Session 2: Introduction to Version Control

Assignment

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

Debian / Ubuntu (apt-get)

Git packages are available via apt:

1. From your shell, install Git using apt-get:

```
$ sudo apt-get update $ sudo apt-get install git
```

2. Verify the installation was successful by typing
   git --version:

```
$ git --version git version 2.9.2
```

3. Configure your Git username and email using the following
   commands, replacing Emma's name with your own. These
   details will be associated with any commits that you create:

```
$ git config --global user.name "Emma Paris" $ git con
```

2) Initialize a Git Repository


```
File  Edit  View  Search  Terminal  Help
ttn@parth-choudhary:~$ mkdir git_ex
ttn@parth-choudhary:~$ cd git_ex
ttn@parth-choudhary:~/git_ex$
ttn@parth-choudhary:~/git_ex$
ttn@parth-choudhary:~/git_ex$ git init
Initialized empty Git repository in /home/ttn/git_ex/.git/
ttn@parth-choudhary:~/git_ex$
```

3) Add files to the repository

```
File  Edit  View  Search  Terminal  Help
Initialized empty Git repository in /home/ttn/git_ex/.git/
ttn@parth-choudhary:~/git_ex$
ttn@parth-choudhary:~/git_ex$
ttn@parth-choudhary:~/git_ex$ ls
ttn@parth-choudhary:~/git_ex$ touch file1.txt
ttn@parth-choudhary:~/git_ex$ touch file2.txt
ttn@parth-choudhary:~/git_ex$ touch file3.css
ttn@parth-choudhary:~/git_ex$ touch file4.html
ttn@parth-choudhary:~/git_ex$
ttn@parth-choudhary:~/git_ex$
ttn@parth-choudhary:~/git_ex$ git add file.txt
fatal: pathspec 'file.txt' did not match any files
ttn@parth-choudhary:~/git_ex$ git add file1.txt
ttn@parth-choudhary:~/git_ex$ git status
On branch master

No commits yet

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

        new file:   file1.txt

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

        file2.txt
        file3.css
        file4.html

ttn@parth-choudhary:~/git_ex$ git add .
ttn@parth-choudhary:~/git_ex$ git status
On branch master

No commits yet

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

        new file:   file1.txt
        new file:   file2.txt
        new file:   file3.css
        new file:   file4.html

ttn@parth-choudhary:~/git_ex$
```

4) Unstage 1 file

```
File  Edit  View  Search  Terminal  Help
ttn@parth-choudhary:~/git_ex$ git status
On branch master

No commits yet

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

        new file:   file1.txt
        new file:   file2.txt
        new file:   file3.css
        new file:   file4.html

ttn@parth-choudhary:~/git_ex$ git rm --cached file3.css
rm 'file3.css'
ttn@parth-choudhary:~/git_ex$ git status
On branch master

No commits yet

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

        new file:   file1.txt
        new file:   file2.txt
        new file:   file4.html

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

        file3.css

ttn@parth-choudhary:~/git_ex$
```

5) Commit the file

```
File  Edit  View  Search  Terminal  Help
ttn@parth-choudhary:~/git_ex$ git status
On branch master

No commits yet

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

        new file:   file1.txt
        new file:   file2.txt
        new file:   file3.css
        new file:   file4.html

ttn@parth-choudhary:~/git_ex$ git commit -m "Inital Commit"
[master (root-commit) 8959aea] Inital Commit
 4 files changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 file1.txt
 create mode 100644 file2.txt
 create mode 100644 file3.css
 create mode 100644 file4.html
ttn@parth-choudhary:~/git_ex$ git status
On branch master
nothing to commit, working tree clean
ttn@parth-choudhary:~/git_ex$ 
```

6) Add a remote

```
File  Edit  View  Search  Terminal  Help
ttn@parth-choudhary:~/git_ex$ git remote -v
ttn@parth-choudhary:~/git_ex$
ttn@parth-choudhary:~/git_ex$
ttn@parth-choudhary:~/git_ex$ git remote add origin https://github.com/pc7-droid/demo_repo.git
ttn@parth-choudhary:~/git_ex$
ttn@parth-choudhary:~/git_ex$ git remote -v
origin  https://github.com/pc7-droid/demo_repo.git (fetch)
origin  https://github.com/pc7-droid/demo_repo.git (push)
ttn@parth-choudhary:~/git_ex$ 
```

7) Undo changes to a particular file

```
File  Edit  View  Search  Terminal  Help
ttn@parth-choudhary:~/git_ex$ ls
file1.txt  file2.txt  file3.css  file4.html
ttn@parth-choudhary:~/git_ex$
ttn@parth-choudhary:~/git_ex$ echo "this data is going to be changed later" >> file1.txt
ttn@parth-choudhary:~/git_ex$ cat file1.txt
this data is going to be changed later
ttn@parth-choudhary:~/git_ex$
ttn@parth-choudhary:~/git_ex$ 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:   file1.txt

no changes added to commit (use "git add" and/or "git commit -a")
ttn@parth-choudhary:~/git_ex$ git add .
ttn@parth-choudhary:~/git_ex$ git status
On branch master
Changes to be committed:
  (use "git reset HEAD <file>..." to unstage)

        modified:   file1.txt

ttn@parth-choudhary:~/git_ex$ git commit -m "Commit before change"
[master 99c20d2] Commit before change
 1 file changed, 1 insertion(+)
ttn@parth-choudhary:~/git_ex$ git status
On branch master
nothing to commit, working tree clean
ttn@parth-choudhary:~/git_ex$ 
```

```
File  Edit  View  Search  Terminal  Help
ttn@parth-choudhary:~/git_ex$
ttn@parth-choudhary:~/git_ex$ git log
commit 99c20d27cdb2a544ebb68ccba15819b4db4e95bc (HEAD -> master)
Author: parth <parthch75@gmail.com>
Date:   Thu Feb 4 01:43:16 2021 +0530

    Commit before change

commit 8959aeaadcd03a6f9886b8d35d5982ea4de74d0d
Author: parth <parthch75@gmail.com>
Date:   Thu Feb 4 00:57:37 2021 +0530

    Inital Commit
ttn@parth-choudhary:~/git_ex$
ttn@parth-choudhary:~/git_ex$
ttn@parth-choudhary:~/git_ex$
ttn@parth-choudhary:~/git_ex$
ttn@parth-choudhary:~/git_ex$ echo "Now data is in process of change" >> file1.txt
ttn@parth-choudhary:~/git_ex$ 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:   file1.txt

no changes added to commit (use "git add" and/or "git commit -a")
ttn@parth-choudhary:~/git_ex$
ttn@parth-choudhary:~/git_ex$
ttn@parth-choudhary:~/git_ex$ git add file1.txt
ttn@parth-choudhary:~/git_ex$ git commit -m "commit after change"
[master ffaacbb] commit after change
 1 file changed, 1 insertion(+)
ttn@parth-choudhary:~/git_ex$ git status
On branch master
nothing to commit, working tree clean
ttn@parth-choudhary:~/git_ex$ 
```
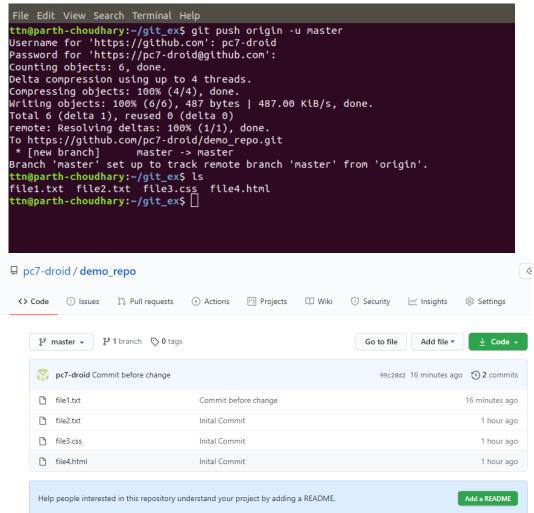
8) Push changes to Github

9) Clone the repository

```
File  Edit  View  Search  Terminal  Help
ttn@parth-choudhary:~/git_ex$ mkdir clonerepo
ttn@parth-choudhary:~/git_ex$ cd clonerepo
ttn@parth-choudhary:~/git_ex/clonerepo$
ttn@parth-choudhary:~/git_ex/clonerepo$ git clone https://github.com/pc7-droid/demo_repo
Cloning into 'demo_repo'...
remote: Enumerating objects: 6, done.
remote: Counting objects: 100% (6/6), done.
remote: Compressing objects: 100% (3/3), done.
remote: Total 6 (delta 1), reused 6 (delta 1), pack-reused 0
Unpacking objects: 100% (6/6), done.
ttn@parth-choudhary:~/git_ex/clonerepo$
ttn@parth-choudhary:~/git_ex/clonerepo$ ls -l
total 4
drwxr-xr-x 3 ttn ttn 4096 Feb  4 02:07 demo_repo
ttn@parth-choudhary:~/git_ex/clonerepo$ ls
demo_repo
ttn@parth-choudhary:~/git_ex/clonerepo$ cd demo_repo
ttn@parth-choudhary:~/git_ex/clonerepo/demo_repo$
ttn@parth-choudhary:~/git_ex/clonerepo/demo_repo$
ttn@parth-choudhary:~/git_ex/clonerepo/demo_repo$ ls -l
total 4
-rw-r--r-- 1 ttn ttn 39 Feb  4 02:07 file1.txt
-rw-r--r-- 1 ttn ttn  0 Feb  4 02:07 file2.txt
-rw-r--r-- 1 ttn ttn  0 Feb  4 02:07 file3.css
-rw-r--r-- 1 ttn ttn  0 Feb  4 02:07 file4.html
ttn@parth-choudhary:~/git_ex/clonerepo/demo_repo$ 
```

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

```
File  Edit  View  Search  Terminal  Help
ttn@parth-choudhary:~/git_ex$ ls
clonerepo  file1.txt  file2.txt  file3.css  file4.html
ttn@parth-choudhary:~/git_ex$
ttn@parth-choudhary:~/git_ex$ mkdir testdir
ttn@parth-choudhary:~/git_ex$ cd testdir
ttn@parth-choudhary:~/git_ex/testdir$ touch names.txt
ttn@parth-choudhary:~/git_ex/testdir$ cat raj > names.txt
cat: raj: No such file or directory
ttn@parth-choudhary:~/git_ex/testdir$ echo raj > names.txt
ttn@parth-choudhary:~/git_ex/testdir$ cat names.txt
raj
ttn@parth-choudhary:~/git_ex/testdir$ echo ravi >> names.txt
ttn@parth-choudhary:~/git_ex/testdir$ echo ram >> names.txt
ttn@parth-choudhary:~/git_ex/testdir$ echo raghu >> names.txt
ttn@parth-choudhary:~/git_ex/testdir$ cat names.txt
raj
ravi
ram
raghu
ttn@parth-choudhary:~/git_ex/testdir$ clear
```

```
File Edit View Search Terminal Help
ttn@parth-choudhary:~/git_ex/testdir$ ls
names.txt
ttn@parth-choudhary:~/git_ex/testdir$ git add .
ttn@parth-choudhary:~/git_ex/testdir$
ttn@parth-choudhary:~/git_ex/testdir$
ttn@parth-choudhary:~/git_ex/testdir$ git branch
* master
ttn@parth-choudhary:~/git_ex/testdir$ git commit -m "name file commit"
[master b02614d] name file commit
 1 file changed, 4 insertions(+)
 create mode 100644 testdir/names.txt
ttn@parth-choudhary:~/git_ex/testdir$ git push -u origin master
Username for 'https://github.com': pc7-droid
Password for 'https://pc7-droid@github.com':
Counting objects: 4, done.
Delta compression using up to 4 threads.
Compressing objects: 100% (2/2), done.
Writing objects: 100% (4/4), 326 bytes | 326.00 KiB/s, done.
Total 4 (delta 1), reused 0 (delta 0)
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/pc7-droid/demo_repo.git
   99c20d2..b02614d  master -> master
Branch 'master' set up to track remote branch 'master' from 'origin'.
ttn@parth-choudhary:~/git_ex/testdir$ git checkout -b newbranch
Switched to a new branch 'newbranch'
ttn@parth-choudhary:~/git_ex/testdir$ mkdir files
ttn@parth-choudhary:~/git_ex/testdir$ cd files
ttn@parth-choudhary:~/git_ex/testdir/files$ git pull https://github.com/pc7-droid/demo_repo
From https://github.com/pc7-droid/demo_repo
 * branch            HEAD       -> FETCH_HEAD
Already up to date.
ttn@parth-choudhary:~/git_ex/testdir/files$ ls
ttn@parth-choudhary:~/git_ex/testdir/files$ git fetch
ttn@parth-choudhary:~/git_ex/testdir/files$ ls
ttn@parth-choudhary:~/git_ex/testdir/files$ git pull
There is no tracking information for the current branch.
Please specify which branch you want to merge with.
See git-pull(1) for details.
```

```
    git pull <remote> <branch>

If you wish to set tracking information for this branch you can do so with:

    git branch --set-upstream-to=origin/<branch> newbranch

ttn@parth-choudhary:~/git_ex/testdir/files$ ls
ttn@parth-choudhary:~/git_ex/testdir/files$ git pull https://github.com/pc7-droid/demo_repo newbranch
fatal: Couldn't find remote ref newbranch
ttn@parth-choudhary:~/git_ex/testdir/files$ git pull https://github.com/pc7-droid/demo_repo master
From https://github.com/pc7-droid/demo_repo
 * branch            master     -> FETCH_HEAD
Already up to date.
ttn@parth-choudhary:~/git_ex/testdir/files$ ls
ttn@parth-choudhary:~/git_ex/testdir/files$ cd ..
ttn@parth-choudhary:~/git_ex/testdir$ ls
files  names.txt
ttn@parth-choudhary:~/git_ex/testdir$ git branch
  master
* newbranch
ttn@parth-choudhary:~/git_ex/testdir$ cat names.txt
raj
ravi
ram
raghu
ttn@parth-choudhary:~/git_ex/testdir$
```

11) Check differences between a file and its staged version

12) Ignore a few files to be checked in

```
File  Edit  View  Search  Terminal  Help
ttn@parth-choudhary:~/git_ex/testdir2$ git init
Initialized empty Git repository in /home/ttn/git_ex/testdir2/.git/
ttn@parth-choudhary:~/git_ex/testdir2$
ttn@parth-choudhary:~/git_ex/testdir2$ gedit .gitignore
ttn@parth-choudhary:~/git_ex/testdir2$ ls
log.txt  test1.txt  test2.txt  test3.txt
ttn@parth-choudhary:~/git_ex/testdir2$ touch test4.txt
ttn@parth-choudhary:~/git_ex/testdir2$ git status
On branch master

No commits yet

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

        .gitignore
        log.txt
        test1.txt
        test2.txt
        test3.txt

nothing added to commit but untracked files present (use "git add" to track)
ttn@parth-choudhary:~/git_ex/testdir2$ git add .
ttn@parth-choudhary:~/git_ex/testdir2$ git commit -m "Initial Commit"
[master (root-commit) 7cac224] Initial Commit
 5 files changed, 18 insertions(+)
 create mode 100644 .gitignore
 create mode 100644 log.txt
 create mode 100644 test1.txt
 create mode 100644 test2.txt
 create mode 100644 test3.txt
ttn@parth-choudhary:~/git_ex/testdir2$ git status
On branch master
nothing to commit, working tree clean
ttn@parth-choudhary:~/git_ex/testdir2$ cat .gitignore
#ignored files
test4.txt
```

13) Create a new branch.

```
File  Edit  View  Search  Terminal  Help
ttn@parth-choudhary:~/git_ex$ git branch branch1
ttn@parth-choudhary:~/git_ex$
ttn@parth-choudhary:~/git_ex$ git checkout -b dev
M       testdir2/log.txt
M       testdir2/test1.txt
Switched to a new branch 'dev'
ttn@parth-choudhary:~/git_ex$
ttn@parth-choudhary:~/git_ex$
ttn@parth-choudhary:~/git_ex$ git checkout master
M       testdir2/log.txt
M       testdir2/test1.txt
Switched to branch 'master'
Your branch is ahead of 'origin/master' by 2 commits.
  (use "git push" to publish your local commits)
ttn@parth-choudhary:~/git_ex$
ttn@parth-choudhary:~/git_ex$ git branch -a
  branch1
  dev
* master
  newbranch
  remotes/origin/master
ttn@parth-choudhary:~/git_ex$
ttn@parth-choudhary:~/git_ex$
ttn@parth-choudhary:~/git_ex$ 
```

14) Diverge them with commits

```
ttn@parth-choudhary:~/diverge_ex/div1$ git init
Initialized empty Git repository in /home/ttn/diverge_ex/div1/.git/
ttn@parth-choudhary:~/diverge_ex/div1$ git pull https://github.com/pc7-droid/demo_repo.git
remote: Enumerating objects: 29, done.
remote: Counting objects: 100% (29/29), done.
remote: Compressing objects: 100% (15/15), done.
remote: Total 29 (delta 6), reused 25 (delta 4), pack-reused 0
Unpacking objects: 100% (29/29), done.
From https://github.com/pc7-droid/demo_repo
 * branch            HEAD       -> FETCH_HEAD
ttn@parth-choudhary:~/diverge_ex/div1$ ls
file1.txt  file2.txt  file3.css  file4.html
ttn@parth-choudhary:~/diverge_ex/div1$ gedit file1.txt
ttn@parth-choudhary:~/diverge_ex/div1$ cat fil1.txt
cat: fil1.txt: No such file or directory
ttn@parth-choudhary:~/diverge_ex/div1$ cat file1.txt
this is going to be diverge term-1.
ttn@parth-choudhary:~/diverge_ex/div1$ git add .
ttn@parth-choudhary:~/diverge_ex/div1$ git commit -m "1st term commit"
[master a101ff0] 1st term commit
 1 file changed, 1 insertion(+), 2 deletions(-)
ttn@parth-choudhary:~/diverge_ex/div1$ git push -u https://github.com/pc7-droid/demo_repo.git
fatal: The current branch master has no upstream branch.
To push the current branch and set the remote as upstream, use

    git push --set-upstream https://github.com/pc7-droid/demo_repo.git master

ttn@parth-choudhary:~/diverge_ex/div1$ git push --set-upstream https://github.com/pc7-droid/demo_repo.git master
Username for 'https://github.com': pc7-droid
Password for 'https://pc7-droid@github.com':
Counting objects: 3, done.
Delta compression using up to 4 threads.
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 338 bytes | 338.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0)
To https://github.com/pc7-droid/demo_repo.git
   ed5a8bb..a101ff0  master -> master
Branch 'master' set up to track remote branch 'master' from 'https://github.com/pc7-droid/demo_repo.git'.
ttn@parth-choudhary:~/diverge_ex/div1$
```

```
File  Edit  View  Search  Terminal  Tabs  Help
              ttn@parth-choudhary: ~/diverge_ex/div1              ×          ttn@pa
archive.zip  diverge_ex  Downloads  exercise      git_ex    Music    newbranches  Public    tmp      wget-log
ttn@parth-choudhary:~$ cd diverge_ex
ttn@parth-choudhary:~/diverge_ex$ ls
div1  div2
ttn@parth-choudhary:~/diverge_ex$ cd div2
ttn@parth-choudhary:~/diverge_ex/div2$ clear
ttn@parth-choudhary:~/diverge_ex/div2$ git init
Initialized empty Git repository in /home/ttn/diverge_ex/div2/.git/
ttn@parth-choudhary:~/diverge_ex/div2$ git pull https://github.com/pc7-droid/demo_repo.git
remote: Enumerating objects: 29, done.
remote: Counting objects: 100% (29/29), done.
remote: Compressing objects: 100% (15/15), done.
remote: Total 29 (delta 6), reused 25 (delta 4), pack-reused 0
Unpacking objects: 100% (29/29), done.
From https://github.com/pc7-droid/demo_repo
 * branch            HEAD       -> FETCH_HEAD
ttn@parth-choudhary:~/diverge_ex/div2$ ls
file1.txt  file2.txt  file3.css  file4.html
ttn@parth-choudhary:~/diverge_ex/div2$ gedit file1.txt
ttn@parth-choudhary:~/diverge_ex/div2$ cat file1.txt
this is going to be diverge term-2.  Hope for a crash.
ttn@parth-choudhary:~/diverge_ex/div2$ git add .
ttn@parth-choudhary:~/diverge_ex/div2$ git commit -m "2nd term commit"
[master 07362a8] 2nd term commit
 1 file changed, 1 insertion(+), 2 deletions(-)
ttn@parth-choudhary:~/diverge_ex/div2$ git push -u  https://github.com/pc7-droid/demo_repo.git
fatal: The current branch master has no upstream branch.
To push the current branch and set the remote as upstream, use

    git push --set-upstream https://github.com/pc7-droid/demo_repo.git master

ttn@parth-choudhary:~/diverge_ex/div2$ git push --set-upstream https://github.com/pc7-droid/demo_repo.git master
Username for 'https://github.com': pc7-droid
Password for 'https://pc7-droid@github.com':
To https://github.com/pc7-droid/demo_repo.git
 ! [rejected]        master -> master (fetch first)
error: failed to push some refs to 'https://github.com/pc7-droid/demo_repo.git'
hint: Updates were rejected because the remote contains work that you do
hint: not have locally. This is usually caused by another repository pushing
hint: to the same ref. You may want to first integrate the remote changes
hint: (e.g., 'git pull ...') before pushing again.
hint: See the 'Note about fast-forwards' in 'git push --help' for details.
ttn@parth-choudhary:~/diverge_ex/div2$
```

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

```
File  Edit  View  Search  Terminal  Help
ttn@parth-choudhary:~/git_ex$ cat file1.txt
this data is going to be changed later
but don't know when
ttn@parth-choudhary:~/git_ex$ gedit file1.txt
ttn@parth-choudhary:~/git_ex$ cat file1.txt
this data is not going to be changed later
but don't know when
ttn@parth-choudhary:~/git_ex$ git add file1.txt
ttn@parth-choudhary:~/git_ex$ git commit -m "file1 chnaged in master"
[master c147f12] file1 chnaged in master
 1 file changed, 1 insertion(+), 1 deletion(-)
ttn@parth-choudhary:~/git_ex$
ttn@parth-choudhary:~/git_ex$ git checkout dev
M       testdir2/log.txt
M       testdir2/test1.txt
Switched to branch 'dev'
ttn@parth-choudhary:~/git_ex$ cat file1.txt
this data is going to be changed later
but don't know when
ttn@parth-choudhary:~/git_ex$ gedit file1.txt
ttn@parth-choudhary:~/git_ex$ cat file1.txt
this data is not going to be changed later
but don't know when
ttn@parth-choudhary:~/git_ex$ git add file1.txt
ttn@parth-choudhary:~/git_ex$ git commit -m "file1 chnaged in dev"
[dev e7f2bb0] file1 chnaged in dev
 1 file changed, 1 insertion(+), 1 deletion(-)
ttn@parth-choudhary:~/git_ex$
```

16) Try merging and resolve merge conflicts

```
File  Edit  View  Search  Terminal  Help
ttn@parth-choudhary:~/git_ex2$ gedit dummy.txt
ttn@parth-choudhary:~/git_ex2$ git status
On branch branch1
Untracked files:
  (use "git add <file>..." to include in what will be committed)

        dummy.txt

nothing added to commit but untracked files present (use "git add" to track)
ttn@parth-choudhary:~/git_ex2$ git add .
ttn@parth-choudhary:~/git_ex2$ git commit -m "mrg commit1"
[branch1 4b267a6] mrg commit1
 1 file changed, 1 insertion(+)
 create mode 100644 dummy.txt
ttn@parth-choudhary:~/git_ex2$ git checkout master
Switched to branch 'master'
ttn@parth-choudhary:~/git_ex2$ git status
On branch master
nothing to commit, working tree clean
ttn@parth-choudhary:~/git_ex2$ git merge branch1
Updating ea937c2..4b267a6
Fast-forward
 dummy.txt | 1 +
 1 file changed, 1 insertion(+)
 create mode 100644 dummy.txt
ttn@parth-choudhary:~/git_ex2$ git log
commit 4b267a63249cc7586454d7f4deb21e4972fa89dc (HEAD -> master, branch1)
Author: parth <parthch75@gmail.com>
Date:   Thu Feb 4 22:51:43 2021 +0530

    mrg commit1

commit ea937c256595a9ed09204f7bd93e3060d8edd3bd
Author: parth <parthch75@gmail.com>
Date:   Thu Feb 4 22:49:55 2021 +0530

    Inital commit
ttn@parth-choudhary:~/git_ex2$
```

```
File  Edit  View  Search  Terminal  Help
ttn@parth-choudhary:~/git_ex2$ ls
dummy.txt  file.txt
ttn@parth-choudhary:~/git_ex2$ gedit dummy.txt
ttn@parth-choudhary:~/git_ex2$ git checkout branch1
M       dummy.txt
Switched to branch 'branch1'
ttn@parth-choudhary:~/git_ex2$ gedit dummy.txt
ttn@parth-choudhary:~/git_ex2$ git status
On branch branch1
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:   dummy.txt

no changes added to commit (use "git add" and/or "git commit -a")
ttn@parth-choudhary:~/git_ex2$ git add .
ttn@parth-choudhary:~/git_ex2$ git commit -m "mrg commit2"
[branch1 9af8299] mrg commit2
 1 file changed, 3 insertions(+), 1 deletion(-)
ttn@parth-choudhary:~/git_ex2$ git checkout master
Switched to branch 'master'
ttn@parth-choudhary:~/git_ex2$ gedit dummy.txt
ttn@parth-choudhary:~/git_ex2$ 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:   dummy.txt

no changes added to commit (use "git add" and/or "git commit -a")
ttn@parth-choudhary:~/git_ex2$ git add .
ttn@parth-choudhary:~/git_ex2$ git commit -m "mrg commit3"
[master add687f] mrg commit3
 1 file changed, 1 insertion(+)
ttn@parth-choudhary:~/git_ex2$
```



```
File  Edit  View  Search  Terminal  Help
ttn@parth-choudhary:~/git_ex2$ git checkout branch1
M       dummy.txt
Switched to branch 'branch1'
ttn@parth-choudhary:~/git_ex2$ gedit dummy.txt
ttn@parth-choudhary:~/git_ex2$ git status
On branch branch1
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:   dummy.txt

no changes added to commit (use "git add" and/or "git commit -a")
ttn@parth-choudhary:~/git_ex2$ git add .
ttn@parth-choudhary:~/git_ex2$ git commit -m "mrg commit2"
[branch1 9af8299] mrg commit2
 1 file changed, 3 insertions(+), 1 deletion(-)
ttn@parth-choudhary:~/git_ex2$ git checkout master
Switched to branch 'master'
ttn@parth-choudhary:~/git_ex2$ gedit dummy.txt
ttn@parth-choudhary:~/git_ex2$ 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:   dummy.txt

no changes added to commit (use "git add" and/or "git commit -a")
ttn@parth-choudhary:~/git_ex2$ git add .
ttn@parth-choudhary:~/git_ex2$ git commit -m "mrg commit3"
[master add687f] mrg commit3
 1 file changed, 1 insertion(+)
ttn@parth-choudhary:~/git_ex2$ git merge branch1
Auto-merging dummy.txt
CONFLICT (content): Merge conflict in dummy.txt
Automatic merge failed; fix conflicts and then commit the result.
ttn@parth-choudhary:~/git_ex2$
```

```
File  Edit  View  Search  Terminal  Help
ttn@parth-choudhary:~/git_ex2$ cat dummy.txt
<<<<<<< HEAD
this is a dummy merge conflict file
changing
=======
this is a dummy merge conflict file
changing
once again
>>>>>>> branch1
ttn@parth-choudhary:~/git_ex2$ □
```

17) Stash the changes and pop them


```
File  Edit  View  Search  Terminal  Help
ttn@parth-choudhary:~/git_ex$ echo "some styles" > file3.css
ttn@parth-choudhary:~/git_ex$ echo "some pages" > file4.html
ttn@parth-choudhary:~/git_ex$
ttn@parth-choudhary:~/git_ex$ git status
On branch dev
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:   file3.css
        modified:   file4.html
        modified:   testdir2/log.txt
        modified:   testdir2/test1.txt

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

        clonerepo/

no changes added to commit (use "git add" and/or "git commit -a")
ttn@parth-choudhary:~/git_ex$ git stash
Saved working directory and index state WIP on dev: e7f2bb0 file1 chnaged in dev
ttn@parth-choudhary:~/git_ex$ git stash list
stash@{0}: WIP on dev: e7f2bb0 file1 chnaged in dev
ttn@parth-choudhary:~/git_ex$
ttn@parth-choudhary:~/git_ex$ git stash pop
On branch dev
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:   file3.css
        modified:   file4.html
        modified:   testdir2/log.txt
        modified:   testdir2/test1.txt

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

```
File  Edit  View  Search  Terminal  Help
  (use "git checkout -- <file>..." to discard changes in working directory)

        modified:   file3.css
        modified:   file4.html
        modified:   testdir2/log.txt
        modified:   testdir2/test1.txt

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

        clonerepo/

no changes added to commit (use "git add" and/or "git commit -a")
ttn@parth-choudhary:~/git_ex$ git stash
Saved working directory and index state WIP on dev: e7f2bb0 file1 chnaged in dev
ttn@parth-choudhary:~/git_ex$ git stash list
stash@{0}: WIP on dev: e7f2bb0 file1 chnaged in dev
ttn@parth-choudhary:~/git_ex$
ttn@parth-choudhary:~/git_ex$ git stash pop
On branch dev
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:   file3.css
        modified:   file4.html
        modified:   testdir2/log.txt
        modified:   testdir2/test1.txt

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

        clonerepo/

no changes added to commit (use "git add" and/or "git commit -a")
Dropped refs/stash@{0} (305be46f2b8180f7d3584d7c628a8b9ebfc8727a)
ttn@parth-choudhary:~/git_ex$ git stash list
ttn@parth-choudhary:~/git_ex$
```

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@parth-choudhary:~$ cat >> ~/.bashrc
        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 $(parse_git_branch)\$ '
fi
unset color_prompt force_color_prompt
^C
ttn@parth-choudhary:~$ source ~/.bashrc
ttn@parth-choudhary:~ $ ls
archive.tar  Desktop     Documents   examples.desktop  file1.txt  git_ex2      mysoftware    Pictures   Templates  Videos
archive.zip  diverge_ex  Downloads   exercise          git_ex     Music        newbranches   Public     tmp        wget-log
ttn@parth-choudhary:~ $ cd git_ex
ttn@parth-choudhary:git_ex (master)$ ls
clonerepo  file1.txt  file2.txt  file3.css  file4.html  mergcon  testdir  testdir2
ttn@parth-choudhary:git_ex (master)$ cd testdir
ttn@parth-choudhary:testdir (master)$ ls
files  names.txt
ttn@parth-choudhary:testdir (master)$ cd files
ttn@parth-choudhary:files (master)$ ls
ttn@parth-choudhary:files (master)$ cd ..
ttn@parth-choudhary:testdir (master)$ cd ..
ttn@parth-choudhary:git_ex (master)$ cd clonerepo
ttn@parth-choudhary:clonerepo (master)$ ls
demo_repo
ttn@parth-choudhary:clonerepo (master)$ cd demo_repo
ttn@parth-choudhary:demo_repo (master)$ 
```