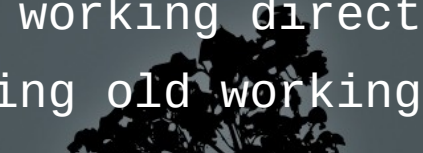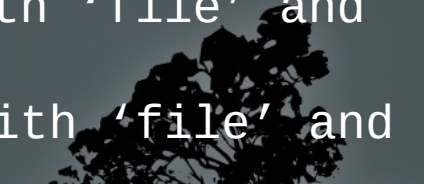# LPIC-1 100-400 – Lesson 3 – Lab
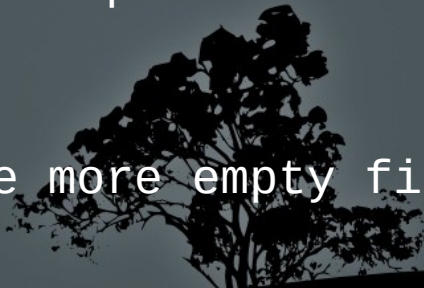
* Login into your Lab environment

- **$ cd Lab3**

- **$ pwd** # print working directory

- **$ ls** # show contents of working directory

- **$ ls -l** # same with long listing format

- **$ ls -la** # show hidden files as well

- **$ mkdir dir1/dir2 dir3/dir4** # what's wrong here?

- **$ mkdir -p dir1/dir2 dir3/dir4** # create directory hierarchy

- **$ ls -la** # list content anew

- **$ cd dir1/dir2** # change into **dir2**

- **$ pwd** # print working directory

- **$ echo $PWD** # environment variable showing working directory

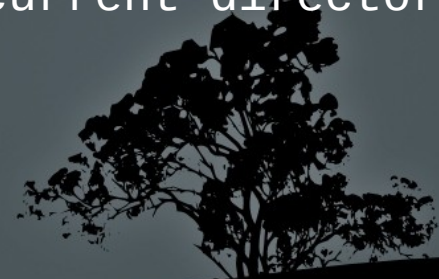- **$ echo $OLDPWD** # environment variable showing old working directory

Lesson 3 – Lab

- **$ touch fileone filetwo filethree fileA** # create some empty files

- **$ ls -la** # show contents

- **$ date** # show date

- **$ ls file*** # list all files starting with 'file'

- **$ ls filet*** # list all files starting with 'filet'

- **$ ls filet??** # list all files starting with 'filet' and followed by exactly 2 characters

- **$ ls file{one,two}** # show fileone and filetwo

- **$ touch file1 file2 file3 file11 file22** # create some more empty files

- **$ ls file[a-z]*** # display files starting with 'file' and followed by an alpha character

- **$ ls file[0-9]** # display files starting with 'file' and followed by a single digit

- **$ ls file[0-9]*** # display files starting with 'file' and followed by a digit

Lesson 3 – Lab

- **$ cd ../..** # go two directories back

- **$ pwd** # verify where we are working

- **$ ls -R** # recursive listing

- **$ ls -lR** # recursive long listing

- **$ cd -** # go back to the previous working directory ($OLDPWD)

- **$ pwd** # verify where we are working

- **$ stat file[o,t]* > dates-before.txt** # save the stats for the selected files

- **$ touch file[o,t]*** # change the dates of the selected files

- **$ stat file[o,t]* > dates-after.txt** # save the new stats for the selected files

- **$ cat dates-before.txt dates-after.txt** # compare the previous and new stats

- **$ paste dates-before.txt dates-after.txt** # compare the previous and new stats side by side

- **$ cd dir3 ; pwd** # change to dir3; verify

- **$ touch dir4/fileA dir4/fileB** # create some more empty files

Lesson 3 – Lab

- **$ rmdir dir4** # try to remove dir4. Did it work?

- **$ rm dir4/*** # remove the contents of dir4

- **$ rmdir dir4** # remove dir4. Did it work?

- **$ mkdir dir4** # create a new dir4

- **$ touch dir4/fileA dir4/fileB** # create some new empty files

- **$ rm -rf dir4** #(rm -Rf dir4) delete dir4 recursively

- **$ cp -av ../dir1 .** # copy dir1 and contents from parent to current recursively

- **$ ls -lR** # long listing recursively

- **$ stat dir1/*** # show stats of dir1 contents

- **$ mv dir1 dir4** # rename dir1 to dir4

- **$ stat dir4/*** # show stats of dir4 contents

- **$ mv dir4/* .** # move contents of dir4 to current directory

- **$ ls -lR** # long listing recursively

Lesson 3 – Lab

- **$ stat *** # show stats for all contents of working directory
- **$ mv -i ../dir1/dir2/*** . # reply "y"
- **$ stat *** # show stats for all contents of working directory again
- **$ ls -la ../dir1/dir2** # show contents of dir2
- **$ ls -FR** # list classes recursively
- **$ ls -F /bin** # list classes of /bin
- **$ ls -F /dev | less** # list classes of /dev
- **$ ls -FR /var/run | less** list classes of /var/run
- **$ touch -t 197001010000 fileA** # go back in time
- **$ ls -l fileA ; stat fileA** # time travel is possible!
- **$ file *** # show type of all files in working directory
- **$ cd ..** # go to parent directory
- **$ file *** # show type of all files in the new working directory

Lesson 3 – Lab

- **$ dd if=/etc/fstab of=fstab.mod conv=ucase** # convert to upper case
- **$ paste -d\| /etc/fstab fstab.mod** # compare the two files
- **$ find .** # find everything in the working directory
- **$ find dir3 -ctime +15** # find files older than 15 days
- **$ find dir3 -ctime +15 -delete** # delete files older than 15d
- **$ find /usr/share -type f -exec file {} \;** # execute `file` on all normal files
- **$ ls -lh** # display a long listing in human readable form
- **$ gzip example.odt** # compress file example.odt
- $ ls -lh *.ooodt* # compare the size of the two files
- **$ ls . | cpio -ov > backup.cpio** # archive current directory
- **$ find /etc | cpio -ov > etc.cpio** # archive /etc
- **$ mkdir new-etc ; cd new-etc** # create a new directory
- **$ cpio -iv < ../etc.cpio** # extract /etc to the new directory

Lesson 3 – Lab

- **$ `ls -lhR ; pwd`** # list everything recursively

- **$ `rm -fr *`** # remove everything in the working directory!

- **$ `tar cvf backup.tar /etc /boot /var`** # archive three directories (/etc /boot /var)

- **$ `gzip backup.tar`** # compress archive

- **$ `tar cvzf backup2.tar.gz /etc /boot /var`** # archive and compress using gzip

- **$ `tar cvjf backup3.tar.bz2 /etc /boot /var`** # archive and compress using bzip2

- **$ `tar cvJf backup4.tar.xz /etc /boot /var`** # archive and compress using xz

- **$ `ls -lh`** # compare the size of the three archives

- **$ `tar tvzf backup.tar.gz`** # display the contents of the archive

- **$ `tar xvzf backup.tar.gz`** # extract the archive in the working directory
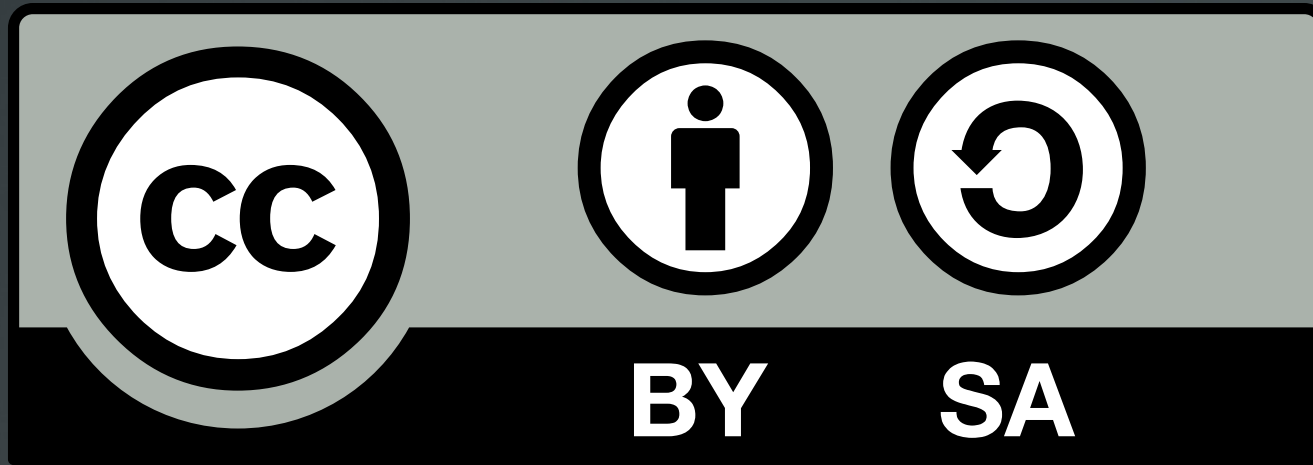
Lesson 3 – Lab

- **$ mkdir backup2 backup3 backup4** # create three backup directories

- **$ time tar xvzf backup2.tar.gz -C backup2** # calculate the time needed to gzip to extract

- **$ time tar xvjf backup3.tar.bz2 -C backup3** # calculate the time needed to bzip2 to extract

- **$ time tar xvJf backup4.tar.xz -C backup4** # calculate the time needed to xz to extract

- **$ ls -lR backup**

License