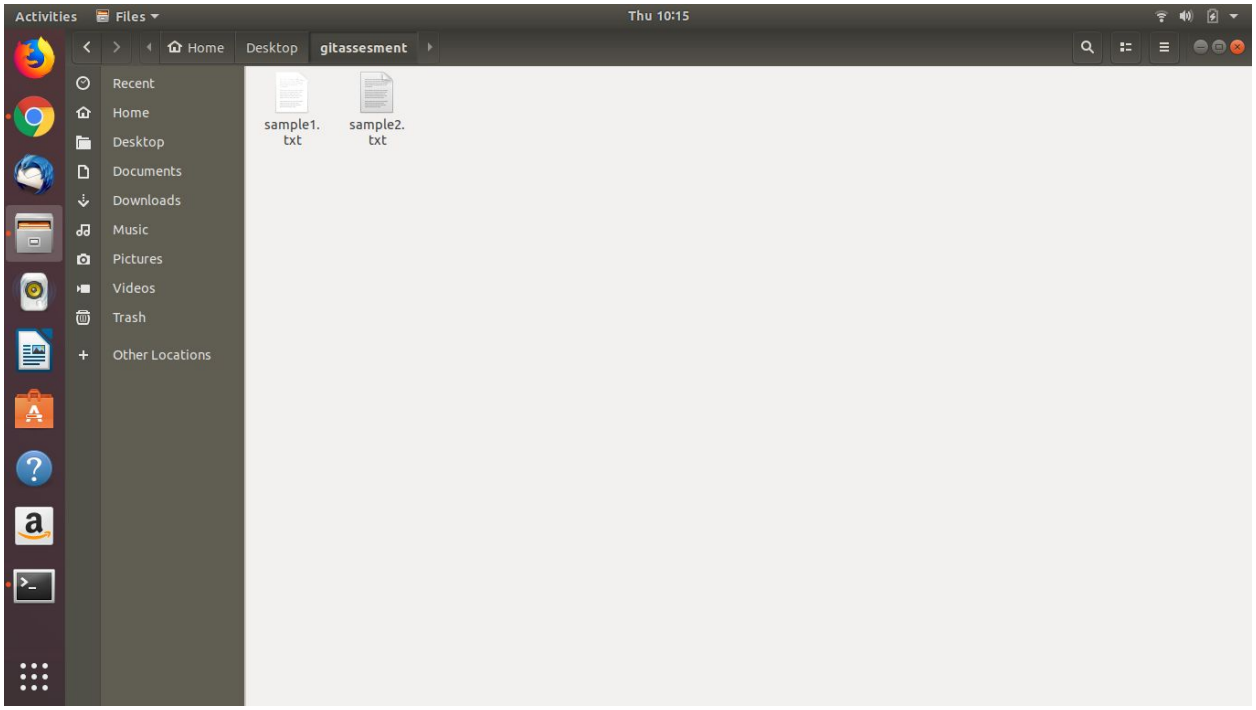
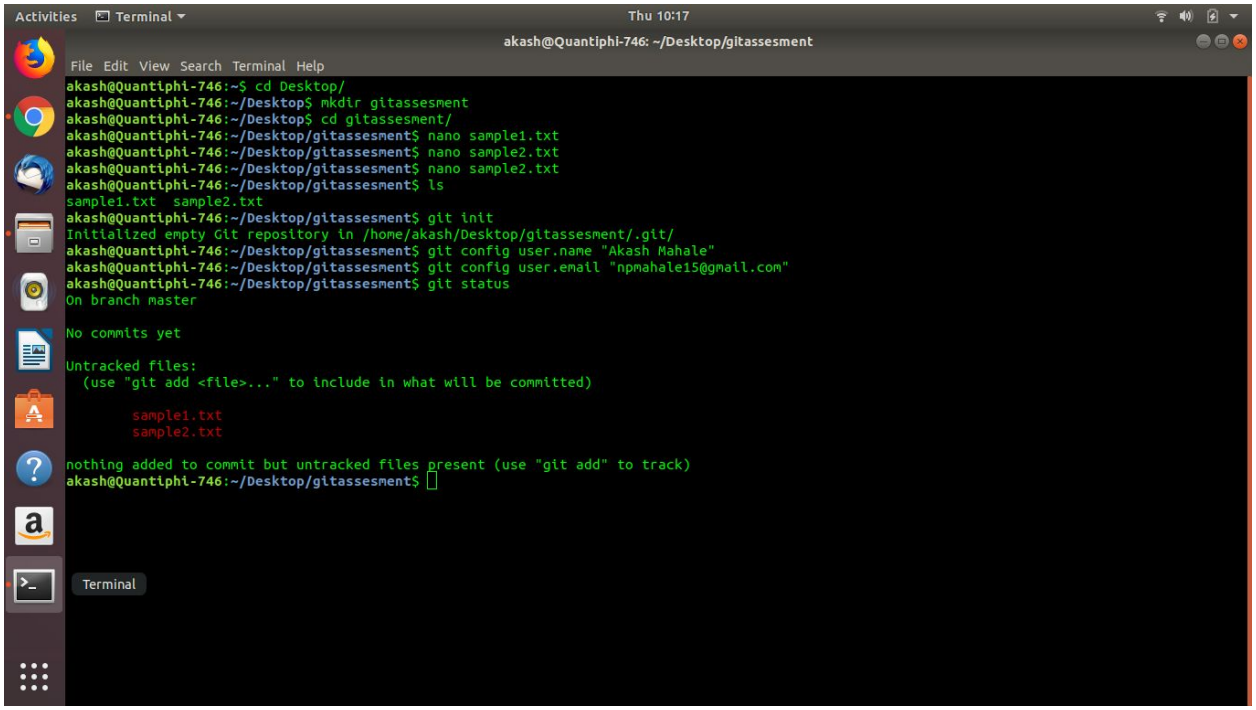
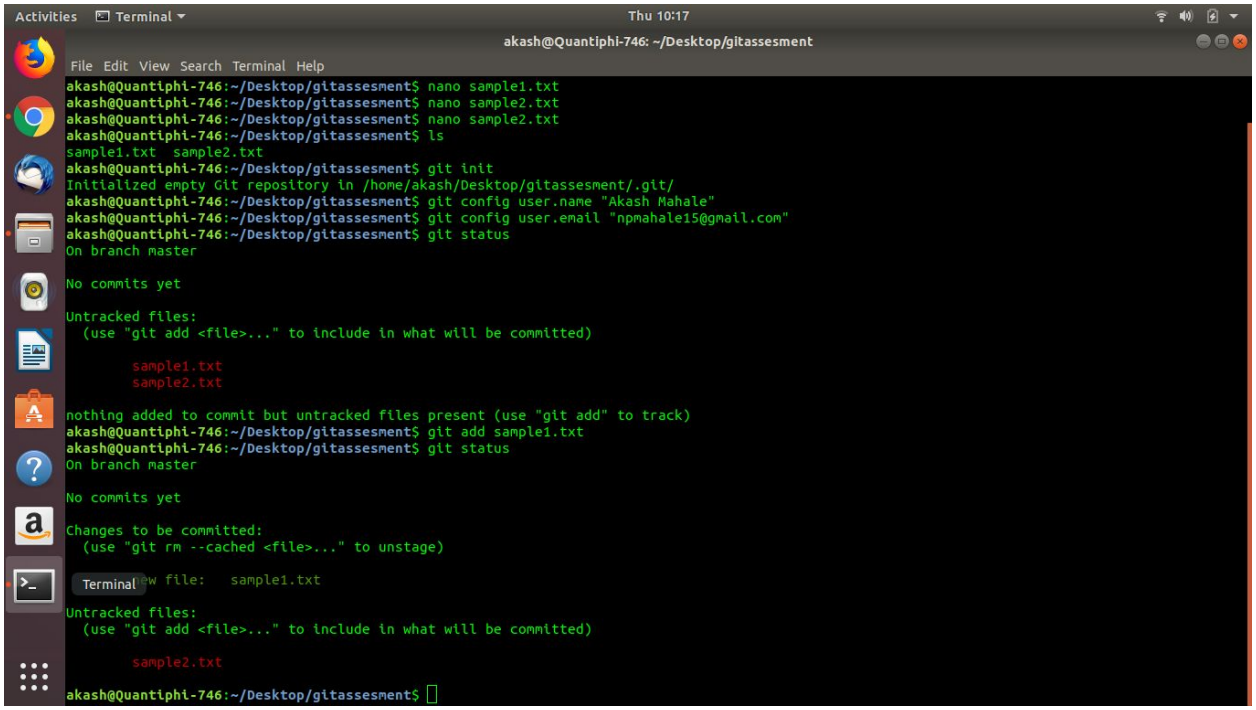
GIT Assessment

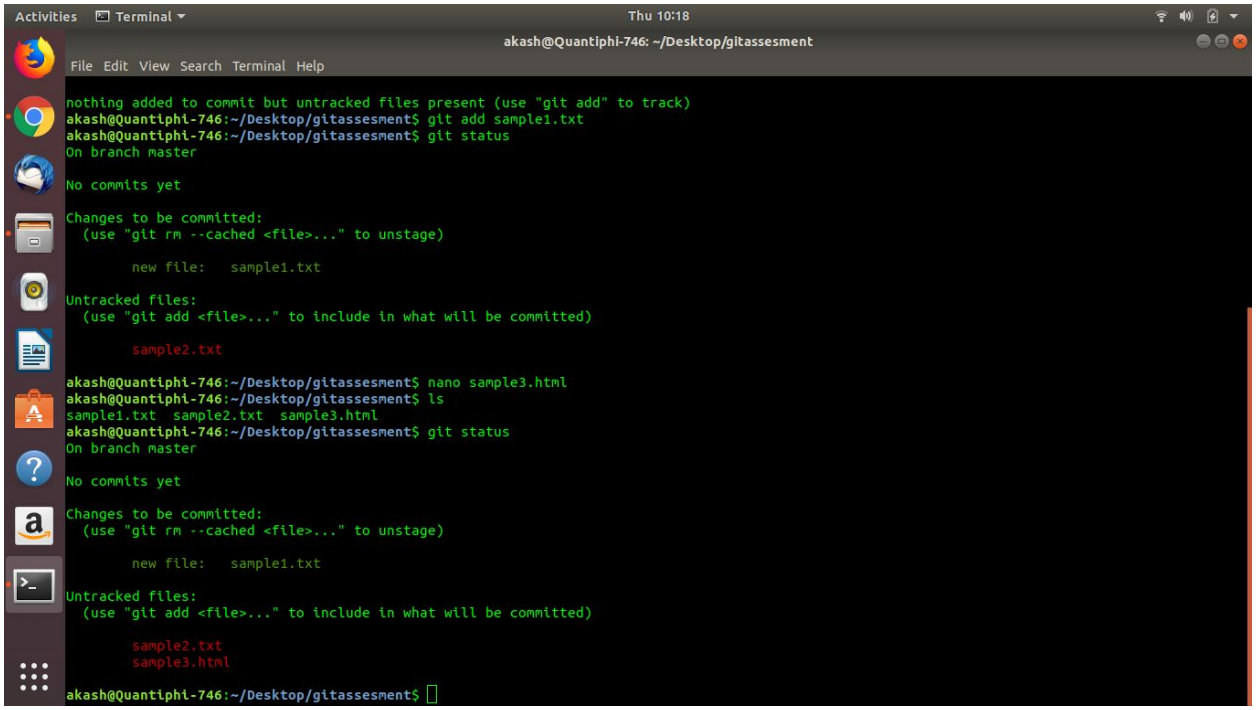
Distributed version control system(DVCS)

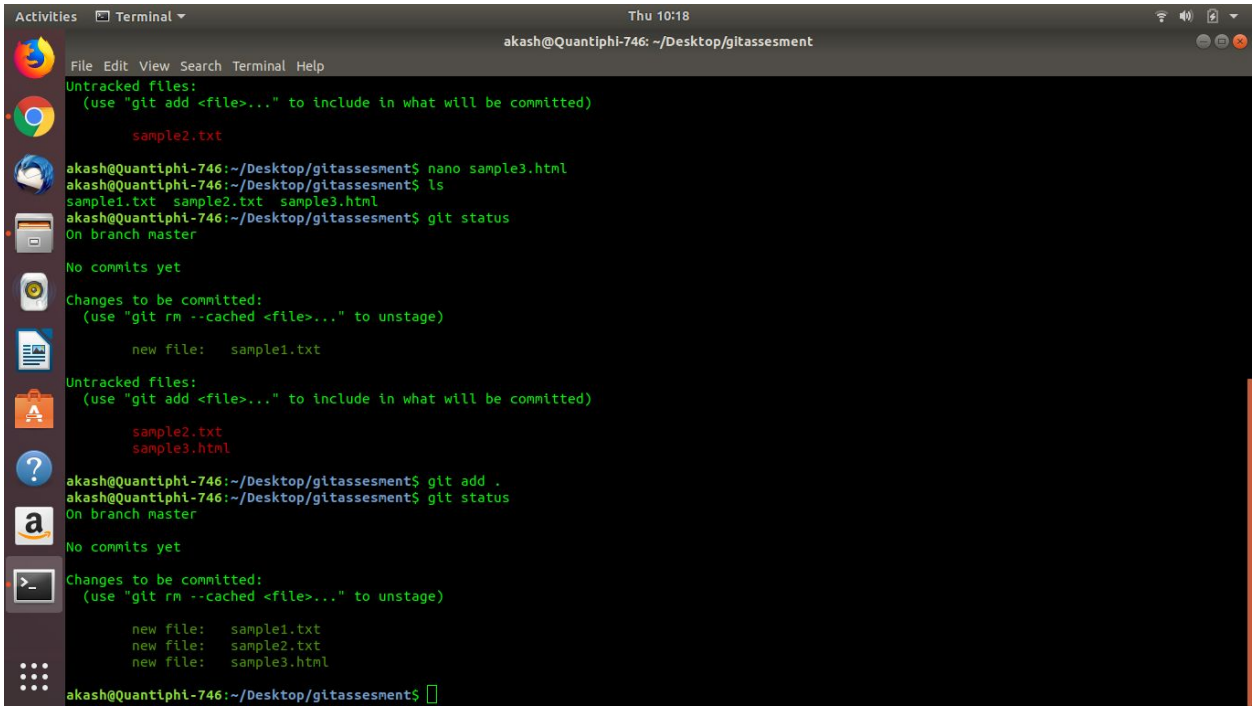
1) Create a Distributed version control system, and put files into it.



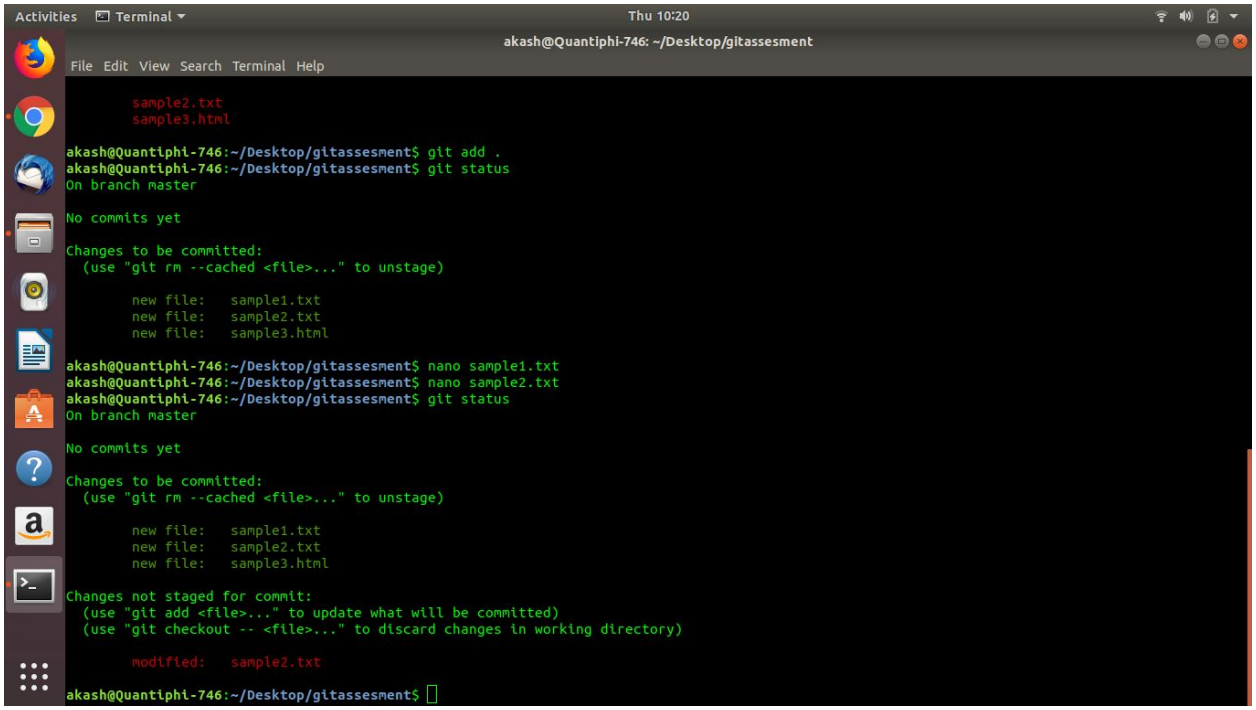

Activities
Terminal
Thu 10:17
akash@Quantiphi-746: ~/Desktop/gitassesment
File Edit View Search Terminal Help
akash@Quantiphi-746:~$ cd Desktop/
akash@Quantiphi-746:~/Desktop$ mkdir gitassesment
akash@Quantiphi-746:~/Desktop$ cd gitassesment/
akash@Quantiphi-746:~/Desktop/gitassesment$ nano sample1.txt
akash@Quantiphi-746:~/Desktop/gitassesment$ nano sample2.txt
akash@Quantiphi-746:~/Desktop/gitassesment$ nano sample2.txt
akash@Quantiphi-746:~/Desktop/gitassesment$ ls
sample1.txt sample2.txt
akash@Quantiphi-746:~/Desktop/gitassesment$ git init
Initialized empty Git repository in /home/akash/Desktop/gitassesment/.git/
akash@Quantiphi-746:~/Desktop/gitassesment$ git config user.name "Akash Mahale"
akash@Quantiphi-746:~/Desktop/gitassesment$ git config user.email "npmahale15@gmail.com"
akash@Quantiphi-746:~/Desktop/gitassesment$ git status
On branch master
No commits yet
Untracked files:
(use "git add <file>..." to include in what will be committed)
sample1.txt
sample2.txt
nothing added to commit but untracked files present (use "git add" to track)
akash@Quantiphi-746:~/Desktop/gitassesment$
Terminal

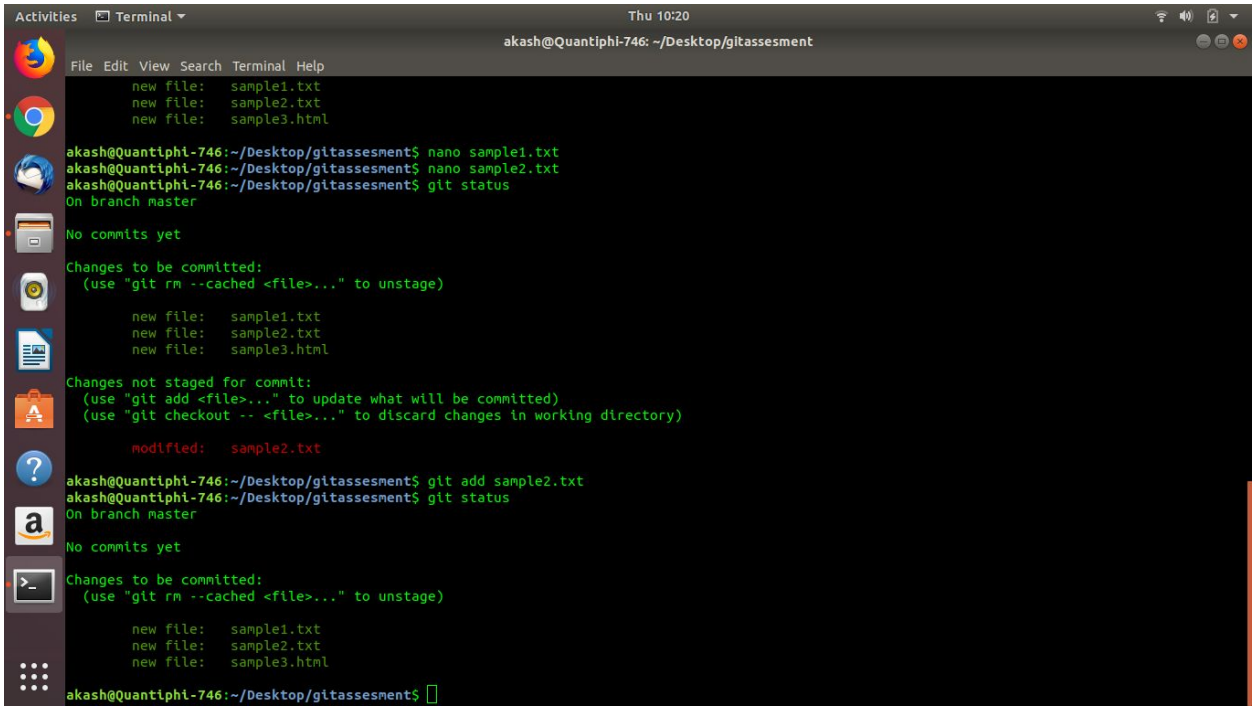

Activities
Terminal
Thu 10:17
akash@Quantiphi-746: ~/Desktop/gitassesment
File Edit View Search Terminal Help
akash@Quantiphi-746:~/Desktop/gitassesment$ nano sample1.txt
akash@Quantiphi-746:~/Desktop/gitassesment$ nano sample2.txt
akash@Quantiphi-746:~/Desktop/gitassesment$ nano sample2.txt
akash@Quantiphi-746:~/Desktop/gitassesment$ ls
sample1.txt sample2.txt
akash@Quantiphi-746:~/Desktop/gitassesment$ git init
Initialized empty Git repository in /home/akash/Desktop/gitassesment/.git/
akash@Quantiphi-746:~/Desktop/gitassesment$ git config user.name "Akash Mahale"
akash@Quantiphi-746:~/Desktop/gitassesment$ git config user.email "npmahale15@gmail.com"
akash@Quantiphi-746:~/Desktop/gitassesment$ git status
On branch master
No commits yet
Untracked files:
(use "git add <file>..." to include in what will be committed)
sample1.txt
sample2.txt
nothing added to commit but untracked files present (use "git add" to track)
akash@Quantiphi-746:~/Desktop/gitassesment$ git add sample1.txt
akash@Quantiphi-746:~/Desktop/gitassesment$ git status
On branch master
No commits yet
Changes to be committed:
(use "git rm --cached <file>..." to unstage)
new file: sample1.txt
Untracked files:
(use "git add <file>..." to include in what will be committed)
sample2.txt
akash@Quantiphi-746:~/Desktop/gitassesment$
Terminal

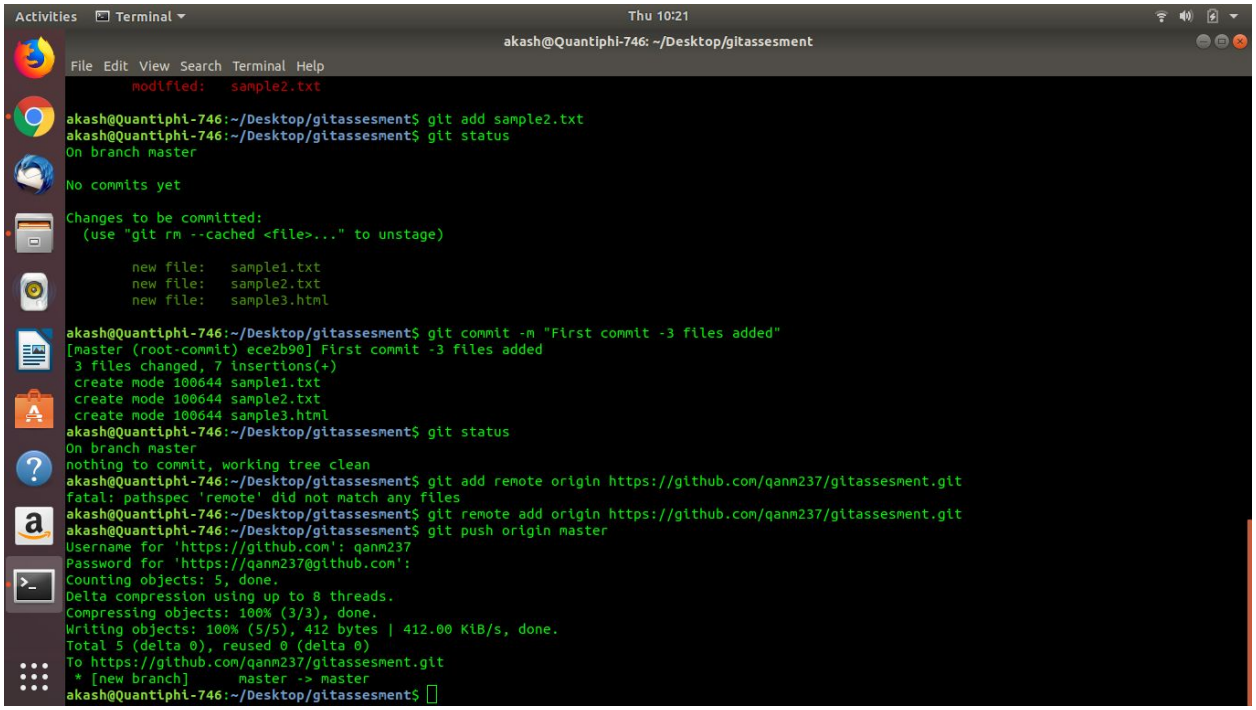




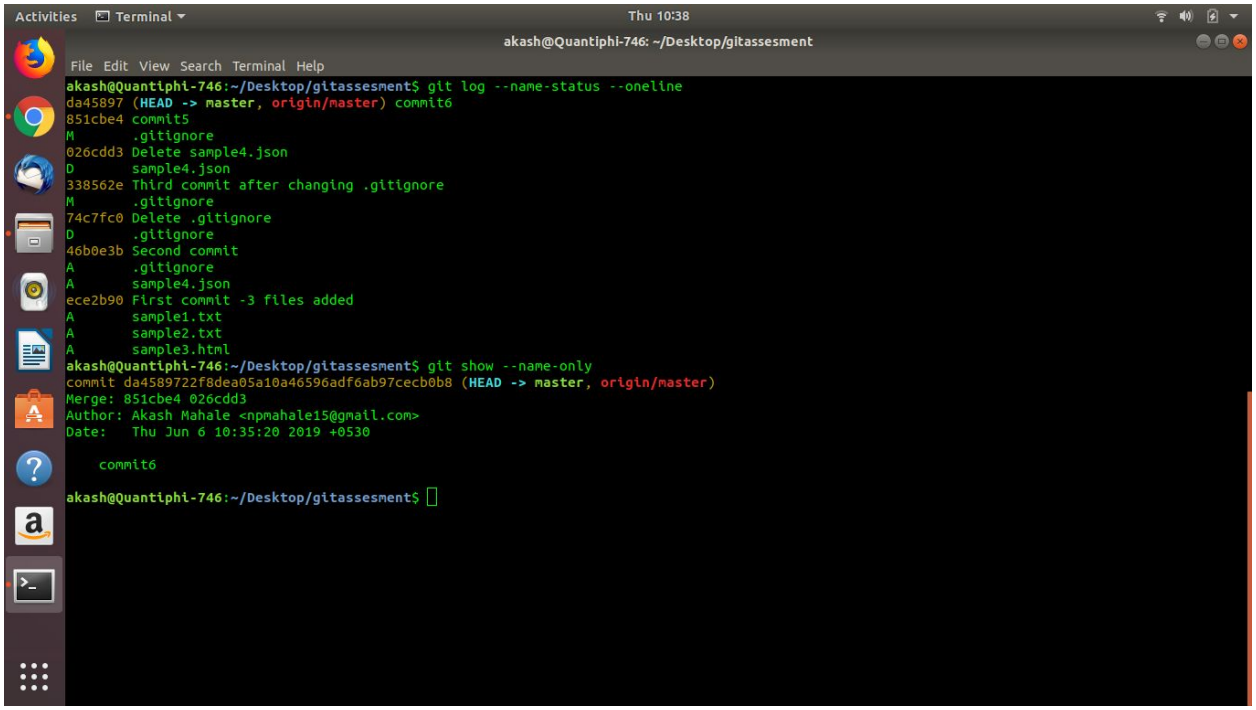
2) Replicate a DVCS on your local machine, make changes to its files, and then put them back into it.

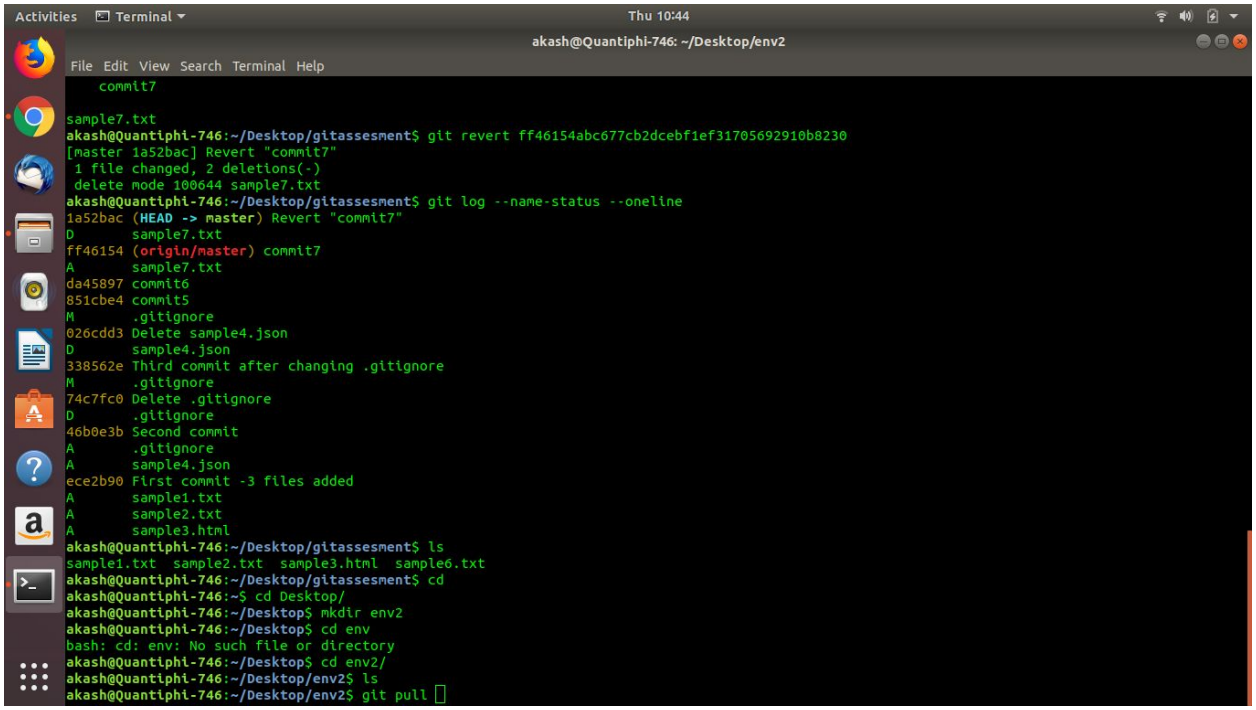

Activities
Terminal
Thu 10:20
akash@Quantiphi-746: ~/Desktop/gitassesment
File Edit View Search Terminal Help
sample2.txt
sample3.html
akash@Quantiphi-746:~/Desktop/gitassesment$ git add .
akash@Quantiphi-746:~/Desktop/gitassesment$ git status
On branch master
No commits yet
Changes to be committed:
(use "git rm --cached <file>..." to unstage)
new file: sample1.txt
new file: sample2.txt
new file: sample3.html
akash@Quantiphi-746:~/Desktop/gitassesment$ nano sample1.txt
akash@Quantiphi-746:~/Desktop/gitassesment$ nano sample2.txt
akash@Quantiphi-746:~/Desktop/gitassesment$ git status
On branch master
No commits yet
Changes to be committed:
(use "git rm --cached <file>..." to unstage)
new file: sample1.txt
new file: sample2.txt
new file: sample3.html
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: sample2.txt
akash@Quantiphi-746:~/Desktop/gitassesment$


Activities
Terminal
Thu 10:20
akash@Quantiphi-746: ~/Desktop/gitassesment
File Edit View Search Terminal Help
new file: sample1.txt
new file: sample2.txt
new file: sample3.html
akash@Quantiphi-746:~/Desktop/gitassesment$ nano sample1.txt
akash@Quantiphi-746:~/Desktop/gitassesment$ nano sample2.txt
akash@Quantiphi-746:~/Desktop/gitassesment$ git status
On branch master
No commits yet
Changes to be committed:
(use "git rm --cached <file>..." to unstage)
new file: sample1.txt
new file: sample2.txt
new file: sample3.html
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: sample2.txt
akash@Quantiphi-746:~/Desktop/gitassesment$ git add sample2.txt
akash@Quantiphi-746:~/Desktop/gitassesment$ git status
On branch master
No commits yet
Changes to be committed:
(use "git rm --cached <file>..." to unstage)
new file: sample1.txt
new file: sample2.txt
new file: sample3.html
akash@Quantiphi-746:~/Desktop/gitassesment$

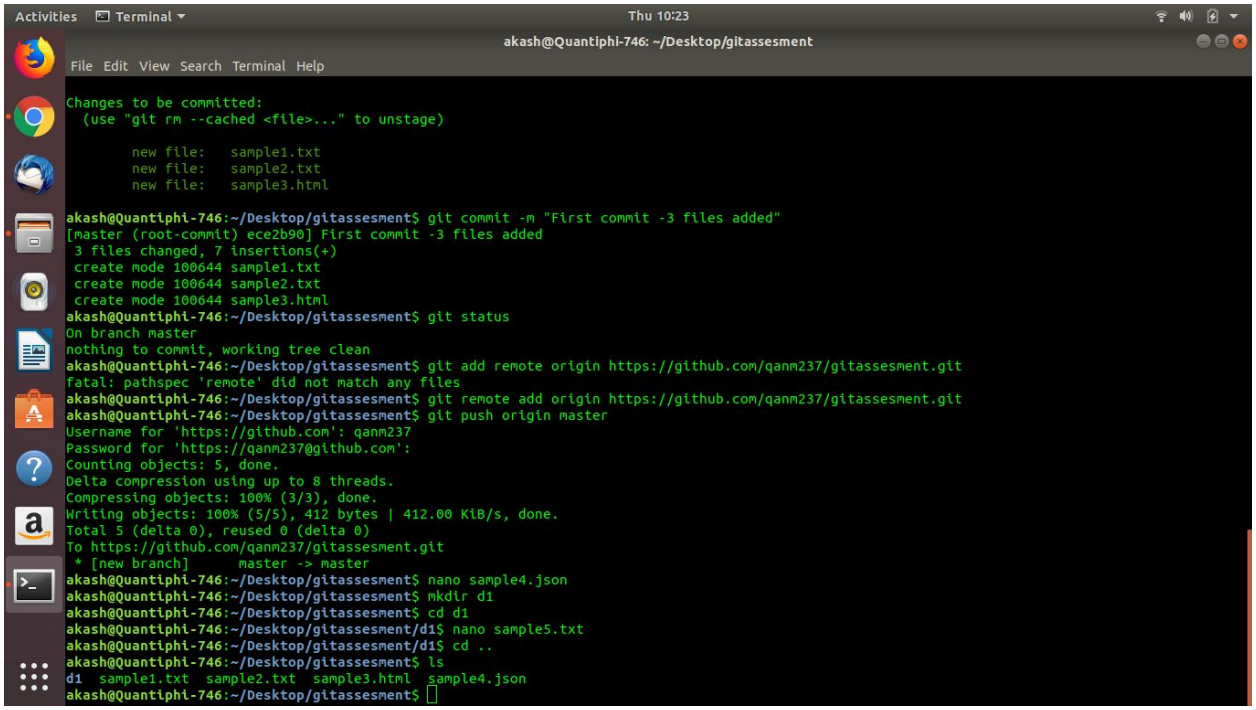

Activities
Terminal
Thu 10:21
akash@Quantiphi-746: ~/Desktop/gitassesment
File Edit View Search Terminal Help
modfied: sample2.txt
akash@Quantiphi-746:~/Desktop/gitassesment$ git add sample2.txt
akash@Quantiphi-746:~/Desktop/gitassesment$ git status
On branch master
No commits yet
Changes to be committed:
(use "git rm --cached <file>..." to unstage)
new file: sample1.txt
new file: sample2.txt
new file: sample3.html
akash@Quantiphi-746:~/Desktop/gitassesment$ git commit -m "First commit -3 files added"
[master (root-commit) ece2b90] First commit -3 files added
3 files changed, 7 insertions(+)
create mode 100644 sample1.txt
create mode 100644 sample2.txt
create mode 100644 sample3.html
akash@Quantiphi-746:~/Desktop/gitassesment$ git status
On branch master
nothing to commit, working tree clean
akash@Quantiphi-746:~/Desktop/gitassesment$ git add remote origin https://github.com/qanm237/gitassesment.git
fatal: pathspec 'remote' did not match any files
akash@Quantiphi-746:~/Desktop/gitassesment$ git remote add origin https://github.com/qanm237/gitassesment.git
akash@Quantiphi-746:~/Desktop/gitassesment$ git push origin master
Username for 'https://github.com': qanm237
Password for 'https://qanm237@github.com':
Counting objects: 5, done.
Delta compression using up to 8 threads.
Compressing objects: 100% (3/3), done.
Writing objects: 100% (5/5), 412 bytes | 412.00 KiB/s, done.
Total 5 (delta 0), reused 0 (delta 0)
To https://github.com/qanm237/gitassesment.git
* [new branch] master -> master
akash@Quantiphi-746:~/Desktop/gitassesment$

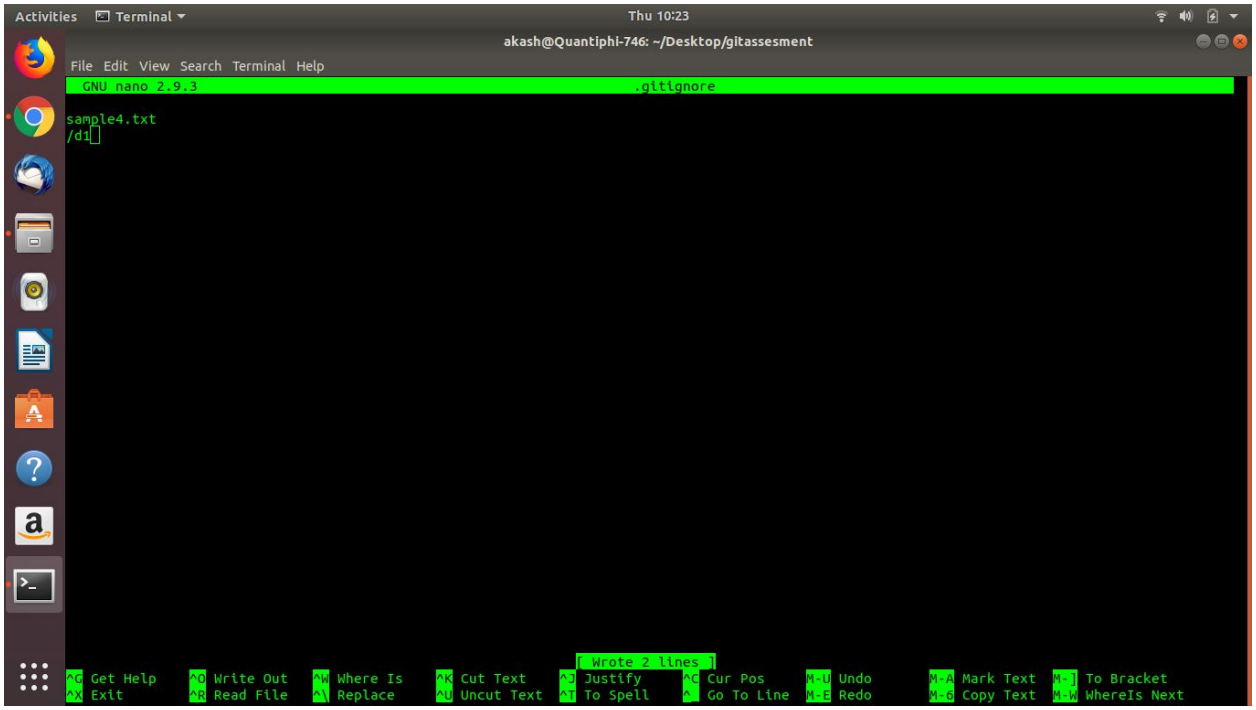
3) List down all the files which have changed in the last commit. List only the file names.

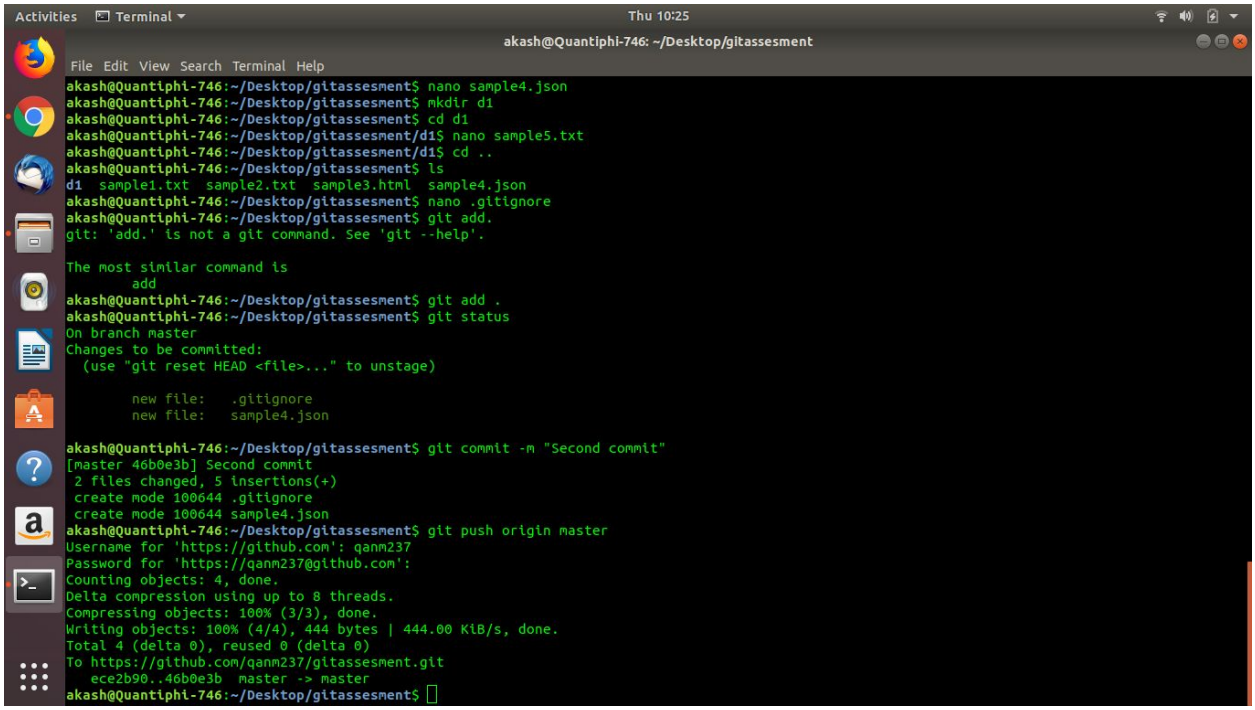


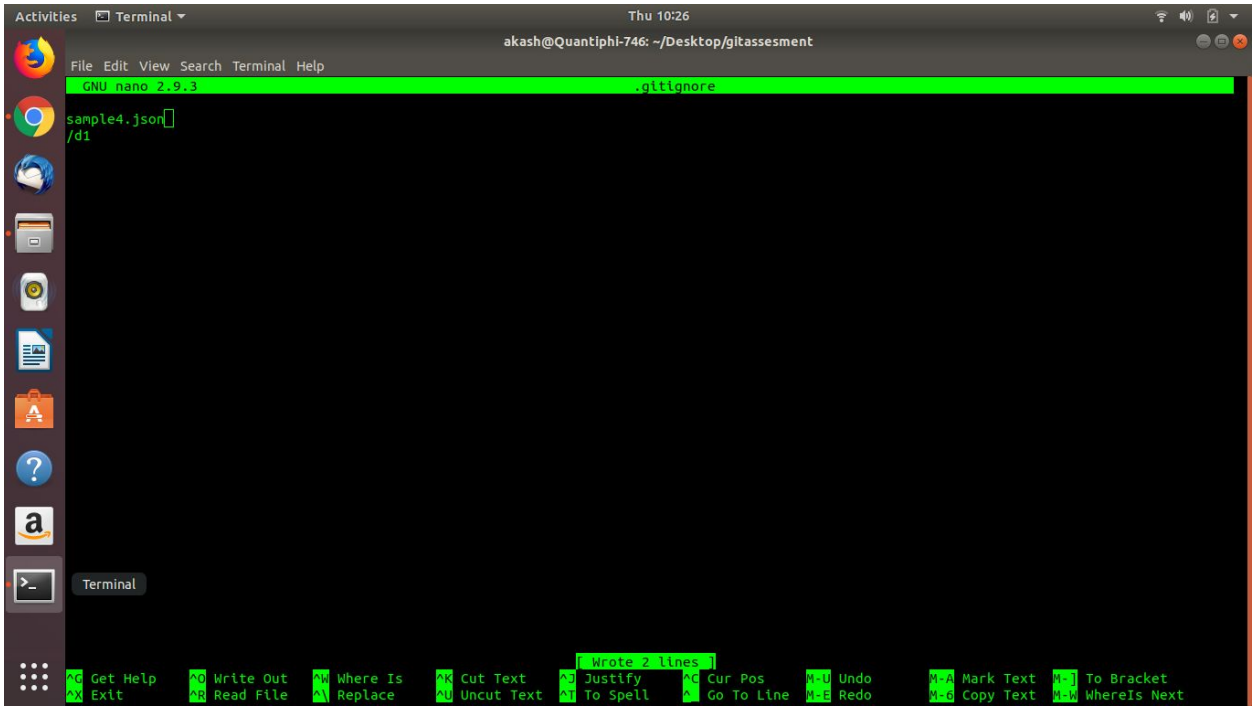


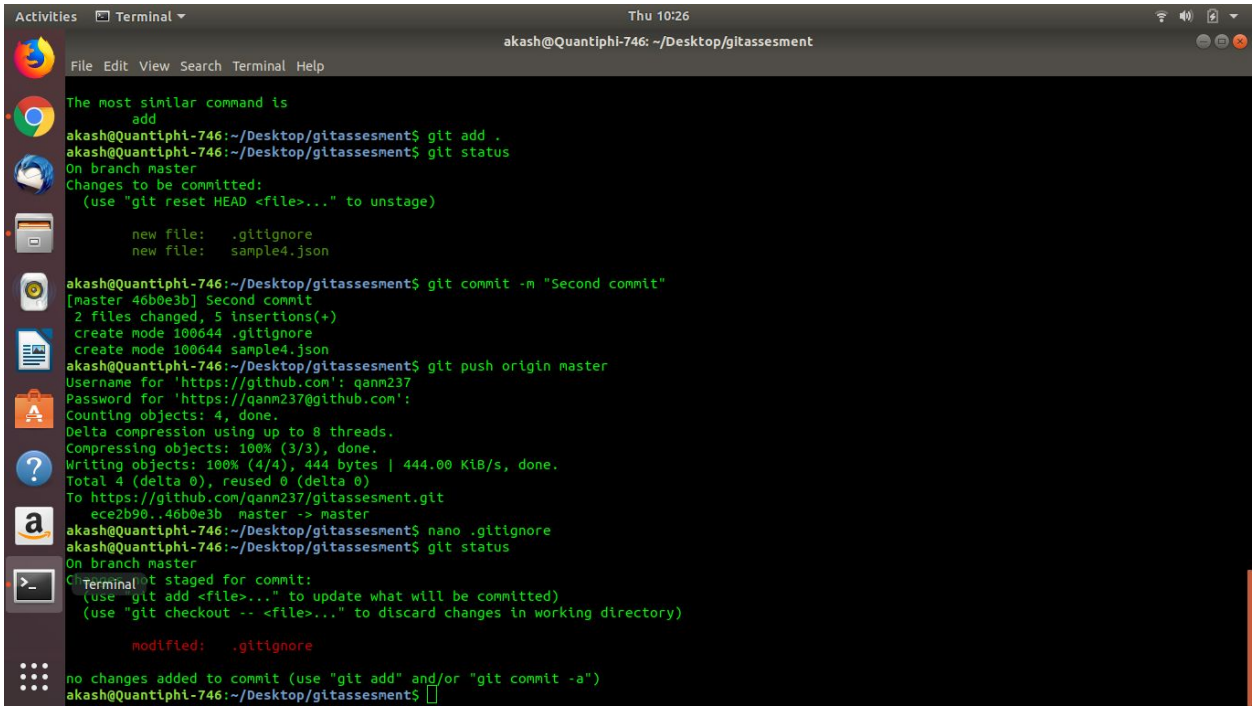
4) You've accidentally added some files on a DVCS. Remove those files from the DVCS without deleting them from your local system.

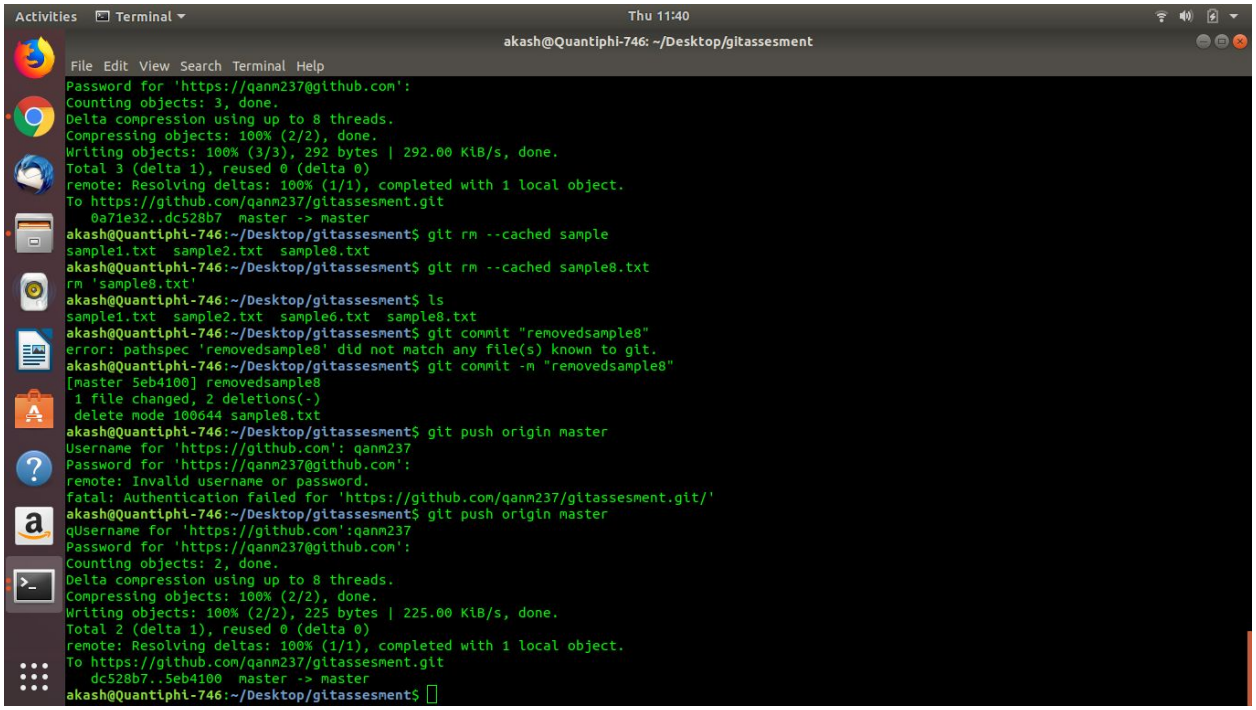




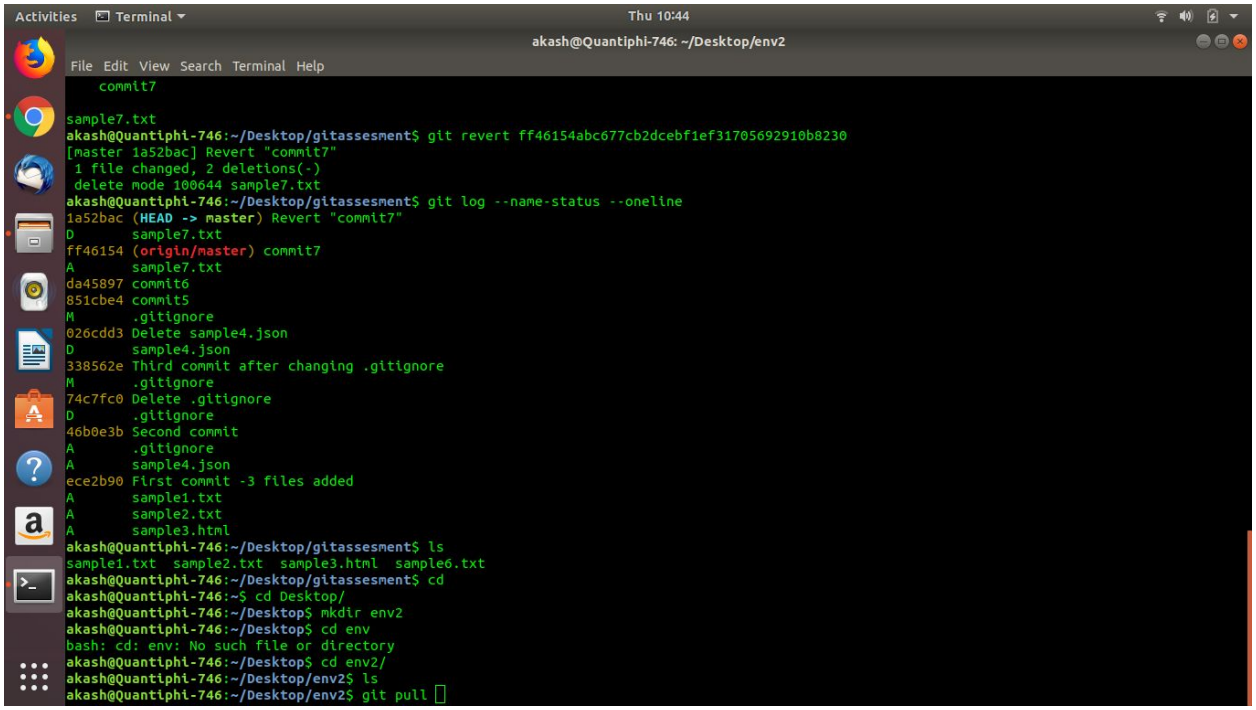

Activities
Terminal
Thu 10:25
akash@Quantiphi-746: ~/Desktop/gitassesment
File Edit View Search Terminal Help
akash@Quantiphi-746:~/Desktop/gitassesment$ nano sample4.json
akash@Quantiphi-746:~/Desktop/gitassesment$ mkdir d1
akash@Quantiphi-746:~/Desktop/gitassesment$ cd d1
akash@Quantiphi-746:~/Desktop/gitassesment/d1$ nano sample5.txt
akash@Quantiphi-746:~/Desktop/gitassesment/d1$ cd ..
akash@Quantiphi-746:~/Desktop/gitassesment$ ls
d1 sample1.txt sample2.txt sample3.html sample4.json
akash@Quantiphi-746:~/Desktop/gitassesment$ nano .gitignore
akash@Quantiphi-746:~/Desktop/gitassesment$ git add.
git: 'add.' is not a git command. See 'git --help'.
The most similar command is
add
akash@Quantiphi-746:~/Desktop/gitassesment$ git add .
akash@Quantiphi-746:~/Desktop/gitassesment$ git status
On branch master
Changes to be committed:
(use "git reset HEAD <file>..." to unstage)
new file: .gitignore
new file: sample4.json
akash@Quantiphi-746:~/Desktop/gitassesment$ git commit -m "Second commit"
[master 46b0e3b] Second commit
2 files changed, 5 insertions(+)
create mode 100644 .gitignore
create mode 100644 sample4.json
akash@Quantiphi-746:~/Desktop/gitassesment$ git push origin master
Username for 'https://github.com': qanm237
Password for 'https://qanm237@github.com':
Counting objects: 4, done.
Delta compression using up to 8 threads.
Compressing objects: 100% (3/3), done.
Writing objects: 100% (4/4), 444 bytes | 444.00 KiB/s, done.
Total 4 (delta 0), reused 0 (delta 0)
To https://github.com/qanm237/gitassesment.git
ece2b90..46b0e3b master -> master
akash@Quantiphi-746:~/Desktop/gitassesment$


Activities
Terminal
Thu 10:26
akash@Quantiphi-746: ~/Desktop/gitassesment
File Edit View Search Terminal Help
GNU nano 2.9.3 .gitignore
sample4.json
/d1
Terminal
[Wrote 2 lines]
^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify ^C Cur Pos M-U Undo M-A Mark Text M-] To Bracket
^X Exit ^R Read File ^\ Replace ^U Uncut Text ^T To Spell ^_ Go To Line M-E Redo M-6 Copy Text M-W WhereIs Next

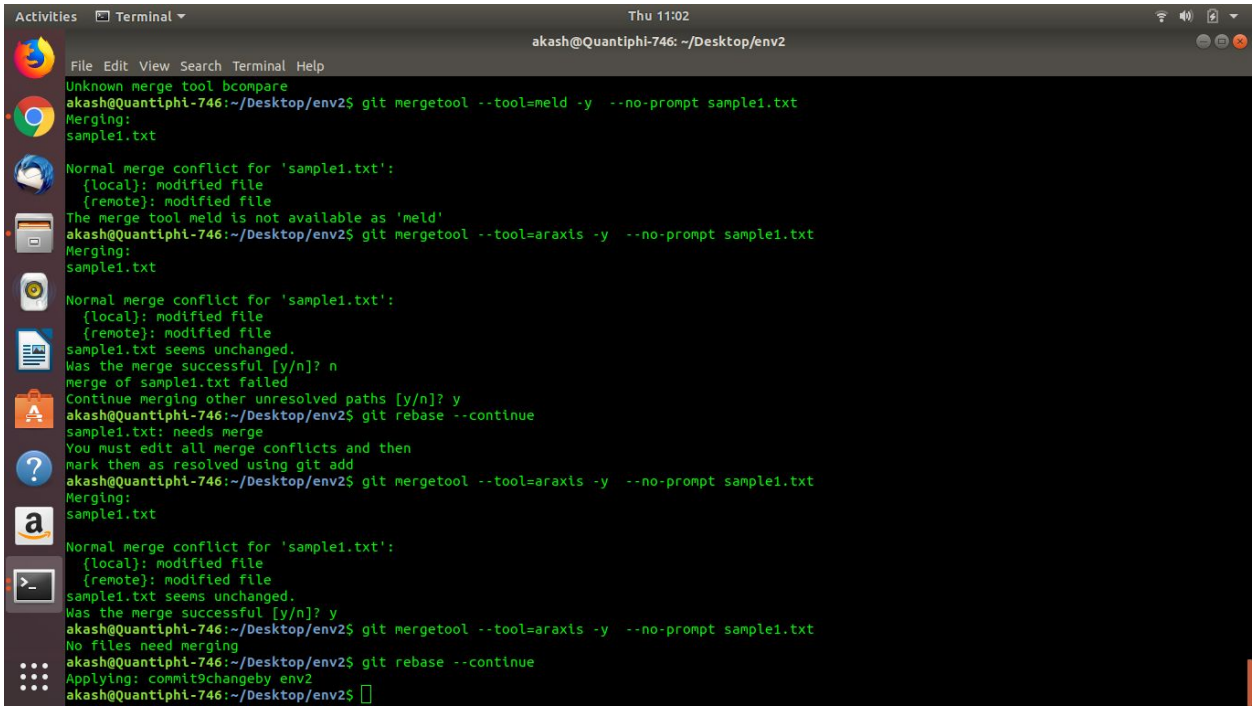

Activities
Terminal
Thu 10:26
akash@Quantiphi-746: ~/Desktop/gitassesment
File Edit View Search Terminal Help
The most similar command is
add
akash@Quantiphi-746:~/Desktop/gitassesment$ git add .
akash@Quantiphi-746:~/Desktop/gitassesment$ git status
On branch master
Changes to be committed:
(use "git reset HEAD <file>..." to unstage)
new file: .gitignore
new file: sample4.json
akash@Quantiphi-746:~/Desktop/gitassesment$ git commit -m "Second commit"
[master 46b0e3b] Second commit
2 files changed, 5 insertions(+)
create mode 100644 .gitignore
create mode 100644 sample4.json
akash@Quantiphi-746:~/Desktop/gitassesment$ git push origin master
Username for 'https://github.com': qanm237
Password for 'https://qanm237@github.com':
Counting objects: 4, done.
Delta compression using up to 8 threads.
Compressing objects: 100% (3/3), done.
Writing objects: 100% (4/4), 444 bytes | 444.00 KiB/s, done.
Total 4 (delta 0), reused 0 (delta 0)
To https://github.com/qanm237/gitassesment.git
ece2b90..46b0e3b master -> master
akash@Quantiphi-746:~/Desktop/gitassesment$ nano .gitignore
akash@Quantiphi-746:~/Desktop/gitassesment$ 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: .gitignore
no changes added to commit (use "git add" and/or "git commit -a")
akash@Quantiphi-746:~/Desktop/gitassesment$
Terminal

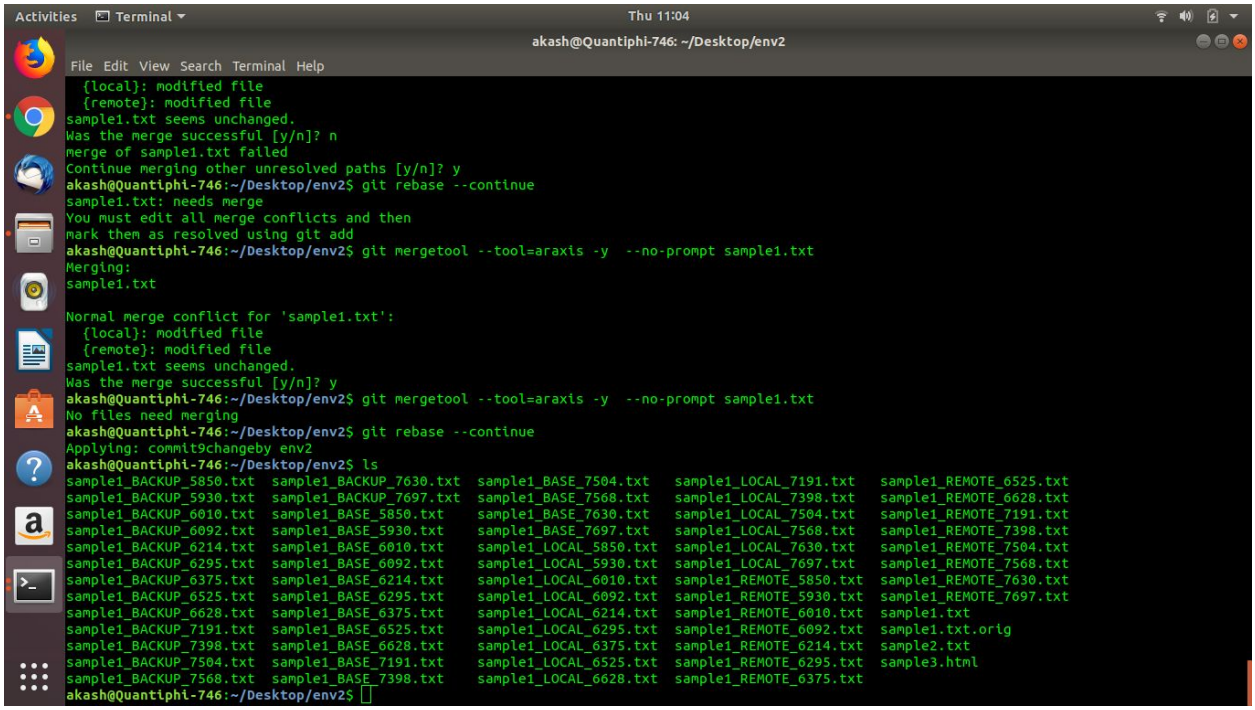


5) You've accidentally committed some files on a DVCS. Revert the DVCS to a previous stable state.



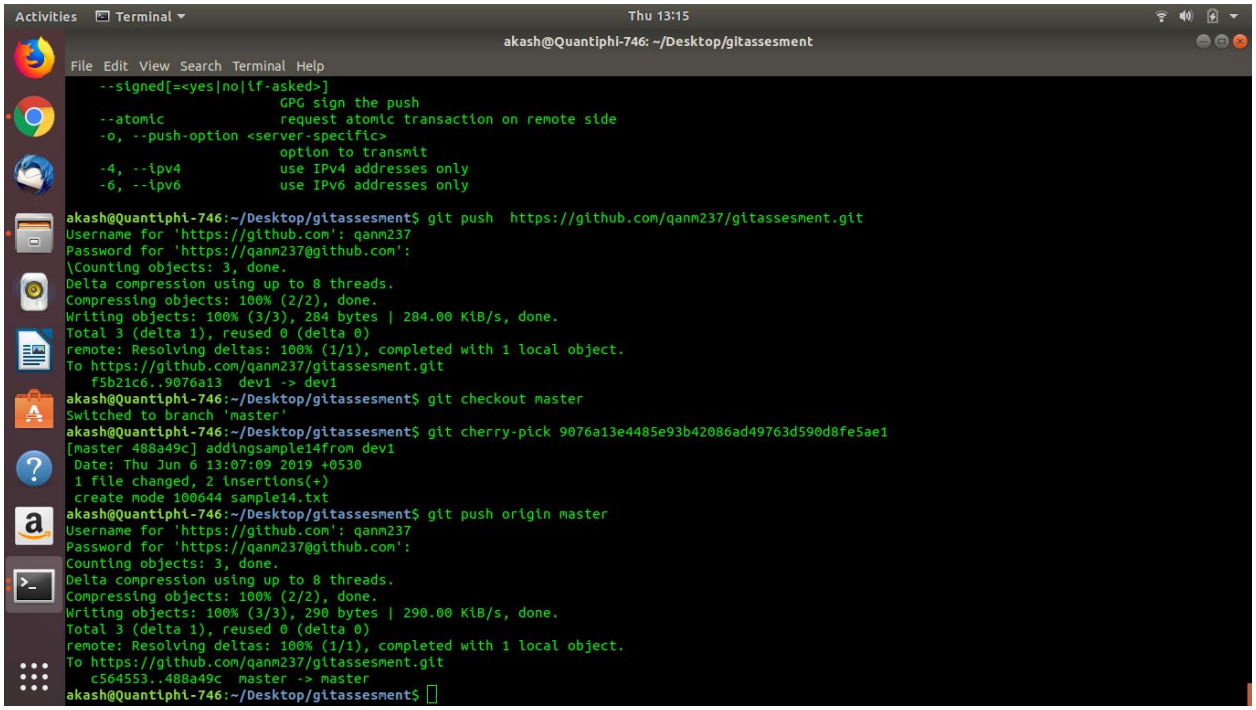
6) Create a DVCS capable of supporting 2 similar dev environments. Make changes in the files which are present on both of them and then merge the environments into one.

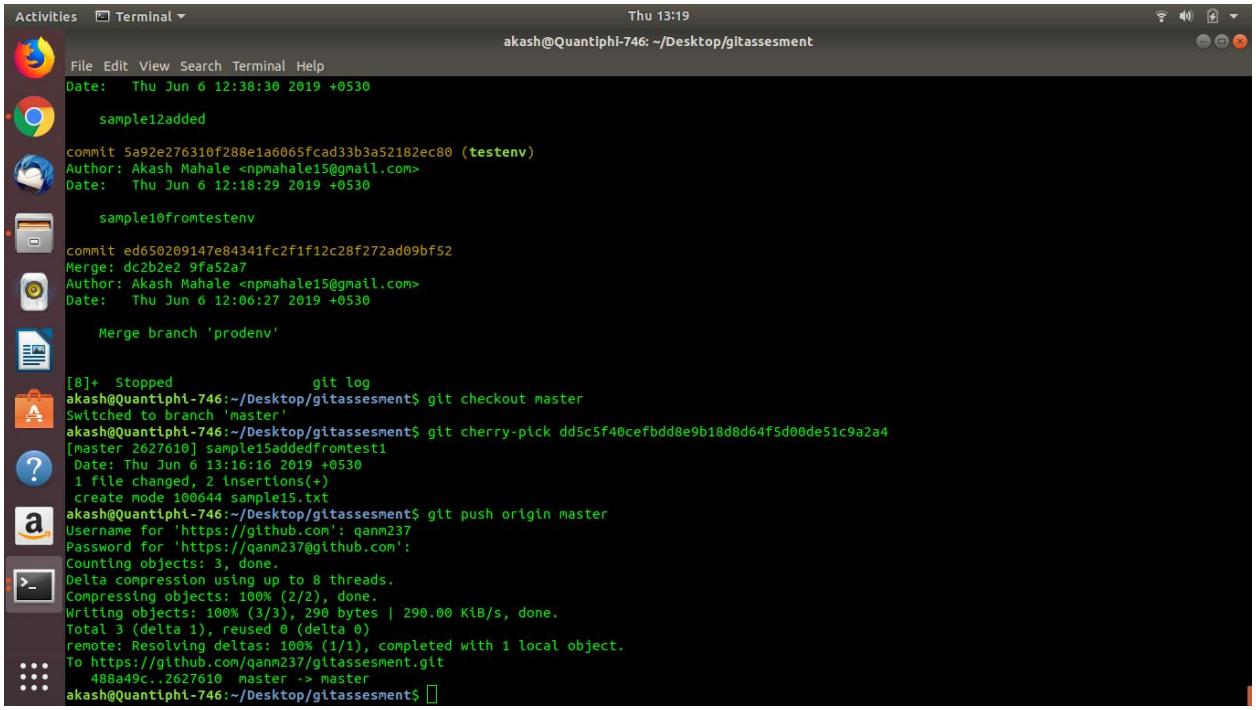


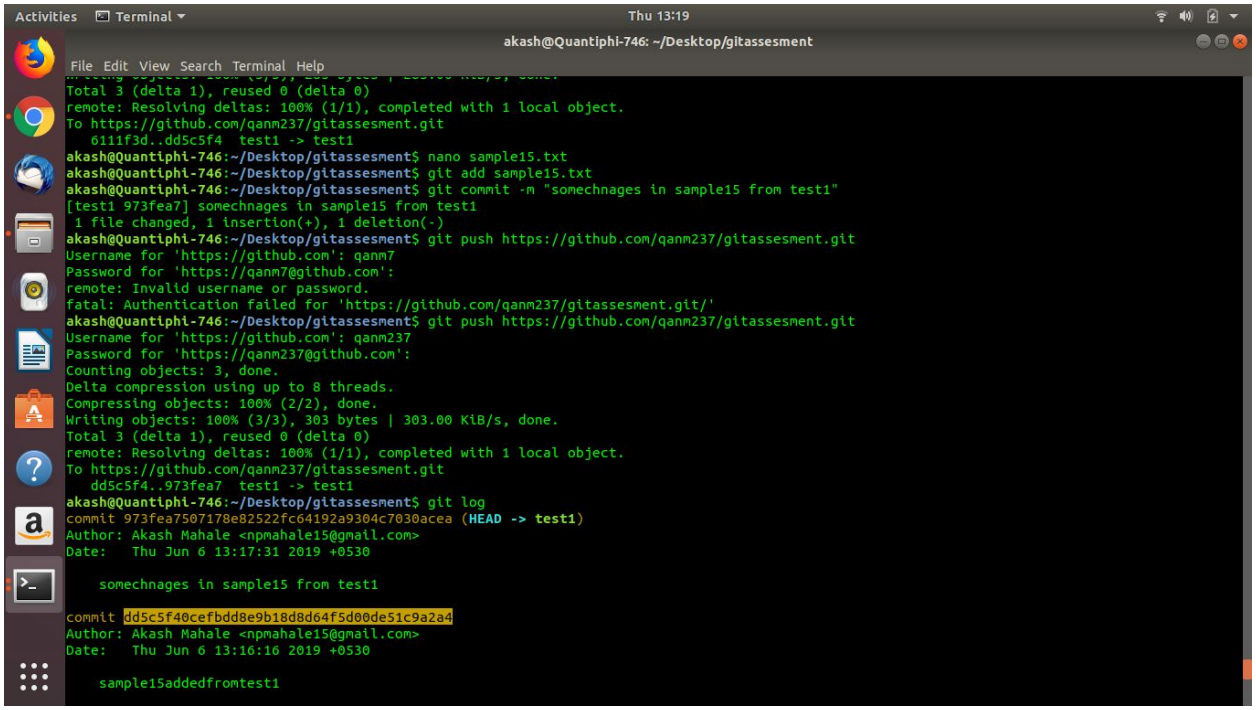


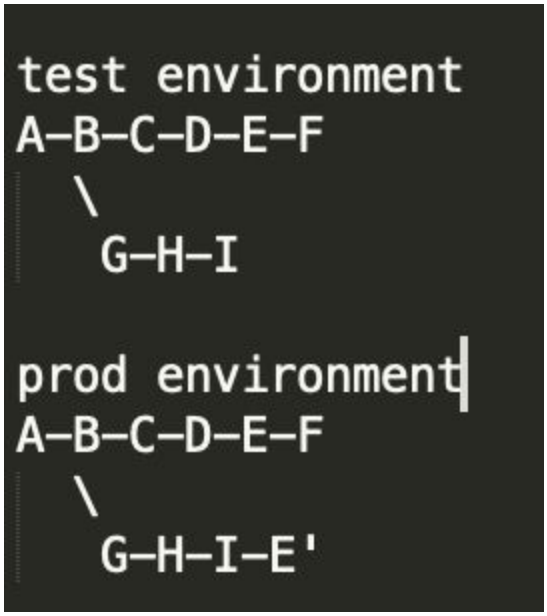
7) You have a DVCS supporting your prod, test and dev environments, you need to make sure that only a particular set of commits from the test environment are added in the prod environment. What & how would you do it?

I have assumed master branch as the prod env and have created a test1 and dev1(branches) env as testing and development environment. A file is being added from the test1 environment , committed. We change it to the master branch and cherry-pick the commit on the from test1 environment. It gets committed to the master branch and thus highlighted on the production environment. Similarly it is done using dev1 env. The hash of the commit is required for cherry-pick. Multiple changes and the corresponding changes were done for to the file in test1 and dev1 branches, however, the commit we were interested was selected from the git log and its hash was noted and the git cherry-pick <hash> was done and the desired changed file was highlighted on the prod env.


Activities
Terminal
Thu 13:15
akash@Quantiphi-746: ~/Desktop/gitassesment
File Edit View Search Terminal Help
--signed[=<yes|no|if-asked>]
GPC sign the push
--atomic
request atomic transaction on remote side
-o, --push-option <server-specific>
option to transmit
-4, --ipv4
use IPv4 addresses only
-6, --ipv6
use IPv6 addresses only
akash@Quantiphi-746:~/Desktop/gitassesment$ git push https://github.com/qanm237/gitassesment.git
Username for 'https://github.com': qanm237
Password for 'https://qanm237@github.com':
\Counting objects: 3, done.
Delta compression using up to 8 threads.
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 284 bytes | 284.00 KiB/s, done.
Total 3 (delta 1), reused 0 (delta 0)
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/qanm237/gitassesment.git
f5b21c6..9076a13 dev1 -> dev1
akash@Quantiphi-746:~/Desktop/gitassesment$ git checkout master
Switched to branch 'master'
akash@Quantiphi-746:~/Desktop/gitassesment$ git cherry-pick 9076a13e4485e93b42086ad49763d590d8fe5ae1
[master 488a49c] addingsample14from dev1
Date: Thu Jun 6 13:07:09 2019 +0530
1 file changed, 2 insertions(+)
create mode 100644 sample14.txt
akash@Quantiphi-746:~/Desktop/gitassesment$ git push origin master
Username for 'https://github.com': qanm237
Password for 'https://qanm237@github.com':
Counting objects: 3, done.
Delta compression using up to 8 threads.
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 290 bytes | 290.00 KiB/s, done.
Total 3 (delta 1), reused 0 (delta 0)
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/qanm237/gitassesment.git
c564553..488a49c master -> master
akash@Quantiphi-746:~/Desktop/gitassesment$


Activities
Terminal
Thu 13:19
akash@Quantiphi-746: ~/Desktop/gitassesment
File Edit View Search Terminal Help
Date: Thu Jun 6 12:38:30 2019 +0530
sample12added
commit 5a92e276310f288e1a6065fcad33b3a52182ec80 (testenv)
Author: Akash Mahale <npmahale15@gmail.com>
Date: Thu Jun 6 12:18:29 2019 +0530
sample10fromtestenv
commit ed650209147e84341fc2f1f12c28f272ad09bf52
Merge: dc2b2e2 9fa52a7
Author: Akash Mahale <npmahale15@gmail.com>
Date: Thu Jun 6 12:06:27 2019 +0530
Merge branch 'prodenv'
[8]+ Stopped git log
akash@Quantiphi-746:~/Desktop/gitassesment$ git checkout master
Switched to branch 'master'
akash@Quantiphi-746:~/Desktop/gitassesment$ git cherry-pick dd5c5f40cefbdd8e9b18d8d64f5d00de51c9a2a4
[master 2627610] sample15addedfromtest1
Date: Thu Jun 6 13:16:16 2019 +0530
1 file changed, 2 insertions(+)
create mode 100644 sample15.txt
akash@Quantiphi-746:~/Desktop/gitassesment$ git push origin master
Username for 'https://github.com': qanm237
Password for 'https://qanm237@github.com':
Counting objects: 3, done.
Delta compression using up to 8 threads.
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 290 bytes | 290.00 KiB/s, done.
Total 3 (delta 1), reused 0 (delta 0)
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/qanm237/gitassesment.git
488a49c..2627610 master -> master
akash@Quantiphi-746:~/Desktop/gitassesment$


Activities
Terminal
Thu 13:19
akash@Quantiphi-746: ~/Desktop/gitassesment
File Edit View Search Terminal Help
Total 3 (delta 1), reused 0 (delta 0)
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/qanm237/gitassesment.git
6111f3d..dd5c5f4 test1 -> test1
akash@Quantiphi-746:~/Desktop/gitassesment$ nano sample15.txt
akash@Quantiphi-746:~/Desktop/gitassesment$ git add sample15.txt
akash@Quantiphi-746:~/Desktop/gitassesment$ git commit -m "somechnages in sample15 from test1"
[test1 973fea7] somechnages in sample15 from test1
1 file changed, 1 insertion(+), 1 deletion(-)
akash@Quantiphi-746:~/Desktop/gitassesment$ git push https://github.com/qanm237/gitassesment.git
Username for 'https://github.com': qanm7
Password for 'https://qanm7@github.com':
remote: Invalid username or password.
fatal: Authentication failed for 'https://github.com/qanm237/gitassesment.git/'
akash@Quantiphi-746:~/Desktop/gitassesment$ git push https://github.com/qanm237/gitassesment.git
Username for 'https://github.com': qanm237
Password for 'https://qanm237@github.com':
Counting objects: 3, done.
Delta compression using up to 8 threads.
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 303 bytes | 303.00 KiB/s, done.
Total 3 (delta 1), reused 0 (delta 0)
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/qanm237/gitassesment.git
dd5c5f4..973fea7 test1 -> test1
akash@Quantiphi-746:~/Desktop/gitassesment$ git log
commit 973fea7507178e82522fc64192a9304c7030acea (HEAD -> test1)
Author: Akash Mahale <npmahale15@gmail.com>
Date: Thu Jun 6 13:17:31 2019 +0530
somechnages in sample15 from test1
commit dd5c5f40cefbdd8e9b18d8d64f5d00de51c9a2a4
Author: Akash Mahale <npmahale15@gmail.com>
Date: Thu Jun 6 13:16:16 2019 +0530
sample15addedfromtest1


test environment
A-B-C-D-E-F
\
G-H-I
prod environment
A-B-C-D-E-F
\
G-H-I-E'