System Operations Lab Assignment

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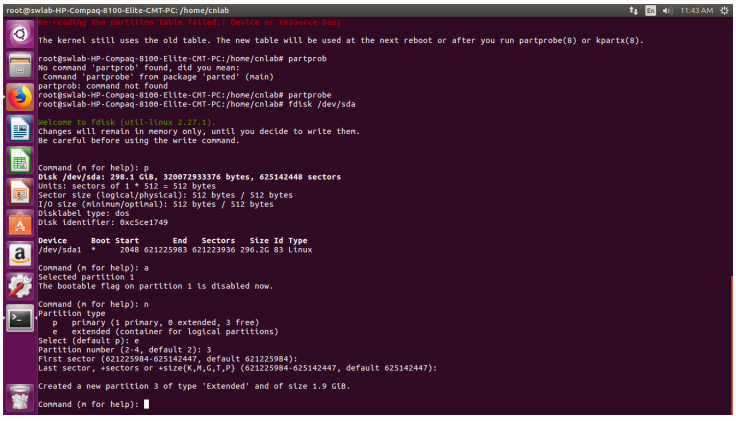
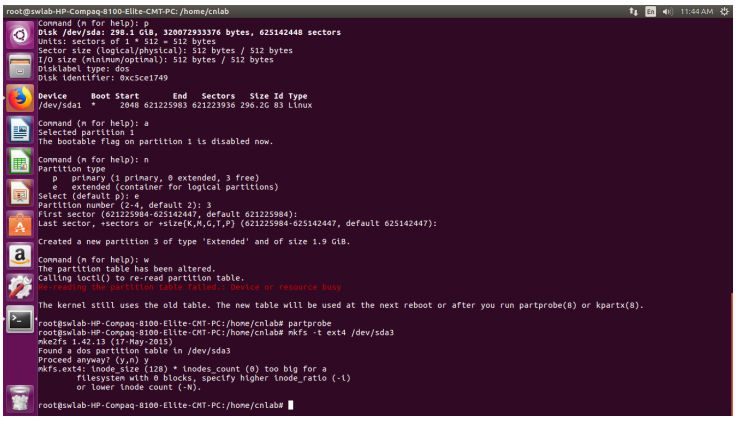
1 Installation with creation of file system using fdisk (manual) with at least one logical partition

We will first list all the existing partitions. Then add a partition with the help of fdisk GUI. Then again list the partitions.

Steps to Follow
Step 1 : List the partitions



Step 2: Adding a new partition



Step 3 : List partitions again to view the new added partition

2 Root Password change using boot loader options

Since everything happens during the boot time. It's unable to click screen shots. So I would just lay out the steps of changing the password during boot.

Steps to Follow

Step 1: Restart the computer

Step 2: Open the Grub GUI during boot up.

Step 3: Highlight the OS in which you want to change the root password.

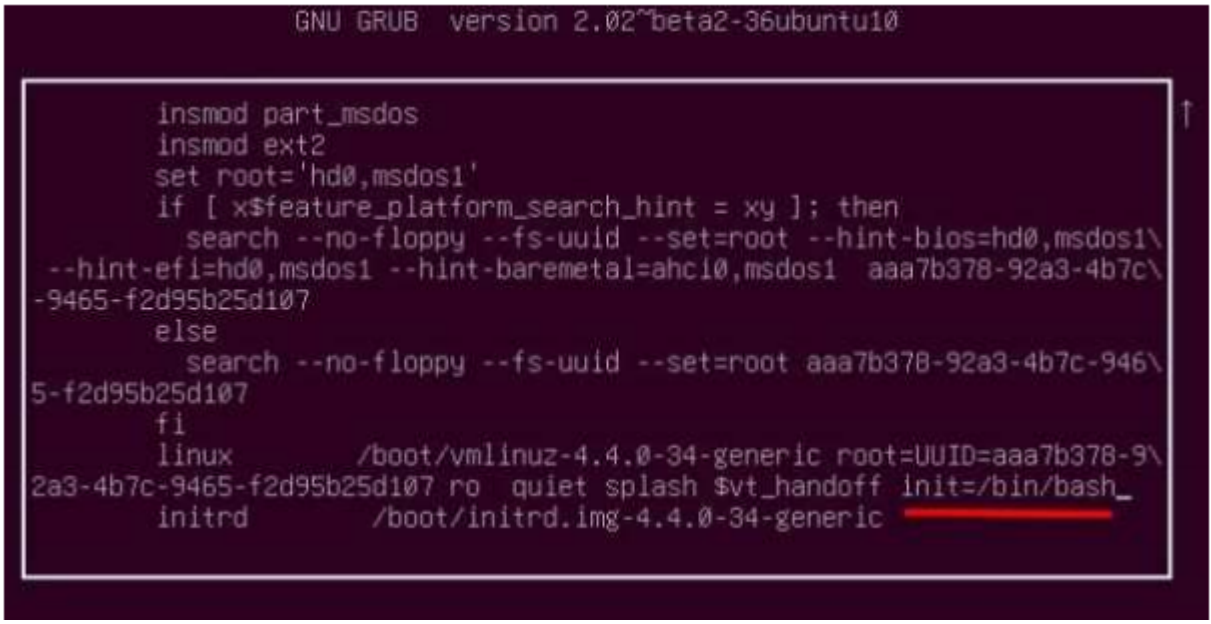
Step 4: Press E to edit that OS.

Step 5: Edit the line starting with linux. By appending **rw init=/bin/bash**

Step 6: Now you will be taken to the root shell.

Step 7: Run command **passwd**. and change the passwd

Step 8: Run **exec=/sbin/init**.


GNU GRUB version 2.02~beta2-36ubuntu10
insmod part_msdos
insmod ext2
set root='hd0,msdos1'
if [x$feature_platform_search_hint = xy]; then
search --no-floppy --fs-uuid --set=root --hint-bios=hd0,msdos1\
--hint-efi=hd0,msdos1 --hint-baremetal=ahci0,msdos1 aaa7b378-92a3-4b7c\
-9465-f2d95b25d107
else
search --no-floppy --fs-uuid --set=root aaa7b378-92a3-4b7c-946\
5-f2d95b25d107
fi
linux /boot/vmlinuz-4.4.0-34-generic root=UUID=aaa7b378-9\
2a3-4b7c-9465-f2d95b25d107 ro quiet splash $vt_handoff init=/bin/bash_
initrd /boot/initrd.img-4.4.0-34-generic


GNU GRUB version 2.02~beta2-36ubuntu10
*Ubuntu
Advanced options for Ubuntu
Memory test (memtest86+)
Memory test (memtest86+, serial console 115200)

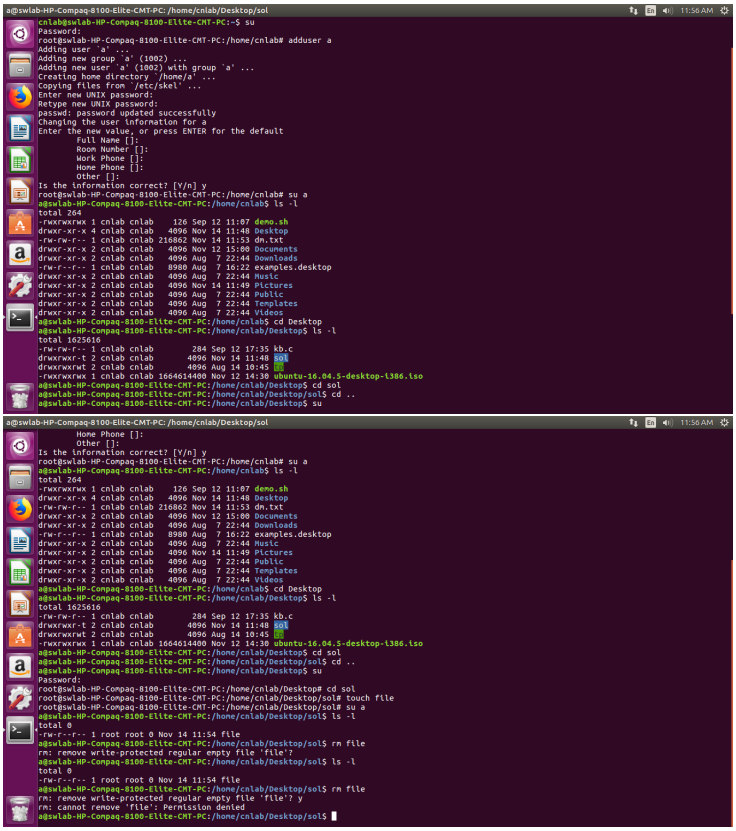
3 Directory creation in which all can write but only owner can delete files.

This can be done via sticky bit. This helps only the owner of the files to delete from that particular folder. No one else can delete the files in that folder.

Steps to Follow

Step 1 : Making a folder named **newFold**. Creating a file named **file.txt**.

Step 2 : Switching to another user. Then trying to delete this file.



4 Write a cron job to remote power up a system in a LAN

For this assignment we need to have the MAC address of the other system on the LAN for which we have to perform this cron job.

Steps to Follow
Step 1 : First open the file **/etc/crontab**

```
#
# To define the time you can provide concrete values for
# minute (m), hour (h), day of month (dom), month (mon),
# and day of week (dow) or use '*' in these fields (for 'any').#
# Notice that tasks will be started based on the cron's system
# daemon's notion of time and timezones.
#
# Output of the crontab jobs (including errors) is sent through
# email to the user the crontab file belongs to (unless redirected).
#
# For example, you can run a backup of all your user accounts
# at 5 a.m every week with:
# 0 5 * * 1 tar -zcf /var/backups/home.tgz /home/
#
# For more information see the manual pages of crontab(5) and cron(8)
#
# m h  dom mon dow   command
* * * * * ./script.sh
```

Step 2 : Edit the file.

```
while true; do
    echo "$(date)" >> date.txt
    sleep 5;
done
```

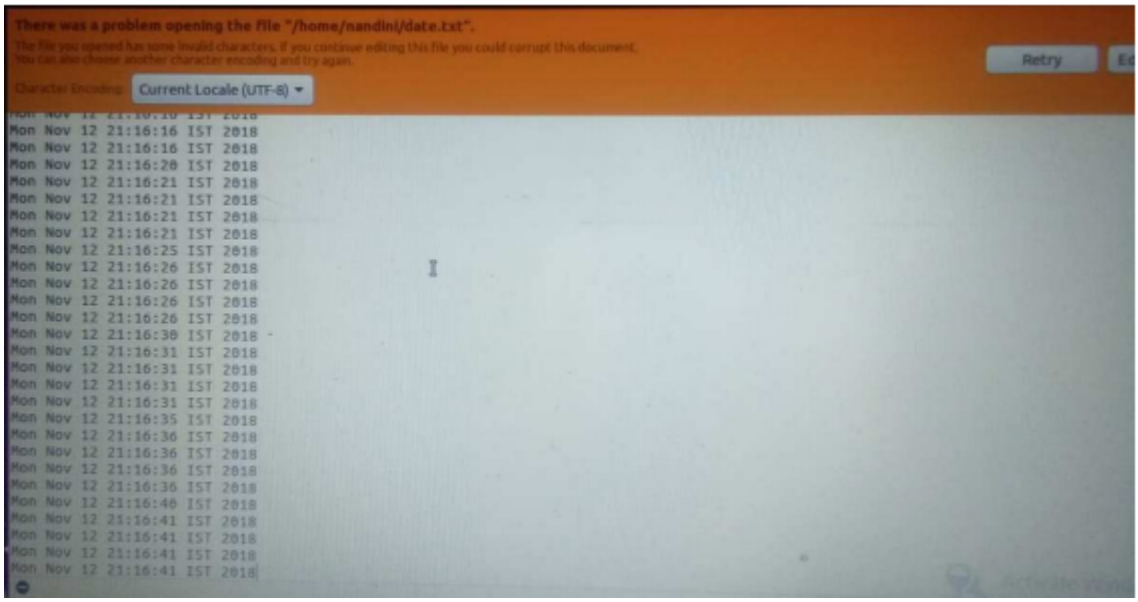
5 Write a cron job to remotely shutdown a Linux system.

For this assignment we need to have the MAC address of the other system on the LAN for which we have to perform this cron job.

Steps to Follow
Step 1 : First open the file **/etc/crontab**

```
#
# To define the time you can provide concrete values for
# minute (m), hour (h), day of month (dom), month (mon),
# and day of week (dow) or use '*' in these fields (for 'any').#
# Notice that tasks will be started based on the cron's system
# daemon's notion of time and timezones.
#
# Output of the crontab jobs (including errors) is sent through
# email to the user the crontab file belongs to (unless redirected).
#
# For example, you can run a backup of all your user accounts
# at 5 a.m every week with:
# 0 5 * * 1 tar -zcf /var/backups/home.tgz /home/
#
# For more information see the manual pages of crontab(5) and cron(8)
#
# m h  dom mon dow   command
* * * * * ./script.sh
```

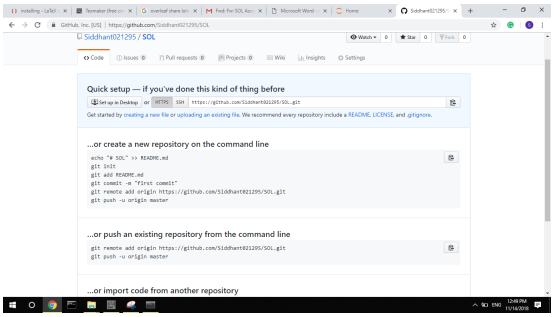
Step 2 : Edit the file.


There was a problem opening the file "/home/nandini/date.txt".
The file you opened has some invalid characters. If you continue editing this file you could corrupt this document.
You can also choose another character encoding and try again.
Retry
Character Encoding:
Current Locale (UTF-8)
Mon Nov 12 21:16:16 IST 2018
Mon Nov 12 21:16:16 IST 2018
Mon Nov 12 21:16:20 IST 2018
Mon Nov 12 21:16:21 IST 2018
Mon Nov 12 21:16:21 IST 2018
Mon Nov 12 21:16:21 IST 2018
Mon Nov 12 21:16:21 IST 2018
Mon Nov 12 21:16:25 IST 2018
Mon Nov 12 21:16:26 IST 2018
Mon Nov 12 21:16:26 IST 2018
Mon Nov 12 21:16:26 IST 2018
Mon Nov 12 21:16:26 IST 2018
Mon Nov 12 21:16:30 IST 2018
Mon Nov 12 21:16:31 IST 2018
Mon Nov 12 21:16:31 IST 2018
Mon Nov 12 21:16:31 IST 2018
Mon Nov 12 21:16:31 IST 2018
Mon Nov 12 21:16:35 IST 2018
Mon Nov 12 21:16:36 IST 2018
Mon Nov 12 21:16:36 IST 2018
Mon Nov 12 21:16:36 IST 2018
Mon Nov 12 21:16:36 IST 2018
Mon Nov 12 21:16:40 IST 2018
Mon Nov 12 21:16:41 IST 2018
Mon Nov 12 21:16:41 IST 2018
Mon Nov 12 21:16:41 IST 2018
Mon Nov 12 21:16:41 IST 2018

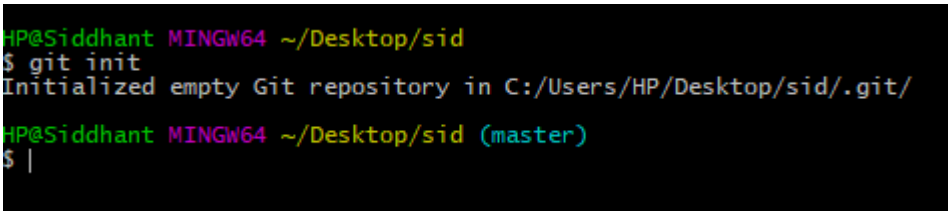
6 In Git account add new project and shows commits.

For this assignment we need to have an github account and create an repository.

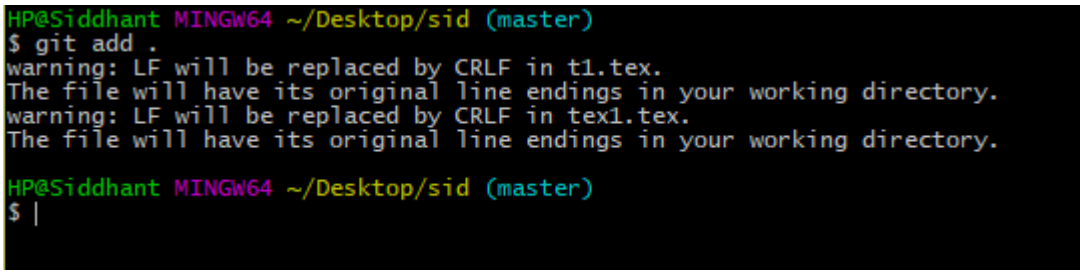
Steps to Follow
Step 1 : Create a repository. **/etc/crontab**



Step 2 : Create a folder and run git init.



Step 3 : Create different file you want to commit and



Step 4 : Add files to the staging area. Run git add .

```
HP@Siddhant MINGW64 ~/Desktop/sid (master)
$ git commit -m "1st commit"
[master (root-commit) 32781d6] 1st commit
 29 files changed, 498 insertions(+)
 create mode 100644 PARTISON2.PNG
 create mode 100644 cron1.png
 create mode 100644 cron2.png
 create mode 100644 cron3.PNG
 create mode 100644 dhcp1.PNG
 create mode 100644 dhcp2.PNG
 create mode 100644 dhcp3.PNG
 create mode 100644 dhcp4.PNG
 create mode 100644 dhcp5.PNG
 create mode 100644 dhcp6.PNG
 create mode 100644 dhcp7.PNG
 create mode 100644 git1.png
 create mode 100644 git2.PNG
 create mode 100644 partison1.PNG
 create mode 100644 partison3.PNG
 create mode 100644 pass.PNG
 create mode 100644 pass2.PNG
 create mode 100644 sticky2.png
 create mode 100644 sticky3.png
 create mode 100644 stickybit.png
 create mode 100644 t1.aux
 create mode 100644 t1.log
 create mode 100644 t1.synctex.gz
 create mode 100644 t1.tex
 create mode 100644 tex1.aux
 create mode 100644 tex1.log
 create mode 100644 tex1.pdf
 create mode 100644 tex1.synctex.gz
 create mode 100644 tex1.tex
```

Step 5 : Commit the changes. Run git commit -m ”message” .