

Q-1

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Applications Terminal - coder@c9056f204407: ~
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File Edit View Terminal Tabs Help
coder@c9056f204407:~$ passwd
Changing password for coder.
(current) UNIX password:
passwd: Authentication token manipulation error
passwd: password unchanged
coder@c9056f204407:~$ explanation: start password change for your user .enter current password then type securepwd123 twice.
bash: explanation: command not found
coder@c9056f204407:~$ who
coder@c9056f204407:~$ explanation - shows active user sessions and their terminal alrternative w
bash: explanation: command not found
coder@c9056f204407:~$ whoami
coder
coder@c9056f204407:~$ id
uid=1000(coder) gid=1000(coder) groups=1000(coder),27(sudo)
coder@c9056f204407:~$ explanation whoami prints your login name id shows uid gid and groups.
bash: explanation: command not found
coder@c9056f204407:~$ echo
coder@c9056f204407:~$ echo "confidential :for authorized personnel only"
confidential :for authorized personnel only
coder@c9056f204407:~$ explanation - creates the file and wirtes the exact message
bash: expalnation: command not found
coder@c9056f204407:~$ man ls
No manual entry for ls
See 'man 7 undocumented' for help when manual pages are not available.
coder@c9056f204407:~$ explanation - show option eg long format -a include hidden-h human readable size if man is unavilable use ls --help
bash: explanation: command not found
coder@c9056f204407:~$ ls -la
bash: ls -: command not found
coder@c9056f204407:~$ ls la
bash: ls la: command not found
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bash: ls -: command not found
coder@c9056f204407:~$ ls la
bash: ls la: command not found
coder@c9056f204407:~$ explanation - show permission /owner/size/timestamps
bash: explanation: command not found
coder@c9056f204407:~$ echo "sample data">text.txt
coder@c9056f204407:~$ sed -i
Usage: sed [OPTION]... {script-only-if-no-other-script} [input-file]...
-n, --quiet, --silent
    suppress automatic printing of pattern space
-e script, --expression=script
    add the script to the commands to be executed
-f script-file, --file=script-file
    add the contents of script-file to the commands to be executed
--follow-symlinks
    follow symlinks when processing in place
-i[SUFFIX], --in-place[=SUFFIX]
    edit files in place (makes backup if SUFFIX supplied)
-l N, --line-length=N
    specify the desired line-wrap length for the 'l' command
--posix
    disable all GNU extensions.
-E, -r, --regexp-extended
    use extended regular expressions in the script
    (for portability use POSIX -E).
-s, --separate
    consider files as separate rather than as a single,
    continuous long stream.
--sandbox
    operate in sandbox mode.
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continuous long stream.
--sandbox
    operate in sandbox mode.
-u, --unbuffered
    load minimal amounts of data from the input files and flush
    the output buffers more often
-z, --null-data
    separate lines by NUL characters
--help
    display this help and exit
--version
    output version information and exit

If no -e, --expression, -f, or --file option is given, then the first
non-option argument is taken as the sed script to interpret. All
remaining arguments are names of input files; if no input files are
specified, then the standard input is read.

GNU sed home page: <http://www.gnu.org/software/sed/>.
General help using GNU software: <http://www.gnu.org/gethelp/>.
coder@c9056f204407:~$ explanation- first create text .txt then sed edit in place to all lowercase a with upper case A
bash: explanation: command not found
coder@c9056f204407:~$ hostname
c9056f204407
coder@c9056f204407:~$ explanation : print the machine s network name.
bash: explanation: command not found
coder@c9056f204407:~$ traceroute www.example.com
traceroute to www.example.com (104.18.26.120), 30 hops max, 60 byte packets
 1 ip-172-18-0-1.ec2.internal (172.18.0.1) 0.031 ms 0.012 ms 0.012 ms
 2 ip-172-18-0-1.ec2.internal (172.18.0.1) 0.012 ms 0.010 ms 0.010 ms
coder@c9056f204407:~$ explanation : shows each hop the destination use tracpath if tracerout is not avilable .
bash: explanation: command not found
coder@c9056f204407:~$ nmap -ph 10.0.0.1
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bash: explanation-: command not found
coder@c9056f204407:~$ hostname
c9056f204407
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bash: explanation: command not found
coder@c9056f204407:~$ traceroute www.example.com
traceroute to www.example.com (104.18.26.120), 30 hops max, 60 byte packets
 1 ip-172-18-0-1.ec2.internal (172.18.0.1)  0.031 ms  0.012 ms  0.012 ms
 2 ip-172-18-0-1.ec2.internal (172.18.0.1)  0.012 ms  0.010 ms  0.010 ms
coder@c9056f204407:~$ explanation : shows each hop the destination use tracpath if tracerout is not available .
bash: explanation: command not found
coder@c9056f204407:~$ nmap -ph 10.0.0.1

Starting Nmap 7.60 ( https://nmap.org ) at 2025-12-30 07:21 UTC
Found no matches for the service mask 'h' and your specified protocols
QUITTING!
coder@c9056f204407:~$ Explanation: pn scan common TCP port without host discovery as a fallback nc attempts TCP Connects accross a port range .

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Q2

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File Edit View Terminal Tabs Help
coder@c9056f204407:~$ mkdir
mkdir: missing operand
Try 'mkdir --help' for more information.
coder@c9056f204407:~$ mkdir "$HOME/reports"
coder@c9056f204407:~$ 700 "$HOME /reports"
bash: 700: command not found
coder@c9056f204407:~$ explanation - 700 give rwx to owners no access to group /other.
bash: explanation: command not found
coder@c9056f204407:~$ cd "$Home reports "
bash: cd: reports : No such file or directory
coder@c9056f204407:~$ touch monthly_report.txt
coder@c9056f204407:~$ chmod 640 monthly_report.txt
chmod: cannot access 'monthly': No such file or directory
coder@c9056f204407:~$ explanation - owner rw group R other no access
bash: explanation: command not found
coder@c9056f204407:~$ mkdir -p "$Home /otherdir"
mkdir: invalid option -- ' '
Try 'mkdir --help' for more information.
coder@c9056f204407:~$ cp -p $Home /report /mothly_report.txt "$Home/ otherdir/"
> explanation :p preserves mode/timestamps/ownership
> mv
> mv "$Home /otherdir/monthly_report .txt "$Home/report/"
> ls-la "$HOME/reports"
> cd "$HOME"
> mv reports quarterly reports
> mkdir-p "$HOME/backup /daily""$HOME /back ups/weekly"
> explanation - creates both subdirection .
> touch "$HOME/backups/daily/important.txt"
> Explannation- Creates an empty file.
> mv
> mv "$HOME/back ups/daily/important/txt."$HOME/backups/weekly/"
cp: target 'ups/daily/important/txt./home/coder/backups/weekly/' is not a directory
coder@c9056f204407:~$ explanation: move the file while keeping its name

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> mv
> mv "$HOME/back ups/daily/important/txt."$HOME/backups/weekly/"
cp: target 'ups/daily/important/txt./home/coder/backups/weekly/' is not a directory
coder@c9056f204407:~$ explanation: move the file while keeping its name
bash: explanation-: command not found
coder@c9056f204407:~$ pwd
/home/coder
coder@c9056f204407:~$ explanation - print the full of the working dicrectory .

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Q3

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File Edit View Terminal Tabs Help
coder@c9056f204407:~$ in /important_data.txt"$HOME/important_data_hard.txt
bash: syntax error near unexpected token `in'
coder@c9056f204407:~$ in /important_data.txt"$HOME/important_data_hard.txt"
bash: syntax error near unexpected token `in'
coder@c9056f204407:~$ explanation- hard link share the inode:ls li showa inode numbers.
bash: explanation-: command not found
coder@c9056f204407:~$ ln- s/important_data .txt"$HOME /important_data _soft.txt"
bash: ln-: command not found
coder@c9056f204407:~$ ls-li "$HOME/important_data-soft.txt"
bash: ls-li: command not found
coder@c9056f204407:~$ ls-l "$HOME /important_data_soft.txt"
bash: ls-l: command not found
coder@c9056f204407:~$ explanation : symlink has its own inode and stores a path to target ; Ls - l shown the target and link permission.
bash: explanation: command not found
bash: Ls: command not found
coder@c9056f204407:~$ find/-xdev -inum"$important_data.txt"$HOME/important_data_hard.txt
bash: find/-xdev: No such file or directory
coder@c9056f204407:~$ important_data.txt"$HOME/important_data_hard.txt
> important_data.txt"$HOME/important_data_hard.txt
bash: important_data.txt/home/coder/important_data_hard.txt
important_data.txt/home/coder/important_data_hard.txt: No such file or directory
coder@c9056f204407:~$ important_data.txt"$HOME/important_data_hard.txt
> important_data.txt"$HOME/important_data_hard.txt
bash: important_data.txt/home/coder/important_data_hard.txt
important_data.txt/home/coder/important_data_hard.txt: No such file or directory
coder@c9056f204407:~$ important_data.txt"$HOME/important_data_hard.txt
> important_data.txt"$HOME/important_data_hard.txt
bash: important_data.txt/home/coder/important_data_hard.txt
important_data.txt/home/coder/important_data_hard.txt: No such file or directory
coder@c9056f204407:~$ ^C
coder@c9056f204407:~$ find /-xdev-inum important_data.txt"$HOME/important_data_hard.txt

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coder@c9056f204407:~$ ^C
coder@c9056f204407:~$ find ~/.xdev-inum important_data.txt $HOME/important_data hard.txt
> 2>/dev/null
>
> stat/important_data.txt
> sudo dumpe2fs -h "$(df --output=source/important_data.txt|tail -n1)"
bash: syntax error near unexpected token `('
coder@c9056f204407:~$ sudo mkdir -p /back
sudo: unable to change to root gid: Operation not permitted
sudo: unable to initialize policy plugin
coder@c9056f204407:~$ sudo mkdir -p /backup
sudo: unable to change to root gid: Operation not permitted
sudo: unable to initialize policy plugin
coder@c9056f204407:~$ sudo mv /important_data.txt /backup/
sudo: unable to change to root gid: Operation not permitted
sudo: unable to initialize policy plugin
coder@c9056f204407:~$ ls -li /backup/important_data.txt
bash: ls -li /backup/important_data.txt: No such file or directory
coder@c9056f204407:~$ ln -s /backup/important_data.txt
bash: ln -s /backup/important_data.txt: No such file or directory
coder@c9056f204407:~$ " $HOME/important_data-soft-new.txt
> ls -l "$HOME/important_data-soft_new.txt"
>
> explanation : hard link ref and inode number on one file system Inode are unique only within that filesystem so ref an inode on another filesystem is invalid the kernel prohibits it symlinks store pathname and can cross filesystem.
> rsync -aH /back /important_data.txt $HOME /file_backup/"
>

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Q4

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Applications Terminal - coder@c9056f204407: ~ coder@c9056f204407: ~ Terminal - coder@c9056f204407: ~ Terminal - coder@c9056f204407: ~ 11:19 coder
File Edit View Terminal Tabs Help
Terminal - coder@c9056f204407: ~
coder@c9056f204407:~$ lsblk -f
bash: lsblk -f: command not found
coder@c9056f204407:~$ sudo smartctl -a /dev/sda
sudo: unable to change to root gid: Operation not permitted
sudo: unable to initialize policy plugin
coder@c9056f204407:~$ lsblk -NAME SIZE,TYPE MOUNTPOINT /dev/sda
bash: lsblk -NAME: command not found
coder@c9056f204407:~$ df -h
bash: df -h: command not found
coder@c9056f204407:~$ sudo parted /dev/sda /units/print
sudo: unable to change to root gid: Operation not permitted
sudo: unable to initialize policy plugin
coder@c9056f204407:~$ sudo blockdev --getbsz /dev/sda
sudo: unable to change to root gid: Operation not permitted
sudo: unable to initialize policy plugin
coder@c9056f204407:~$ sudo blockdev --getsize64 /dev/sda
sudo: unable to change to root gid: Operation not permitted
sudo: unable to initialize policy plugin
coder@c9056f204407:~$ sudo smartctl -H /dev/sda
sudo: unable to change to root gid: Operation not permitted
sudo: unable to initialize policy plugin
coder@c9056f204407:~$ sudo smartctl -A
sudo: unable to change to root gid: Operation not permitted
sudo: unable to initialize policy plugin
coder@c9056f204407:~$ #setps
coder@c9056f204407:~$ sudo part /dev/sda /mkpart lab
sudo: unable to change to root gid: Operation not permitted
sudo: unable to initialize policy plugin
coder@c9056f204407:~$
coder@c9056f204407:~$ sudo ddrescue /dev/sda /mnt/recovery.img /mnt/recovery.log
sudo: unable to change to root gid: Operation not permitted

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coder@c9056f204407:~$ sudo ddrescue /dev/sda /mnt/recovery.img /mnt/recovery.log
sudo: unable to change to root gid: Operation not permitted
sudo: unable to initialize policy plugin
coder@c9056f204407:~$ sudo mount -o loop /mnt/recovery.img /mnt/recovery
sudo: unable to change to root gid: Operation not permitted
sudo: unable to initialize policy plugin
coder@c9056f204407:~$ du -h -max-depth=1 /var/log
bash: du -h -max-depth=1 /var/log: No such file or directory
coder@c9056f204407:~$ du -sh /var/log
bash: du -sh /var/log: No such file or directory
coder@c9056f204407:~$

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