Bash command line for Linux

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ls	list
ls -al	list of hidden & all detail
cd ..	Go one level up
cd ../..	Go two level up
cd directoryname(path)	Go to specified directory(path)
cal	for calender by day
cal -y	for calender completely
who	Print all usernames currently logged in
whoami	who is current user
ls -al | less	use | for get output from prior command and give it to input of next comman (paging)
mkdir directoryname	make directory

example :   mkdir kianoosh   make kianoosh folder
mkdir kianoosh rezaee   make two folder   kianoosh & rezaee
mkdir kianoosh\ rezaee   make one folder   kianoosh rezaee

clear	clear the screen shortcut ctrl+l
touch filename	create file with specified name

example :   touch zanjan   create file with zanjan name
touch kia{1,2,3}   create three file kia1 kia2 kia3
touch kia{1..3}   create three file kia1 kia2 kia3

echo "hello"	print the hello in the output
echo "hello" > zanjan	write hello in zanjan file (overwrite)
echo "hello" >> zanjan	append hello to zanjan
cat zanjan	to read file content
ls -al | grep zanjan	to find zanjan in list of current path
grep -rin "test" .	To find a string (test) in the file in current path

-r   recursive
in   insensetive
.   current path

man commandname	manual of command

example : man grep   to see how to use grep or manual of grep

history   to see history of command used in this computer up to now
example :   history | grep ls |wc -l   count of the ls command in history
wc   word count
-l   line

cp test1 test2   (test1,2 is file) copy the content of test1 to test2
cp -r folder1 folder2   copy folder1 to folder2
remaining   -r   recursive
example :   cp folder1/folder2 .   Copy folder2 to current path
mv test2 test5   rename the test2 to test5
mv test3 folder   move or cut the test3 to folder or directory

rm test1   remove the test1

notice : *evry thing in linux is file.*

Cat /proc/cpuinfo   see cpu information and performance
cat /proc/meminfo   see memory information and performance
head -n3 /prco/meminfo   to see 3 first line of memory information and performance
tail -n5 /proc/meminfo   to see 3 last line of memory information and performance
find /home -iname "*.pdf"   search in /home to finde all file with .pdf extention
         remaining   -i   insensetive

Question: 1-creat 2 folder tehran and zanjan
              2-in zanjan folder creat test 1 to 9
              3-in tehran folder creat new folder and named it milad
              4-copy the test5 to milad folder
              5-cut the test9 to milad folder
              6-make new folder and name it iran and move all file that start with test to iran
      soloution :   mkdir iran
                      find . -iname "test*" -exec mv {} iran \;
              syntax : find <path> <option> "object to find" <action>
ps -A   list all process
      example : ps -A | grep gedit   show gedit PID
kill KILL PID   to kill the specified process by ID
unam -a   show the version of linux
notice :   to install font make new folder in home directory and named it .font then copy
              the font to that folder.
Ls;ls   use ; to manage the command.at first ,first command is get start and after that
              second one.
Wget <download link>   use this command to download the downloadable link
notice :   to install the program in debian side linux use this command :
                      apt -get install aria2
              to uninstall the program :
                      apt -get remove aria2
              to see address of source :
                      cat /etc/apt/source.list
              to update all installed program :
                      apt -get update
              to update (upgrade) version of linux
                      apt -get upgrade
notice :   to install the program from file :
                      dpkg -i /home/kia/downloads/
adduser kianoosh   create new user
useradd kianoosh   create new user
passwd newpassword   to change password
deluser kianoosh   remove user
userdel kianoosh   remove user
userdel -r kianoosh   remove user and all user file and folder

```
d  r w x
- - - -   - - -   - - -
 owner  group  other
```
r : read (4)   w : write (2)   x : execute (1)   d : directory

chmod 777 test   to change access permissions
                remaining : 777 means all user can do every thing
                                755
                                724
The octal (0-7) value is calculated by adding up the values for each digit
User (rwx) = 4+2+1 = **7**
Group(rx) = 4+1 = **5**
World (rx) = 4+1 = **5**
chmode mode = 0755

       Examples

       chmod 400 *file* - Read by owner
       chmod 040 *file* - Read by group
       chmod 004 *file* - Read by world

       chmod 200 *file* - Write by owner
       chmod 020 *file* - Write by group
       chmod 002 *file* - Write by world

       chmod 100 *file* - execute by owner
       chmod 010 *file* - execute by group
       chmod 001 *file* - execute by world

To combine these, just add the numbers together :
       chmod 444 *file* - Allow read permission to owner and group and world
       chmod 777 *file* - Allow everyone to read, write, and execute *file*

Permissions: 751   -rwxr-x--x

read	*	*	
write	*		
execute	*	*	*

Chown   Change owner, change the user and/or group ownership of
each   given File to a new Owner.
                                   Chown can also change the ownership of a file to match

the   user/group of an existing reference file.
Chown username filename
chgrp   Change group ownership
chgrp username filename

cat /proc/partition   to see all hards and partitions
df -H   Disk Free - display free disk space
                                    With no arguments, `df' reports the space used and
                                    available on all currently mounted filesystems (of all
                                    types).
Mount   mount a file system and partitions.
        Example :
                        mkdir mnt
                        mount /dev/sda6 mnt/
umount mnt/   to unmount the partitions

VI Editor Commands
Vi has two modes *insert* mode and *command* mode.
The editor begins in command mode, where cursor movement and copy/paste editing occur.
Most commands execute as soon as typed except for "colon" commands which execute when
you press the return key.
Switch to Insert mode:

O   Open line above cursor

I   Insert text at beginning of line

i   Insert text at cursor

a   Insert text after cursor

A   **A**ppend text at line end

o   Open line below cursor
Switch to Command mode:
        Switch to command mode <ESC>

        Cursor Movement (command mode):

                Scroll Backward 1 screen <ctrl>**b**
                Scroll Up 1/2 screen <ctrl>**u**
                Go to beginning of line **0**
                Go to line *n* *n***G**
                Go to end of line **$**
                Scroll Down 1/2 screen <ctrl>**d**
                Go to line number ## **:##**
                Scroll Forward 1 screen <ctrl>**f**
                Go to last line **G**

Scroll by sentence f/b **( )**
Scroll by word f/b **w b**
Move left, down, up, right **h j k l**
Left 6 chars **6h**
Scroll by paragraph f/b **{ }**
Directional Movement **Arrow Keys**
Go to line #6 **6G**

Delete text (command mode):

Change word **cw**
Replace one character **r**
Delete word **dw**
Delete text at cursor **x**
Delete entire line (to buffer) **dd**
Delete (backspace) text at cursor **X**
Delete 5 lines (to buffer) **5dd**
Delete current to end of line **D**
Delete lines 5-10 **:5,10d**

Editing (command mode):

Copy line	**yy**	Copy *n* lines	***n*yy**	Copy lines 1-2/paste after 3	**:1,2t 3**
Paste above current line	**P**				
Paste below current line	**p**			Move lines 4-5/paste after 6	**:4,5m 6**
				Join previous line	**J**
Search backward for *string*	**?*string***	Search forward for *string*	**/*string***	Find next *string* occurrence	**n**
% (entire file) **s** (search and replace) /old text with new/ **c** (confirm) **g** (global - all)	**:%s/oldstring/newstring/cg**			Ignore case during search	**:set ic**
Repeat last command	**.**	Undo previous command	**u**	Undo all changes to line	**U**

Save and Quit (command mode):

Save changes to buffer **:w**
Save changes and quit vi **:wq**
Save file to new file **:w** *file*
Quit without saving **:q!**
Save lines to new file **:10,15w** *file*

ifconfig	Configure a network interface.**I**nter**f**ace **config**urator - display your ip address, network interfaces, transferred and received data information, configure a network interface.

Example :

ifconfig eth0 192.168.1.82	assign ip to eth0 interface
ifconfig etht0 192.168.1.82/16	assign ip and subnet mask to eth0 interface
route -n	display the defult gateway
route add defult gw 192.168.1.1 eth0	change the defult gateway manually
dig www.zanjanhost.com	DNS lookup (domain information groper)
fdisk	Partition table manipulator for Linux
	Hard disks can be divided into one or more logical disks called partitions. This division is described in the partition table found in sector 0 of the disk.

Example :

fdisk /dev/sda1

mkfs.ntfs /dev/sda1	to format ntfs partitions
tar	Tape ARchiver, store, list or extract files in an archive

Example :

tar -cf testarchive.tar /home/kia/rezaee	to archive the rezaee folder
tar -xf testarchive.tar /home/kia/rezaee	to extract
tar -cjf testarchive.tar /home/kia/rezaee	to compress and archive the rezaee folder
tar -xjf testarchive.tar /home/kia/rezaee	to extract