Bash Handout

ls -l ~ `#list files in home directory`	**shuf -n 10 /var/log/syslog -o r.txt**``` `#create file with shuffled lines`
mkdir dir src-dir dest-dir `#make directories`	**passwd <user>** `#update password`
rm -ir dir/ `#remove dir interactively & recursively`	**source ~/.bashrc** `#update the configs in the current bash process`
cp -ir src-dir/ dest-dir/ `#copy recursively`	**for i in {1..10}; do echo The number is $i; done** `#simple for loop`
mv -i src-dir/ dest-dir/ `#move/rename`	**if [-f ~/.bashrc]; then echo File exists; fi** `#simple if condition`
alias rm='rm -i' `#make shortcut`	**while :;do echo Infinite loop [hit CTRL+c];done** `#simple while loop`
man man `#print manual, press q to exit`	**mutt -a <file-to-be-attached> -s <subject> <email>** `#wait for content`
apropos copy `#search the term 'copy' in all man pages`	**cat <email content> | mutt -a <file> -s <sub> <email>** `#non interactive`
cat /etc/lsb-release /etc/bash.bashrc `#print file content on stdout`	**mogrify -resize 50% -format jpg images/*.png** `#convert all png to jpg`
less /etc/bash.bashrc `#browse through file, 'q' to quit`	**echo "hi" 1>so1; ls -z 1>so2** `#redirect STDOUT stream to files`
head -n1 /etc/bash.bashrc `#print first line and exit`	**echo "hi" 2>se1; ls -z 2>se2** `#redirect STDERR stream to files`
tail -n1 /etc/bash.bashrc `#print last line and exit`	**mount | column -t** `#show all mounted drives`
find ~/Downloads -iname *.pdf -size +4M `#find files larger than 4MB`	**sudo mount /dev/sd<partition> /mnt** `#mount partition to any directory`
grep 'nobody' /etc/passwd `#search line(s) with 'nobody'`	**sudo umount /mnt** `un-mount the partition from directory`
grep -ri 'printf' /usr/include/ `#search recursive in dir & ignore case`	**tar -cvzf archive.tgz *.txt** `#create compressed archive`
grep '\<st..ct\>' /usr/include/stdio.h `#match pattern in all lines`	**tar -xvzf archive.tgz** `#extract to pwd(present working directory)`
grep '^st..ct' /usr/include/stdio.h `#match pattern in beginning of lines`	**zip allfiles.zip *.txt** `#create a zip file`
chmod -R o+w dest-dir/ `#change permission to write for others`	**unzip allfiles.zip** `#unzip to pwd, may overwrite`
chmod -R a=rx dest-dir/ `#only read and execute permission for all`	**unrar -x file.rar** `#unrar to pwd`
chmod -R 775 dest-dir/ `#change permission to rwxrwxr-x`	**ln -s images/ ~/Desktop** `#create shortcut to Desktop`
sudo chown -R root.root dest-dir/ `#change ownership to root(admin)`	**unlink ~/Desktop/images** `#remove shortcut`
whoami `#will return present user`	**touch 1.txt** `#create a file of zero size`
ls -l | grep 'rw' `#pipe/send the STDOUT of ls -l to grep`	**which ls** `#return path of *ls* command`
for i in {1..9}; do echo $i,$RANDOM | cut -c -5 >> 1.csv;done `#generated csv file, this one liner will be explained later`	**find /tmp/ -depth -name "* *" -execdir rename 's/ /_/g' "{}" ;** `#remove all white space from dirs & files recursively`
sort 1.csv `#sort according to first column`	**kill -15 `pgrep firefox`** `#kill firefox`
sort -t ',' -r 1.csv `#pipe output of 1st command to 'sort' command`	**rm -i `find ~/Downloads -iname *.pdf -size +16M`** `#rm results of *find*`
sort -t ',' -k2 1.csv > 2.csv `#sort based on 2nd col & redirect to 2.csv`	**top** `#will show system monitor`
cat 2.csv | cut -d ',' -f 1,2 | paste -d ';' 1.csv - > 1_2.csv `#cut 1,2 col of 2.csv & paste next to 1.csv cols,separate with ;`	**last** `#show listing of last logged in users`
cat 1.csv | awk {'print $1 + $2'} | paste -d ',' 1.csv - > sum.csv `#sum first two column and create a third one, write to sum.csv`	**ping -c 5 127.0.0.1** `#check networking connectivity`
wget -c http://ftp.gnu.org/gnu/wget/wget-1.14.tar.xz `#download file`	**free -m** `#show memory(RAM) usage`
wget -nd -P images/ -r -A.png http://matplotlib.org/gallery.html `# Download png files to *images* directory recursively`	**file /bin/ls** `#show file type`
ifconfig -a `#will list all the network interfaces and their status`	**w** `#show logged in users and their activity`
export PATH=$PATH:/tmp/bin `#add custom executable path`	**jhead -purejpg Photo/*.jpg** `#removes EXIF data from jpg files`
export PS1="[\d \t \u@\h:\w] $ " `#add custom bash prompt`	**cat 1.txt| tr a-z A-Z** `#convert to uppercase`
export http_proxy="http://user:passwd@host:port/" `#https_proxy,ftp_proxy`	**nmcli dev wifi connect <name> password <password>** `#connect to wifi`
export no_proxy=10.0.0.0/8,localhost,*.iitb.ac.in,127.0.0.1 `#ignore list`	**sudo apt-cache search <package>** `#search packages(debian,ubuntu,mint)`
ssh -X root@localhost `#login to remote shell, '-X' enables X11`	**sudo apt-get install <package>** `#install package`
scp -r /etc/udev root@localhost:/tmp `#copy to remote machine recursively`	**sudo apt-get remove <package>** `#uninstall package`
df -h `#will list all filesystem disk space usage`	**sudo dpkg -i <package.deb>** `#install local deb file`
du -sh ~ `#estimate file space usage`	**dpkg -S /bin/ls** `#search which package the command belongs to`
wc -lwm /etc/passwd `#print number of lines, word, and char of file`	**yum search <package>** `#search packages(fedora,centOS,redhat)`
diff -y 1.txt 2.txt `#show difference of two files`	**sudo yum install <package>** `#install package / local rpm install`
cmp 1.txt 2.txt `#compare two files byte by byte`	**sudo yum remove <package>** `#uninstall package`
mkdir sed; cd sed;for i in {1..1000}; do shuf -n 10 /var/log/dmesg -o $i.txt;done `#create text files with shuffled data, to practice 'sed' command`	**yum provides /bin/ls** `#search which package the command belongs to`
sed 's/\[//g' 1.txt `#replace '[' with empty string`	**pdftk A=in.pdf cat A8-12 output new.pdf** `#extract page 8 to 12`
sed 's/\[//g' -i.orig {1..1000}.txt `#replace '[' with empty string in place, repeat for 1000 files`	**pdftk 1.pdf 2.pdf cat output 1_plus_2.pdf** `#add two pdf files`
sed 's/\ *[0-9]*\.[0-9]*\]//g' -i {1..1000}.txt `#eg:' 10.405270]' --> \ *[0-9]*\.[0-9]*\]`	**lsof | grep bash** `#list all the files used by bash currenty`
sed '1i He was here & HERE on top of every page' -i {1..1000}.txt `Add text following '1i', '1' is the line number`	**nohup <any-command> &** `#continue running after logout`
sed 's/\<here\>/**/gi' -i {1..1000}.txt** `Replace 'here' & 'HERE' with '****', 'gi' is global & ignore case`	**mencoder in.ogv -subpos 85 -sub 1.srt -o out.ogv -oac copy -ovc lavc -lavcopts vbitrate=1200 -subfont-text-scale 3** `#add subtitles`
sed -n '/was/,/ugly UGLY/p' 1.txt >pat.txt `#Print lines between pattern`	**ffmpeg -f alsa -ac 1 -i pulse -acodec pcm_s16le -f x11grab -r 2 -s 1366x768 -i :0.0 -vcodec libtheora -b 800k 2.ogv** `#record A/V`
sed = sed/10.txt | sed 'N;s/n/ /' `#Add line number to file`	**sox noisyAudio.wav noisefree.wav noisered myprofile 0.26** `#remove noise`

Latest/Issues: http://git.io/kOVtRw