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#Check for available space
fdisk -l /dev/sdb

#Create a new partition
fdisk /dev/sdb
#Then type n enter, and all default things

#Create LVM physical volume
pvcreate /dev/sdb1

#Create volume group
vgcreate savg /dev/sdb1

#Create logical volume named tmp with size of 1GB
lvcreate -L 1G -n tmp savg

#Make it ext4 file sys on tmp volume
mkfs.xfs /dev/savg/home

#Allocate 80% for home
lvcreate -l +80%FREE -n home savg

#Make it xfs file sys on home volume
mkfs.xfs /dev/savg/home

#Edit /etc/fstab and add these lines:
/dev/mapper/savg-tmp new/tmp ext4 nodev,nosuid,noexec 0 0
/dev/mapper/savg-home new/home xfs nodev 0 0

#Then do mount -a to mount them

#Move all files into new home directory
mv home/* new/home
mv tmp/* new/tmp

#umount both new volumes and then edit the /etc/fstab file to read:
/dev/mapper/savg-tmp /tmp ext4 nodev,nosuid,noexec 0 0
/dev/mapper/savg-home /home xfs nodev 0 0

#Now move new/tmp and new/home to /
mv new/tmp /
mv new/home /

#Do a mount -a to mount them

#Do chmod 1777 tmp to have the same permissions as the original tmp file

#This assignment took me 6 hours.
```

