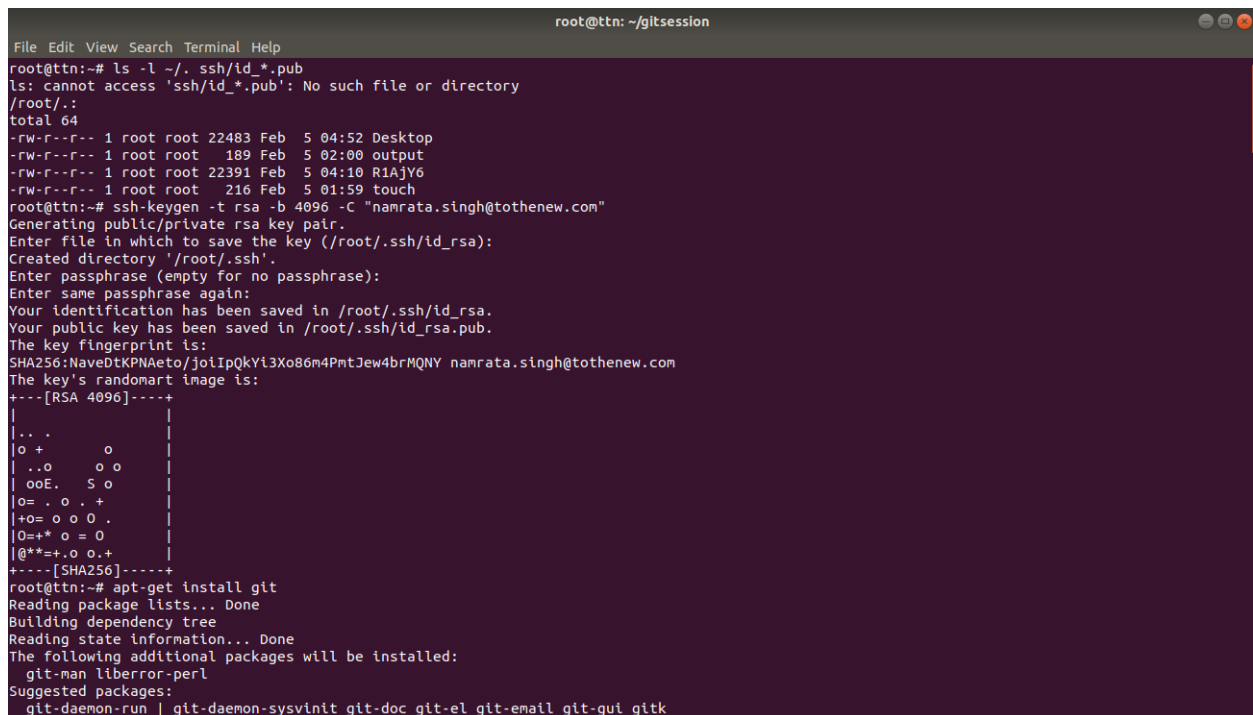


VERSION CONTROL

NAMRATA SINGH

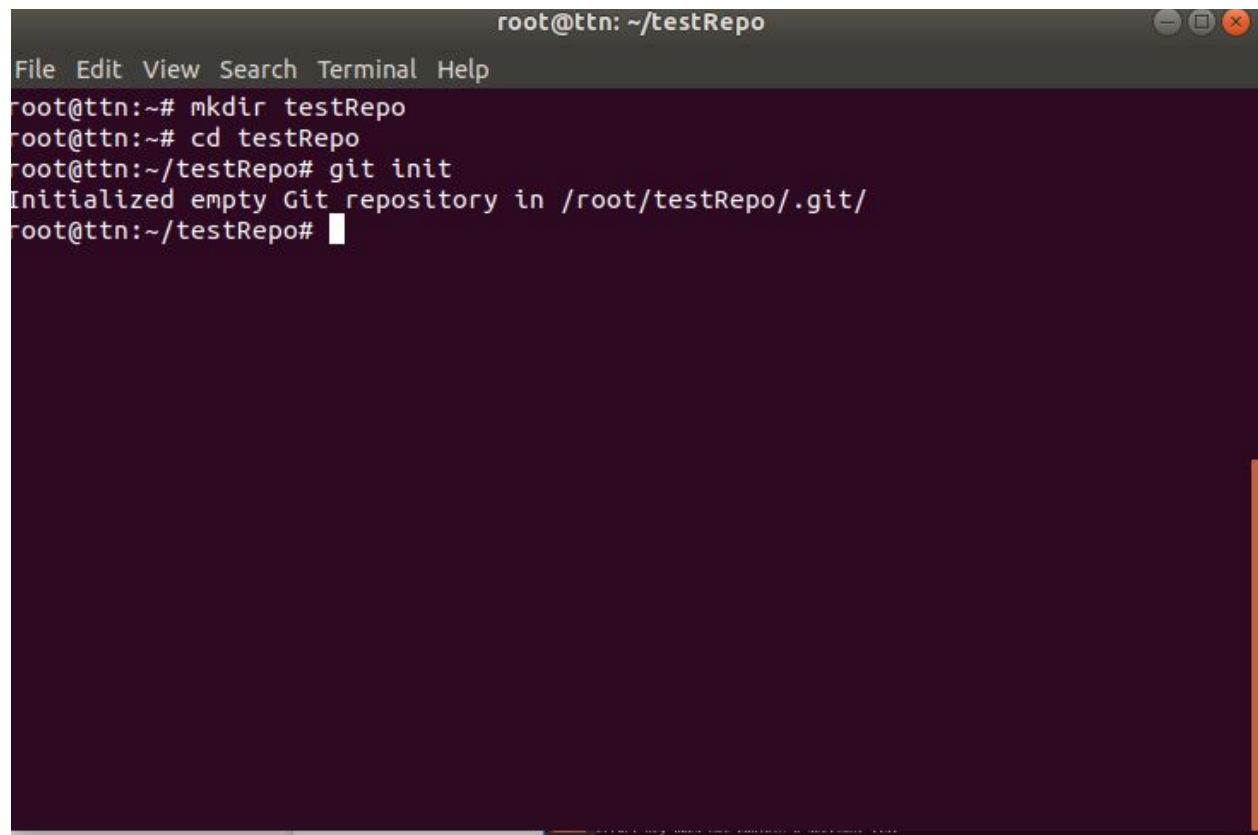
GROUP 5

1. Git Setup <https://confluence.atlassian.com/bitbucket/set-up-git-744723531.html>



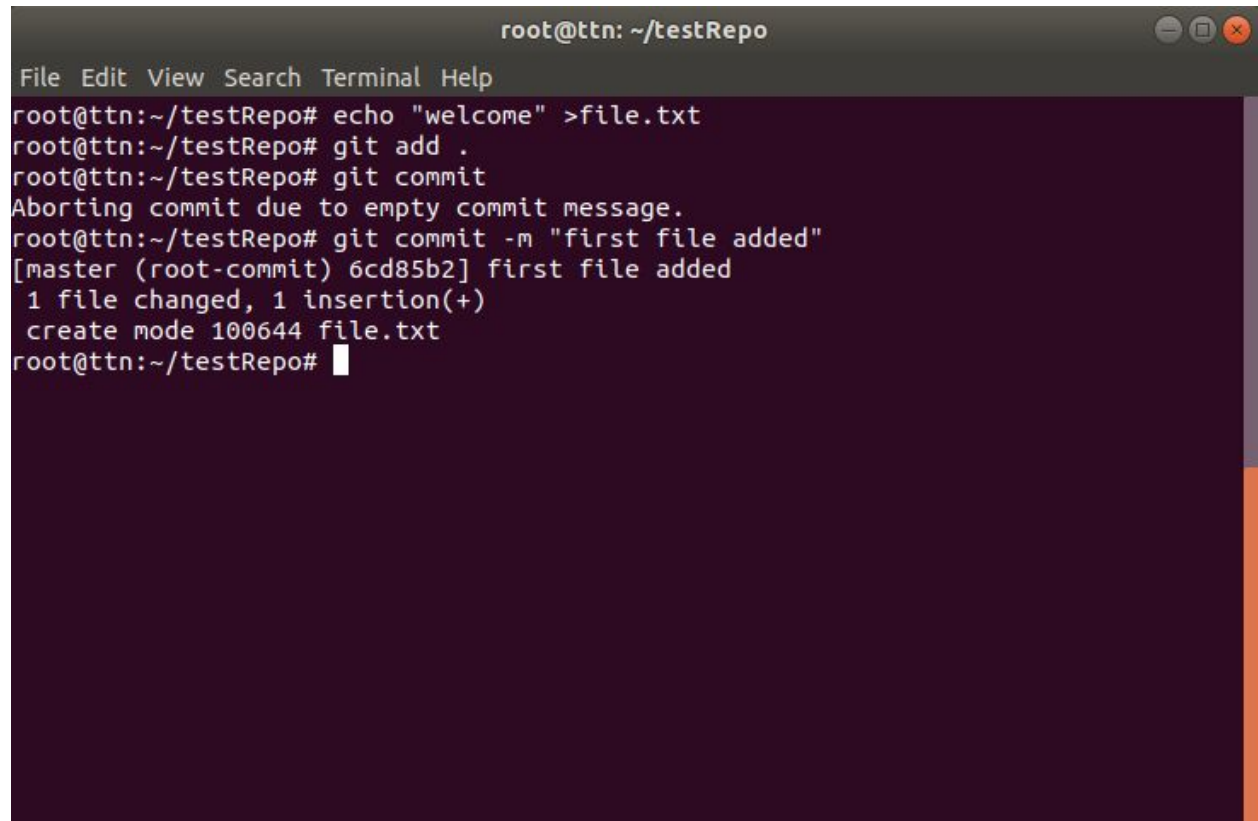
```
root@ttn: ~/gitssession
File Edit View Search Terminal Help
root@ttn:~# ls -l ~/.ssh/id_*.pub
ls: cannot access 'ssh/id_*.pub': No such file or directory
/root/.:
total 64
-rw-r--r-- 1 root root 22483 Feb  5 04:52 Desktop
-rw-r--r-- 1 root root  189 Feb  5 02:00 output
-rw-r--r-- 1 root root 22391 Feb  5 04:10 RIAjY6
-rw-r--r-- 1 root root  216 Feb  5 01:59 touch
root@ttn:~# ssh-keygen -t rsa -b 4096 -C "namrata.singh@tothenew.com"
Generating public/private rsa key pair.
Enter file in which to save the key (/root/.ssh/id_rsa):
Created directory '/root/.ssh'.
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /root/.ssh/id_rsa.
Your public key has been saved in /root/.ssh/id_rsa.pub.
The key fingerprint is:
SHA256:NaveDtkPNAeto/joIIP0kYi3Xo86m4PntJew4brMQNY namrata.singh@tothenew.com
The key's randomart image is:
+---[RSA 4096]-----+
|.. .|
|o +  o|
|..o  o o|
|ooE.  S o|
|O= . o . +|
|+o= o o O .|
|O+=* o = O|
|@**+o o o+|
+---[SHA256]-----+
root@ttn:~# apt-get install git
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  git-man liberror-perl
Suggested packages:
  git-daemon-run | git-daemon-sysvinit git-doc git-el git-email git-gui gitk
```

2. Initialize a Git Repository

A terminal window titled 'root@ttn: ~/testRepo' with a menu bar (File, Edit, View, Search, Terminal, Help). The terminal shows the following commands and output:

```
root@ttn:~# mkdir testRepo
root@ttn:~# cd testRepo
root@ttn:~/testRepo# git init
Initialized empty Git repository in /root/testRepo/.git/
root@ttn:~/testRepo#
```

3. Add files to the repository

A terminal window titled 'root@ttn: ~/testRepo' with a menu bar (File, Edit, View, Search, Terminal, Help). The terminal shows the following commands and output:

```
root@ttn:~/testRepo# echo "welcome" >file.txt
root@ttn:~/testRepo# git add .
root@ttn:~/testRepo# git commit
Aborting commit due to empty commit message.
root@ttn:~/testRepo# git commit -m "first file added"
[master (root-commit) 6cd85b2] first file added
1 file changed, 1 insertion(+)
create mode 100644 file.txt
root@ttn:~/testRepo#
```

4. Unstage 1 file

```
root@ttn: ~/testRepo
File Edit View Search Terminal Help
root@ttn:~/testRepo# touch file2
root@ttn:~/testRepo# git add .
root@ttn:~/testRepo# git status
On branch master
Changes to be committed:
  (use "git reset HEAD <file>..." to unstage)

    new file:   file2

root@ttn:~/testRepo# git reset HEAD -- file2
root@ttn:~/testRepo# git status
On branch master
Untracked files:
  (use "git add <file>..." to include in what will be committed)

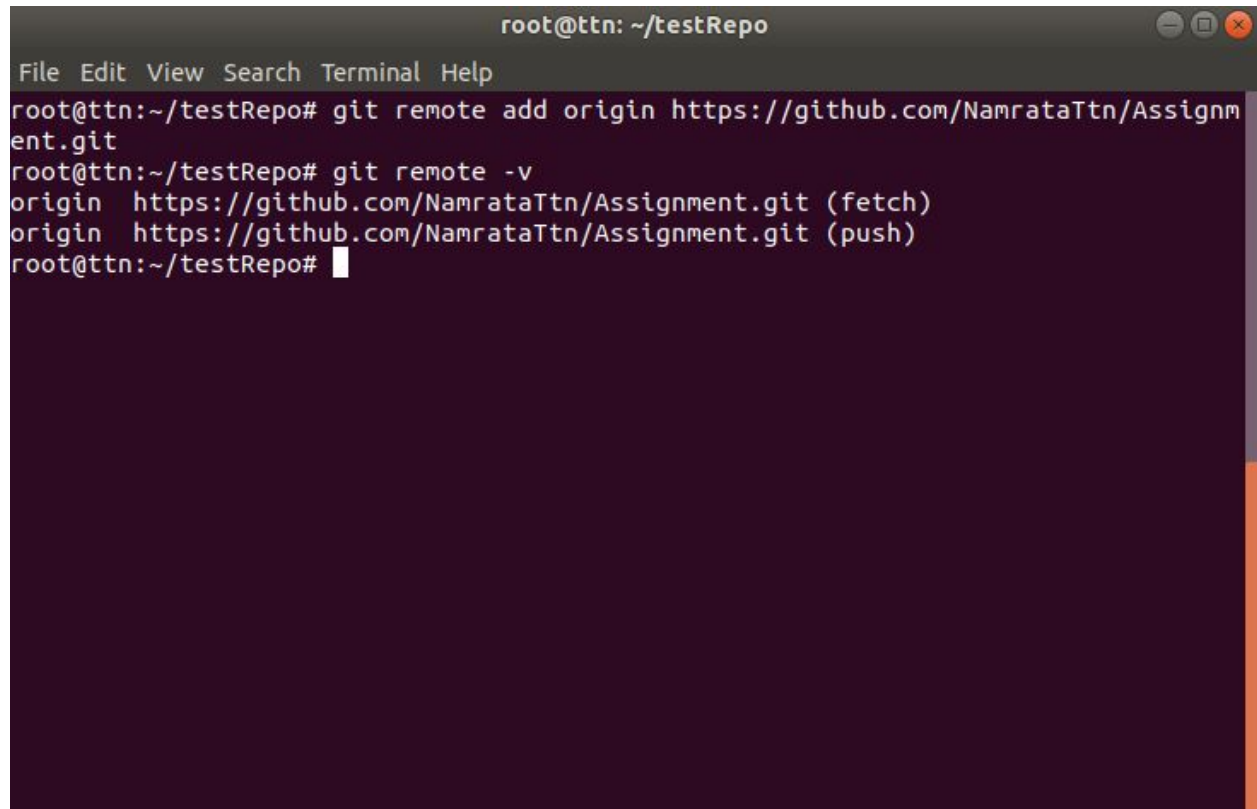
    file2

nothing added to commit but untracked files present (use "git add" to track)
root@ttn:~/testRepo#
```

5. Commit the file

```
root@ttn: ~/testRepo
File Edit View Search Terminal Help
root@ttn:~/testRepo# git add file2
root@ttn:~/testRepo# git commit -m "file2 added"
[master 855b430] file2 added
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 file2
root@ttn:~/testRepo#
```

6. Add a remote

A terminal window titled 'root@ttn: ~/testRepo' with a menu bar (File, Edit, View, Search, Terminal, Help). The terminal shows the following commands and output:

```
root@ttn:~/testRepo# git remote add origin https://github.com/NamrataTtn/Assignment.git
root@ttn:~/testRepo# git remote -v
origin  https://github.com/NamrataTtn/Assignment.git (fetch)
origin  https://github.com/NamrataTtn/Assignment.git (push)
root@ttn:~/testRepo#
```

7. Undo changes to a particular file

```
root@ttn: ~/testRepo
File Edit View Search Terminal Help
root@ttn:~/testRepo# nano file2
root@ttn:~/testRepo# git status
On branch master
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git checkout -- <file>..." to discard changes in working directory)

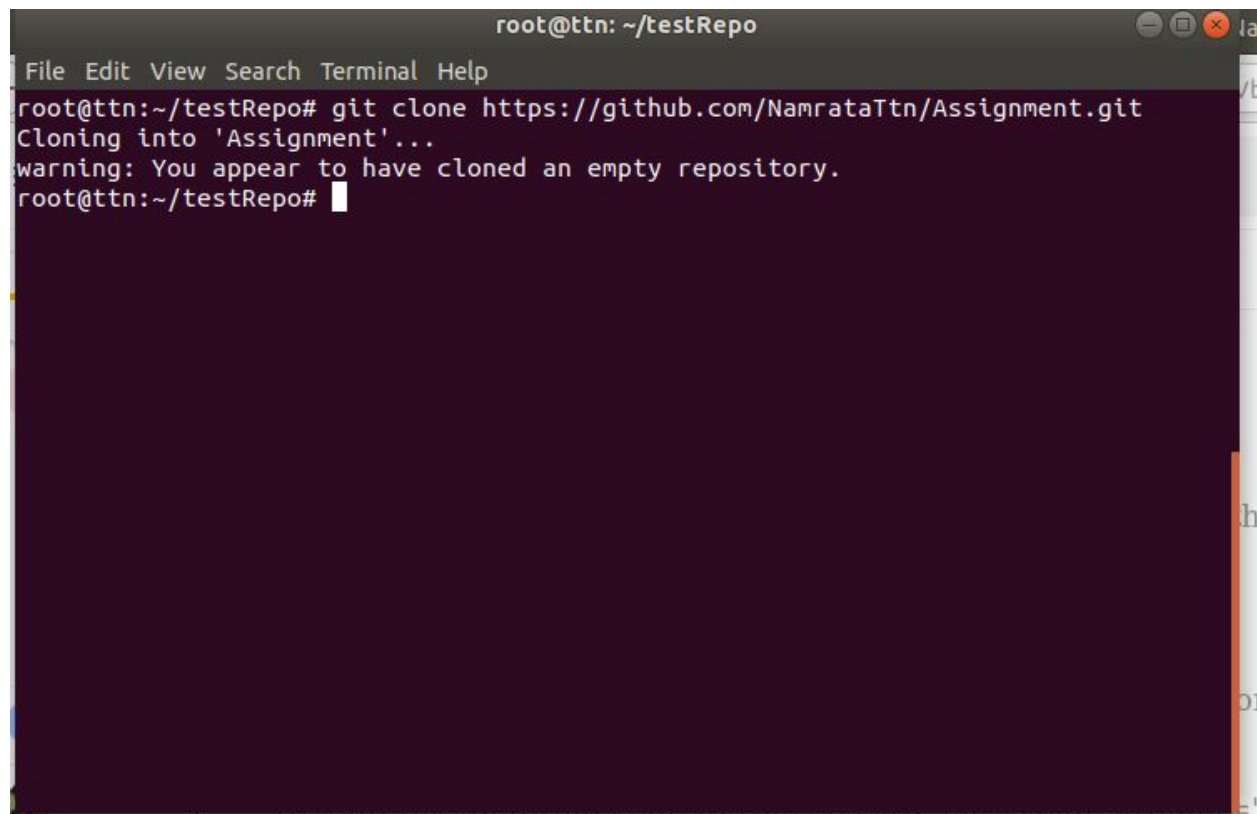
        modified:   file2

no changes added to commit (use "git add" and/or "git commit -a")
root@ttn:~/testRepo# git checkout -- file2
root@ttn:~/testRepo# git status
On branch master
nothing to commit, working tree clean
root@ttn:~/testRepo#
```

8. Push changes to Github

```
root@ttn: ~/testRepo/Assignment
File Edit View Search Terminal Help
root@ttn:~/testRepo# cd Assignment
root@ttn:~/testRepo/Assignment# touch fileToPush
root@ttn:~/testRepo/Assignment# git add fileToPush
root@ttn:~/testRepo/Assignment# git commit
Aborting commit due to empty commit message.
root@ttn:~/testRepo/Assignment# git commit -m "first file pushed"
[master (root-commit) e51dfe8] first file pushed
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 fileToPush
root@ttn:~/testRepo/Assignment# git push -u origin master
Username for 'https://github.com': NamrataTtn
Password for 'https://NamrataTtn@github.com':
Counting objects: 3, done.
Writing objects: 100% (3/3), 218 bytes | 218.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0)
To https://github.com/NamrataTtn/Assignment.git
 * [new branch]      master -> master
Branch 'master' set up to track remote branch 'master' from 'origin'.
root@ttn:~/testRepo/Assignment#
```

9. Clone the repository

A terminal window titled 'root@ttn: ~/testRepo' with a menu bar (File, Edit, View, Search, Terminal, Help). The terminal shows the command 'git clone https://github.com/NamrataTtn/Assignment.git' being executed. The output is 'Cloning into 'Assignment'...' followed by a warning: 'warning: You appear to have cloned an empty repository.' The prompt 'root@ttn:~/testRepo#' is shown again with a cursor.

```
root@ttn: ~/testRepo
File Edit View Search Terminal Help
root@ttn:~/testRepo# git clone https://github.com/NamrataTtn/Assignment.git
Cloning into 'Assignment'...
warning: You appear to have cloned an empty repository.
root@ttn:~/testRepo#
```

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

```
root@ttn: ~/testRepo/Assignment
File Edit View Search Terminal Help
root@ttn:~/testRepo/Assignment# nano file
root@ttn:~/testRepo/Assignment# git add .
root@ttn:~/testRepo/Assignment# git commit -m "changed file"
[master 305035c] changed file
 1 file changed, 1 insertion(+)
 create mode 100644 file
root@ttn:~/testRepo/Assignment# git push -u origin master
Username for 'https://github.com': NamrataTtn
Password for 'https://NamrataTtn@github.com':
Counting objects: 3, done.
Delta compression using up to 4 threads.
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 285 bytes | 285.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0)
To https://github.com/NamrataTtn/Assignment.git
 e51dfe8..305035c master -> master
Branch 'master' set up to track remote branch 'master' from 'origin'.
root@ttn:~/testRepo/Assignment#
```

11. Check differences between a file and its staged version

12. Ignore a few files to be checked in

```
root@ttn: ~/testRepo/Assignment
File Edit View Search Terminal Help
root@ttn:~/testRepo/Assignment# touch ignoreFile thisOneToo
root@ttn:~/testRepo/Assignment# nano .gitignore
root@ttn:~/testRepo/Assignment# git status
On branch master
Your branch is up to date with 'origin/master'.

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

        .gitignore
        ignoreFile
        thisOneToo

nothing added to commit but untracked files present (use "git add" to track)
root@ttn:~/testRepo/Assignment#
```

13. Create a new branch.

```
root@ttn: ~/testRepo/Assignment
File Edit View Search Terminal Help
root@ttn:~/testRepo/Assignment# git branch
* master
root@ttn:~/testRepo/Assignment# git branch newBranch
root@ttn:~/testRepo/Assignment# git branch
* master
  newBranch
root@ttn:~/testRepo/Assignment#
```

14. Diverge them with commits

```
root@ttn: ~/testRepo/Assignment
File Edit View Search Terminal Help
bash: alias: su: not found
ttn@ttn:~$ sudo -i
[sudo] password for ttn:
root@ttn:~# cd testRepo/Assignment
root@ttn:~/testRepo/Assignment# cat file
changes done
after changing again
root@ttn:~/testRepo/Assignment# echo "Third modification" >> file
root@ttn:~/testRepo/Assignment# git add --all
root@ttn:~/testRepo/Assignment# git commit -m "Diverge with commit"
[master 4fad903] Diverge with commit
1 file changed, 1 insertion(+)
root@ttn:~/testRepo/Assignment# git branch
* master
  newBranch
root@ttn:~/testRepo/Assignment# git checkout newBranch
Switched to branch 'newBranch'
root@ttn:~/testRepo/Assignment# ls
file  fileToPush
root@ttn:~/testRepo/Assignment#
```

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

```
root@ttn: ~/testRepo/Assignment
File Edit View Search Terminal Help
root@ttn:~/testRepo/Assignment# echo "something" > file
root@ttn:~/testRepo/Assignment# cat file
something
root@ttn:~/testRepo/Assignment# git add --all
root@ttn:~/testRepo/Assignment# git commit -m "conflict"
[newBranch 9c5af38] conflict
1 file changed, 1 insertion(+), 1 deletion(-)
root@ttn:~/testRepo/Assignment# git push -u origin master
Username for 'https://github.com': NamrataTtn
Password for 'https://NamrataTtn@github.com':
Counting objects: 7, done.
Delta compression using up to 4 threads.
Compressing objects: 100% (6/6), done.
Writing objects: 100% (7/7), 674 bytes | 674.00 KiB/s, done.
Total 7 (delta 1), reused 0 (delta 0)
remote: Resolving deltas: 100% (1/1), done.
To https://github.com/NamrataTtn/Assignment.git
   305035c..4fad903  master -> master
branch 'master' set up to track remote branch 'master' from 'origin'.
root@ttn:~/testRepo/Assignment#
```

```
root@ttn:~/testRepo/Assignment# echo "conflicting line" > file
root@ttn:~/testRepo/Assignment# cat file
conflicting line
root@ttn:~/testRepo/Assignment# git add --all
root@ttn:~/testRepo/Assignment# git commit -m "conflict line"
[newBranch dcfd7bc] conflict line
1 file changed, 1 insertion(+), 1 deletion(-)
root@ttn:~/testRepo/Assignment# git pull origin master
From https://github.com/NamrataTtn/Assignment
 * branch          master       -> FETCH_HEAD
Auto-merging file
CONFLICT (content): Merge conflict in file
Automatic merge failed; fix conflicts and then commit the result.
root@ttn:~/testRepo/Assignment#
```

16. Try merging and resolve merge conflicts


```
Activities  Terminal  Wed 12:31
root@ttn: ~/testRepo/Assignment

File Edit View Search Terminal Help
root@ttn:~/testRepo/Assignment# git status
On branch newBranch
You have unmerged paths.
  (fix conflicts and run "git commit")
  (use "git merge --abort" to abort the merge)

Changes to be committed:
  new file:   .gitignore
  new file:   ignoreFile
  new file:   thisOneToo

Unmerged paths:
  (use "git add <file>..." to mark resolution)

    both modified:   file

root@ttn:~/testRepo/Assignment# cat file
<<<<< HEAD
conflicting line
=====
changes done
after changing again
Third modification
>>>>> 4fad9032c6d9de848cb4c244a241e020d51bc508
root@ttn:~/testRepo/Assignment# git pull origin master
error: Pulling is not possible because you have unmerged files.
hint: Fix them up in the work tree, and then use 'git add/rm <file>'
hint: as appropriate to mark resolution and make a commit.
fatal: Exiting because of an unresolved conflict.
root@ttn:~/testRepo/Assignment# nano file
root@ttn:~/testRepo/Assignment# git add --all
root@ttn:~/testRepo/Assignment# git commit -m "conflict line"
[newBranch c174fb9] conflict line
root@ttn:~/testRepo/Assignment# git pull origin master
From https://github.com/NamrataTtn/Assignment
* branch      master       -> FETCH_HEAD
Already up to date.
```

17. Stash the changes and pop them

```
root@ttn: ~/testRepo/Assignment

File Edit View Search Terminal Help
root@ttn:~/testRepo/Assignment# echo "some stash content" >file
root@ttn:~/testRepo/Assignment# git status
On branch newBranch
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git checkout -- <file>..." to discard changes in working directory)

    modified:   file

no changes added to commit (use "git add" and/or "git commit -a")
root@ttn:~/testRepo/Assignment# git stash
Saved working directory and index state WIP on newBranch: c174fb9 conflict line
root@ttn:~/testRepo/Assignment# git status
On branch newBranch
nothing to commit, working tree clean
root@ttn:~/testRepo/Assignment# git stash pop
On branch newBranch
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git checkout -- <file>..." to discard changes in working directory)

    modified:   file

no changes added to commit (use "git add" and/or "git commit -a")
Dropped refs/stash@{0} (010e964e4d6467960d93fe7038d956f764cf6b1c)
root@ttn:~/testRepo/Assignment#
```

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
```

```
ttn@ttn: ~
File Edit View Search Terminal Help
ttn@ttn:~$ nano .bashrc
ttn@ttn:~$ source .bashrc
ttn@ttn:~$ mkdir namrata
mkdir: cannot create directory 'namrata': File exists
ttn@ttn:~$ cd namrata/
ttn@ttn:namrata$ ls -a
. .. .git
ttn@ttn:namrata$ git branch
ttn@ttn:namrata$ echo "hello world" > file1
ttn@ttn:namrata$ git add --all
ttn@ttn:namrata$ git commit

*** Please tell me who you are.

Run

git config --global user.email "you@example.com"
git config --global user.name "Your Name"

to set your account's default identity.
Omit --global to set the identity only in this repository.

fatal: unable to auto-detect email address (got 'ttn@ttn.(none)')
ttn@ttn:namrata$ git config --global user.email "you@example.com"
ttn@ttn:namrata$ git config --global user.name "Your Name"
ttn@ttn:namrata$ git commit
[master (root-commit) 0e5f723] asad
1 file changed, 1 insertion(+)
create mode 100644 file1
ttn@ttn:namrata (master)$ git checkout -b test
Switched to a new branch 'test'
ttn@ttn:namrata (test)$
```