

```
kali@kali:~
File Actions Edit View Help
root@kali:/home/kali# lsblk
NAME MAJ:MIN RM SIZE RO TYPE MOUNTPOINT
sda
         8:0
                0 80G 0 disk
 -sda1 8:1
                0
                    78G 0 part /
  -sda2
        8:2
                     1K 0 part
 -sda5
         8:5
                     2G 0 part [SWAP]
         8:16
               0 10.8G 0 disk
sdb
sro
        11:0
               1 1024M 0 rom
root@kali:/home/kali# fdisk -l
Disk /dev/sdb: 10.82 GiB, 11596411392 bytes, 22649241 sectors
Disk model: VBOX HARDDISK
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disk /dev/sda: 80 GiB, 85899345920 bytes, 167772160 sectors
Disk model: VBOX HARDDISK
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: 0×00c9bcc3
                                                                                      I
Device
           Boot
                    Start
                                End
                                      Sectors Size Id Type
/dev/sda1 *
                     2048 163577855 163575808 78G 83 Linux
/dev/sda2
                163579902 167770111
                                     4190210
                                               2G 5 Extended
/dev/sda5
                163579904 167770111
                                     4190208
                                               2G 82 Linux swap / Solaris
root@kali:/home/kali#
```

```
kali@kali:~
File Actions Edit View Help
  -sda2
         8:2
                     1K 0 part
                     2G 0 part [SWAP]
 -sda5 8:5
         8:16
sdb
                0 10.8G 0 disk
sr0
        11:0
               1 1024M 0 rom
root@kali:/home/kali# fdisk -l
Disk /dev/sdb: 10.82 GiB, 11596411392 bytes, 22649241 sectors
Disk model: VBOX HARDDISK
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disk /dev/sda: 80 GiB, 85899345920 bytes, 167772160 sectors
Disk model: VBOX HARDDISK
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: 0×00c9bcc3
Device
           Boot
                    Start
                                      Sectors Size Id Type
/dev/sda1 *
                     2048 163577855 163575808 78G 83 Linux
/dev/sda2
                163579902 167770111
                                      4190210
                                                2G 5 Extended
                                                                                     I
/dev/sda5
                163579904 167770111 4190208
                                                2G 82 Linux swap / Solaris
root@kali:/home/kali# fdisk /dev/sdb
Welcome to fdisk (util-linux 2.34).
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 0×6cce497e.
Command (m for help):
```

kali@kali:~ File Actions Edit View Help n add a new partition print the partition table change a partition type verify the partition table print information about a partition Misc print this menu change display/entry units extra functionality (experts only) Script load disk layout from sfdisk script file dump disk layout to sfdisk script file Save & Exit write table to disk and exit 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 create a new empty Sun partition table Command (m for help): p Disk /dev/sdb: 10.82 GiB, 11596411392 bytes, 22649241 sectors Disk model: VBOX HARDDISK 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: 0×6cce497e Command (m for help):

```
kali@kali:~
File Actions Edit View Help
   i print information about a partition
  Misc
      print this menu
       change display/entry units
       extra functionality (experts only)
  Script
   I load disk layout from sfdisk script file
       dump disk layout to sfdisk script file
  Save & Exit
       write table to disk and exit
       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): p
Disk /dev/sdb: 10.82 GiB, 11596411392 bytes, 22649241 sectors
Disk model: VBOX HARDDISK
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: 0×6cce497e
Command (m for help): n
 Partition type
   p primary (0 primary, 0 extended, 4 free)
   e extended (container for logical partitions)
```

Select (default p):

```
kali@kali:~
File Actions Edit View Help
       print this menu
      change display/entry units
       extra functionality (experts only)
  Script
       load disk layout from sfdisk script file
       dump disk layout to sfdisk script file
  Save & Exit
       write table to disk and exit
       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
      create a new empty Sun partition table
Command (m for help): p
Disk /dev/sdb: 10.82 GiB, 11596411392 bytes, 22649241 sectors
Disk model: VBOX HARDDISK
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: 0×6cce497e
Command (m for help): n
Partition type
   p primary (0 primary, 0 extended, 4 free)
       extended (container for logical partitions)
Select (default p): p
Partition number (1-4, default 1): 1
First sector (2048-22649240, default 2048): 2048
Last sector, +/-sectors or +/-size{K,M,G,T,P} (2048-22649240, default 22649240): +4G
```

kali@kali:~

```
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: 0×6cce497e
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 (2048-22649240, default 2048): 2048
Last sector, +/-sectors or +/-size{K,M,G,T,P} (2048-22649240, default 22649240): +4G
Created a new partition 1 of type 'Linux' and of size 4 GiB.
Command (m for help): p
Disk /dev/sdb: 10.82 GiB, 11596411392 bytes, 22649241 sectors
Disk model: VBOX HARDDISK
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: 0×6cce497e
Device
           Boot Start
                          End Sectors Size Id Type
/dev/sdb1
                 2048 8390655 8388608
                                      4G 83 Linux
Command (m for help): n
Partition type
   p primary (1 primary, 0 extended, 3 free)
   e extended (container for logical partitions)
Select (default p): p
Partition number (2-4, default 2): 2
First sector (8390656-22649240, default 8390656): +66
```

File Actions Edit View Help

```
kali@kali:~
File Actions Edit View Help
Disklabel type: dos
Disk identifier: 0×6cce497e
Device
           Boot
                  Start
                             End Sectors Size Id Type
/dev/sdb1
                   2048 8390655 8388608
                                            4G 83 Linux
/dev/sdb2
                8390656 18876415 10485760
                                            5G 83 Linux
Command (m for help): d
Partition number (1,2, default 2): 2
Partition 2 has been deleted.
Command (m for help): p
Disk /dev/sdb: 10.82 GiB, 11596411392 bytes, 22649241 sectors
Disk model: VBOX HARDDISK
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: 0×6cce497e
Device
           Boot Start
                          End Sectors Size Id Type
                 2048 8390655 8388608 4G 83 Linux
/dev/sdb1
Command (m for help): n
Partition type
   p primary (1 primary, 0 extended, 3 free)
   e extended (container for logical partitions)
Select (default p): e
Partition number (2-4, default 2): 2
First sector (8390656-22649240, default 8390656): 8390656
Last sector, +/-sectors or +/-size{K,M,G,T,P} (8390656-22649240, default 22649240): +6G
```

Created a new partition 2 of type 'Extended' and of size 6 GiB.

Command (m for help):

kali@kali: ~ File Actions Edit View Help Disk /dev/sdb: 10.82 GiB, 11596411392 bytes, 22649241 sectors Disk model: VBOX HARDDISK 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: 0×6cce497e Device **Boot Start End Sectors Size Id Type** /dev/sdb1 2048 8390655 8388608 4G 83 Linux Command (m for help): n Partition type p primary (1 primary, 0 extended, 3 free) e extended (container for logical partitions) Select (default p): e Partition number (2-4, default 2): 2 First sector (8390656-22649240, default 8390656): 8390656 Last sector, +/-sectors or +/-size{K,M,G,T,P} (8390656-22649240, default 22649240): +6G Created a new partition 2 of type 'Extended' and of size 6 GiB. Command (m for help): p Disk /dev/sdb: 10.82 GiB, 11596411392 bytes, 22649241 sectors Disk model: VBOX HARDDISK 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: 0×6cce497e Device

Command (m for help):

/dev/sdb1

/dev/sdb2

Boot

Start

2048 8390655 8388608

8390656 20973567 12582912

End Sectors Size Id Type

4G 83 Linux

6G 5 Extended

```
kali@kali:~
Last sector, +/-sectors or +/-size{K,M,G,T,P} (8390656-22649240, default 22649240): +6G
```

Device Boot Start **End Sectors Size Id Type** /dev/sdb1 2048 8390655 8388608 4G 83 Linux /dev/sdb2 8390656 20973567 12582912 6G 5 Extended Command (m for help): w The partition table has been altered. Calling ioctl() to re-read partition table. Syncing disks.

End Sectors Size Id Type

4G 83 Linux

2048 8390655 8388608

First sector (8390656-22649240, default 8390656): 8390656

Created a new partition 2 of type 'Extended' and of size 6 GiB.

Disk /dev/sdb: 10.82 GiB, 11596411392 bytes, 22649241 sectors

Sector size (logical/physical): 512 bytes / 512 bytes I/O size (minimum/optimal): 512 bytes / 512 bytes

p primary (1 primary, 0 extended, 3 free) e extended (container for logical partitions)

I

root@kali:/home/kali#

File Actions Edit View Help Disklabel type: dos

Device

/dev/sdb1

Partition type

Disk identifier: 0×6cce497e

Command (m for help): n

Select (default p): e

Command (m for help): p

Disklabel type: dos

Disk model: VBOX HARDDISK

Disk identifier: 0×6cce497e

Boot Start

Partition number (2-4, default 2): 2

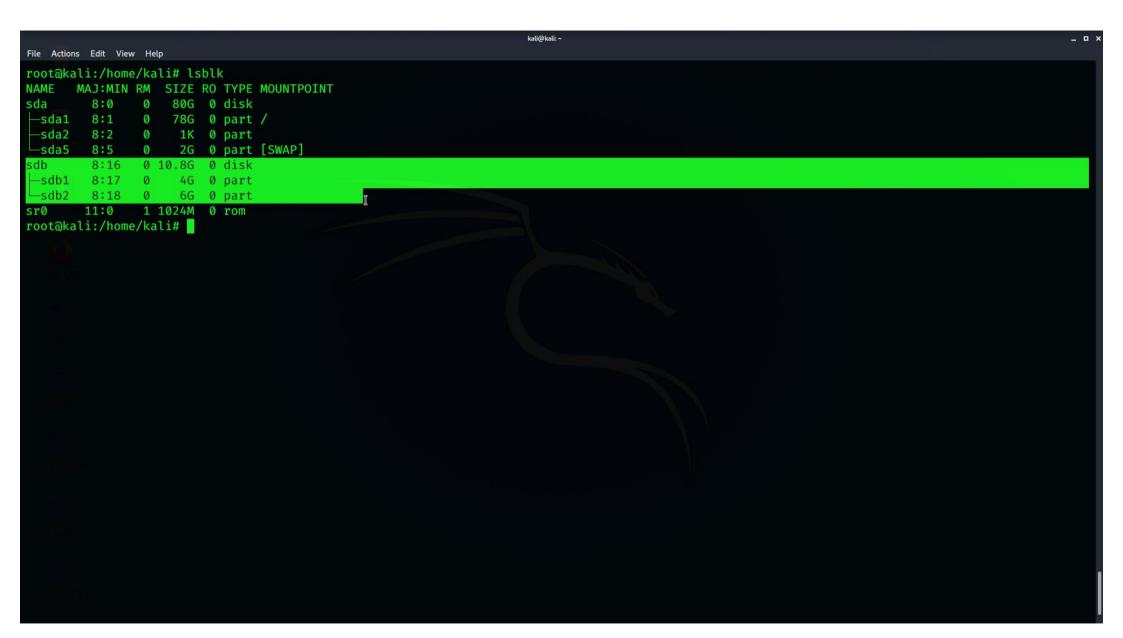
Units: sectors of 1 * 512 = 512 bytes

```
File Actions Edit View Help
Disk /dev/sdb: 10.82 GiB, 11596411392 bytes, 22649241 sectors
Disk model: VBOX HARDDISK
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: 0×6cce497e
Device
           Boot Start
                          End Sectors Size Id Type
/dev/sdb1
                 2048 8390655 8388608
                                        4G 83 Linux
Command (m for help): n
Partition type
   p primary (1 primary, 0 extended, 3 free)
   e extended (container for logical partitions)
Select (default p): p
Partition number (2-4, default 2): 2
First sector (8390656-22649240, default 8390656): 8390656
Last sector, +/-sectors or +/-size{K,M,G,T,P} (8390656-22649240, default 22649240): +6G
Created a new partition 2 of type 'Linux' and of size 6 GiB.
Command (m for help): p
Disk /dev/sdb: 10.82 GiB, 11596411392 bytes, 22649241 sectors
Disk model: VBOX HARDDISK
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: 0×6cce497e
Device
                  Start
                             End Sectors Size Id Type
           Boot
/dev/sdb1
                   2048 8390655 8388608 4G B3 Linux
/dev/sdb2
                8390656 20973567 12582912 6G 83 Linux
Command (m for help):
```

```
Disklabel type: dos
Disk identifier: 0×6cce497e
Device
           Boot Start
                          End Sectors Size Id Type
/dev/sdb1
                 2048 8390655 8388608
                                      4G 83 Linux
Command (m for help): n
Partition type
   p primary (1 primary, 0 extended, 3 free)
   e extended (container for logical partitions)
Select (default p): p
Partition number (2-4, default 2): 2
First sector (8390656-22649240, default 8390656): 8390656
Last sector, +/-sectors or +/-size{K,M,G,T,P} (8390656-22649240, default 22649240): +6G
Created a new partition 2 of type 'Linux' and of size 6 GiB.
Command (m for help): p
Disk /dev/sdb: 10.82 GiB, 11596411392 bytes, 22649241 sectors
Disk model: VBOX HARDDISK
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: 0×6cce497e
Device
           Boot Start
                             End Sectors Size Id Type
/dev/sdb1
                   2048 8390655 8388608
                                           4G 83 Linux
/dev/sdb2
                8390656 20973567 12582912 6G 83 Linux
Command (m for help): w
The partition table has been altered.
Calling ioctl() to re-read partition table.
Syncing disks.
                                    I
```

root@kali:/home/kali#

File Actions Edit View Help



```
File Actions Edit View Help
```

Disk identifier: 0×6cce497e

Device Boot Start End Sectors Size Id Type /dev/sdb1 2048 8390655 8388608 4G 83 Linux /dev/sdb2 8390656 20973567 12582912 6G 83 Linux

Disk /dev/sda: 80 GiB, 85899345920 bytes, 167772160 sectors

Disk model: VBOX HARDDISK

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: 0×00c9bcc3

Device Sectors Size Id Type Boot Start End /dev/sda1 * 2048 163577855 163575808 78G 83 Linux /dev/sda2 163579902 167770111 4190210 2G 5 Extended /dev/sda5 163579904 167770111 4190208 2G 82 Linux swap / Solaris

root@kali:/home/kali# mkfs.ext4 -j /dev/sdb2 mke2fs 1.45.5 (07-Jan-2020) Found a dos partition table in /dev/sdb2 Proceed anyway? (y,N) y

Creating filesystem with 1572864 4k blocks and 393216 inodes

Filesystem UUID: f1345bf6-ca4f-49da-96cd-b9a5955c7359

Superblock backups stored on blocks:

32768, 98304, 163840, 229376, 294912, 819200, 884736

Allocating group tables: done Writing inode tables: done

Creating journal (16384 blocks): done

Writing superblocks and filesystem accounting information: done

root@kali:/home/kali#

kati@kati:-

```
File Actions Edit View Help
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disklabel type: dos
Disk identifier: 0×6cce497e
Device
                  Start
                             End Sectors Size Id Type
           Boot
/dev/sdb1
                   2048 8390655 8388608
                                           4G 83 Linux
/dev/sdb2
                8390656 20973567 12582912
                                            6G 83 Linux
Disk /dev/sda: 80 GiB, 85899345920 bytes, 167772160 sectors
Disk model: VBOX HARDDISK
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: 0×00c9bcc3
Device
           Boot
                                      Sectors Size Id Type
                    Start
/dev/sda1 *
                     2048 163577855 163575808 78G 83 Linux
/dev/sda2
                163579902 167770111
                                      4190210
                                               2G 5 Extended
/dev/sda5
                163579904 167770111
                                      4190208
                                               2G 82 Linux swap / Solaris
root@kali:/home/kali# mkfs -t xfs -f /dev/sdb1
meta-data=/dev/sdb1
                                 isize=512
                                              agcount=4, agsize=262144 blks
                                 sectsz=512
                                              attr=2, projid32bit=1
                                              finobt=1, sparse=1, rmapbt=0
                                 crc=1
                                 reflink=1
data
                                 bsize=4096
                                              blocks=1048576, imaxpct=25
                                              swidth=0 blks
                                 sunit=0
         =version 2
                                 bsize=4096
                                              ascii-ci=0, ftvpe=1
naming
         =internal log
                                 bsize=4096
                                              blocks=2560, version=2
log
                                              sunit=0 blks, lazy-count=1
                                 sectsz=512
                                             blocks=0, rtextents=0
realtime =none
                                 extsz=4096
root@kali:/home/kali#
```

kali@kali:~

```
File Actions Edit View Help
root@kali:/home/kali/Desktop# mkdir data
root@kali:/home/kali/Desktop# mkdir music
root@kali:/home/kali/Desktop# ls
Assignment3_pic Assignment5 data firefox-esr.desktop LinuxAssignment music myjava Test
root@kali:/home/kali/Desktop# mount /dev/sdb1 data
root@kali:/home/kali/Desktop# mount /dev/sdb2 music
root@kali:/home/kali/Desktop# lsblk
       MAJ:MIN RM SIZE RO TYPE MOUNTPOINT
                    80G 0 disk
sda
         8:0
                    78G 0 part /
 -sda1
         8:1
  -sda2
         8:2
                     1K 0 part
                     2G 0 part [SWAP]
 -sda5
         8:5
         8:16
               0 10.8G 0 disk
sdb
 -sdb1
         8:17
                     4G 0 part /home/kali/Desktop/data
                     6G 0 part /home/kali/Desktop/music
 -sdb2
         8:18
        11:0
                1 1024M 0 rom
sr0
root@kali:/home/kali/Desktop# df -l
Filesystem
               1K-blocks
                              Used Available Use% Mounted on
udev
                  999160
                                      999160
                                               0% /dev
tmpfs
                              6032
                                               3% /run
                  203972
                                      197940
/dev/sda1
                           8726768 67147556 12% /
                79980100
                                               0% /dev/shm
tmpfs
                 1019860
                                 0
                                     1019860
                                               0% /run/lock
tmpfs
                    5120
                                        5120
tmpfs
                 1019860
                                 0
                                     1019860
                                               0% /sys/fs/cgroup
                                              30% /media/sf sharedfolder
sharedfolder
               499104044 147394684 351709360
tmpfs
                                12
                                      203960
                                               1% /run/user/1000
                  203972
/dev/sdb1
                 4184064
                             62248
                                     4121816
                                               2% /home/kali/Desktop/data
/dev/sdb2
                 6127168
                             24568
                                     5771644
                                               1% / home/kali/Desktop/music
root@kali:/home/kali/Desktop#
```

kali@kali: ~/Desktop File Actions Edit View Help root@kali:/home/kali/Desktop# seq 100000000 > data/f1 root@kali:/home/kali/Desktop# du -h data/f1 848M data/f1 root@kali:/home/kali/Desktop# seq 100000000 > music/f2
root@kali:/home/kali/Desktop# du -h music/f2 848M music/f2 root@kali:/home/kali/Desktop#

kali@kali: -/Desktop

```
root@kali:/home/kali/Desktop# seg 100000000 > data/f1
root@kali:/home/kali/Desktop# du -h data/f1
       data/f1
root@kali:/home/kali/Desktop# seq 100000000 > music/f2
root@kali:/home/kali/Desktop# du -h music/f2
848M music/f2
root@kali:/home/kali/Desktop# df -h
Filesystem
               Size Used Avail Use% Mounted on
                                 0% /dev
               976M
                       0 976M
udev
tmpfs
               200M 5.9M 194M
                                 3% /run
/dev/sda1
                77G 9.1G
                           64G
                                13% /
                       0 996M
                                 0% /dev/shm
tmpfs
               996M
                                 0% /run/lock
tmpfs
               5.0M
                       0 5.0M
tmpfs
               996M
                       0 996M
                                 0% /sys/fs/cgroup
sharedfolder
               476G 141G 336G 30% /media/sf_sharedfolder
tmpfs
               200M
                     12K 200M
                                 1% /run/user/1000
               4.0G 909M 3.2G 23% /home/kali/Desktop/data
/dev/sdb1
               5.9G 872M 4.7G 16% /home/kali/Desktop/music
/dev/sdb2
root@kali:/home/kali/Desktop#
```

File Actions Edit View Help

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