

## Answer 1 :

GREP command is used to check for the pattern matching in a file.

### SYNTAX:

grep [options] pattern files

#### Options Description

- c : This prints only a count of the lines that match a pattern
- h : Display the matched lines, but do not display the filenames.
- i : Ignores, case for matching
- l : Displays list of a filenames only.
- n : Display the matched lines and their line numbers.
- v : This prints out all the lines that do not matches the pattern
- e **exp** : Specifies expression with this option. Can use multiple times.
- f **file** : Takes patterns from file, one per line.
- E : Treats pattern as an extended regular expression (ERE)
- w : Match whole word
- o : Print only the matched parts of a matching line,

```
arihant@Arihant: ~/Desktop/OSOC Project
File Edit View Search Terminal Help
arihant@Arihant:~$ ls
a.out      Desktop  examples.desktop  fil.csv  file2  file.txt  helloworld.c  kfd  new.txt  playground  snap  sumit.txt  text1
Arduino    Documents fib          file1    file3  first     himanshu      mayank.txt  Pictures  Public  sort  Templates  text3
arihant.txt Downloads fibonaaci.c  file1.txt file.jpg file2.txt  IdeaProjects  Music  play  PycharnProjects  sortArray.c  test.txt  Videos
arihant@Arihant:~$ cd Desktop/
arihant@Arihant:~/Desktop$ cd OSOC\ Project/
arihant@Arihant:~/Desktop/OSOC Project$ cat > question1.txt
Arihant
Alok
Veena
Siddhi
arihant
noti
kusum^C
arihant@Arihant:~/Desktop/OSOC Project$ grep "arihant" question1.txt
arihant
arihant@Arihant:~/Desktop/OSOC Project$ grep -c "arihant" question1.txt
1
arihant@Arihant:~/Desktop/OSOC Project$ grep -i-c "arihant" question1.txt
grep: invalid option -- '.'
Usage: grep [OPTION]... PATTERN [FILE]...
Try 'grep --help' for more information.
arihant@Arihant:~/Desktop/OSOC Project$ grep -i -c "arihant" question1.txt
2
arihant@Arihant:~/Desktop/OSOC Project$
```

Answer 2 :

There are 3 permission for 3 different level.

Types of permission :

1. **r** -> **Read**
2. **w** -> **Write**
3. **x** -> **Execute**

Types of level :

1. **u** -> **User**
2. **g** -> **Group**
3. **o** -> **Other**

Command to change the permission of the file -> **chmod**

There are 10 char in file permission

1. first character shows that it is dir -> 'd' or file -> '-'
2. next 3 shows permission for the user
3. next 3 shows permission for the group
4. next 3 shows permission for the other

example to add and remove the permissions:

```
arihant@Arihant: ~/Desktop/OSOC Project
File Edit View Search Terminal Help
arihant@Arihant:~/Desktop/OSOC Project$ ls -l
total 140
-rw-r--r-- 1 arihant arihant 138351 Oct  5 16:32 question1.png
-rw-r--r-- 1 arihant arihant   44 Oct  5 16:27 question1.txt
arihant@Arihant:~/Desktop/OSOC Project$ chmod u+x question1.txt
arihant@Arihant:~/Desktop/OSOC Project$ ls -l
total 140
-rw-r--r-- 1 arihant arihant 138351 Oct  5 16:32 question1.png
-rwxr--r-- 1 arihant arihant   44 Oct  5 16:27 question1.txt
arihant@Arihant:~/Desktop/OSOC Project$ chmod go+x question1.txt
arihant@Arihant:~/Desktop/OSOC Project$ chmod go+x question1.txt
arihant@Arihant:~/Desktop/OSOC Project$ ls -l
total 140
-rw-r--r-- 1 arihant arihant 138351 Oct  5 16:32 question1.png
-rwxr-xr-x 1 arihant arihant   44 Oct  5 16:27 question1.txt
arihant@Arihant:~/Desktop/OSOC Project$ chmod ugo+rwx question1.txt
chmod: invalid mode: 'ugo+rwx'
Try 'chmod --help' for more information.
arihant@Arihant:~/Desktop/OSOC Project$ chmod ugo+rwx question1.txt
arihant@Arihant:~/Desktop/OSOC Project$ ls -l
total 140
-rw-r--r-- 1 arihant arihant 138351 Oct  5 16:32 question1.png
-rwxrwxrwx 1 arihant arihant   44 Oct  5 16:27 question1.txt
arihant@Arihant:~/Desktop/OSOC Project$ chmod u-x question.txt
chmod: cannot access 'question.txt': No such file or directory
arihant@Arihant:~/Desktop/OSOC Project$ chmod u-x question1.txt
arihant@Arihant:~/Desktop/OSOC Project$ ls -l
total 140
-rw-r--r-- 1 arihant arihant 138351 Oct  5 16:32 question1.png
-rw-rwxrwx 1 arihant arihant   44 Oct  5 16:27 question1.txt
arihant@Arihant:~/Desktop/OSOC Project$
```

Answer 3 :

```
arihant@Arihant: ~/Desktop/OSOC Project/OSOC/Workshop
File Edit View Search Terminal Help
arihant@Arihant:~/Desktop/OSOC Project$ mkdir OSOC
arihant@Arihant:~/Desktop/OSOC Project$ mkdir OSOC/Induction
arihant@Arihant:~/Desktop/OSOC Project$ ls
'Final Submissions.odt' OSOC question1.png question1.txt question2.png task.txt
arihant@Arihant:~/Desktop/OSOC Project$ cd OSOC/
arihant@Arihant:~/Desktop/OSOC Project/OSOC$ ls
Induction
arihant@Arihant:~/Desktop/OSOC Project/OSOC$ cd Induction/
arihant@Arihant:~/Desktop/OSOC Project/OSOC/Induction$ cat > task.txt
Arihant Banthia
^C
arihant@Arihant:~/Desktop/OSOC Project/OSOC/Induction$ mkdir ../Workshop
arihant@Arihant:~/Desktop/OSOC Project/OSOC/Induction$ cd
arihant@Arihant:~$ cd Desktop/OSOC\ Project/OSOC/
arihant@Arihant:~/Desktop/OSOC Project/OSOC$ cp Induction/task.txt Workshop
arihant@Arihant:~/Desktop/OSOC Project/OSOC$ cd Wor
bash: cd: Wor: No such file or directory
arihant@Arihant:~/Desktop/OSOC Project/OSOC$ cd Workshop/
arihant@Arihant:~/Desktop/OSOC Project/OSOC/Workshop$ ls
task.txt
arihant@Arihant:~/Desktop/OSOC Project/OSOC/Workshop$ cat task.txt
Arihant Banthia
arihant@Arihant:~/Desktop/OSOC Project/OSOC/Workshop$
```

Answer 4 :

To check for the network connected to type **route command** in terminal.

Answer 5 :

To change the password of any user you must type

**\$ sudo passwd username**

sudo is type for the root user who is the master/Admin of the system  
you also must know the password of the user you are about to change

**\$ sudo passwd -g faculty**

by this you can change the password of group faculty

## Answer 8:

Branches in git gives a control to us merge the main code with the changed code. As we do braching the main code and newly added code to our project. As you make branches it make harder for the new code to merge with the main/master code. This gives us chance to keep our code clean and secure. It is very usefull in version control as we do not disturb the main code and change the code and make the changes in our project the commit it to main brach. Therefore our main code always stay as we want it to be.

```
Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (master)
$ git add .

Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (master)
$ git status
On branch master
No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
    new file:   .editor.swp
    new file:   .editor.swp
    new file:   .lock.Final Submissions.odt#
    new file:   Final Submissions.odt
    new file:   OSOC/Induction/task.txt
    new file:   OSOC/Workshop/task.txt
    new file:   question1.png
    new file:   question1.txt
    new file:   question2.png
    new file:   question3.png

Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (master)
$ git commit -m 'first commit'
[master (root-commit) 055f18e] first commit
10 files changed, 9 insertions(+)
 create mode 100644 .editor.swp
 create mode 100644 .editor.swp
 create mode 100644 .lock.Final Submissions.odt#
 create mode 100644 Final Submissions.odt
 create mode 100644 OSOC/Induction/task.txt
 create mode 100644 OSOC/Workshop/task.txt
 create mode 100644 question1.png
 create mode 100644 question1.txt
 create mode 100644 question2.png
 create mode 100644 question3.png

Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (master)
$ git branch test

Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (master)
$ git checkout test
Switched to branch 'test'

Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (test)
$ mkdir arihant

Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (test)
$ git checkout master
Switched to branch 'master'

Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (master)
$ git checkout test
Switched to branch 'test'

Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (test)
```

```
Switched to branch 'test'

Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (test)
$ mkdir arihant

Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (test)
$ git checkout master
Switched to branch 'master'

Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (master)
$ git checkout test
Switched to branch 'test'

Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (test)
$ git add .

Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (test)
$ git commit -m 'test first'
[test 48d53e] test first
1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 question8-1.JPG

Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (test)
$ git checkout master
Switched to branch 'master'

Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (master)
$ git checkout test
Switched to branch 'test'

Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (test)
$ touch arihant.txt

Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (test)
$ git add .

Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (test)
$ git commit -m 'test two'
[test 1f56d46] test two
1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 arihant.txt

Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (test)
$ git checkout master
Switched to branch 'master'

Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (master)
$ git merge test -m 'test added'
Updating 055f18e..1f56d46
Fast-forward (no commit created; -m option ignored)
 arihant.txt | 0
 question8-1.JPG | Bin 0 -> 213150 bytes
2 files changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 arihant.txt
 create mode 100644 question8-1.JPG

Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (master)
$ |
```

Answer 9:

Push : this means to push the project to github account

Pull : this means to pull a project from github

Commit : to commit the change that are made by us in our project.

```
Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (master)
$ git remote add origin https://github.com/jainavi30/OSOC019.git

Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (master)
$ git remote
origin

Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (master)
$ git pus -u origin master
git: 'pus' is not a git command. See 'git --help'.

The most similar commands are
    push
    pull

Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (master)
$ git push -u origin master
Enumerating objects: 19, done.
Counting objects: 100% (19/19), done.
Delta compression using up to 4 threads
Compressing objects: 100% (15/15), done.
Writing objects: 100% (19/19), 635.80 KiB | 19.87 MiB/s, done.
Total 19 (delta 6), reused 0 (delta 0)
remote: Resolving deltas: 100% (6/6), done.
To https://github.com/jainavi30/OSOC019.git
 * [new branch]      master -> master
Branch 'master' set up to track remote branch 'master' from 'origin'.

Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (master)
$ git pull
Already up to date.

Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (master)
$ git pull
remote: Enumerating objects: 4, done.
remote: Counting objects: 100% (4/4), done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 3 (delta 1), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (3/3), done.
From https://github.com/jainavi30/OSOC019
 1f56d46..200d028 master    -> origin/master
Updating 1f56d46..200d028
Fast-forward
 README.md | 1 +
 1 file changed, 1 insertion(+)
 create mode 100644 README.md

Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (master)
$ |
```

\*Added read me and pulled it from github\*



Answer 10 :

To revert change of our commit we use command **git revert**.

```
Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (master)
$ git revert --no-edit HEAD
[master bfed267] Revert "Revert "Revert "question9""
Date: Mon Oct 7 22:57:23 2019 +0530
5 files changed, 0 insertions(+), 0 deletions(-)
rewrite question8-1.JPG (90%)
delete mode 100644 question8-2.JPG
delete mode 100644 question9-1.JPG
delete mode 100644 question9-2.JPG
delete mode 100644 ~$nal Submissions.odt

Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (master)
$ git add .

Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (master)
$ git status
On branch master
Your branch is ahead of 'origin/master' by 4 commits.
  (use "git push" to publish your local commits)

nothing to commit, working tree clean

Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (master)
$ git pull
Already up to date.

Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (master)
$ |
```

Answer 11:

```
Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (master)
$ git checkout test
Switched to branch 'test'

Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (test)
$ touch osoc.txt

Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (test)
$ git checkout master
Switched to branch 'master'
Your branch is ahead of 'origin/master' by 4 commits.
  (use "git push" to publish your local commits)

Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (master)
$ git checkout test
Switched to branch 'test'

Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (test)
$ git add .

Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (test)
$ git status
On branch test
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   osoc.txt
    new file:   question9.JPG

Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (test)
$ git commit -m 'arihant'
[test f4e4b1a] arihant
2 files changed, 0 insertions(+), 0 deletions(-)
create mode 100644 osoc.txt
create mode 100644 question9.JPG

Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (test)
$ git checkout master
Switched to branch 'master'
Your branch is ahead of 'origin/master' by 4 commits.
  (use "git push" to publish your local commits)

Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (master)
$ git merge --no-commit test
Automatic merge went well; stopped before committing as requested
```

Merge but not committed so you can check the folder

Answer 12 :

```
Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (test)
$ touch osoc.txt

Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (test)
$ git checkout master
Switched to branch 'master'
Your branch is ahead of 'origin/master' by 4 commits.
  (use "git push" to publish your local commits)

Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (master)
$ git checkout test
Switched to branch 'test'

Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (test)
$ git add .

Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (test)
$ git status
On branch test
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        new file:   osoc.txt
        new file:   question9.JPG

Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (test)
$ git commit -m 'arihant'
[test f4e4b1a] arihant
 2 files changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 osoc.txt
 create mode 100644 question9.JPG

Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (test)
$ git checkout master
Switched to branch 'master'
Your branch is ahead of 'origin/master' by 4 commits.
  (use "git push" to publish your local commits)

Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (master)
$ git merge --no-commit test
Automatic merge went well; stopped before committing as requested

Arihant@Arihant MINGW64 ~/Desktop/OSOC Project/OSOC Project (master|MERGING)
$ git push
Enumerating objects: 12, done.
Counting objects: 100% (12/12), done.
Delta compression using up to 4 threads
Compressing objects: 100% (10/10), done.
Writing objects: 100% (10/10), 434.11 KiB | 20.67 MiB/s, done.
Total 10 (delta 2), reused 0 (delta 0)
remote: Resolving deltas: 100% (2/2), completed with 1 local object.
To https://github.com/jainavi30/OSOC019.git
   200d028..bfed267  master -> master
```

Answer 13:

Stash allow us to work simultaneously with two branches at the same time.