

q-1 Git Setup <https://confluence.atlassian>.

```
siddharth@siddharth:~$ git config --global user.name siddharthbhatia96ttn
siddharth@siddharth:~$ git config --global user.email siddharth.bhatia@tothenew.com
siddharth@siddharth:~$
```

q-2 Initialize a Git Repository

Overview **Repositories 1** Projects 0 Packages 0 Stars 0 Followers 0 Following 0

Find a repository... Type: All Language: All New

assignment2 ★ Star

Updated 17 minutes ago

q-3 Add files to the repository

```
siddharth@siddharth:~$ cd ~/git_repos
siddharth@siddharth:~/git_repos$ git init
Initialized empty Git repository in /home/siddharth/git_repos/.git/
siddharth@siddharth:~/git_repos$ touch file.txt
siddharth@siddharth:~/git_repos$
```

q-4 Unstage 1 file

```
siddharth@siddharth:~/git_repos$ ls
file.txt
siddharth@siddharth:~/git_repos$ git add file.txt
siddharth@siddharth:~/git_repos$ git status
On branch master

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)

        new file:   file.txt

siddharth@siddharth:~/git_repos$
```

```
siddharth@siddharth:~/git_repos$ git rm --cached file.txt
rm 'file.txt'
siddharth@siddharth:~/git_repos$ git status
On branch master

Changes to be committed:
  (use "git reset HEAD <file>..." to unstage)

        deleted:    file.txt

Untracked files:
  (use "git add <file>..." to include in what will be committed)

        file.txt
```

q-5 Commit the file

```
siddharth@siddharth:~/git_repos$ git add .
siddharth@siddharth:~/git_repos$ git commit -m "files add"
[master (root-commit) 9b6d4da] files add
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 file.txt
siddharth@siddharth:~/git_repos$ git status
On branch master
nothing to commit, working tree clean
siddharth@siddharth:~/git_repos$
```

q-6 Add a remote (remote add ho rahi hai local par)

```
siddharth@siddharth:~/git_repos$ git remote add origin https://github.com/siddharthbhatia96ttn/assignment2.git
fatal: remote origin already exists.
siddharth@siddharth:~/git_repos$ git remote -v
origin https://github.com/siddharthbhatia96ttn/assignment2.git (fetch)
origin https://github.com/siddharthbhatia96ttn/assignment2.git (push)
siddharth@siddharth:~/git_repos$
```

q-7 Undo changes to a particular file

```
siddharth@siddharth:~/git_repos$ touch file5.txt
siddharth@siddharth:~/git_repos$ cat >file5.txt
Hello Welcome
siddharth@siddharth:~/git_repos$ git add .
siddharth@siddharth:~/git_repos$ git commit -m "saving"
[master b865e45] saving
2 files changed, 1 insertion(+)
rename file3.txt => file2.txt (100%)
create mode 100644 file5.txt
siddharth@siddharth:~/git_repos$ git status
On branch master
nothing to commit, working tree clean
siddharth@siddharth:~/git_repos$ cat >>file5.txt
Siddharth
^Z
[3]+ Stopped cat >> file5.txt
siddharth@siddharth:~/git_repos$ git commit -m "saving"
```

```
[3]+ Stopped cat >> file5.txt
siddharth@siddharth:~/git_repos$ git commit -m "saving"
On branch master
Changes not staged for commit:
  modified:   file5.txt

no changes added to commit
siddharth@siddharth:~/git_repos$ git add .
siddharth@siddharth:~/git_repos$ git commit -m "saving"
[master 638d810] saving
1 file changed, 1 insertion(+)
siddharth@siddharth:~/git_repos$ git log
commit 638d8102879708d73bc4101dd7d83be959f28d54 (HEAD -> master)
Author: siddharthbhatia96ttn <siddharth.bhatia@tothenew.com>
Date: Thu Feb 6 14:36:40 2020 +0530

    saving

commit b865e45184a6776bc1459120e37bcbdd6ca7cb3d
Author: siddharthbhatia96ttn <siddharth.bhatia@tothenew.com>
```

```
Date: Thu Feb 6 14:35:09 2020 +0530
```

```
saving
```

```
commit 823833f4ca3dfddd797264c75c35b7ae522933c7
```

```
Author: siddharthbhatia96ttn <siddharth.bhatia@tothenew.com>
```

```
Date: Thu Feb 6 14:15:34 2020 +0530
```

```
file_save
```

```
commit 3c64dec36f3ab3102bfe405cec6e59e743bd362b
```

```
Author: siddharthbhatia96ttn <siddharth.bhatia@tothenew.com>
```

```
Date: Thu Feb 6 13:35:24 2020 +0530
```

```
file add
```

```
siddharth@siddharth:~/git_repos$ git revert 638d8102879708d73bc4101dd7d83be959f28d54
```

```
[master 27436bf] Revert "saving"
```

```
1 file changed, 1 deletion(-)
```

```
siddharth@siddharth:~/git_repos$ cat file5.txt
```

```
Hello Welcome
```

```
siddharth@siddharth:~/git_repos$
```

q-8 Push changes to Github

```
siddharth@siddharth:~/git_repos$ git push origin master -f
```

```
Username for 'https://github.com': siddharthbhatia96ttn
```

```
Password for 'https://siddharthbhatia96ttn@github.com':
```

```
Counting objects: 29, done.
```

```
Delta compression using up to 4 threads.
```

```
Compressing objects: 100% (20/20), done.
```

```
Writing objects: 100% (29/29), 2.34 KiB | 799.00 KiB/s, done.
```

```
Total 29 (delta 6), reused 0 (delta 0)
```

```
remote: Resolving deltas: 100% (6/6), done.
```

```
To https://github.com/siddharthbhatia96ttn/assignment2.git
```

```
+ c088734...b613642 master -> master (forced update)
```

```
siddharth@siddharth:~/git_repos$
```

q-9 Clone the repository

```
siddharth@siddharth:~/git_repos$ git clone https://github.com/siddharthbhatia96ttn/assignment2.git
```

```
Cloning into 'assignment2'...
```

```
remote: Enumerating objects: 29, done.
```

```
remote: Counting objects: 100% (29/29), done.
```

```
remote: Compressing objects: 100% (14/14), done.
```

```
remote: Total 29 (delta 6), reused 29 (delta 6), pack-reused 0
```

```
Unpacking objects: 100% (29/29), done.
```

```
siddharth@siddharth:~/git_repos$
```

q-10 Add changes to one of the copies and pull the changes in the other

```
siddharth@siddharth:~/git_repos$ ls -l
total 16
drwxr-xr-x 3 siddharth siddharth 4096 Feb  6 15:53 assignment2
-rw-r--r-- 1 siddharth siddharth  15 Feb  6 14:48 file22.txt
-rw-r--r-- 1 siddharth siddharth  13 Feb  6 14:21 file2.txt
-rw-r--r-- 1 siddharth siddharth  14 Feb  6 14:37 file5.txt
-rw-r--r-- 1 siddharth siddharth   0 Feb  5 15:38 file.txt
-rw-r--r-- 1 siddharth siddharth   0 Feb  5 21:46 xyz.txt
siddharth@siddharth:~/git_repos$ git pull origin master
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/siddharthbhatia96ttn/assignment2
* branch                master      -> FETCH_HEAD
   b613642..689bbb0      master      -> origin/master
Updating b613642..689bbb0
Fast-forward
 apq.txt | 1 +
```

```
1 file changed, 1 insertion(+)
 create mode 100644 apq.txt
siddharth@siddharth:~/git_repos$ ls -l
total 20
-rw-r--r-- 1 siddharth siddharth  12 Feb  6 16:00 apq.txt
drwxr-xr-x 3 siddharth siddharth 4096 Feb  6 15:53 assignment2
-rw-r--r-- 1 siddharth siddharth  15 Feb  6 14:48 file22.txt
-rw-r--r-- 1 siddharth siddharth  13 Feb  6 14:21 file2.txt
-rw-r--r-- 1 siddharth siddharth  14 Feb  6 14:37 file5.txt
-rw-r--r-- 1 siddharth siddharth   0 Feb  5 15:38 file.txt
-rw-r--r-- 1 siddharth siddharth   0 Feb  5 21:46 xyz.txt
siddharth@siddharth:~/git_repos$
```

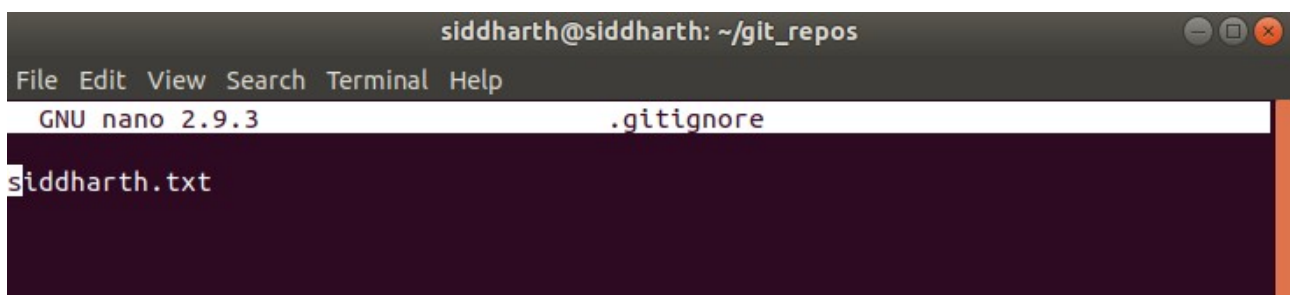
q-11 Check differences between a file and its staged version

```
siddharth@siddharth:~/git_repos$ git add nmo.txt
siddharth@siddharth:~/git_repos$ git status
On branch master
Changes to be committed:
  (use "git reset HEAD <file>..." to unstage)

        new file:   assignment2
        new file:   nmo.txt

siddharth@siddharth:~/git_repos$
```

q12 Ignore a few files to be checked in.




```
siddharth@siddharth:~/git_repos$ touch siddharth.txt
siddharth@siddharth:~/git_repos$ nano .gitignore
siddharth@siddharth:~/git_repos$ git add .
siddharth@siddharth:~/git_repos$ git status
On branch master
Changes to be committed:
  (use "git reset HEAD <file>..." to unstage)

        new file:   .gitignore
        new file:   assignment2
        new file:   nmo.txt

siddharth@siddharth:~/git_repos$
```

q-13 Create a new branch

```
siddharth@siddharth:~/git_repos$ git branch
* master
siddharth@siddharth:~/git_repos$ git checkout -b sidbh
A       .gitignore
A       assignment2
A       nmo.txt
Switched to a new branch 'sidbh'
siddharth@siddharth:~/git_repos$ git branch
  master
* sidbh
siddharth@siddharth:~/git_repos$
```

q-14 Diverge them with commits

q-15 Edit the same file at the same line on both branches and commit.

```
siddharth@siddharth:~/git_repos$ echo "Hello my friend">>file8.txt
siddharth@siddharth:~/git_repos$ git add .
siddharth@siddharth:~/git_repos$ git commit -m "mom"
[master 7528957] mom
 2 files changed, 1 insertion(+), 1 deletion(-)
 delete mode 100644 456.txt
 create mode 100644 file8.txt
siddharth@siddharth:~/git_repos$ git checkout sidbh
Switched to branch 'sidbh'
siddharth@siddharth:~/git_repos$ echo"hello linux">>file8.txt
echohello linux: command not found
siddharth@siddharth:~/git_repos$ echo "hello linux">>file8.txt
siddharth@siddharth:~/git_repos$ git add .
siddharth@siddharth:~/git_repos$ git commit -m "branch2"
[sidbh 51a2a49] branch2
 1 file changed, 1 insertion(+)
 create mode 100644 file8.txt
siddharth@siddharth:~/git_repos$
```

Q16) Try merging and resolve merge conflicts

- When we merged both the branches (using "git merge"); git detected different content in the file at the same line, but in different branches.
- The conflict represented content of both the content in the same file at same line location as :

<<<<<< HEAD

12345

=====

abcde

>>>>>> branch1

- Keeping the content of either of the branches and performing operations as follows:

q-17 Stash the changes and pop them.

```
siddharth@siddharth:~/git_repos$ touch add.txt
siddharth@siddharth:~/git_repos$ cat >add.txt
Siddharth Hellosiddharth@siddharth:~/git_repos$ git add .
siddharth@siddharth:~/git_repos$ git commit -m "again2"
[sidbh 928a785] again2
3 files changed, 1 insertion(+), 1 deletion(-)
create mode 100644 add.txt
delete mode 100644 mno.txt
delete mode 100644 nmo.txt
siddharth@siddharth:~/git_repos$ cat >>add.txt
Byesiddharth@siddharth:~/git_repos$ git add .
siddharth@siddharth:~/git_repos$ git stash
Saved working directory and index state WIP on sidbh: 928a785 again2
siddharth@siddharth:~/git_repos$ cat add.txt
Siddharth Hellosiddharth@siddharth:~/git_repos$
```

q-18 Add the following code to your .bashrc file : color_prompt="yes"

```
parse_git_branch() {
git branch 2> /dev/null | sed -e '/^[^*]/d' -e 's/* \(.*\)/(\1)/'
}
if [ "$color_prompt" = yes ]; then
PS1='\u@\h\[\033[00m\]:\[\033[01;34m\]\W\[\033[01;31m\] $(parse_git_branch)\[\033[00m\]\$ '
else
PS1='\u@\h:\W $(parse_git_branch)\$ '
fi
unset color_prompt force_color_prompt
```

```
siddharth@siddharth: ~/git_repos
File Edit View Search Terminal Help
GNU nano 2.9.3 .bashrc Modified
color_prompt="yes"
parse_git_branch() {
git branch 2> /dev/null | sed -e '/^[^*]/d' -e 's/* \(..*\)/(\1)/'
}
if [ "$color_prompt" = yes ]; then
PS1='\u@\h\[\033[00m\]:\[\033[01;34m\]\W\[\033[01;31m\] $(parse_git_branch)\[\033[00m\]$ '
else
PS1='\u@\h:\W $(parse_git_branch)\$ '
fi
unset color_prompt force_color_prompt

^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify ^C Cur Pos
^X Exit ^R Read File ^\ Replace ^U Uncut Text ^T To Spell ^ _ Go To Line
```