

## Question 1:

# Creating Folder

```
cd Desktop/
```

```
mkdir Git_Assessment
```

```
cd Git_Assessment/
```

# Initializing Readme and some test files

```
echo "This is a Git Assessment Repository" >> README.md
```

```
git init
```

```
cat > file1.txt
```

```
This is the first file
```

```
cat > test2.txt
```

```
This is the second file
```

# Adding and committing with commit message

```
git add .
```

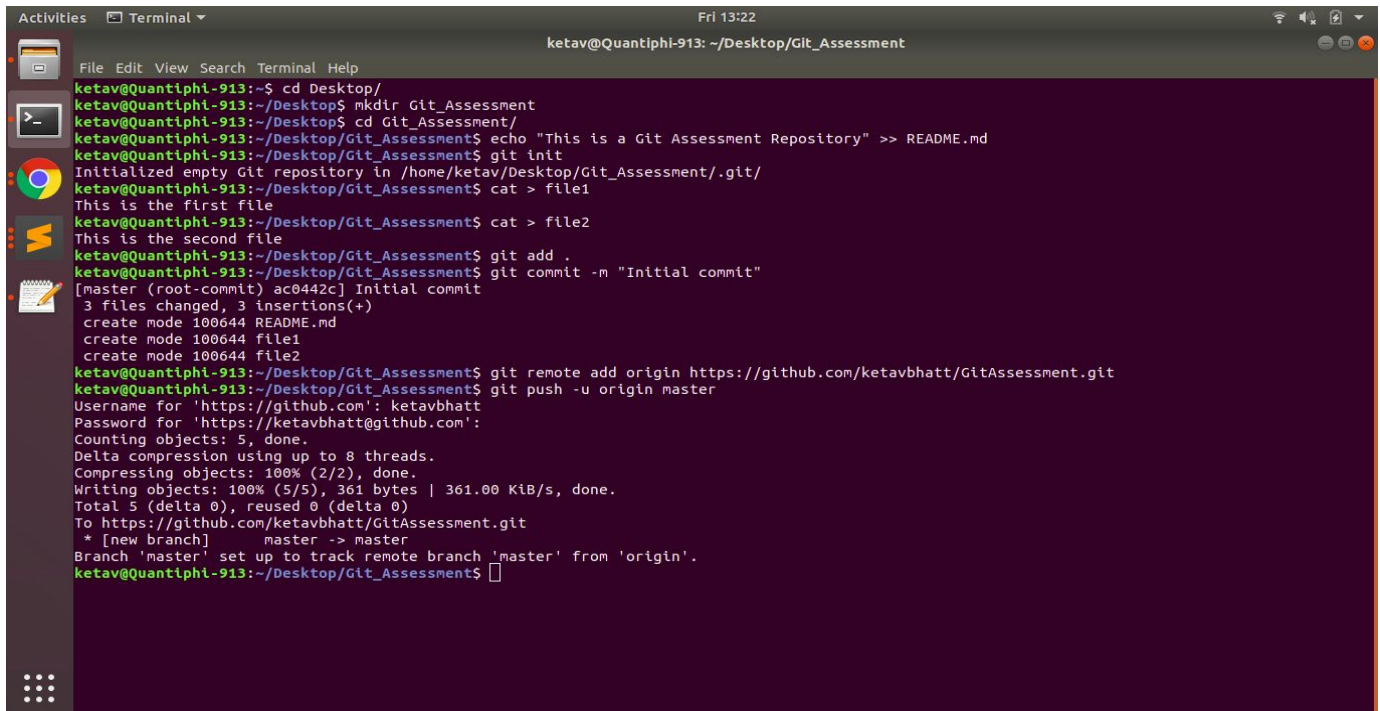
```
git commit -m "Initial commit"
```

# Adding the origin of the repo to the local machine

```
git remote add origin https://github.com/ketavbhatt/GitAssessment.git
```

# Pushing files to the master branch of repo

```
git push -u origin master
```



```
ketav@Quantiphi-913: ~/Desktop/Git_Assessment
ketav@Quantiphi-913:~$ cd Desktop/
ketav@Quantiphi-913:~/Desktop$ mkdir Git_Assessment
ketav@Quantiphi-913:~/Desktop$ cd Git_Assessment/
ketav@Quantiphi-913:~/Desktop/Git_Assessment$ echo "This is a Git Assessment Repository" >> README.md
ketav@Quantiphi-913:~/Desktop/Git_Assessment$ git init
Initialized empty Git repository in /home/ketav/Desktop/Git_Assessment/.git/
ketav@Quantiphi-913:~/Desktop/Git_Assessment$ cat > file1
This is the first file
ketav@Quantiphi-913:~/Desktop/Git_Assessment$ cat > file2
This is the second file
ketav@Quantiphi-913:~/Desktop/Git_Assessment$ git add .
ketav@Quantiphi-913:~/Desktop/Git_Assessment$ git commit -m "Initial commit"
[master (root-commit) ac0442c] Initial commit
3 files changed, 3 insertions(+)
create mode 100644 README.md
create mode 100644 file1
create mode 100644 file2
ketav@Quantiphi-913:~/Desktop/Git_Assessment$ git remote add origin https://github.com/ketavbhatt/GitAssessment.git
ketav@Quantiphi-913:~/Desktop/Git_Assessment$ git push -u origin master
Username for 'https://github.com': ketavbhatt
Password for 'https://ketavbhatt@github.com':
Counting objects: 5, done.
Delta compression using up to 8 threads.
Compressing objects: 100% (2/2), done.
Writing objects: 100% (5/5), 361 bytes | 361.00 KiB/s, done.
Total 5 (delta 0), reused 0 (delta 0)
To https://github.com/ketavbhatt/GitAssessment.git
 * [new branch]      master -> master
Branch 'master' set up to track remote branch 'master' from 'origin'.
ketav@Quantiphi-913:~/Desktop/Git_Assessment$
```

## Question 2

### # Cloning the Repository

```
$ git clone https://github.com/ketavbhatt/GitAssessment.git
```

### # Editing the file

```
$ cd GitAssessment/
```

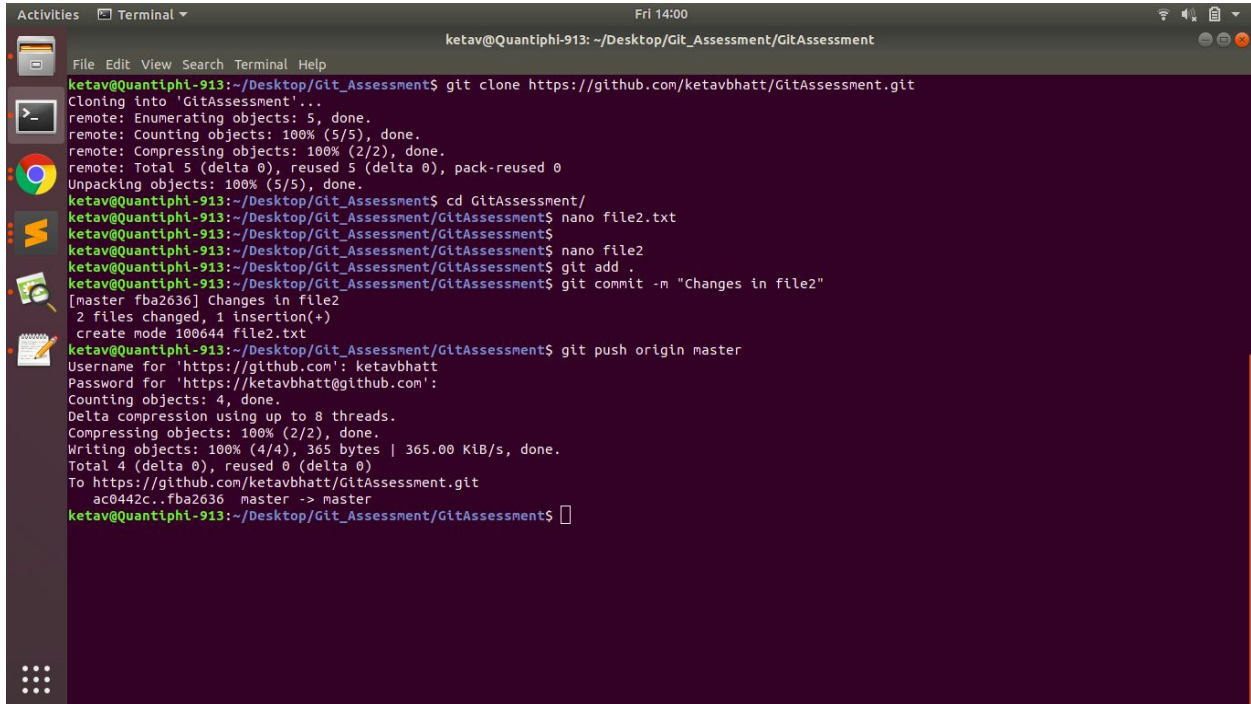
```
$ nano file2
```

### # Adding and committing the changes and pushing on the master branch

```
$ git add .
```

```
$ git commit -m "Changes in file2"
```

```
$ git push origin master
```



```
ketav@Quantiphi-913: ~/Desktop/Git_Assessment/GitAssessment
ketav@Quantiphi-913:~/Desktop/Git_Assessment$ git clone https://github.com/ketavbhatt/GitAssessment.git
Cloning into 'GitAssessment'...
remote: Enumerating objects: 5, done.
remote: Counting objects: 100% (5/5), done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 5 (delta 0), reused 5 (delta 0), pack-reused 0
Unpacking objects: 100% (5/5), done.
ketav@Quantiphi-913:~/Desktop/Git_Assessment$ cd GitAssessment/
ketav@Quantiphi-913:~/Desktop/Git_Assessment/GitAssessment$ nano file2.txt
ketav@Quantiphi-913:~/Desktop/Git_Assessment/GitAssessment$ nano file2
ketav@Quantiphi-913:~/Desktop/Git_Assessment/GitAssessment$ git add .
ketav@Quantiphi-913:~/Desktop/Git_Assessment/GitAssessment$ git commit -m "Changes in file2"
[master fba2636] Changes in file2
 2 files changed, 1 insertion(+)
 create mode 100644 file2.txt
ketav@Quantiphi-913:~/Desktop/Git_Assessment/GitAssessment$ git push origin master
Username for 'https://github.com': ketavbhatt
Password for 'https://github.com': 
Counting objects: 4, done.
Delta compression using up to 8 threads.
Compressing objects: 100% (2/2), done.
Writing objects: 100% (4/4), 365 bytes | 365.00 KiB/s, done.
Total 4 (delta 0), reused 0 (delta 0)
To https://github.com/ketavbhatt/GitAssessment.git
   ac0442c..fba2636  master -> master
ketav@Quantiphi-913:~/Desktop/Git_Assessment/GitAssessment$
```

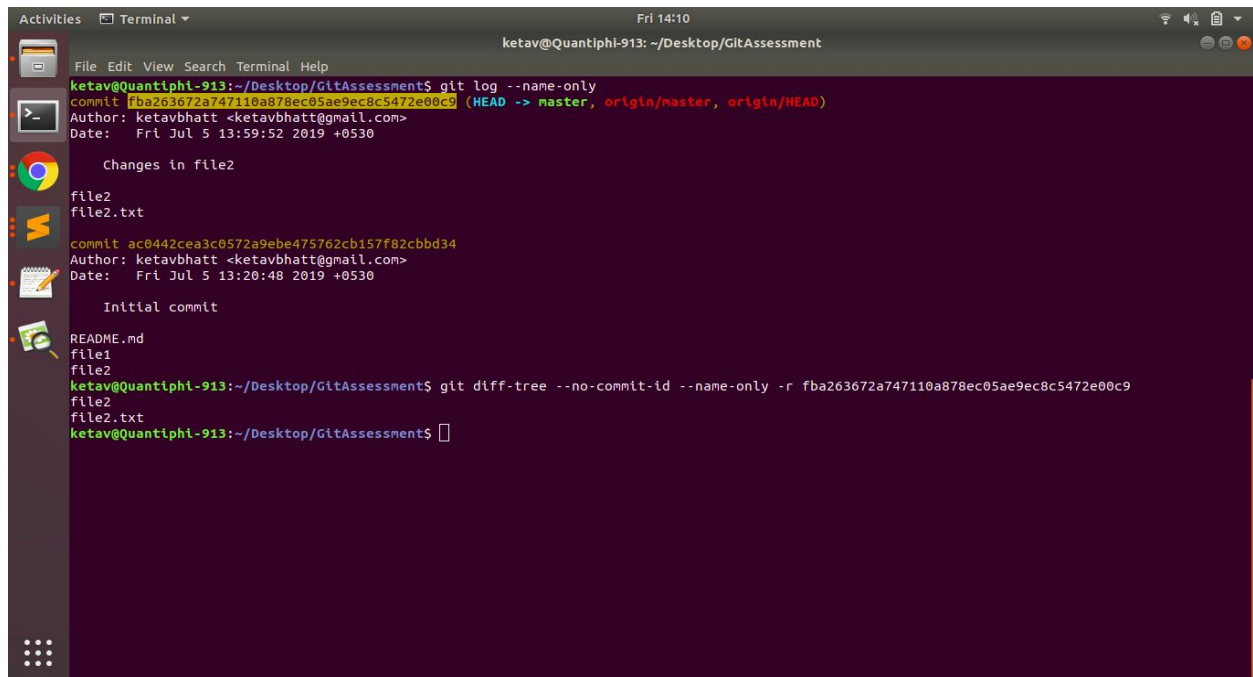
### Question 3

# Finding name of the last commit

```
$ git log --name-only
```

# Finding the files changed in last commit

```
$ git diff-tree --no-commit-id --name-only -r fba263672a747110a878ec05ae9ec8c5472e00c9
```



```
ketav@Quantiphi-913: ~/Desktop/GitAssessment
ketav@Quantiphi-913:~/Desktop/GitAssessment$ git log --name-only
commit fba263672a747110a878ec05ae9ec8c5472e00c9 (HEAD -> master, origin/master, origin/HEAD)
Author: ketavbhatt <ketavbhatt@gmail.com>
Date:   Fri Jul 5 13:59:52 2019 +0530

    Changes in file2
    file2
    file2.txt

commit ac0442cea3c0572a9ebe475762cb157f82cbbd34
Author: ketavbhatt <ketavbhatt@gmail.com>
Date:   Fri Jul 5 13:20:48 2019 +0530

    Initial commit
    README.md
    file1
    file2
ketav@Quantiphi-913:~/Desktop/GitAssessment$ git diff-tree --no-commit-id --name-only -r fba263672a747110a878ec05ae9ec8c5472e00c9
file2
file2.txt
ketav@Quantiphi-913:~/Desktop/GitAssessment$
```

#### Question 4

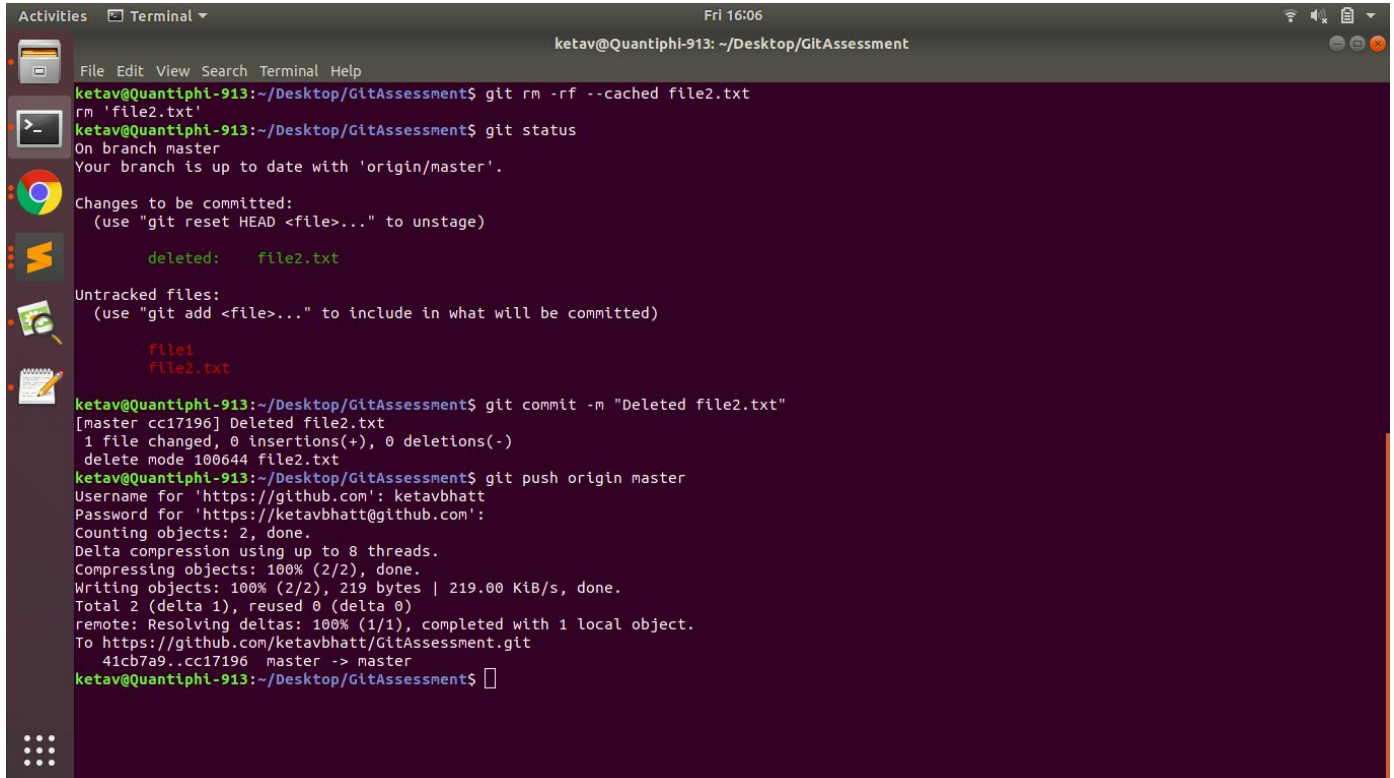
# Remove file from git

```
$ git rm -rf --cached file2.txt
```

# Committing and pushing the rest of the files

```
$ git commit -m "Deleted file2.txt"
```

```
$ git push origin master
```



```
ketav@Quantiphi-913: ~/Desktop/GitAssessment
ketav@Quantiphi-913:~/Desktop/GitAssessment$ git rm -rf --cached file2.txt
rm 'file2.txt'
ketav@Quantiphi-913:~/Desktop/GitAssessment$ git status
On branch master
Your branch is up to date with 'origin/master'.

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

        deleted:    file2.txt

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

        file1
        file2.txt
ketav@Quantiphi-913:~/Desktop/GitAssessment$ git commit -m "Deleted file2.txt"
[master cc17196] Deleted file2.txt
1 file changed, 0 insertions(+), 0 deletions(-)
delete mode 100644 file2.txt
ketav@Quantiphi-913:~/Desktop/GitAssessment$ git push origin master
Username for 'https://github.com': ketavbhatt
Password for 'https://ketavbhatt@github.com':
Counting objects: 2, done.
Delta compression using up to 8 threads.
Compressing objects: 100% (2/2), done.
Writing objects: 100% (2/2), 219 bytes | 219.00 KiB/s, done.
Total 2 (delta 1), reused 0 (delta 0)
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/ketavbhatt/GitAssessment.git
    41cb7a9..cc17196  master -> master
ketav@Quantiphi-913:~/Desktop/GitAssessment$
```

## Question 5

# Checking the log and resetting to previous stage

\$ git log --oneline

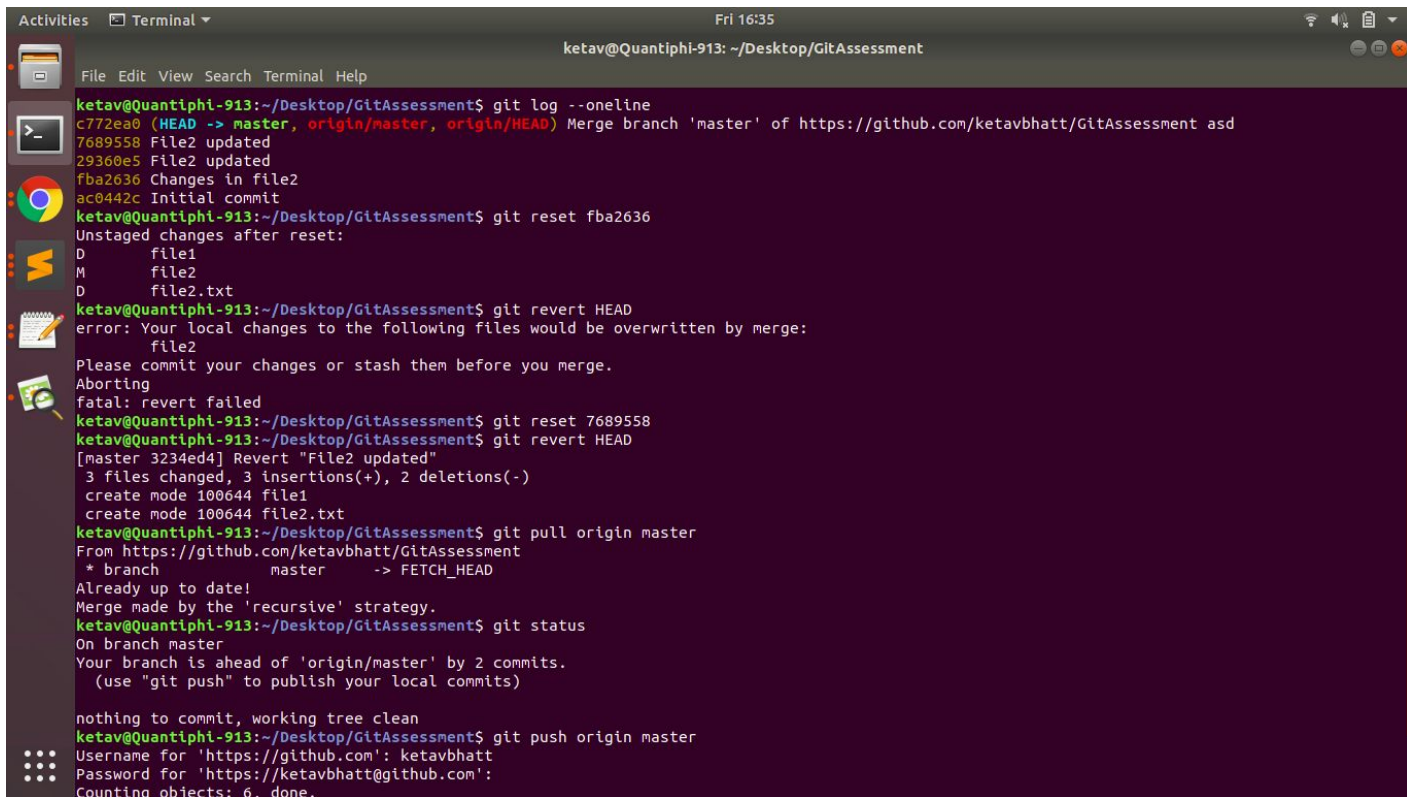
\$ git reset 7689558

# Reverting the HEAD

\$ git revert HEAD

\$ git pull origin master

\$ git push origin master

A terminal window titled 'ketav@Quantiphi-913: ~/Desktop/GitAssessment' showing a series of git commands and their outputs. The user first runs 'git log --oneline' to view commit history. Then they run 'git reset fba2636' to reset to a specific commit. This is followed by an attempt to run 'git revert HEAD', which fails with an error message. The user then runs 'git reset 7689558' and 'git revert HEAD' successfully. Next, they run 'git pull origin master' to fetch updates from the remote repository. Finally, they run 'git push origin master' to push their local changes to the remote repository. The terminal output shows the commit history, the reset operation, the failed revert attempt, the successful revert, the pull operation, and the push operation.

```
ketav@Quantiphi-913:~/Desktop/GitAssessment$ git log --oneline
c772ea0 (HEAD -> master, origin/master, origin/HEAD) Merge branch 'master' of https://github.com/ketavbhatt/GitAssessment asd
7689558 File2 updated
29360e5 File2 updated
fba2636 Changes in file2
ac0442c Initial commit
ketav@Quantiphi-913:~/Desktop/GitAssessment$ git reset fba2636
Unstaged changes after reset:
D   file1
M   file2
D   file2.txt
ketav@Quantiphi-913:~/Desktop/GitAssessment$ git revert HEAD
error: Your local changes to the following files would be overwritten by merge:
file2
Please commit your changes or stash them before you merge.
Aborting
fatal: revert failed
ketav@Quantiphi-913:~/Desktop/GitAssessment$ git reset 7689558
ketav@Quantiphi-913:~/Desktop/GitAssessment$ git revert HEAD
[master 3234ed4] Revert "File2 updated"
3 files changed, 3 insertions(+), 2 deletions(-)
create mode 100644 file1
create mode 100644 file2.txt
ketav@Quantiphi-913:~/Desktop/GitAssessment$ git pull origin master
From https://github.com/ketavbhatt/GitAssessment
* branch      master       -> FETCH_HEAD
Already up to date!
Merge made by the 'recursive' strategy.
ketav@Quantiphi-913:~/Desktop/GitAssessment$ git status
On branch master
Your branch is ahead of 'origin/master' by 2 commits.
  (use "git push" to publish your local commits)

nothing to commit, working tree clean
ketav@Quantiphi-913:~/Desktop/GitAssessment$ git push origin master
Username for 'https://github.com': ketavbhatt
Password for 'https://ketavbhatt@github.com':
Counting objects: 6. done.
```

## Question 6

# Making new branch

\$ git branch test

# Switching HEAD to test branch

\$ git checkout test

# Adding committing and pushing the changes on test branch

\$ git add .

\$ git commit -m "file2 changes in test branch"

\$ git push origin test

# Switching HEAD back to master branch

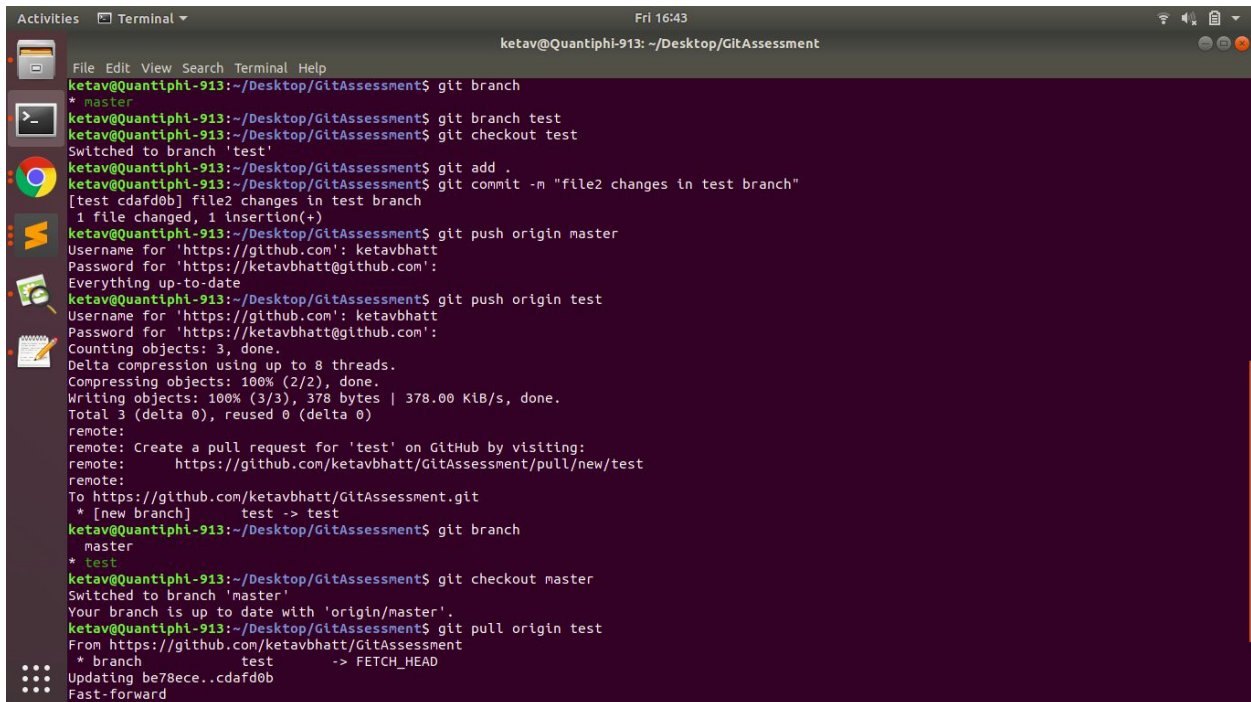
\$ git checkout master

# Pull the code from test branch

\$ git pull origin test

# Remove the conflicts if any and push back on master branch

\$ git push origin master



```
ketav@Quantiphi-913: ~/Desktop/GitAssessment
ketav@Quantiphi-913:~/Desktop/GitAssessment$ git branch
* master
ketav@Quantiphi-913:~/Desktop/GitAssessment$ git branch test
ketav@Quantiphi-913:~/Desktop/GitAssessment$ git checkout test
Switched to branch 'test'
ketav@Quantiphi-913:~/Desktop/GitAssessment$ git add .
ketav@Quantiphi-913:~/Desktop/GitAssessment$ git commit -m "file2 changes in test branch"
[test cdafd0b] file2 changes in test branch
1 file changed, 1 insertion(+)
ketav@Quantiphi-913:~/Desktop/GitAssessment$ git push origin master
Username for 'https://github.com': ketavbhatt
Password for 'https://ketavbhatt@github.com':
Everything up-to-date
ketav@Quantiphi-913:~/Desktop/GitAssessment$ git push origin test
Username for 'https://github.com': ketavbhatt
Password for 'https://ketavbhatt@github.com':
Counting objects: 3, done.
Delta compression using up to 8 threads.
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 378 bytes | 378.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0)
remote:
remote: Create a pull request for 'test' on GitHub by visiting:
remote:   https://github.com/ketavbhatt/GitAssessment/pull/new/test
remote:
To https://github.com/ketavbhatt/GitAssessment.git
 * [new branch]   test -> test
ketav@Quantiphi-913:~/Desktop/GitAssessment$ git branch
* master
 * test
ketav@Quantiphi-913:~/Desktop/GitAssessment$ git checkout master
Switched to branch 'master'
Your branch is up to date with 'origin/master'.
ketav@Quantiphi-913:~/Desktop/GitAssessment$ git pull origin test
From https://github.com/ketavbhatt/GitAssessment
 * branch            test       -> FETCH_HEAD
Updating be78ece..cdafd0b
Fast-forward
```



```
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ketav@Quantlphi-913: ~/Desktop/GitAssessment

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ketav@Quantlphi-913:~/Desktop/GitAssessment$ git push origin master
Username for 'https://github.com': ketavbhatt
Password for 'https://ketavbhatt@github.com':
Everything up-to-date
ketav@Quantlphi-913:~/Desktop/GitAssessment$ git push origin test
Username for 'https://github.com': ketavbhatt
Password for 'https://ketavbhatt@github.com':
Counting objects: 3, done.
Delta compression using up to 8 threads.
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 378 bytes | 378.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0)
remote:
remote: Create a pull request for 'test' on GitHub by visiting:
remote:   https://github.com/ketavbhatt/GitAssessment/pull/new/test
remote:
To https://github.com/ketavbhatt/GitAssessment.git
 * [new branch]   test -> test
ketav@Quantlphi-913:~/Desktop/GitAssessment$ git branch
 * master
 * test
ketav@Quantlphi-913:~/Desktop/GitAssessment$ git checkout master
Switched to branch 'master'
Your branch is up to date with 'origin/master'.
ketav@Quantlphi-913:~/Desktop/GitAssessment$ git pull origin test
From https://github.com/ketavbhatt/GitAssessment
 * branch            test       -> FETCH_HEAD
Updating be78ece..cda9dbb
Fast-forward
 file2 | 1 +
 1 file changed, 1 insertion(+)
ketav@Quantlphi-913:~/Desktop/GitAssessment$ git push origin master
Username for 'https://github.com': ketavbhatt
Password for 'https://ketavbhatt@github.com':
Total 0 (delta 0), reused 0 (delta 0)
To https://github.com/ketavbhatt/GitAssessment.git
 be78ece..cda9dbb  master -> master
ketav@Quantlphi-913:~/Desktop/GitAssessment$
```

## Question 7

# Checkout the test branch

\$ git checkout test

# Add, commit and push first changes in test branch

\$ git add .

\$ git commit -m "first change in test branch"

\$ git push origin test

# Add commit and push second changes on test branch

\$ git add .

\$ git commit -m "second change in test branch"

\$ git push origin test

# Check the commit-ids of first and second changes on test branch

\$ git log --oneline

# Switch to master branch

\$ git checkout master

# Pick the commit id you want to add from test branch to master branch

\$ git cherry-pick 1a89192

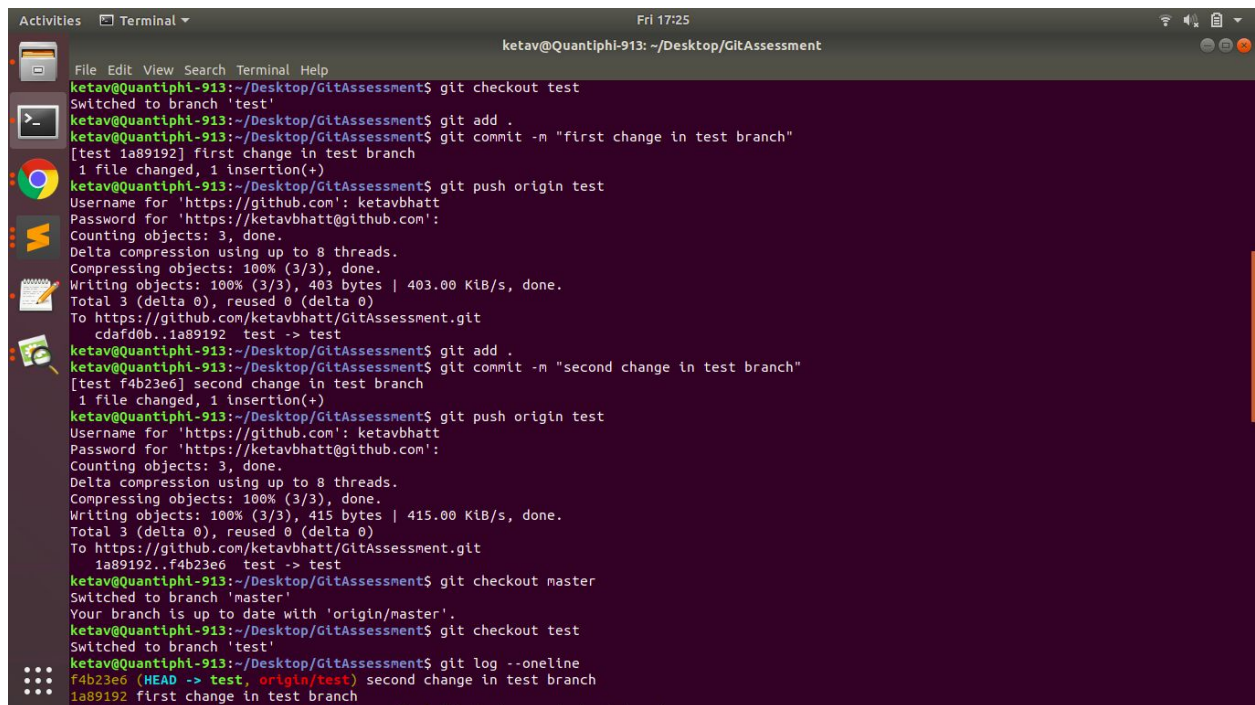
\$ git reset

# Add commit and push changes to master branch

\$ git add -p

\$ git commit -m "first change from test branch"

\$ git push origin master

A terminal window titled 'ketav@Quantiphi-913: ~/Desktop/GitAssessment' showing a series of git commands and their outputs. The user starts by checking out the 'test' branch, adding a file, committing it with the message 'first change in test branch', and pushing it to the origin. Then, they add another file, commit it with 'second change in test branch', and push it. After that, they checkout the 'master' branch, then the 'test' branch again, and finally use 'git log --oneline' to show the commit history. The log shows two commits: 'f4b23e6 (HEAD -> test, origin/test) second change in test branch' and '1a89192 first change in test branch'.

```
ketav@Quantiphi-913:~/Desktop/GitAssessment$ git checkout test
Switched to branch 'test'
ketav@Quantiphi-913:~/Desktop/GitAssessment$ git add .
ketav@Quantiphi-913:~/Desktop/GitAssessment$ git commit -m "first change in test branch"
[test 1a89192] first change in test branch
1 file changed, 1 insertion(+)
ketav@Quantiphi-913:~/Desktop/GitAssessment$ git push origin test
Username for 'https://github.com': ketavbhatt
Password for 'https://ketavbhatt@github.com':
Counting objects: 3, done.
Delta compression using up to 8 threads.
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 403 bytes | 403.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0)
To https://github.com/ketavbhatt/GitAssessment.git
cdafdb..1a89192 test -> test
ketav@Quantiphi-913:~/Desktop/GitAssessment$ git add .
ketav@Quantiphi-913:~/Desktop/GitAssessment$ git commit -m "second change in test branch"
[test f4b23e6] second change in test branch
1 file changed, 1 insertion(+)
ketav@Quantiphi-913:~/Desktop/GitAssessment$ git push origin test
Username for 'https://github.com': ketavbhatt
Password for 'https://ketavbhatt@github.com':
Counting objects: 3, done.
Delta compression using up to 8 threads.
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 415 bytes | 415.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0)
To https://github.com/ketavbhatt/GitAssessment.git
1a89192..f4b23e6 test -> test
ketav@Quantiphi-913:~/Desktop/GitAssessment$ git checkout master
Switched to branch 'master'
Your branch is up to date with 'origin/master'.
ketav@Quantiphi-913:~/Desktop/GitAssessment$ git checkout test
Switched to branch 'test'
ketav@Quantiphi-913:~/Desktop/GitAssessment$ git log --oneline
f4b23e6 (HEAD -> test, origin/test) second change in test branch
1a89192 first change in test branch
```



```
Activities Terminal Fri 17:25
ketav@Quantiphi-913: ~/Desktop/GitAssessment

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ketav@Quantiphi-913:~/Desktop/GitAssessment$ git log --oneline
f4b23e6 (HEAD -> test, origin/test) second change in test branch
1a89192 first change in test branch
cdafd0b (origin/master, origin/HEAD, master) file2 changes in test branch
be78ece Merge branch 'master' of https://github.com/ketavbhatt/GitAssessment Reverting to file2 updated stage
3234ed4 Revert "File2 updated"
c772ea0 Merge branch 'master' of https://github.com/ketavbhatt/GitAssessment asd
7689558 File2 updated
29360e5 File2 updated
fba2636 Changes in file2
ac0442c Initial commit

ketav@Quantiphi-913:~/Desktop/GitAssessment$ git checkout master
Switched to branch 'master'
Your branch is up to date with 'origin/master'.

ketav@Quantiphi-913:~/Desktop/GitAssessment$ git cherry-pick 1a89192
[master 46ea028] first change in test branch
Date: Fri Jul 5 17:13:39 2019 +0530
1 file changed, 1 insertion(+)

ketav@Quantiphi-913:~/Desktop/GitAssessment$ git reset
ketav@Quantiphi-913:~/Desktop/GitAssessment$ git add -p
No changes.
ketav@Quantiphi-913:~/Desktop/GitAssessment$ git commit -m "first change from test branch"
On branch master
Your branch is ahead of 'origin/master' by 1 commit.
(use "git push" to publish your local commits)

nothing to commit, working tree clean
ketav@Quantiphi-913:~/Desktop/GitAssessment$ git commit
On branch master
Your branch is ahead of 'origin/master' by 1 commit.
(use "git push" to publish your local commits)

nothing to commit, working tree clean
ketav@Quantiphi-913:~/Desktop/GitAssessment$ git add .
ketav@Quantiphi-913:~/Desktop/GitAssessment$ git commit -m "first change from test branch"
On branch master
Your branch is ahead of 'origin/master' by 1 commit.
(use "git push" to publish your local commits)
```

```
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ketav@Quantiphi-913: ~/Desktop/GitAssessment

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Your branch is ahead of 'origin/master' by 1 commit.
(use "git push" to publish your local commits)

nothing to commit, working tree clean
ketav@Quantiphi-913:~/Desktop/GitAssessment$ git add .
ketav@Quantiphi-913:~/Desktop/GitAssessment$ git commit -m "first change from test branch"
On branch master
Your branch is ahead of 'origin/master' by 1 commit.
(use "git push" to publish your local commits)

nothing to commit, working tree clean
ketav@Quantiphi-913:~/Desktop/GitAssessment$ git cherry-pick -n 1a89192
ketav@Quantiphi-913:~/Desktop/GitAssessment$ git reset
ketav@Quantiphi-913:~/Desktop/GitAssessment$ git add -p
No changes.
ketav@Quantiphi-913:~/Desktop/GitAssessment$ git commit -m "first change from test branch"
On branch master
Your branch is ahead of 'origin/master' by 1 commit.
(use "git push" to publish your local commits)

nothing to commit, working tree clean
ketav@Quantiphi-913:~/Desktop/GitAssessment$ git status
On branch master
Your branch is ahead of 'origin/master' by 1 commit.
(use "git push" to publish your local commits)

nothing to commit, working tree clean
ketav@Quantiphi-913:~/Desktop/GitAssessment$ git push origin master
Username for 'https://github.com': ketavbhatt
Password for 'https://ketavbhatt@github.com':
Counting objects: 3, done.
Delta compression using up to 8 threads.
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 408 bytes | 408.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0)
To https://github.com/ketavbhatt/GitAssessment.git
cdafd0b..46ea028 master -> master
ketav@Quantiphi-913:~/Desktop/GitAssessment$
```