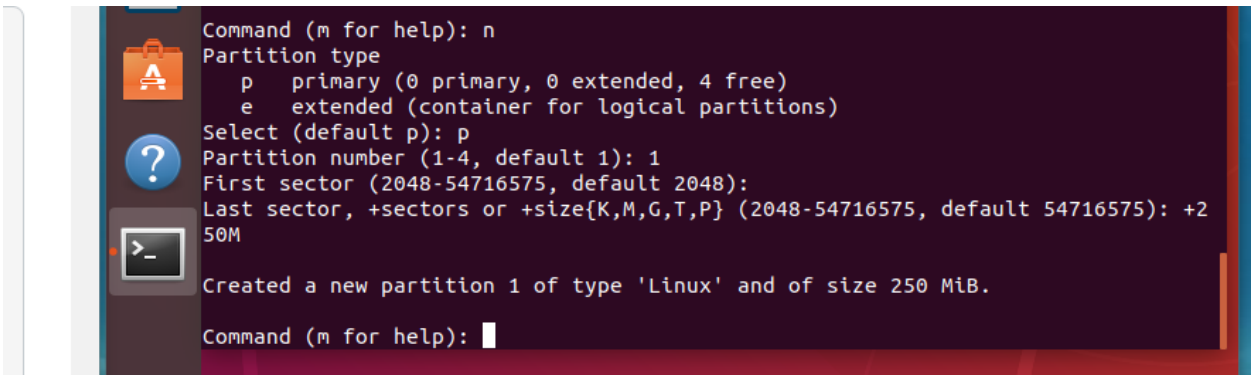
1.8



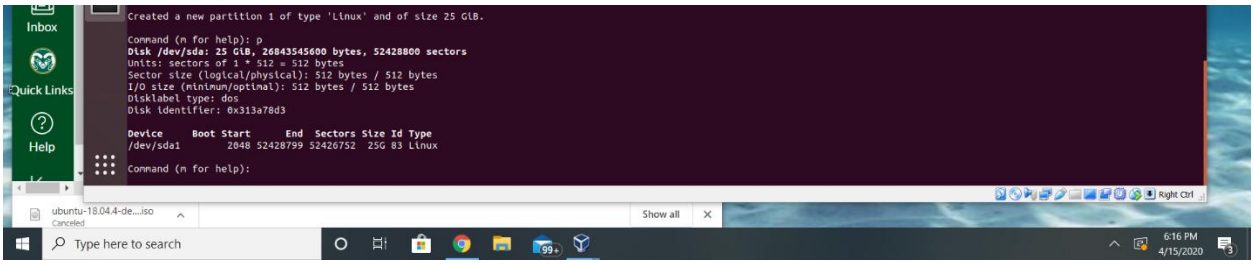
1.9


s create a new empty Sun partition table
Command (m for help): p
Disk /dev/sda: 25 GiB, 26843545600 bytes, 52428800 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disklabel type: dos
Disk identifier: 0x313a78d3
Command (m for help):
Quick Links
Help
Type here to search

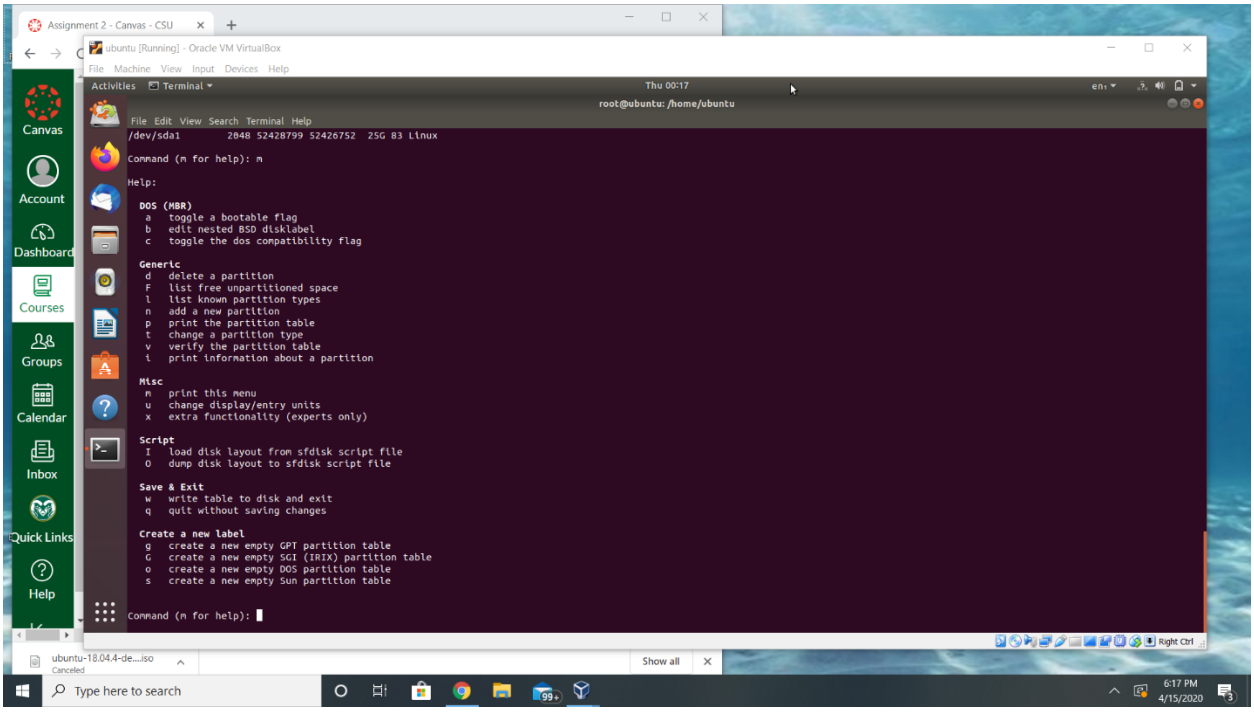
1.10


Command (m for help): n
Partition type
p primary (0 primary, 0 extended, 4 free)
e extended (container for logical partitions)
Select (default p): p
Partition number (1-4, default 1): 1
First sector (2048-54716575, default 2048):
Last sector, +sectors or +size{K,M,G,T,P} (2048-54716575, default 54716575): +250M
Created a new partition 1 of type 'Linux' and of size 250 MiB.
Command (m for help):

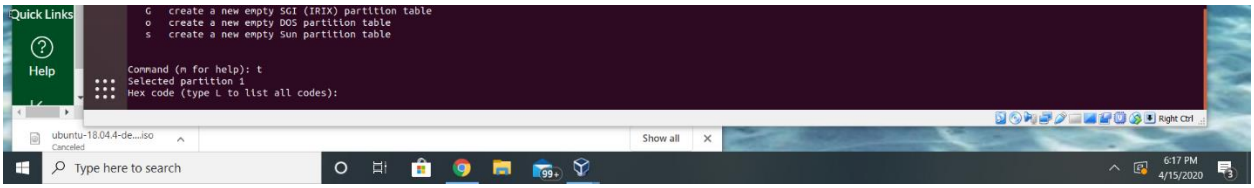
1.11


Created a new partition 1 of type 'Linux' and of size 25 GiB.
Command (m for help): p
Disk /dev/sda: 25 GiB, 26843545600 bytes, 52428800 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disklabel type: dos
Disk identifier: 0x313a78d3
Device Boot Start End Sectors Size Id Type
/dev/sda1 2048 52428799 52426752 25G 83 Linux
Command (m for help):
Quick Links
Help
Type here to search

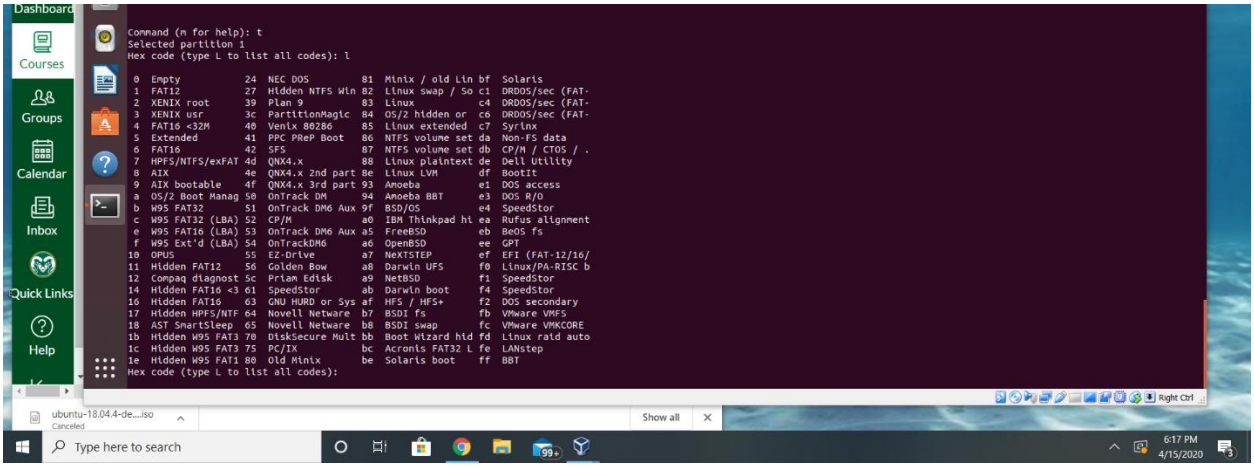
1.12


Assignment 2 - Canvas - CSU
ubuntu [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Activities
Terminal
Thu 00:17
root@ubuntu: /home/ubuntu
File Edit View Search Terminal Help
/dev/sda1 2048 52428799 52426752 25G 83 Linux
Command (m for help): m
Help:
DOS (MBR)
a toggle a bootable flag
b edit nested BSD disklabel
c toggle the dos compatibility flag
Generic
d delete a partition
F list free unpartitioned space
l list known partition types
n add a new partition
p print the partition table
t change a partition type
v verify the partition table
i print information about a partition
Misc
m print this menu
u change display/entry units
x extra functionality (experts only)
Script
I load disk layout from sfdisk script file
O dump disk layout to sfdisk script file
Save & Exit
w write table to disk and exit
q quit without saving changes
Create a new label
g create a new empty GPT partition table
G create a new empty SGI (IRIX) partition table
o create a new empty DOS partition table
s create a new empty Sun partition table
Command (m for help):
Canvas
Account
Dashboard
Courses
Groups
Calendar
Inbox
Quick Links
Help
ubuntu-18.04.4-de....iso
Canceled
Show all
Type here to search
Right Ctrl
6:17 PM
4/15/2020

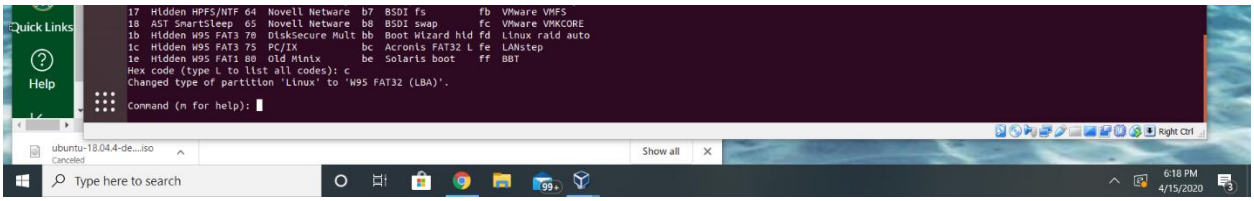
1.13


G create a new empty SGI (IRIX) partition table
o create a new empty DOS partition table
s create a new empty Sun partition table
Command (m for help): t
Selected partition 1
Hex code (type L to list all codes):
Quick Links
Help
ubuntu-18.04.4-de....iso
Canceled
Show all
Type here to search
Right Ctrl
6:17 PM
4/15/2020

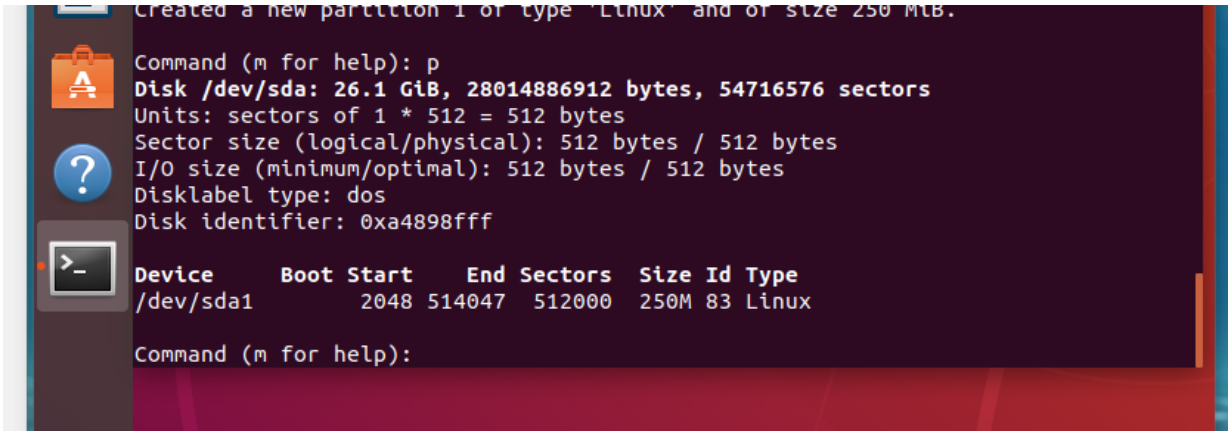
1.14


Command (m for help): t
Selected partition 1
Hex code (type L to list all codes): l
0 Empty 24 NEC DOS 81 Minix / old Lin bf Solaris
1 FAT12 27 Hidden NTFS Win 82 Linux swap / So c1 DRDOS/sec (FAT-
2 XENIX root 39 Plan 9 83 Linux c4 DRDOS/sec (FAT-
3 XENIX usr 3c PartitionMagic 84 OS/2 hidden or c6 DRDOS/sec (FAT-
4 FAT16 <32M 40 Venix 80286 85 Linux extended c7 Syrinx
5 Extended 41 PPC PReP Boot 86 NTFS volume set da Non-FS data
6 FAT16 42 SFS 87 NTFS volume set db CP/M / CTOS / .
7 HPFS/NTFS/exFAT 4d QNX4.x 88 Linux plaintext de Dell Utility
8 AIX 4e QNX4.x 2nd part 8e Linux LVM df BootIt
9 AIX bootable 4f QNX4.x 3rd part 93 Amoeba e1 DOS access
a OS/2 Boot Manag 50 OnTrack DM 94 Amoeba BBT e3 DOS R/O
b W95 FAT32 51 OnTrack DM6 Aux 9f BSD/OS e4 SpeedStor
c W95 FAT32 (LBA) 52 CP/M a0 IBM Thinkpad hi ea Rufus alignment
e W95 FAT16 (LBA) 53 OnTrack DM6 Aux a5 FreeBSD eb BeOS fs
f W95 Ext'd (LBA) 54 OnTrackDM6 a6 OpenBSD ee GPT
10 OPUS 55 EZ-Drive a7 NeXTSTEP ef EFI (FAT-12/16/
11 Hidden FAT12 56 Golden Bow a8 Darwin UFS f0 Linux/PA-RISC b
12 Compaq diagnost 5c Priam Edisk a9 NetBSD f1 SpeedStor
14 Hidden FAT16 <3 61 SpeedStor ab Darwin boot f4 SpeedStor
16 Hidden FAT16 63 GNU HURD or Sys af HFS / HFS+ f2 DOS secondary
17 Hidden HPFS/NTF 64 Novell Netware b7 BSDI fs fb VMware VMFS
18 AST SmartSleep 65 Novell Netware b8 BSDI swap fc VMware VMKCORE
1b Hidden W95 FAT3 70 DiskSecure Mult bb Boot Wizard hid fd Linux raid auto
1c Hidden W95 FAT3 75 PC/IX bc Acronis FAT32 L fe LANstep
1e Hidden W95 FAT1 80 Old Minix be Solaris boot ff BBT
Hex code (type L to list all codes):
Dashboard
Courses
Groups
Calendar
Inbox
Quick Links
Help
ubuntu-18.04.4-de....iso
Canceled
Show all
Type here to search
Right Ctrl
6:17 PM
4/15/2020

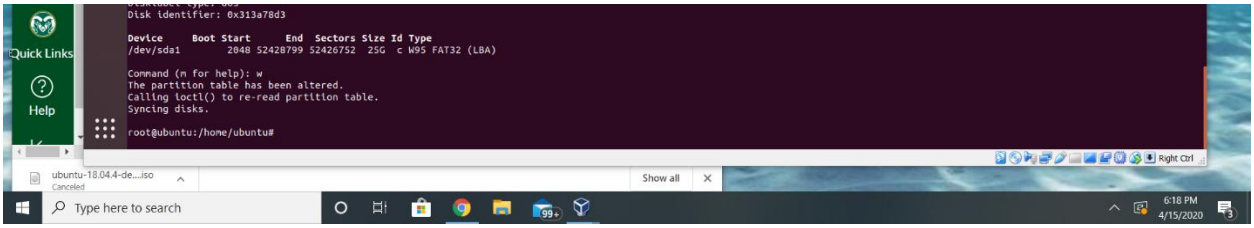
1.15



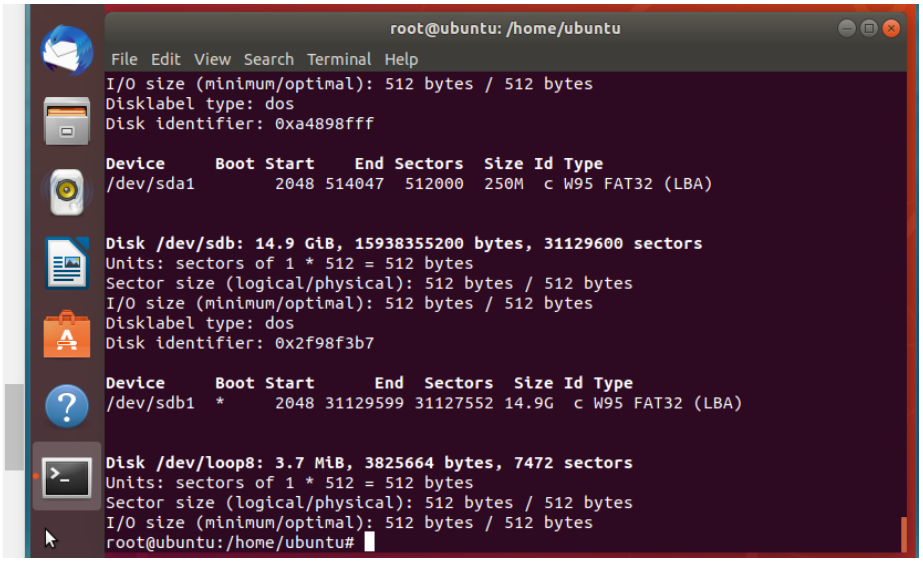
1.16



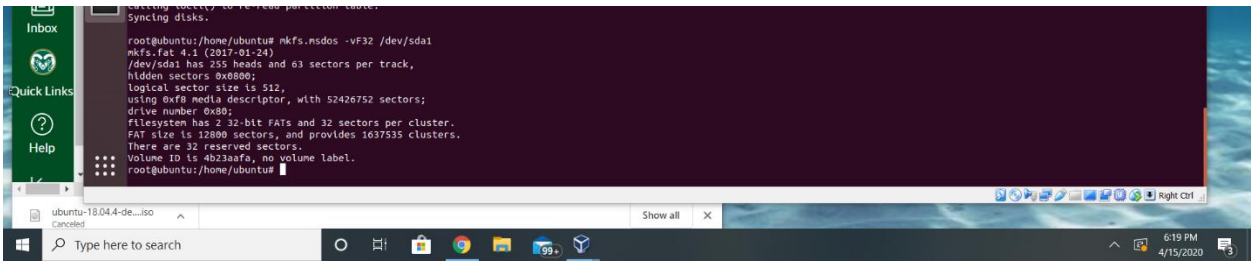
1.17



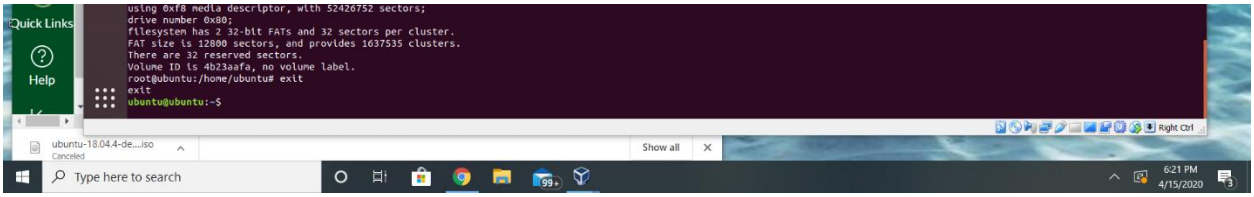
1.18



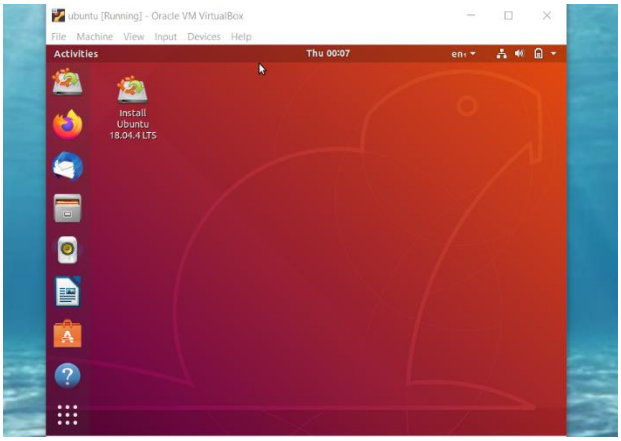
1.19


Syncing disks.
root@ubuntu:/home/ubuntu# mkfs.msdos -vF32 /dev/sda1
mkfs.fat 4.1 (2017-01-24)
/dev/sda1 has 255 heads and 63 sectors per track,
hidden sectors 0x0800;
logical sector size is 512,
using 0xf8 media descriptor, with 52426752 sectors;
drive number 0x80;
filesystem has 2 32-bit FATs and 32 sectors per cluster.
FAT size is 12800 sectors, and provides 1637535 clusters.
There are 32 reserved sectors.
Volume ID is 4b23aafa, no volume label.
root@ubuntu:/home/ubuntu#
Inbox
Quick Links
Help
ubuntu-18.04.4-de....iso
Canceled
Show all
Type here to search
Right Ctrl
6:19 PM
4/15/2020

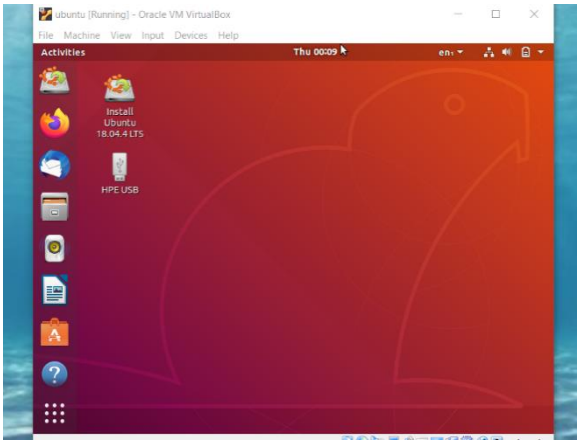
1.20


using 0xf8 media descriptor, with 52426752 sectors;
drive number 0x80;
filesystem has 2 32-bit FATs and 32 sectors per cluster.
FAT size is 12800 sectors, and provides 1637535 clusters.
There are 32 reserved sectors.
Volume ID is 4b23aafa, no volume label.
root@ubuntu:/home/ubuntu# exit
exit
ubuntu@ubuntu:~$
Quick Links
Help
ubuntu-18.04.4-de....iso
Canceled
Show all
Type here to search
Right Ctrl
6:21 PM
4/15/2020

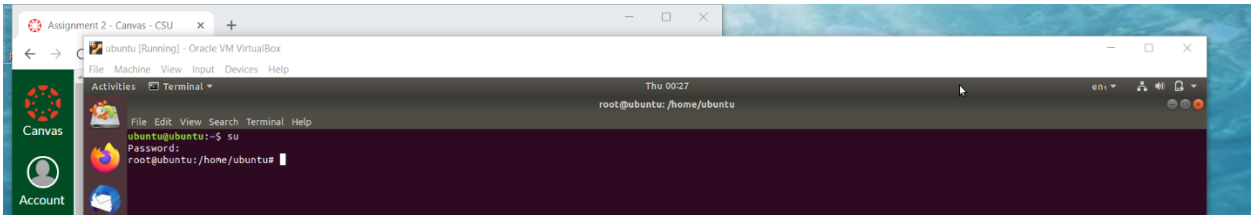
2.


ubuntu [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Activities
Thu 00:07
en
Install
Ubuntu
18.04.4 LTS

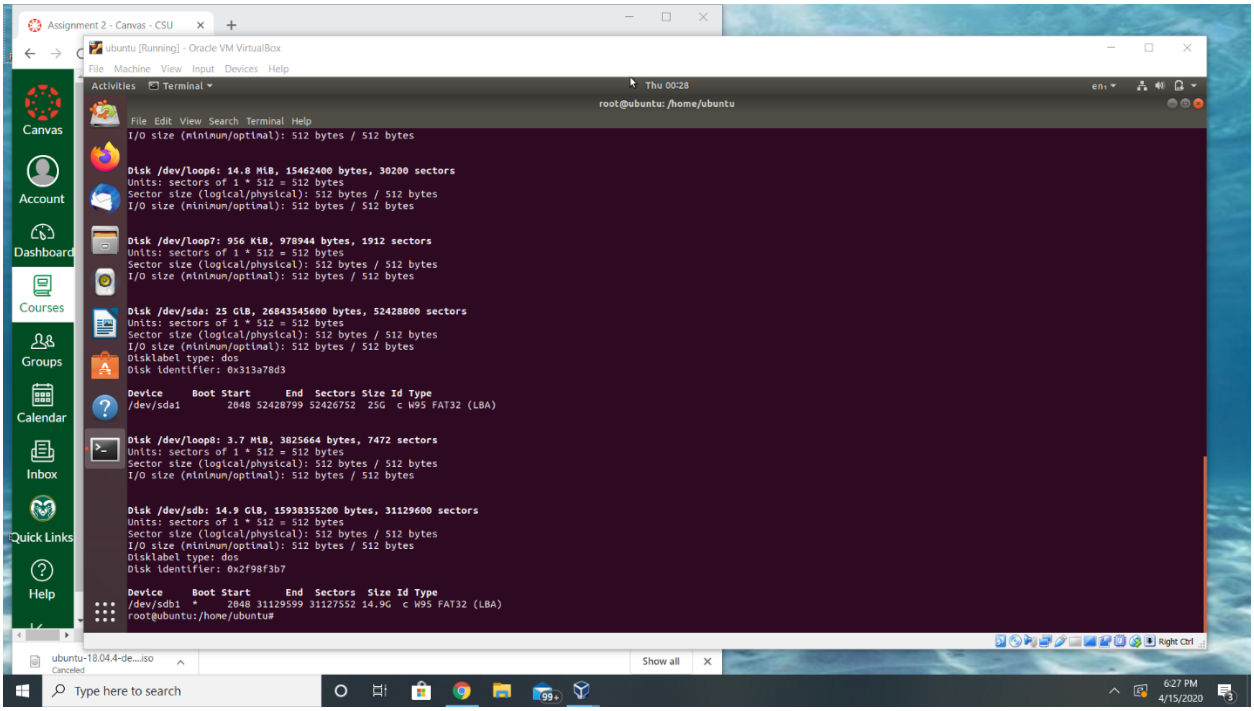
3.1


ubuntu [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Activities
Thu 00:09
en
Install
Ubuntu
18.04.4 LTS
HPE USB

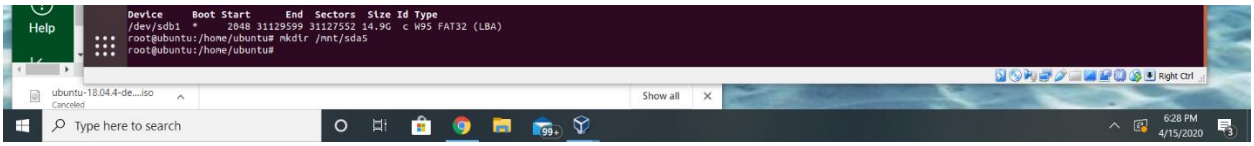
3.2


Assignment 2 - Canvas - CSU
ubuntu [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Activities Terminal
Thu 00:27
root@ubuntu: /home/ubuntu
File Edit View Search Terminal Help
ubuntu@ubuntu:~$ su
Password:
root@ubuntu:/home/ubuntu#
Canvas
Account

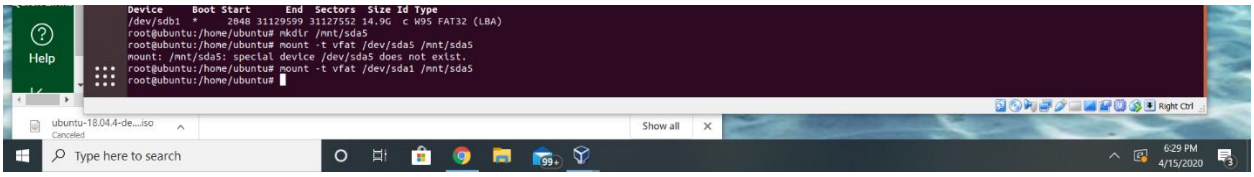
3.3


Assignment 2 - Canvas - CSU
ubuntu [Running] - Oracle VM VirtualBox
Activities Terminal
Thu 00:28
root@ubuntu: /home/ubuntu
File Edit View Search Terminal Help
I/O size (minimun/optimal): 512 bytes / 512 bytes
Disk /dev/loop6: 14.8 MiB, 15462400 bytes, 30200 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimun/optimal): 512 bytes / 512 bytes
Disk /dev/loop7: 956 KiB, 978944 bytes, 1912 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimun/optimal): 512 bytes / 512 bytes
Disk /dev/sda: 25 GiB, 26843545600 bytes, 52428800 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimun/optimal): 512 bytes / 512 bytes
Disklabel type: dos
Disk identifier: 0x313a78d3
Device Boot Start End Sectors Size Id Type
/dev/sda1 2048 52428799 52426752 25G c W95 FAT32 (LBA)
Disk /dev/loop8: 3.7 MiB, 3825664 bytes, 7472 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimun/optimal): 512 bytes / 512 bytes
Disk /dev/sdb: 14.9 GiB, 15938355200 bytes, 31129600 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimun/optimal): 512 bytes / 512 bytes
Disklabel type: dos
Disk identifier: 0x2f98f3b7
Device Boot Start End Sectors Size Id Type
/dev/sdb1 * 2048 31129599 31127552 14.9G c W95 FAT32 (LBA)
root@ubuntu:/home/ubuntu#
Canvas
Account
Dashboard
Courses
Groups
Calendar
Inbox
Quick Links
Help
Show all
Type here to search
6:27 PM
4/15/2020

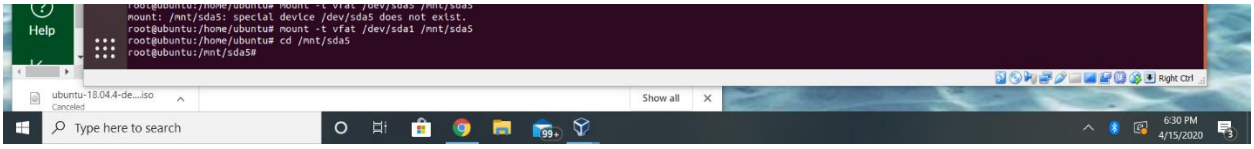
3.4


Device Boot Start End Sectors Size Id Type
/dev/sdb1 * 2048 31129599 31127552 14.9G c W95 FAT32 (LBA)
root@ubuntu:/home/ubuntu# mkdir /mnt/sda5
root@ubuntu:/home/ubuntu#
Help
Show all
Type here to search
6:28 PM
4/15/2020

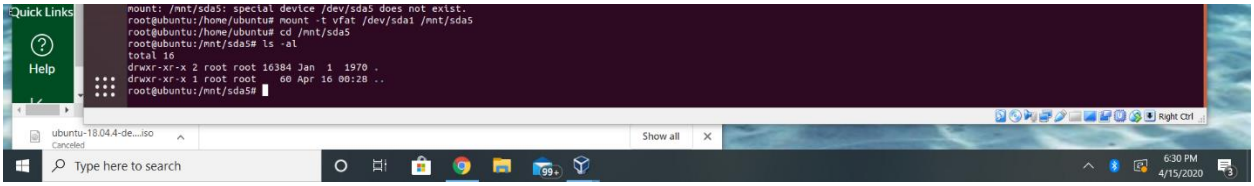
3.5


Device Boot Start End Sectors Size Id Type
/dev/sdb1 * 2048 31129599 31127552 14.9G c W95 FAT32 (LBA)
root@ubuntu:/home/ubuntu# mkdir /mnt/sda5
root@ubuntu:/home/ubuntu# mount -t vfat /dev/sda5 /mnt/sda5
mount: /mnt/sda5: special device /dev/sda5 does not exist.
root@ubuntu:/home/ubuntu# mount -t vfat /dev/sda1 /mnt/sda5
root@ubuntu:/home/ubuntu#
Help
Show all
Type here to search
6:29 PM
4/15/2020

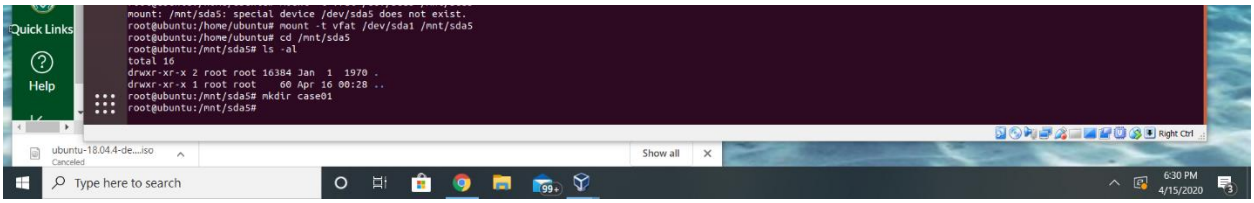
3.6


mount: /mnt/sda5: special device /dev/sda5 does not exist.
root@ubuntu:/home/ubuntu# mount -t vfat /dev/sda1 /mnt/sda5
root@ubuntu:/home/ubuntu# cd /mnt/sda5
root@ubuntu:/mnt/sda5#
Help
Show all
Type here to search
6:30 PM
4/15/2020

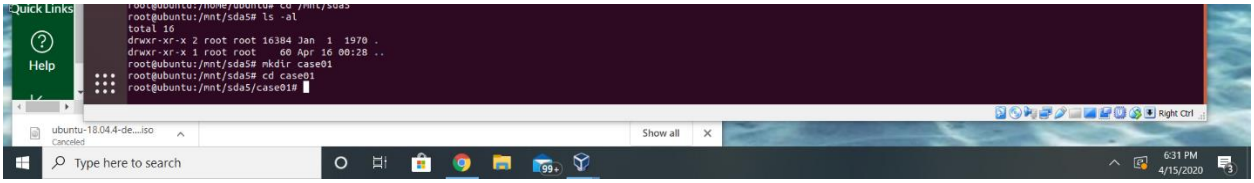
3.7



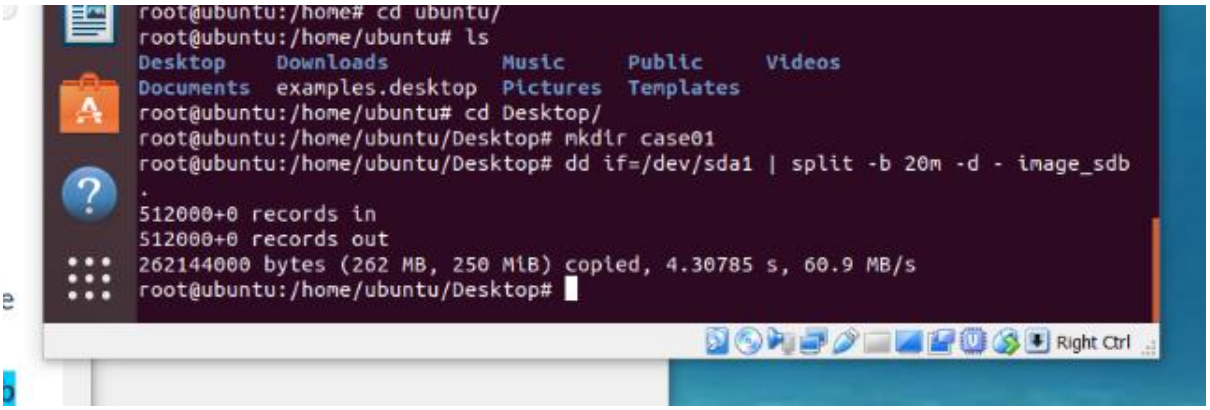
3.8



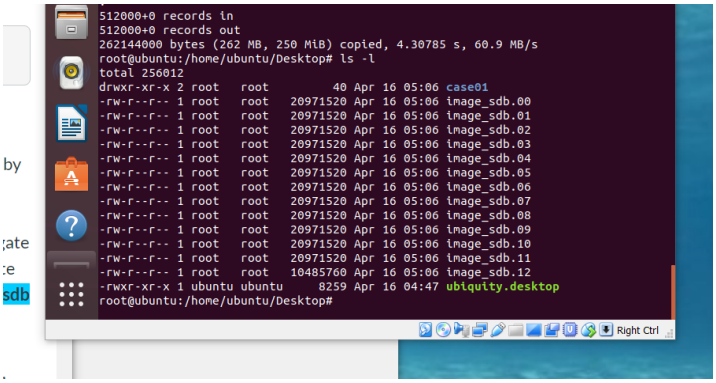
3.9



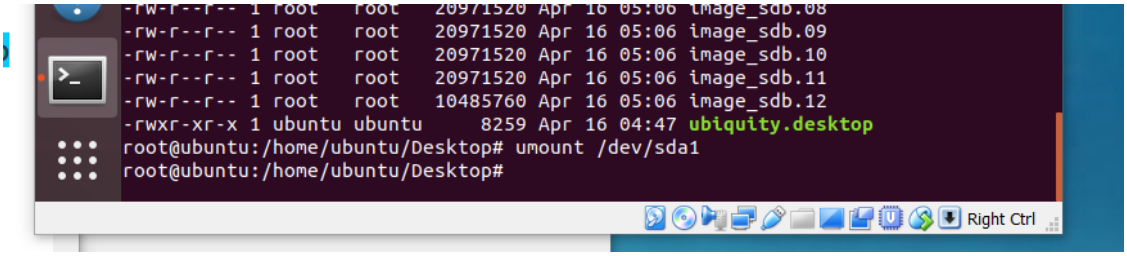
3.10



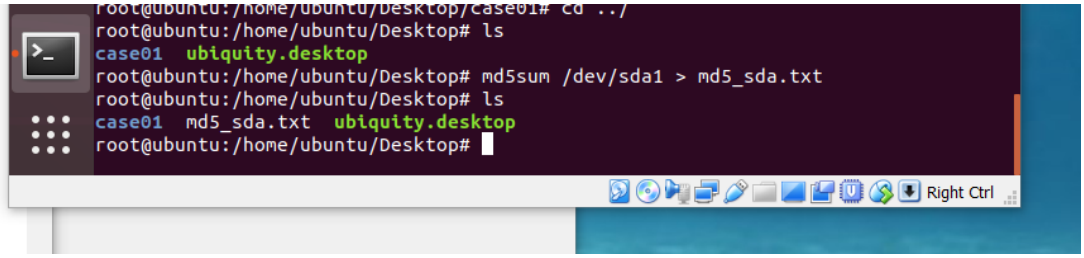
3.11



3.12

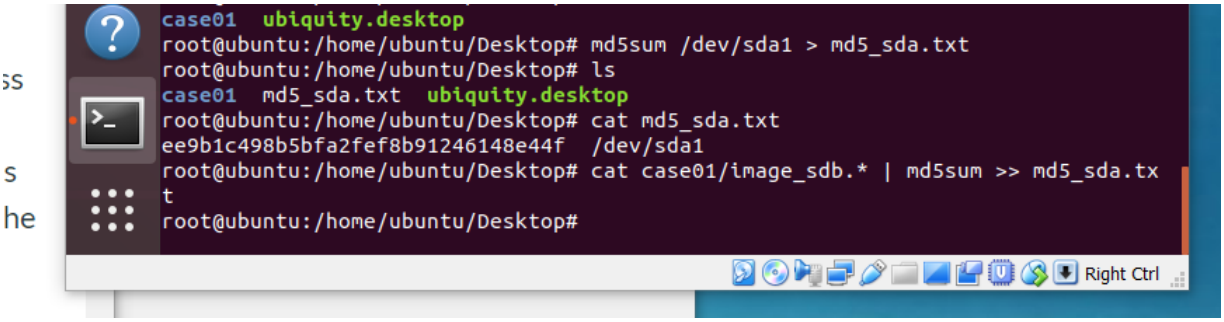


4.1



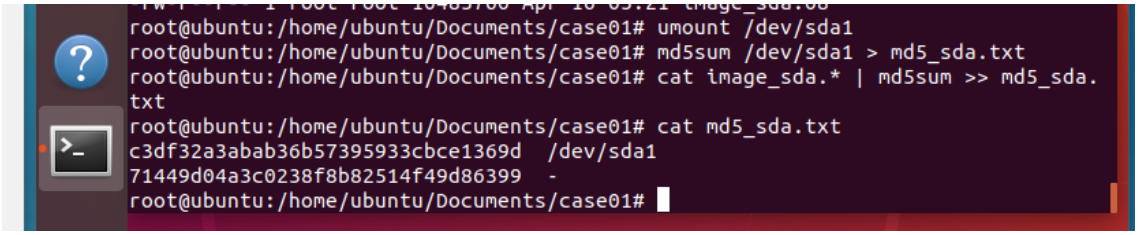
This command is doing an md5 hash on the full drive. You could also use sha256 or another hash to validate. Sha256 would not require any further parameters.

4.2



This command is piping each image file sequentially into md5sum and appending the result onto md5sda.txt. You could also use sha256 or another hash like sha512 here and they wouldn't require different parameters.

4.3



This command is displaying the contents of md5_sda.txt, which contains the hashes of the drive and the images. These don't match which means that the acquisition was unsuccessful. You could replace this with a diff command to display the differences between the top and bottom line, or a different viewer like vim. For diff you would need to put the outputs in two different files and pass them both as parameters. For a different viewer you wouldn't need new parameters.