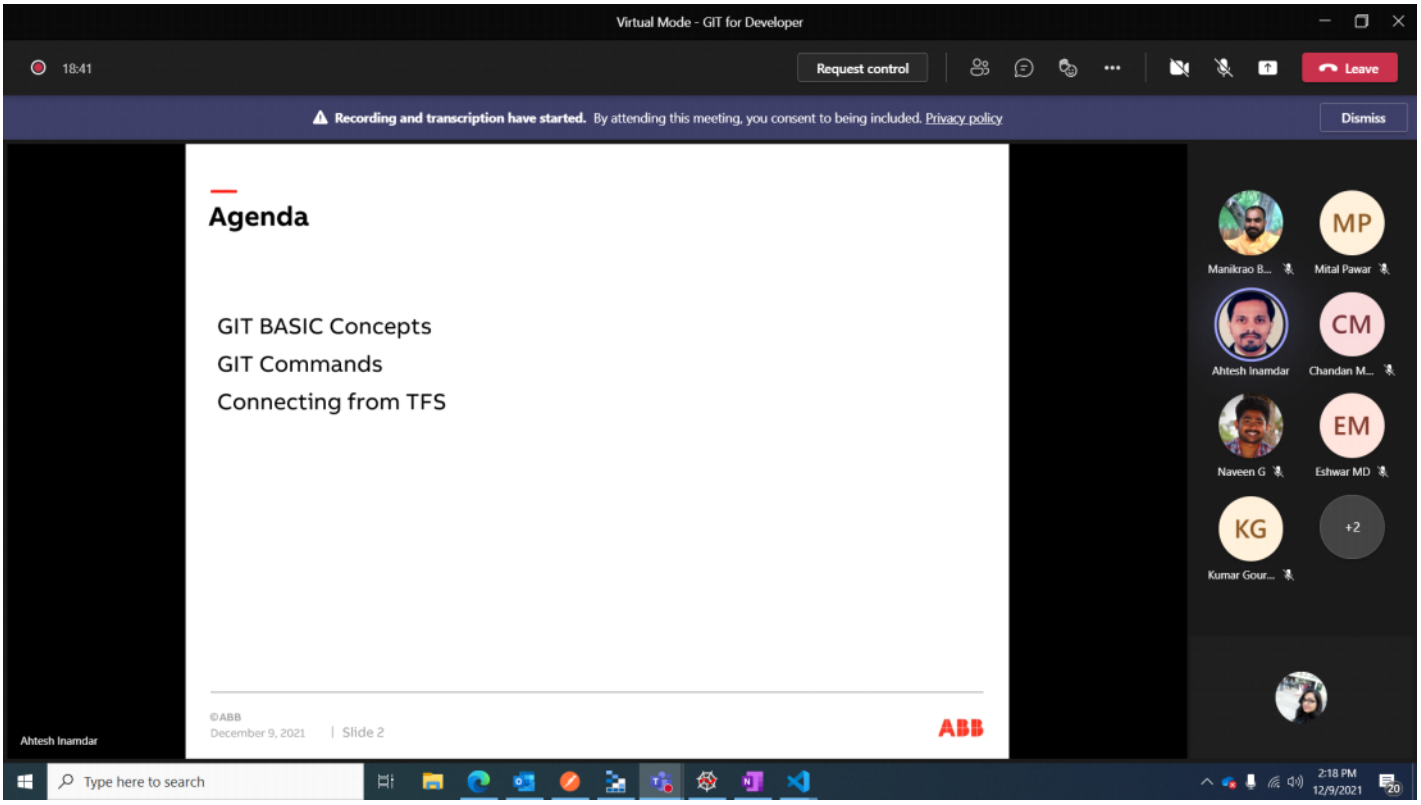
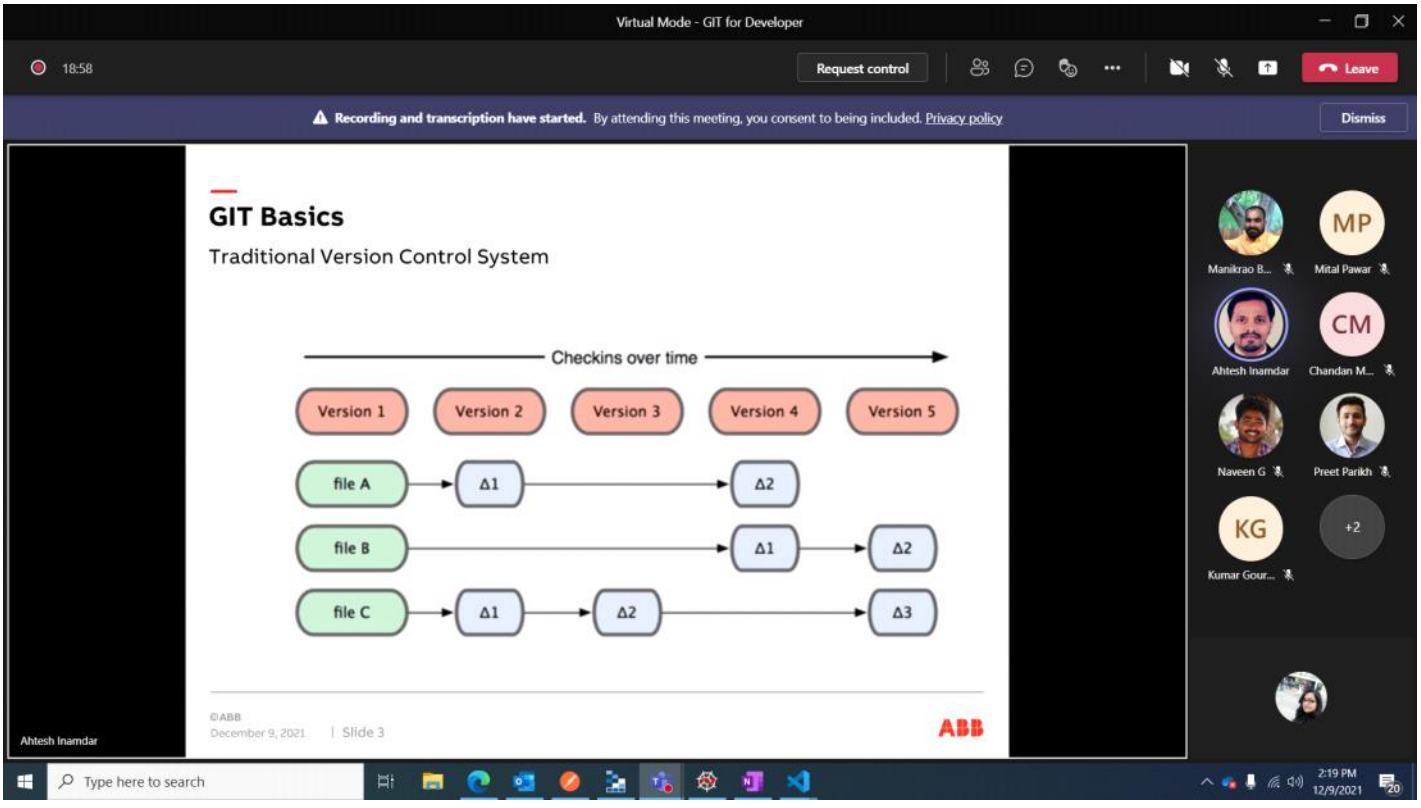
Intro

Thursday, December 9, 2021 12:02 PM





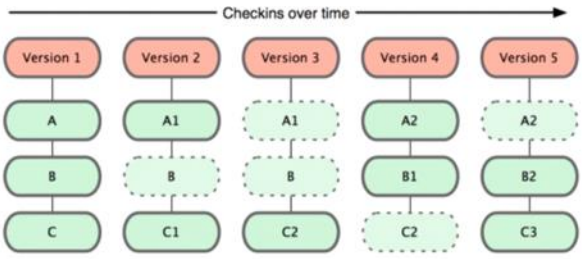
Virtual Mode - GIT for Developer

21:52 | Request control | Leave

Recording and transcription have started. By attending this meeting, you consent to being included. Privacy policy | Dismiss

GIT Basics

Git stores data as snapshots of the project over time



©ABB
December 9, 2021 | Slide 4

ABB

Ahtesh Inamdar

Manikrao B... | Mital Pawar | Ahtesh Inamdar | Chandan M... | Naveen G | Preet Parikh | Kumar Gour... | +4

Type here to search | 2:22 PM 12/9/2021

Virtual Mode - GIT for Developer

25:31 | Request control | Leave

Recording and transcription have started. By attending this meeting, you consent to being included. Privacy policy | Dismiss

GIT Basics

Important Points

- Git thinks of its data more like a set of snapshots of a mini filesystem
- Every time you commit, it basically takes a picture
  of what all your files look like at that moment and stores a reference to that snapshot
- If files have not changed, Git doesn't store the file again
  just a link to the previous identical file it has already stored

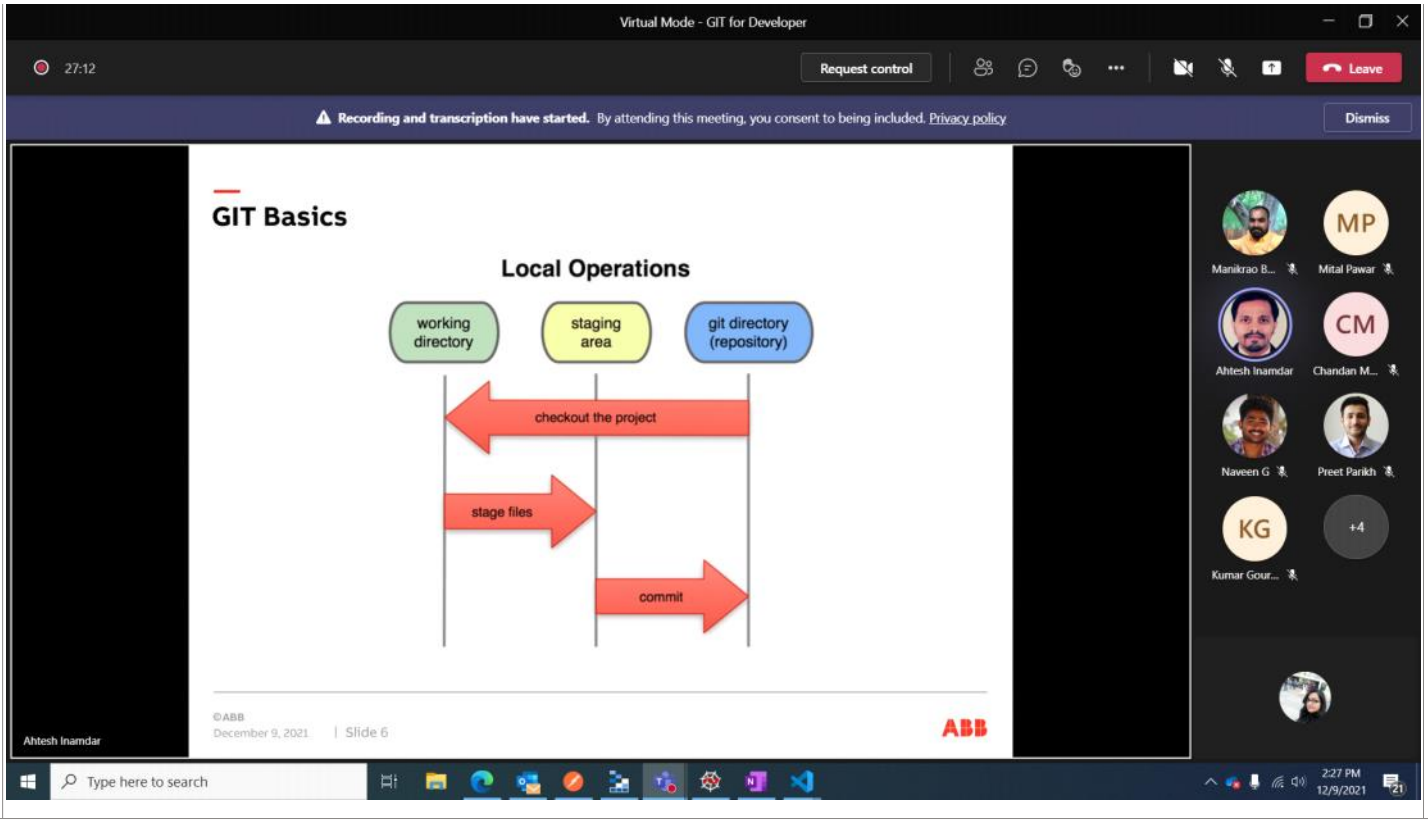
©ABB
December 9, 2021 | Slide 5

ABB

Ahtesh Inamdar

Manikrao B... | Mital Pawar | Ahtesh Inamdar | Chandan M... | Naveen G | Preet Parikh | Kumar Gour... | +4

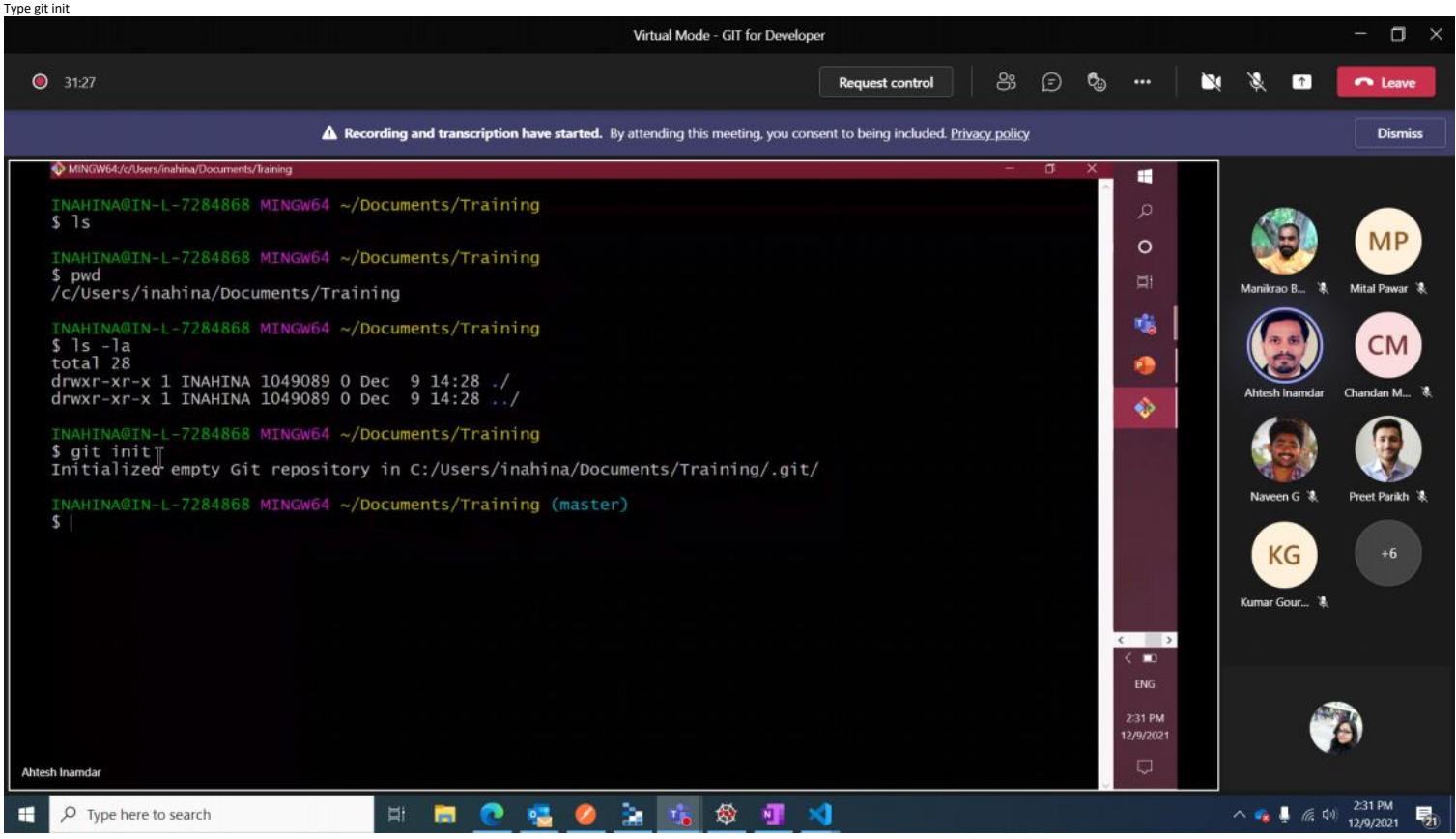
Type here to search | 2:25 PM 12/9/2021


Virtual Mode - GIT for Developer
27:12
Request control
Leave
Recording and transcription have started. By attending this meeting, you consent to being included. Privacy policy
Dismiss
GIT Basics
Local Operations
working directory
staging area
git directory (repository)
checkout the project
stage files
commit
©ABB
December 9, 2021
Slide 6
ABB
Ahtesh Inamdar
Manikrao B...
Mital Pawar
Ahtesh Inamdar
Chandan M...
Naveen G
Preet Parikh
Kumar Gour...
+4
Type here to search
2:27 PM
12/9/2021

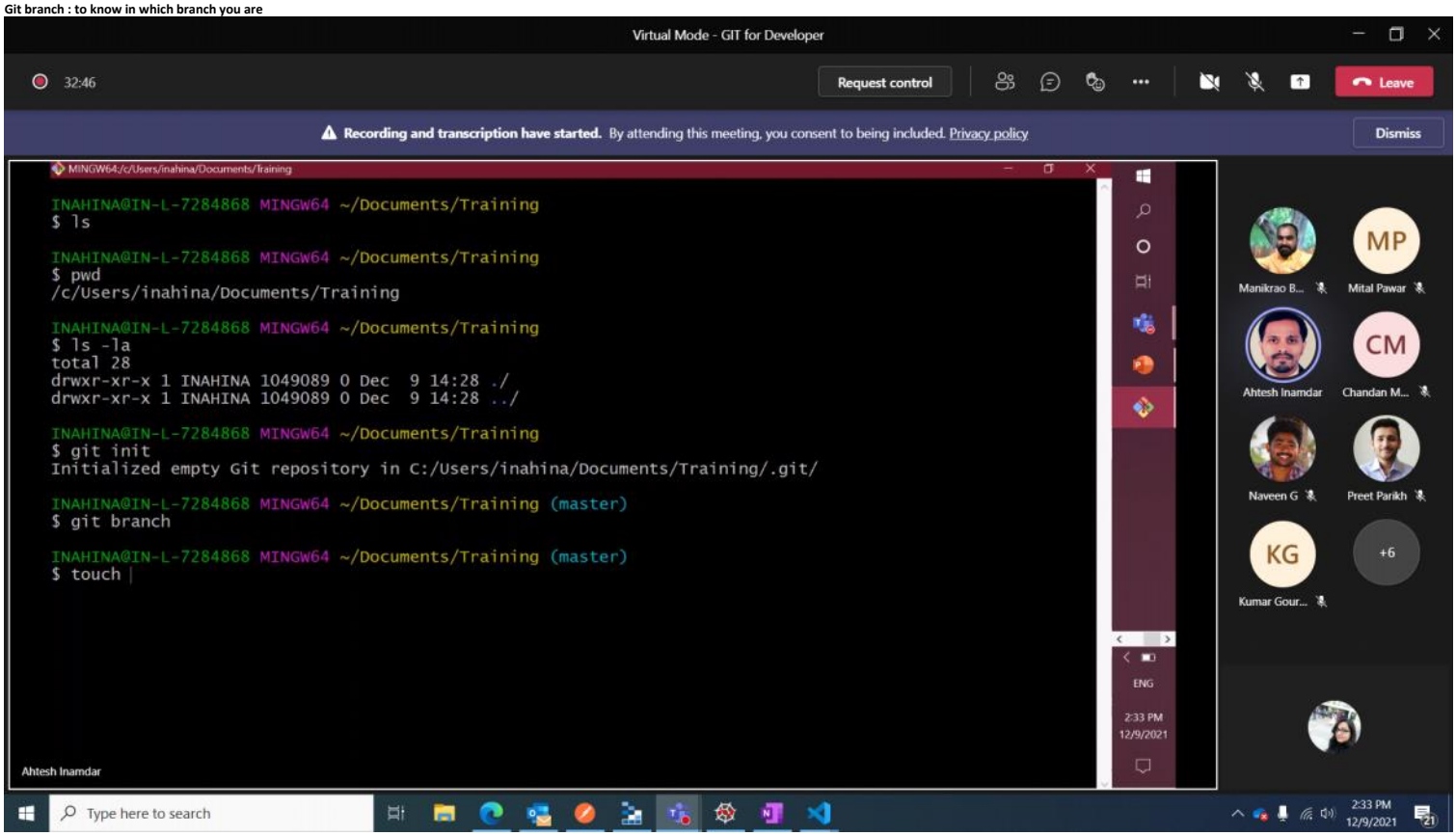
Thursday, December 9, 2021 2:31 PM

Git Init: Initialize git repository

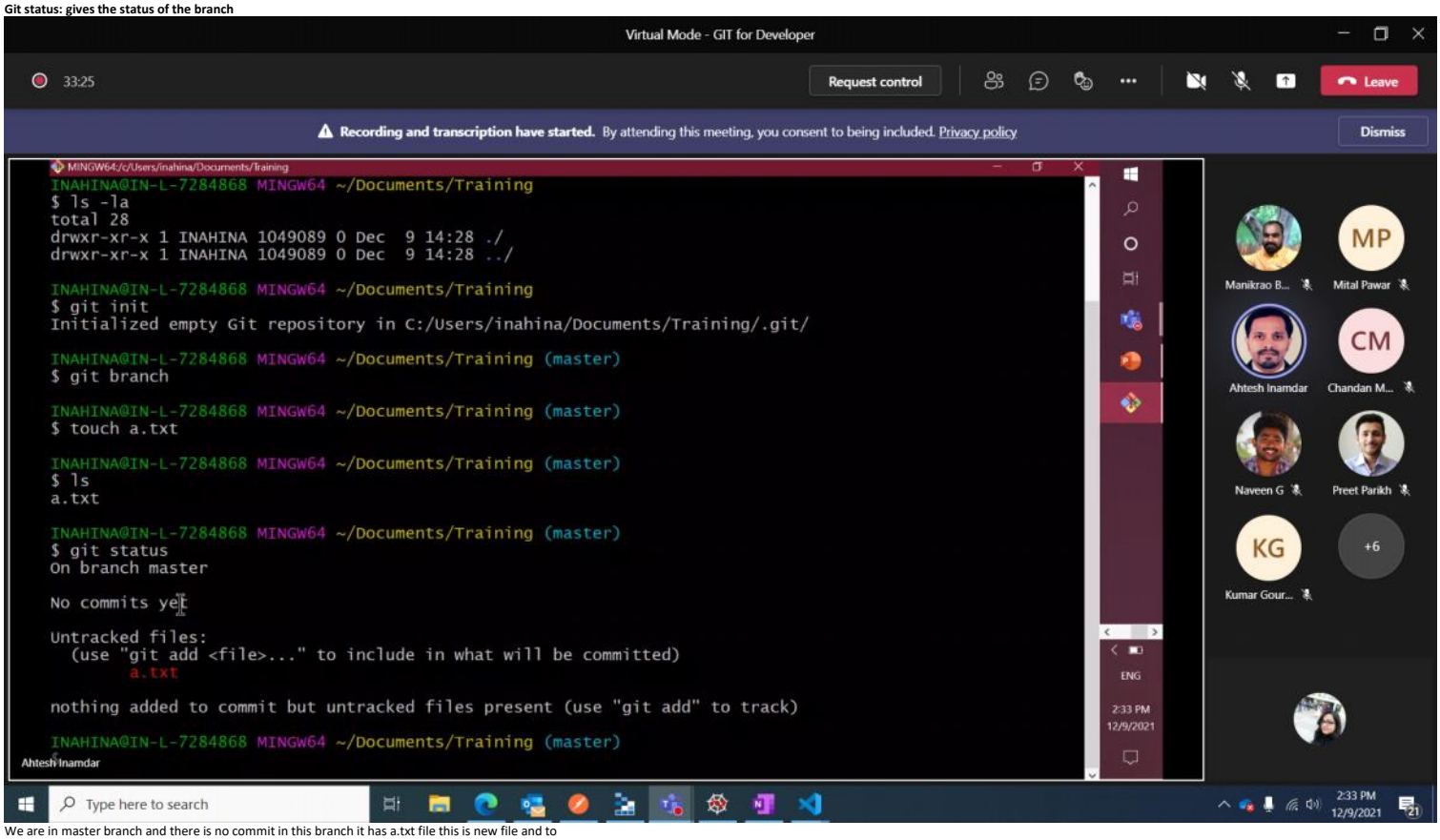
- Open git bash
- Write linux commands here
- Go to the folder location where you want to create repo and write click select open git bash here
- Type git init



Git branch : to know in which branch you are

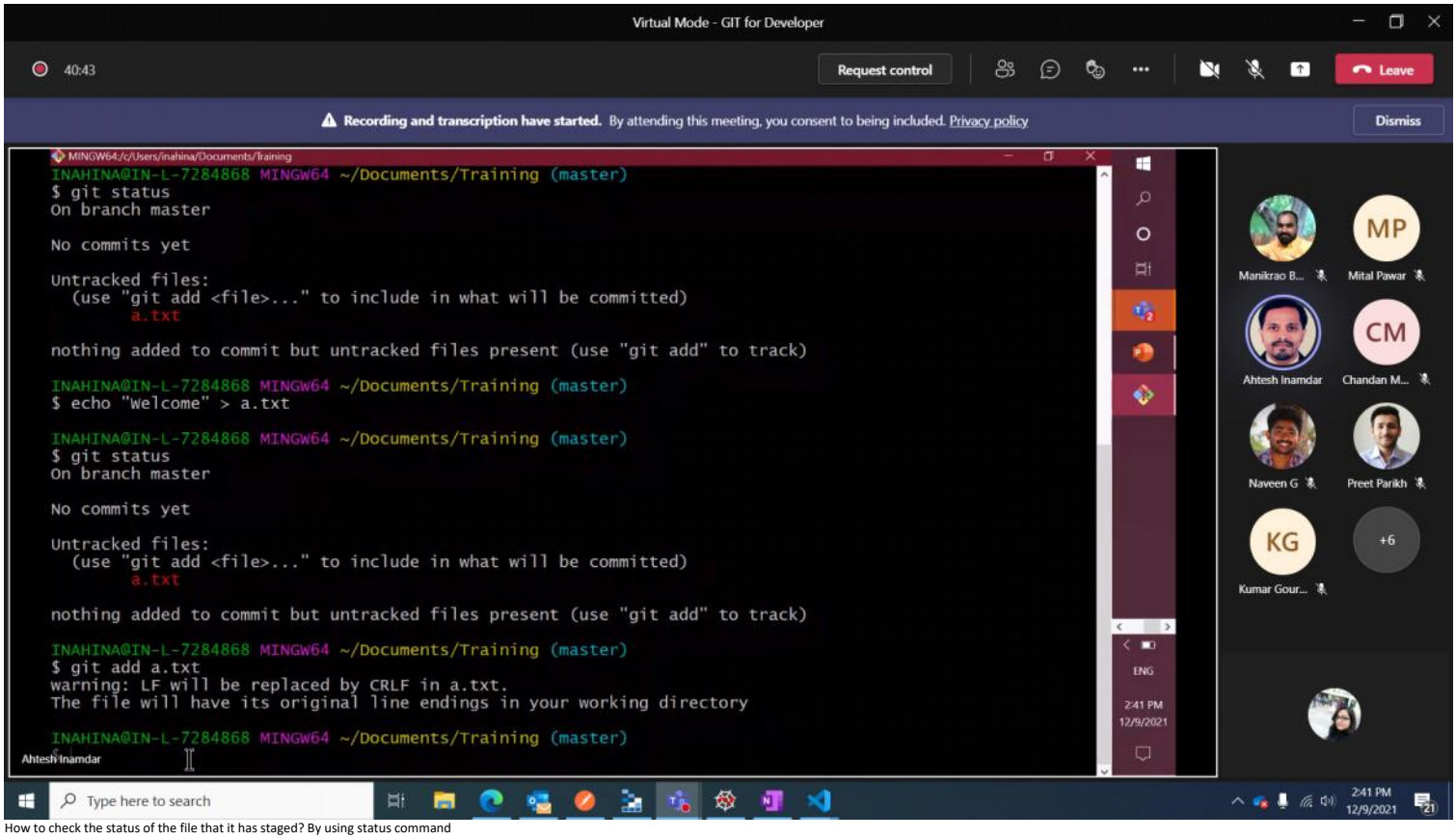


Git status: gives the status of the branch

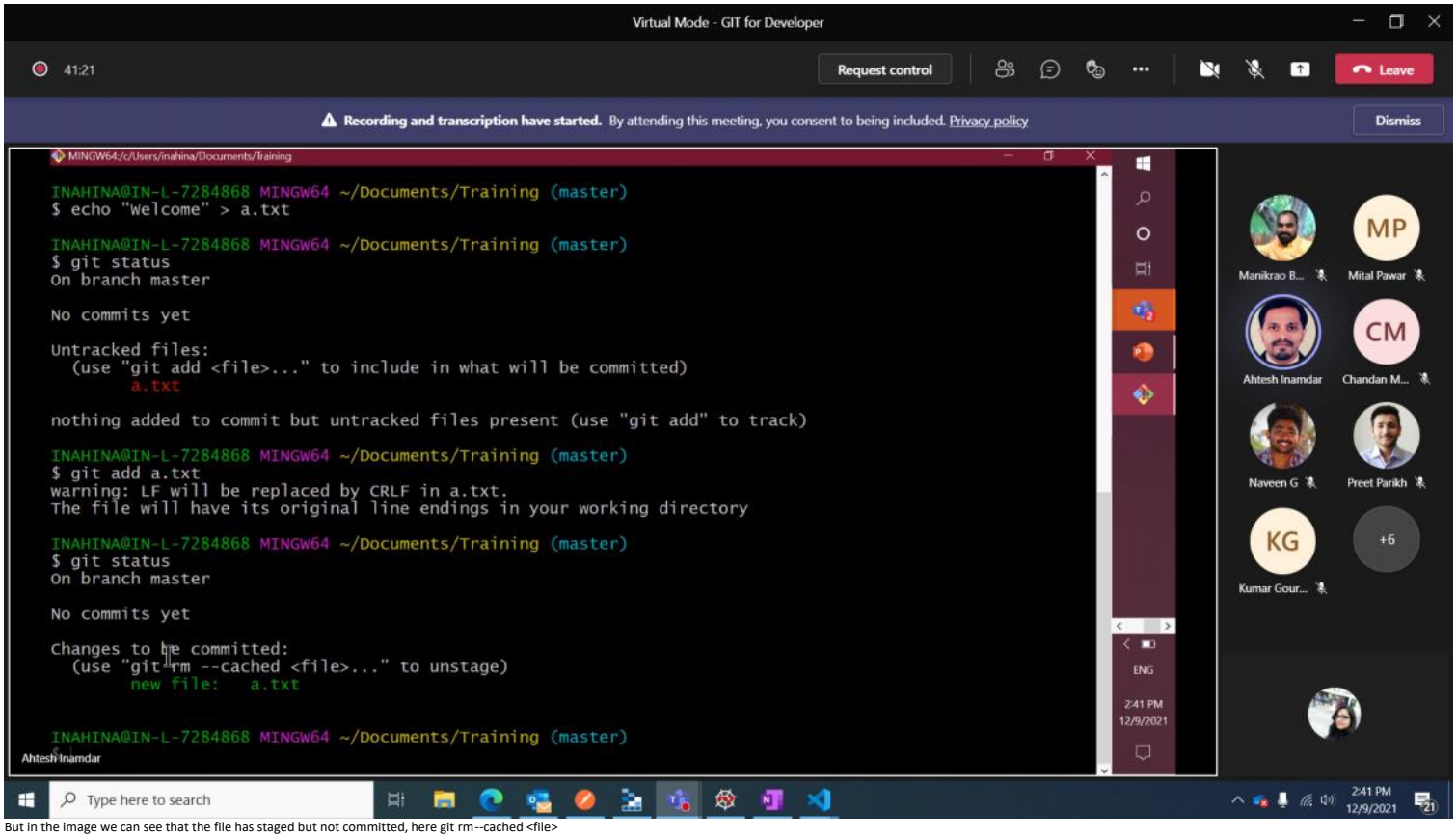


We are in master branch and there is no commit in this branch it has a.txt file this is new file and to commit this file we need to add this file first

Git add <filename>: to move the file from current working to staging area

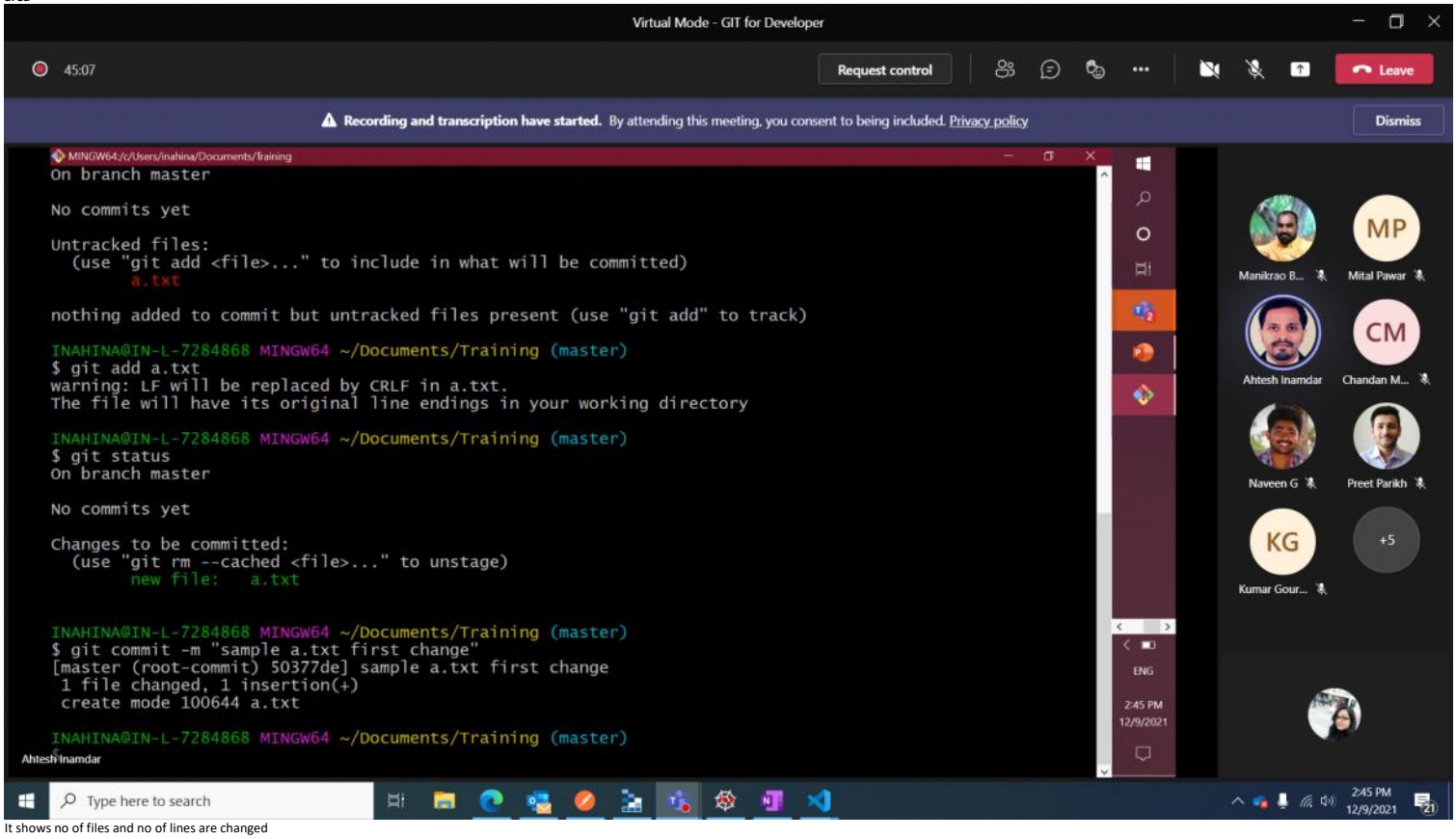


How to check the status of the file that it has staged? By using status command



But in the image we can see that the file has staged but not committed, here git rm--cached <file> command says that if you don't want to commit than you can unstage the changes using this command

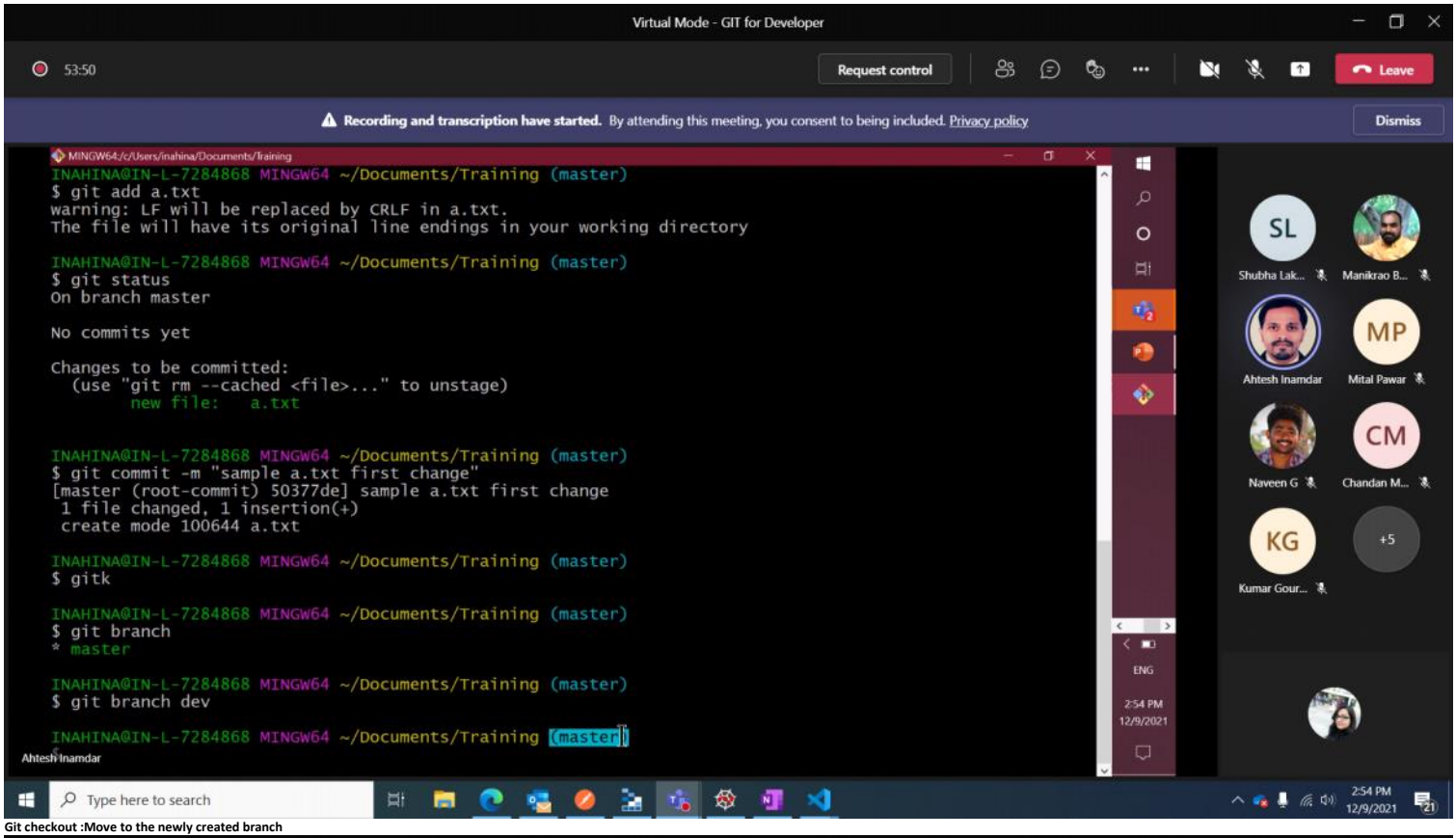
Git commit: command used to commit the changes which only commits the files which are in staging area



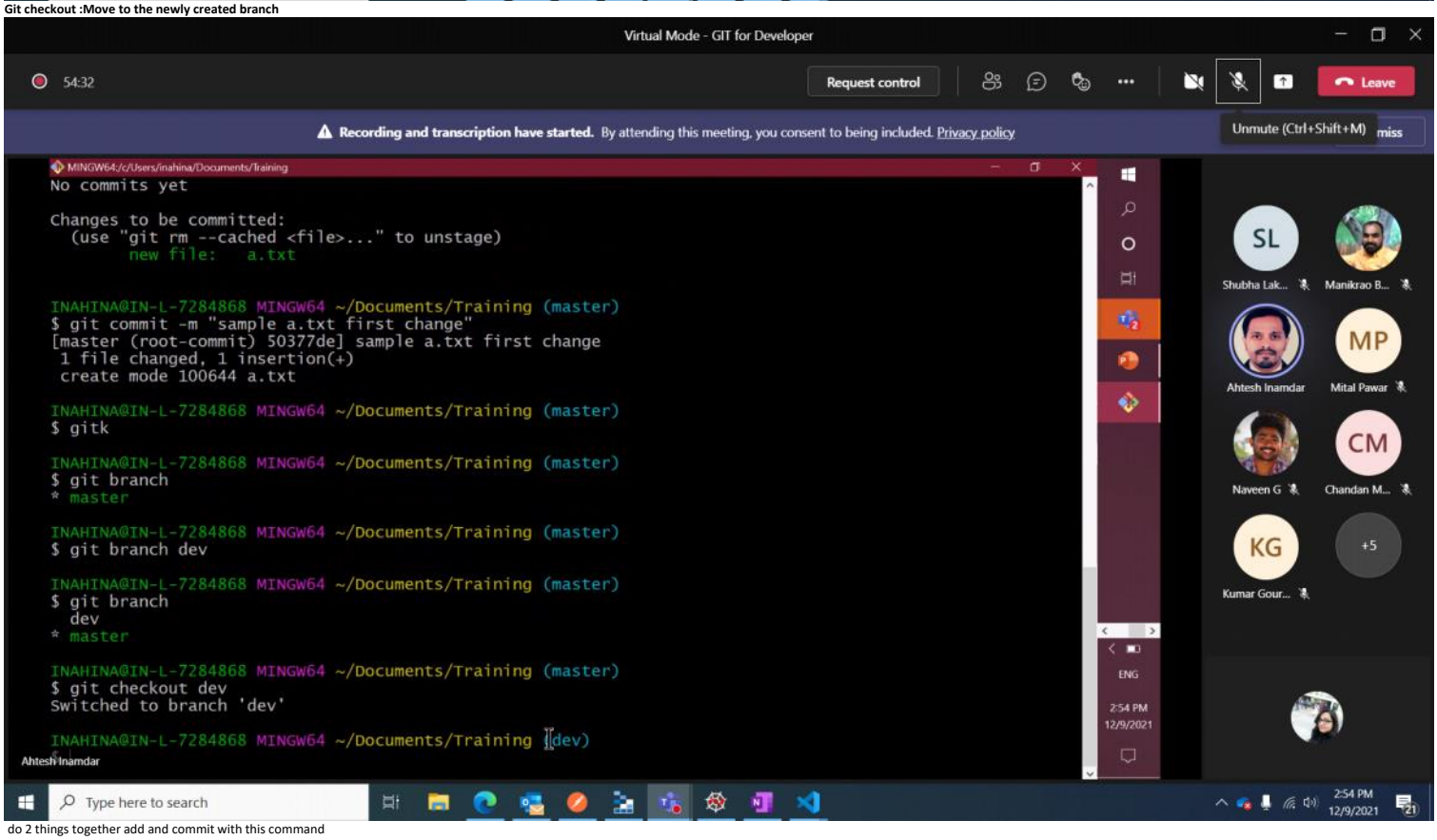
It shows no of files and no of lines are changed

Every commit has unique id generated after commit

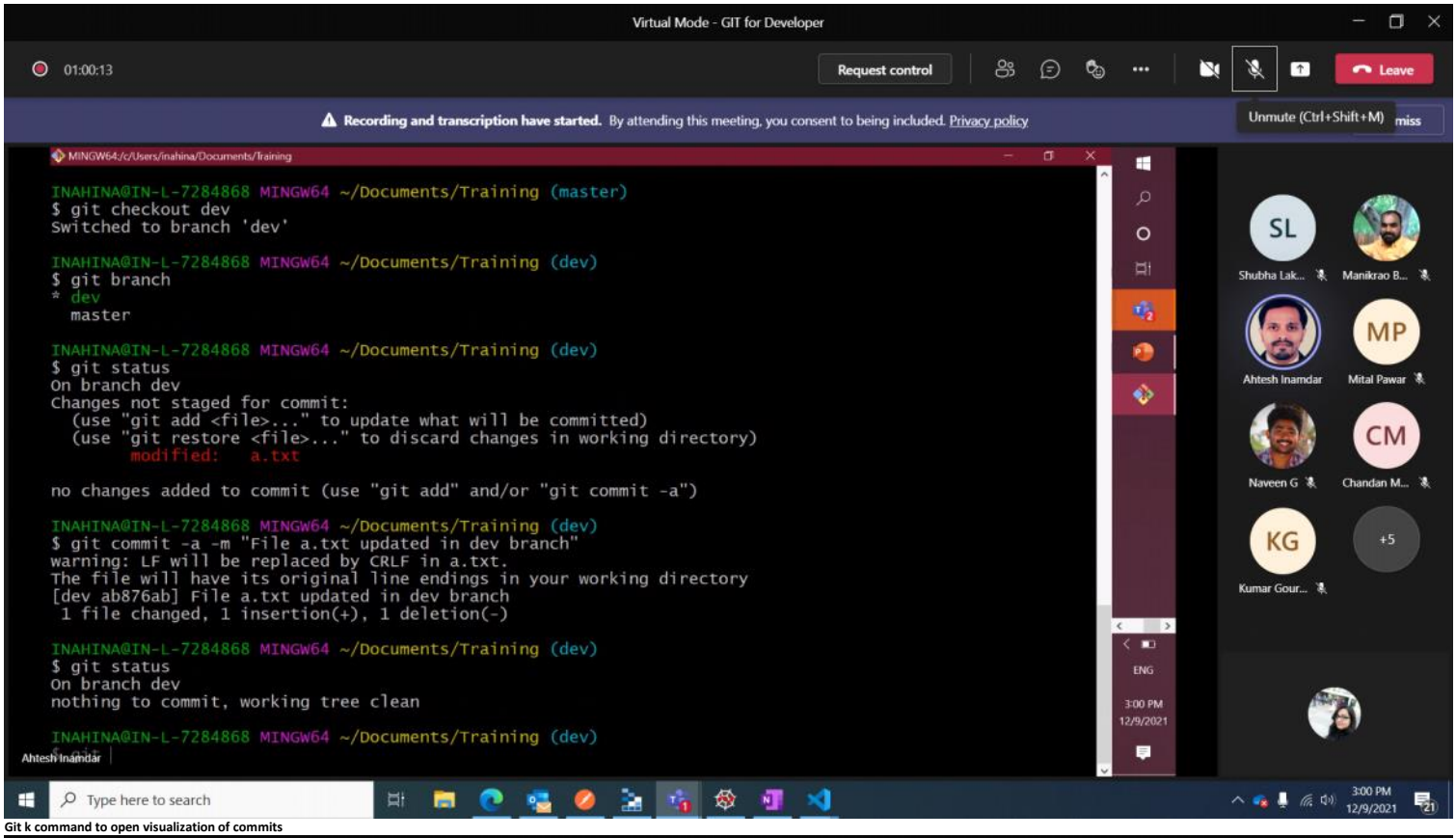
Check in which branch you are and then create dev branch in it



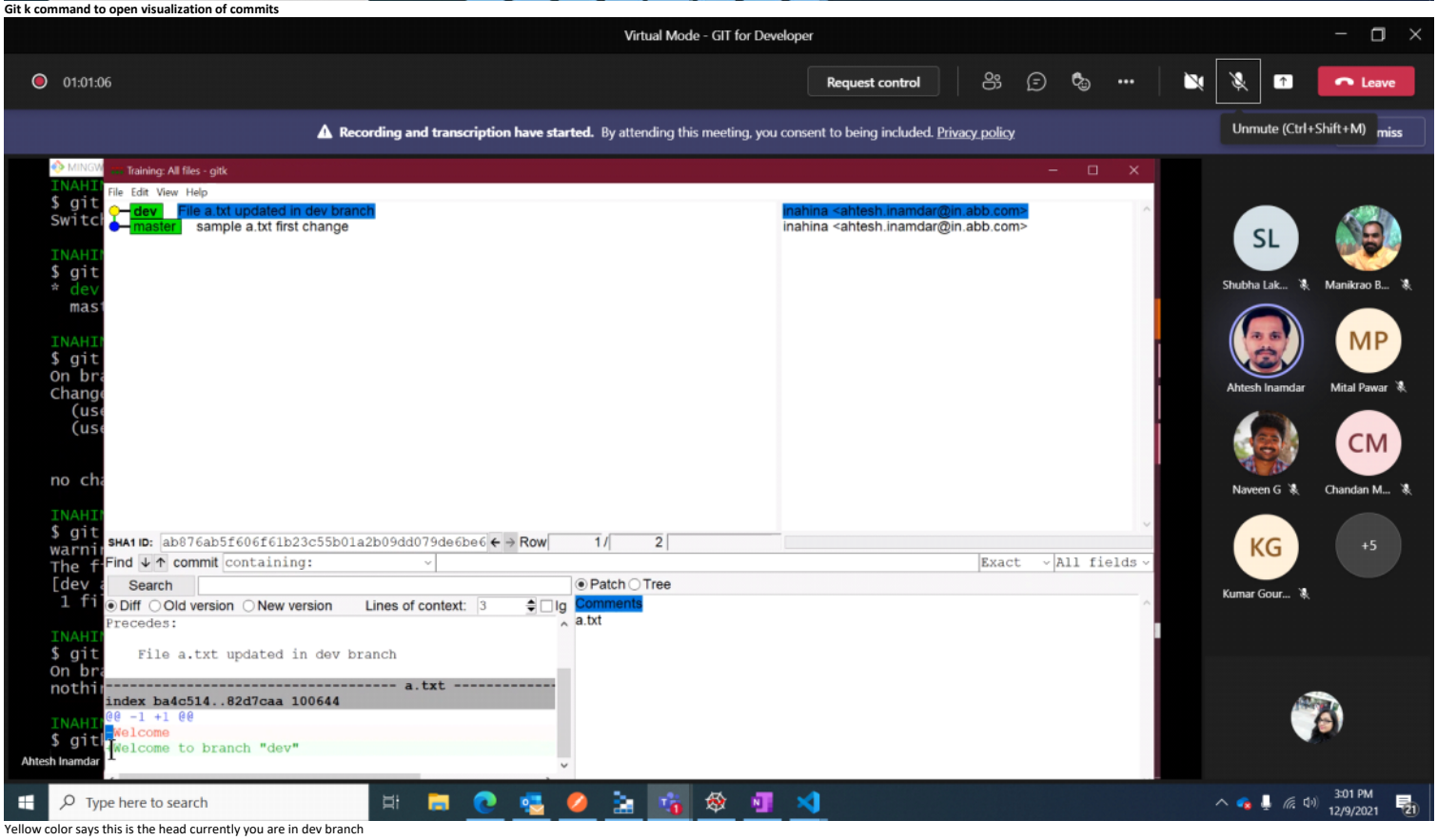
Git checkout :Move to the newly created branch



do 2 things together add and commit with this command

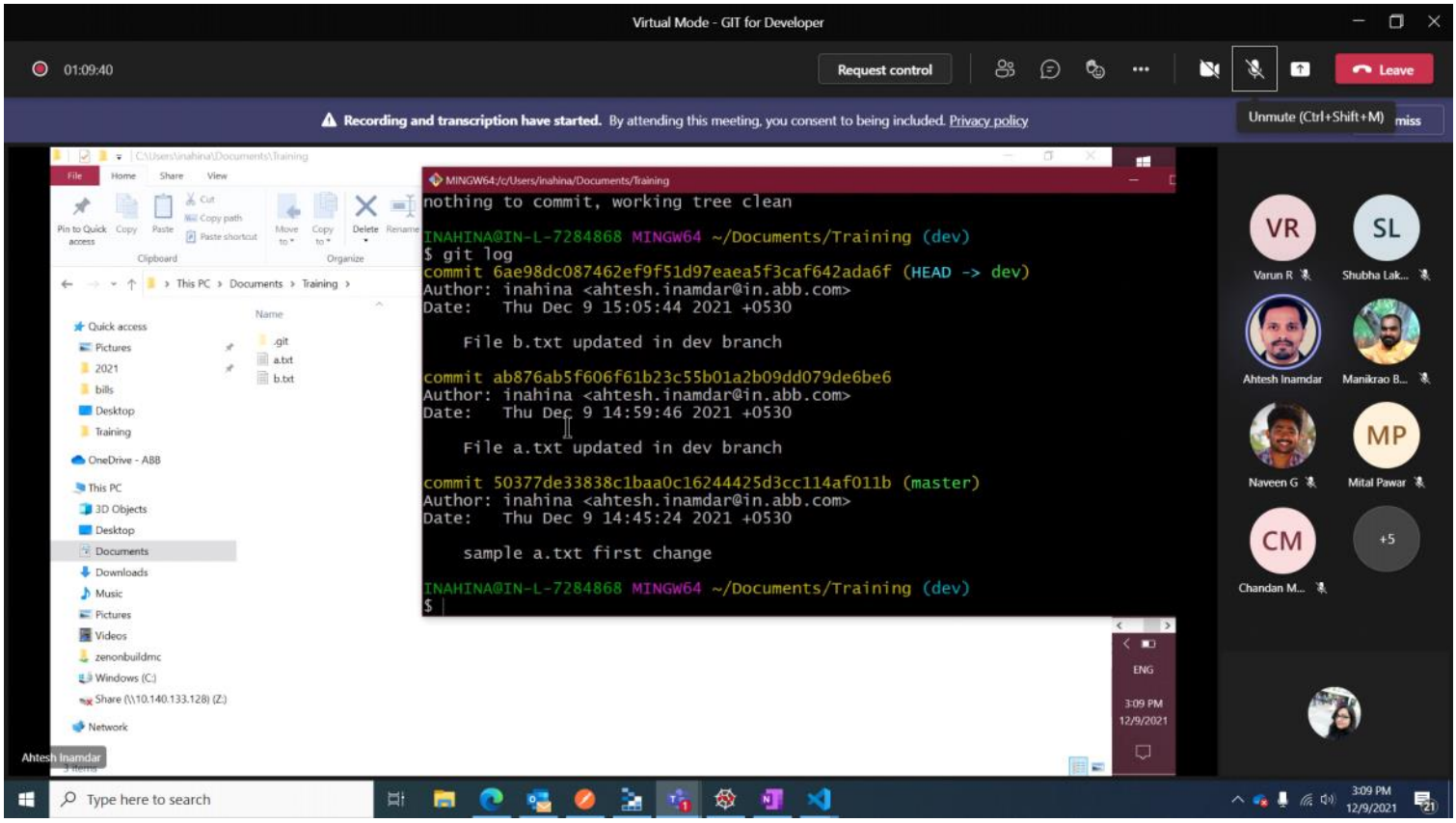


Git k command to open visualization of commits



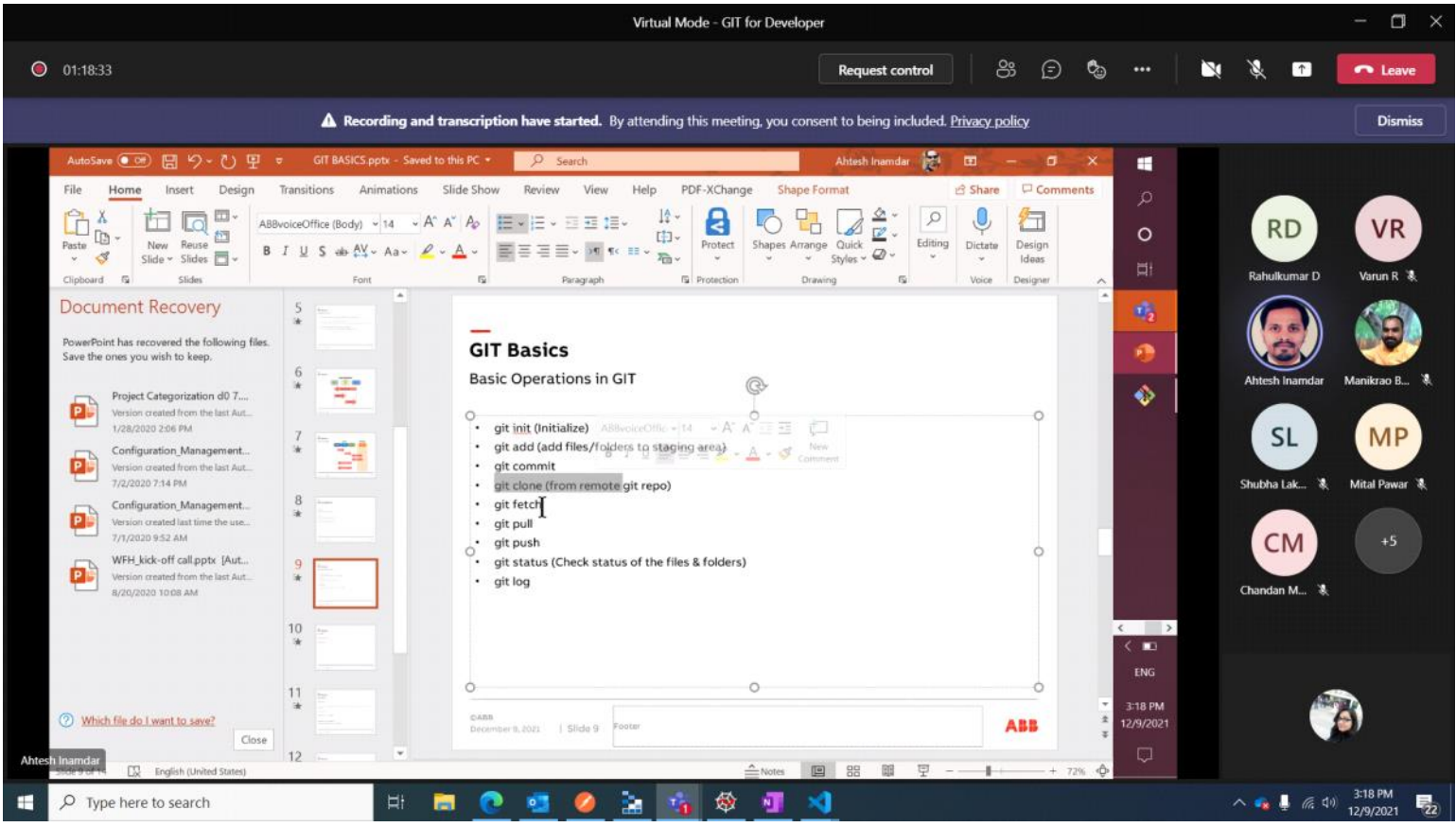
Yellow color says this is the head currently you are in dev branch

Git log : to check latest activity or commit


Virtual Mode - GIT for Developer
01:09:40
Request control
Leave
Recording and transcription have started. By attending this meeting, you consent to being included. Privacy policy
Unmute (Ctrl+Shift+M)
MINGW64:/c/Users/inahina/Documents/Training
nothing to commit, working tree clean
INAHINA@IN-L-7284868 MINGW64 ~/Documents/Training (dev)
$ git log
commit 6ae98dc087462ef9f51d97eaea5f3caf642ada6f (HEAD -> dev)
Author: inahina <ahtesh.inamdar@in.abb.com>
Date: Thu Dec 9 15:05:44 2021 +0530
File b.txt updated in dev branch
commit ab876ab5f606f61b23c55b01a2b09dd079de6be6
Author: inahina <ahtesh.inamdar@in.abb.com>
Date: Thu Dec 9 14:59:46 2021 +0530
File a.txt updated in dev branch
commit 50377de33838c1baa0c16244425d3cc114af011b (master)
Author: inahina <ahtesh.inamdar@in.abb.com>
Date: Thu Dec 9 14:45:24 2021 +0530
sample a.txt first change
INAHINA@IN-L-7284868 MINGW64 ~/Documents/Training (dev)
$
Varun R
Shubha Lak...
Ahtesh Inamdar
Manikrao B...
Naveen G
Mital Pawar
Chandan M...
+5
Ahtesh Inamdar
Type here to search
3:09 PM
12/9/2021

commands

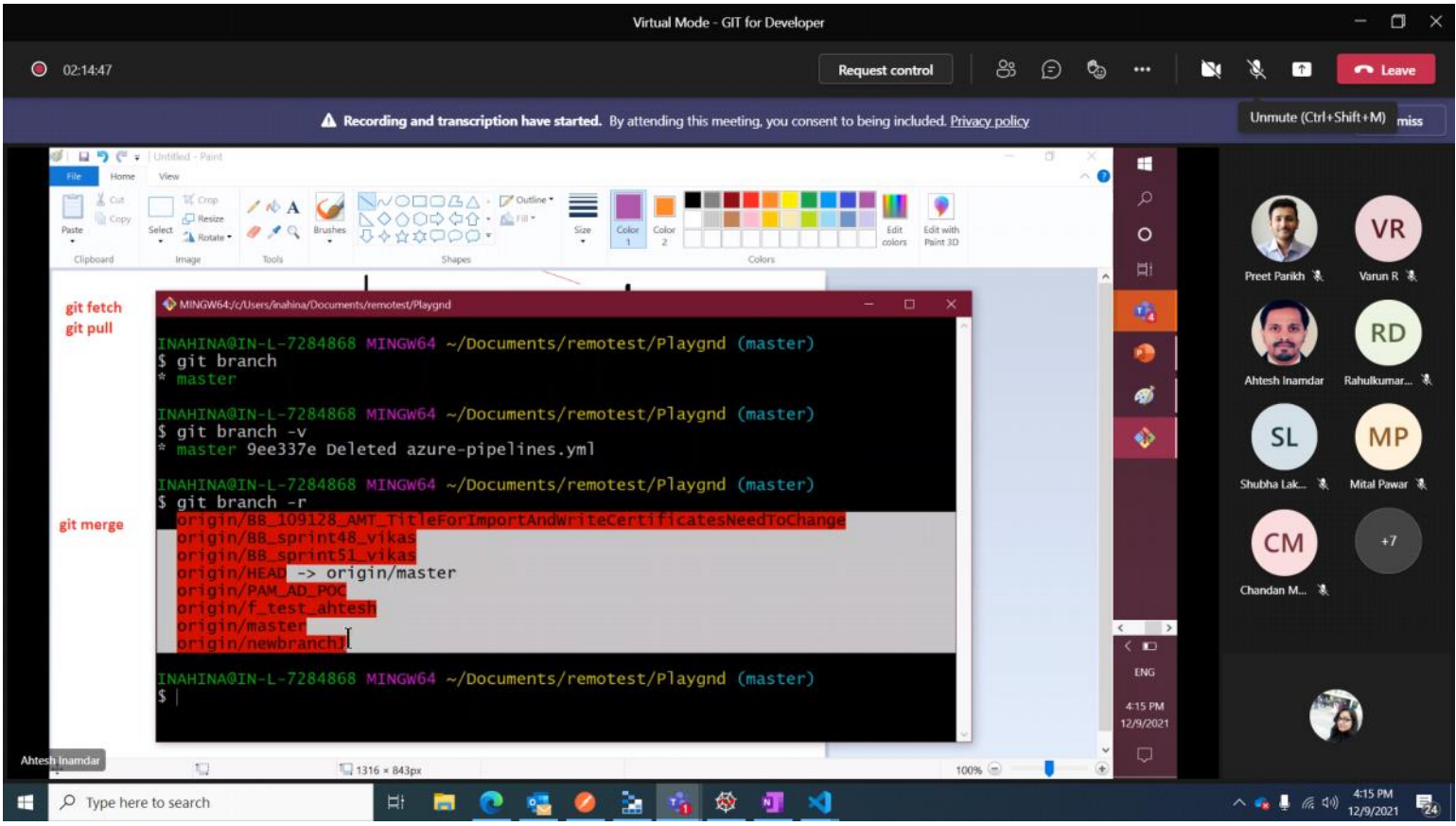
Thursday, December 9, 2021 3:19 PM



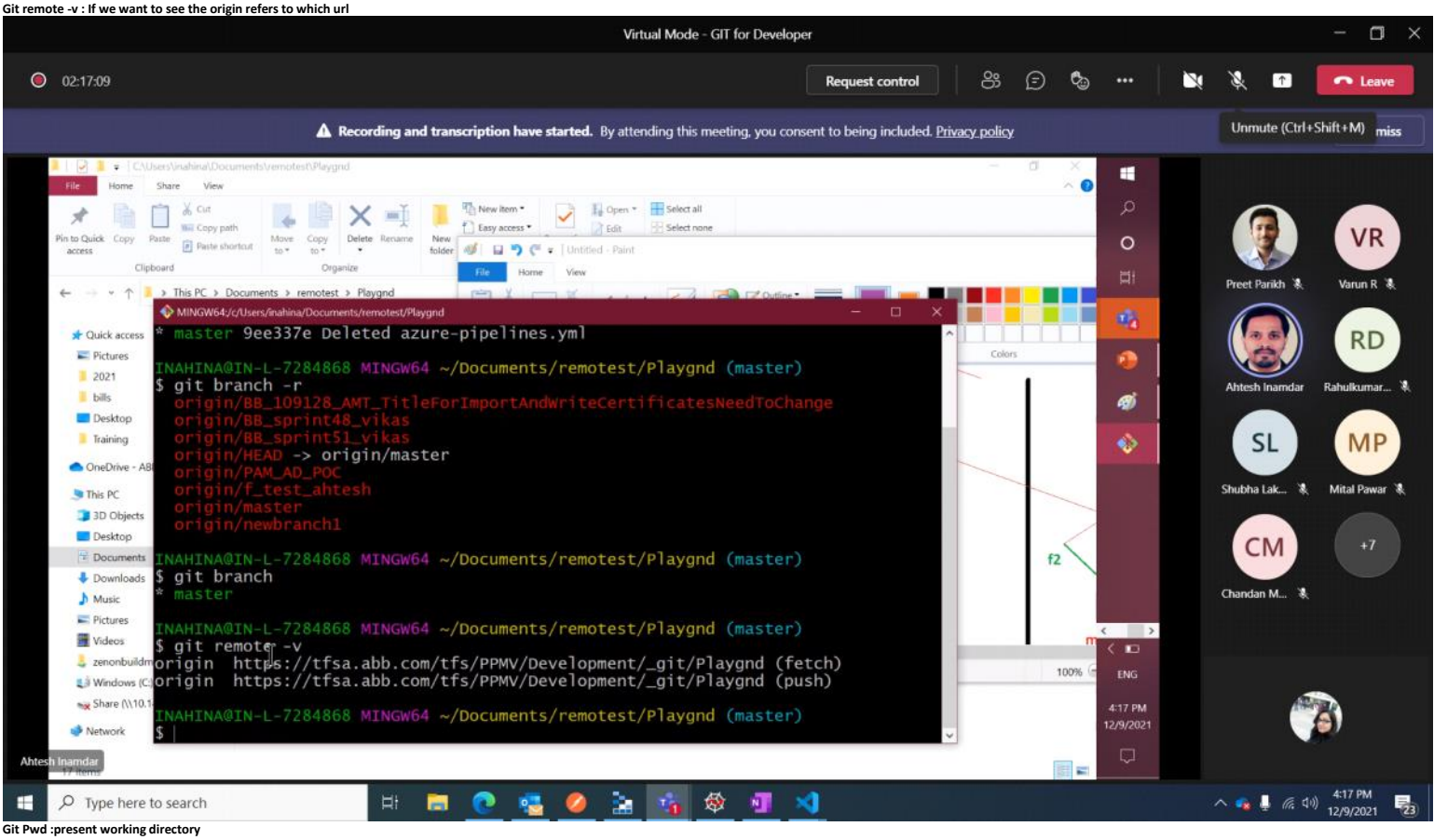
Git merge, merges the local master changes to the feature branch

Difference between fetch and pull
Git pull = git fetch + git merge: it replace all the local changes with remote, if we have not committed the local changes then will lost them. It auto merge all the changes
Git fetch: fetch all the changes from remote
Git merge: merge local master changes to the feature branch(current working branch)
Note: it's always good practice to use git fetch command instead of git pull as the non -committed changes will be lost

Git branch: Show all the branch exist for the repo



Git remote -v : If we want to see the origin refers to which url



Git Pwd :present working directory

Git reset :to remove commit from the remote branch

Command : Git status

Thursday, February 24, 2022 11:35 AM

Git status gives the status of your local repository like how many commits you have done and is there any file has changes or is in staged area or your branch is up to date with master or you need to push your commits to the master.

```
INSHAGR@IN-L-7397978 MINGW64 ~/Desktop/testGit (master)
$ git commit -m 'text file added'
[master 925a8a9] text file added
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 test/txtfile1.txt

INSHAGR@IN-L-7397978 MINGW64 ~/Desktop/testGit (master)
$ git add .

INSHAGR@IN-L-7397978 MINGW64 ~/Desktop/testGit (master)
$ git status
On branch master
Your branch is ahead of 'origin/master' by 1 commit.
  (use "git push" to publish your local commits)

Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        modified:   test/txtfile1.txt


INSHAGR@IN-L-7397978 MINGW64 ~/Desktop/testGit (master)
$ git commit -m 'text is added in text file'
[master bee1cd7] text is added in text file
 1 file changed, 1 insertion(+)

INSHAGR@IN-L-7397978 MINGW64 ~/Desktop/testGit (master)
$ 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
```

1. Text file committed

Command: git checkout -- filename

Thursday, February 24, 2022 3:13 PM

If by mistakenly you have done some changes you want to discard it or say want the master file
Then we can discard it from UI which is showing under changes
If we want to do it from command line then git checkout -- file1.txt is used

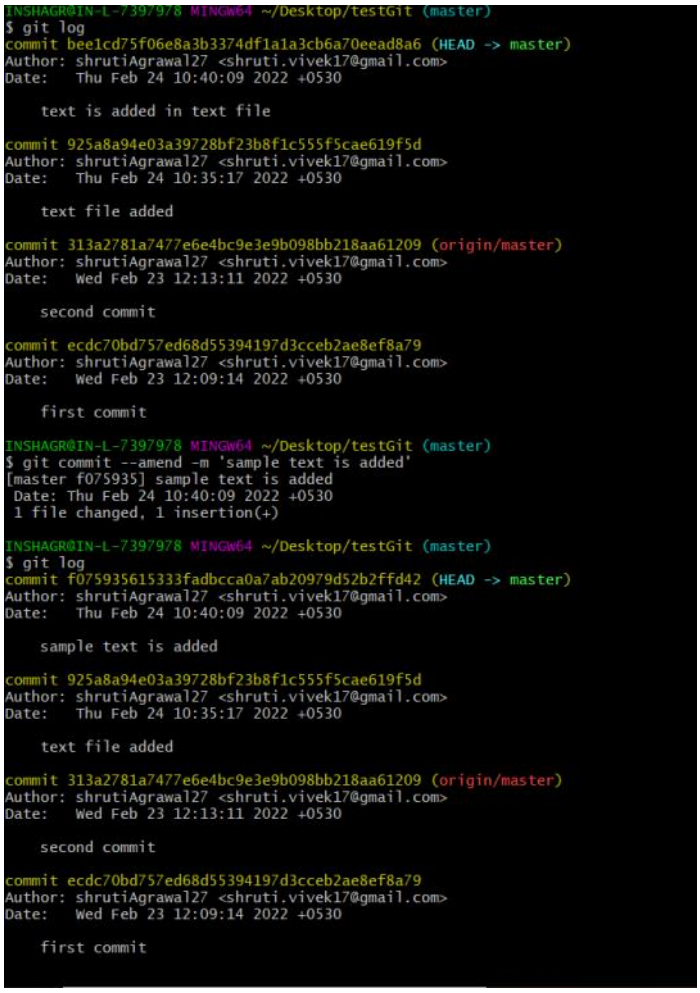
If suppose then you have 3 to 4 times commit and you realize that one of those were working better than current one and we want to get back those particular commit changes so that can be done using 2 command

1. Git checkout <copy 7 to 8 initial no of the particular commit id > -- <filename>(git checkout 3bf31b338 -- file1.txt)
2. Git reset HEAD file1.txt

Command: git commit --amend -m 'message'

Thursday, February 24, 2022 3:52 PM

When you want to change the message or some file in the last commit but not really want to make a new commit at that time this amend can be used



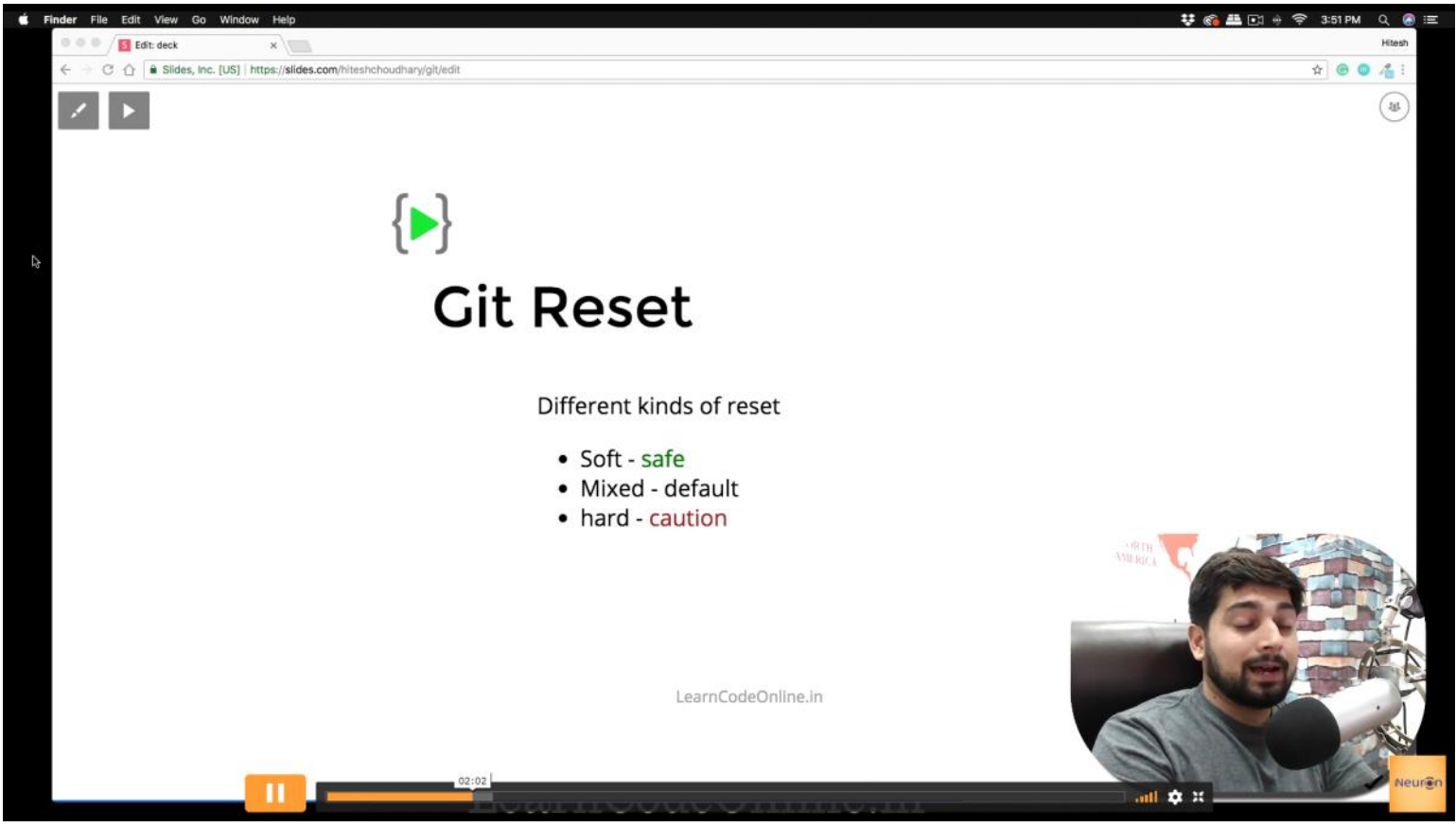
So here in git log we can see the last commit has comment like 'text is added in text file' we want to change the comment but not want to create a new commit so that is done by using amend command and in the next log we can see that the comment has been changed. We can observe here that the commit id has also changed but total no of commits are same and date of commit is also same it has not changed i.e 4 which means no new commit has added we have modified the previous commit.

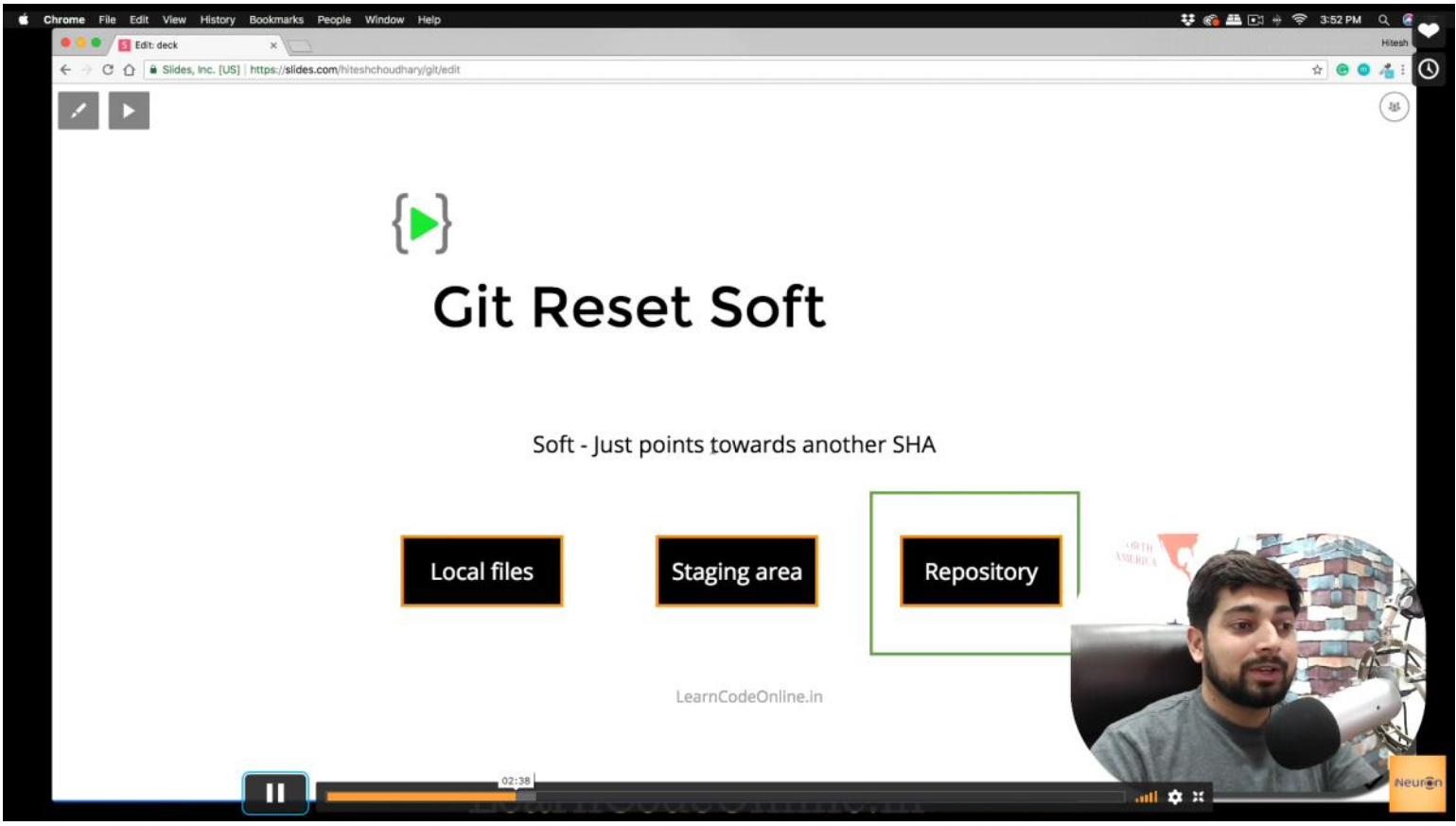
So this can used to handle very small changes

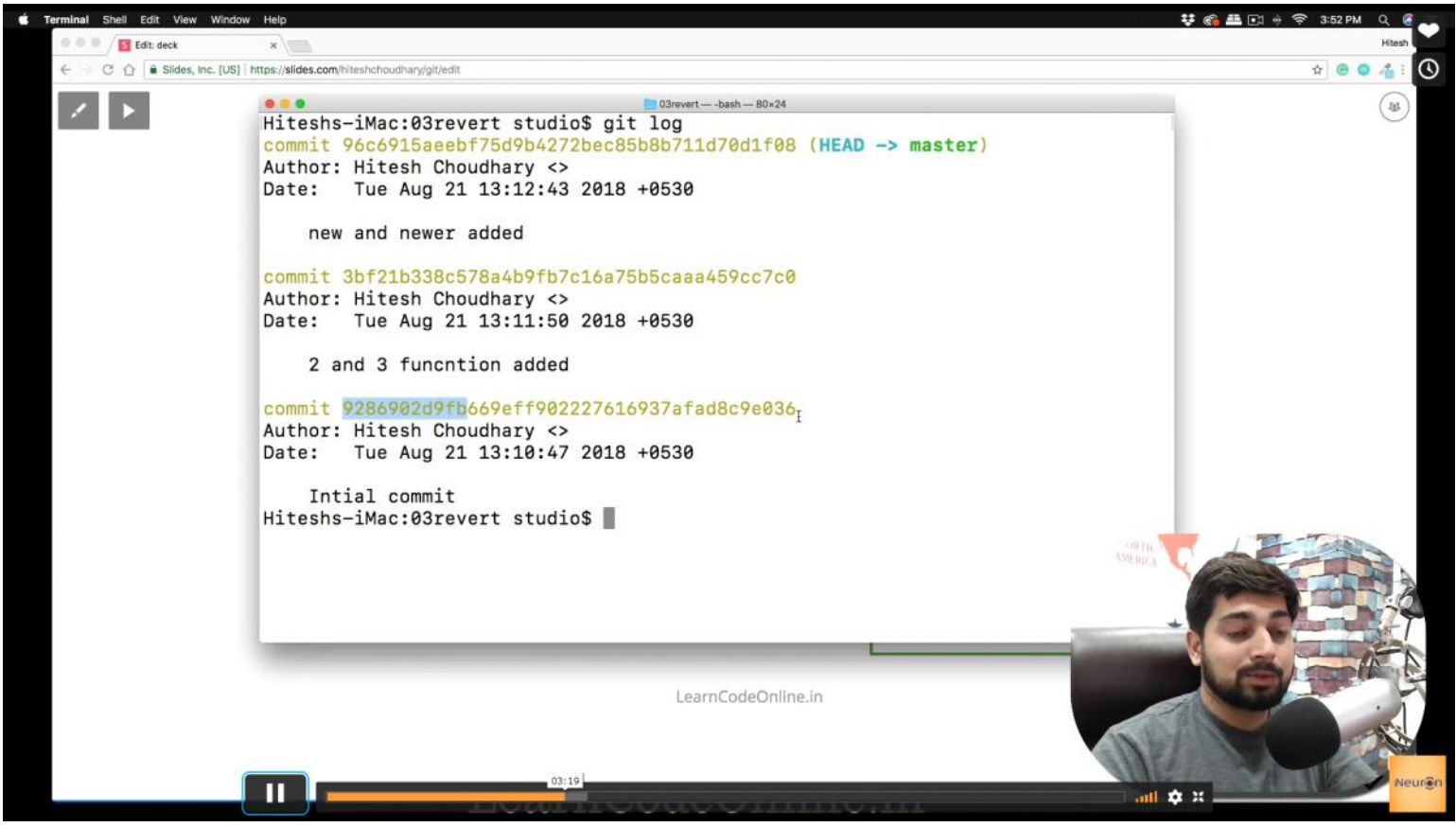
Reset

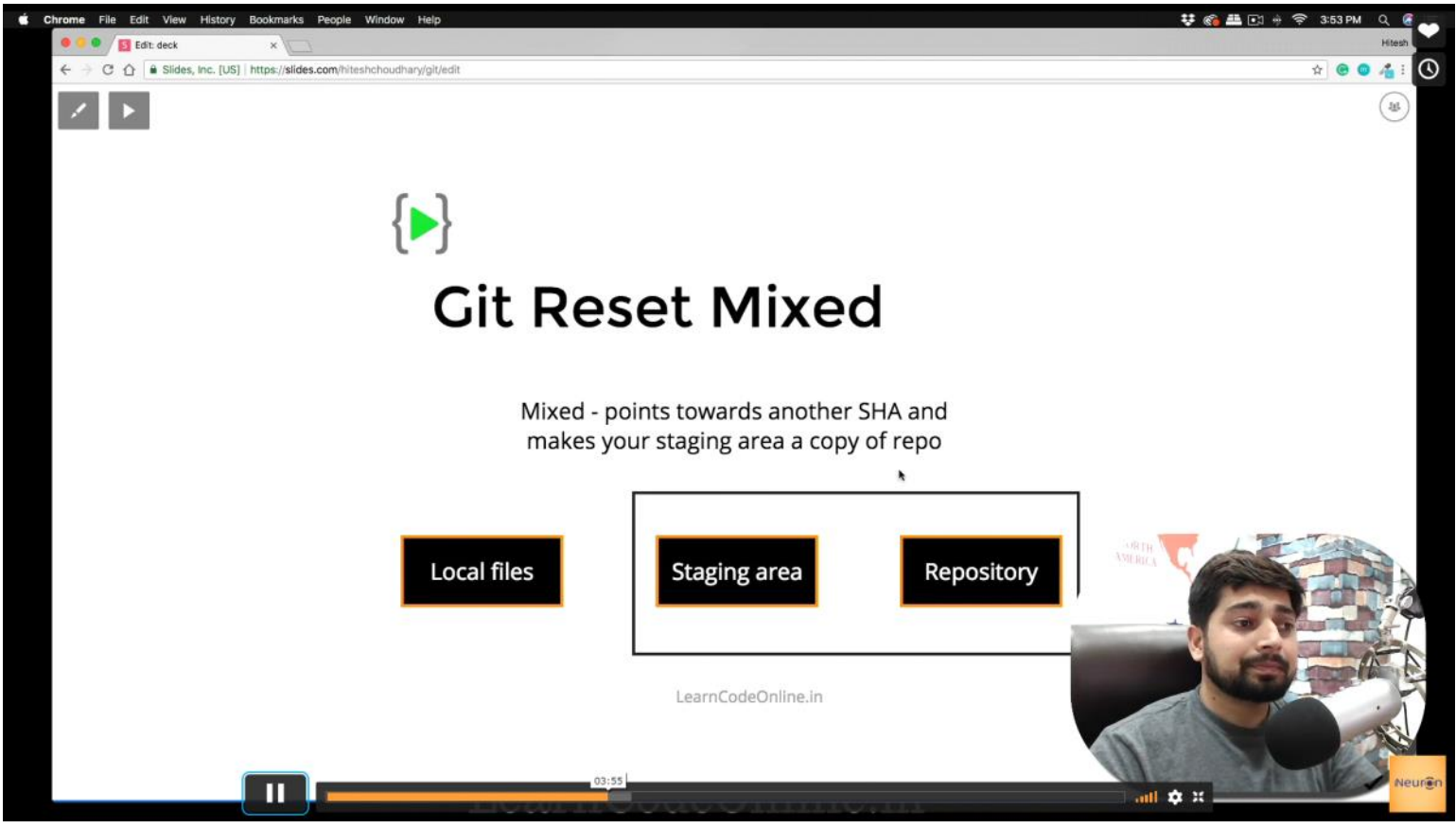
Thursday, February 24, 2022 5:25 PM

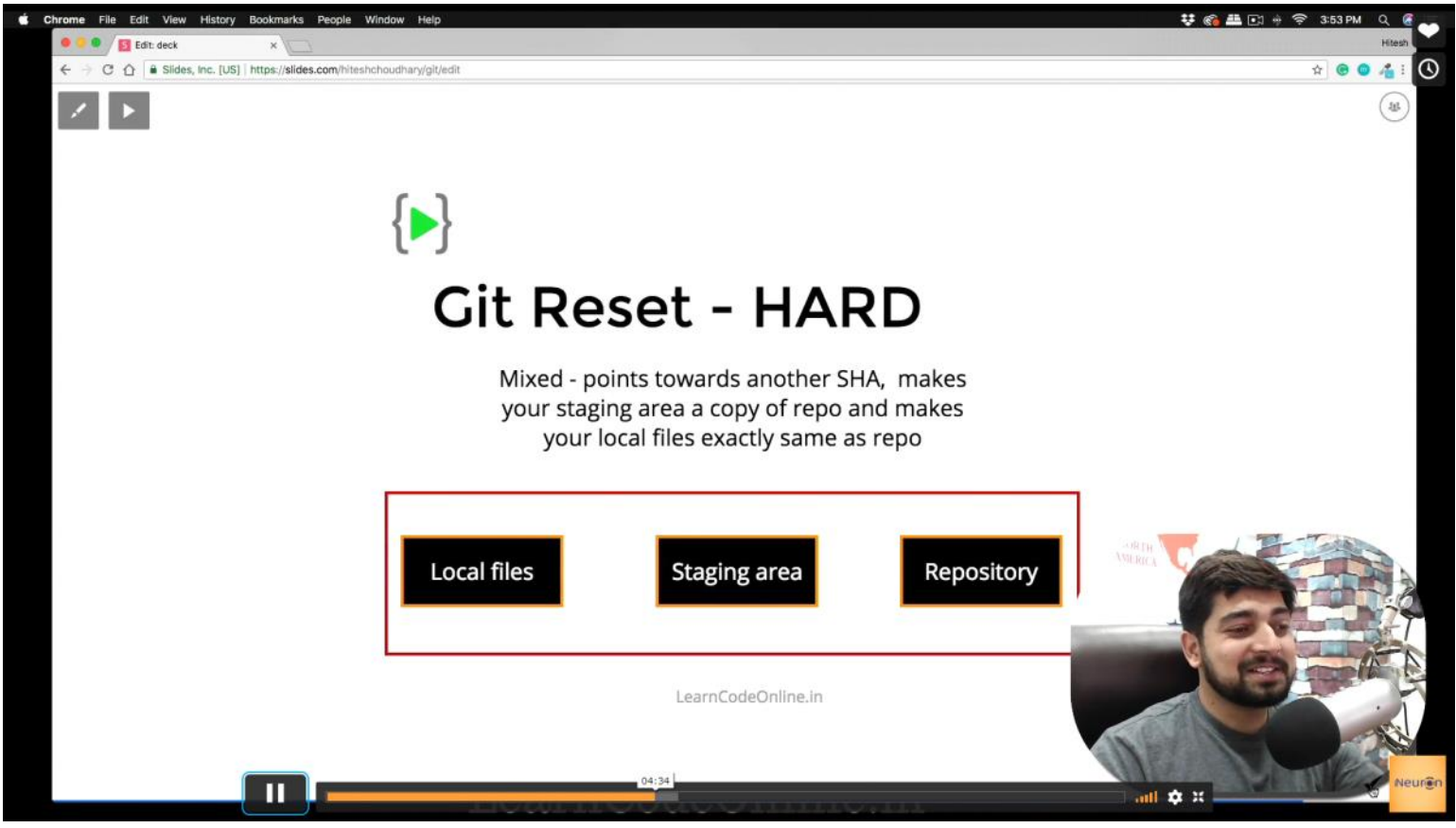
Git reset soft actually moves the HEAD pointer from current or recent commit to the desired commit, it also means that that if you moved to third last commit then 2nd last and 1st last commit will be gone and there is no way we can get back those changes.




Chrome File Edit View History Bookmarks People Window Help
3:52 PM
Edit: deck
Slides, Inc. [US] | https://slides.com/hiteshchoudhary/git/edit
Git Reset Soft
Soft - Just points towards another SHA
Local files
Staging area
Repository
LearnCodeOnline.in
02:38


Terminal Shell Edit View Window Help
3:52 PM
Edit: deck
Slides, Inc. [US] | https://slides.com/hiteshchoudhary/git/edit
03revert — -bash — 80×24
Hiteshs-iMac:03revert studio$ git log
commit 96c6915aeebf75d9b4272bec85b8b711d70d1f08 (HEAD -> master)
Author: Hitesh Choudhary <>
Date: Tue Aug 21 13:12:43 2018 +0530
new and newer added
commit 3bf21b338c578a4b9fb7c16a75b5caaa459cc7c0
Author: Hitesh Choudhary <>
Date: Tue Aug 21 13:11:50 2018 +0530
2 and 3 funcntion added
commit 9286902d9fb669eff902227616937afad8c9e036
Author: Hitesh Choudhary <>
Date: Tue Aug 21 13:10:47 2018 +0530
Intial commit
Hiteshs-iMac:03revert studio$
LearnCodeOnline.in
03:19

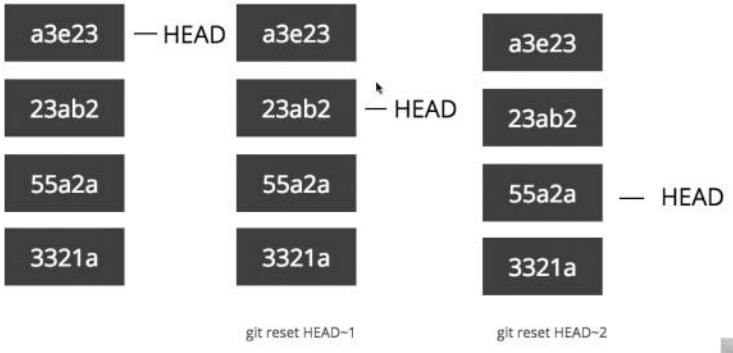

Chrome File Edit View History Bookmarks People Window Help
3:53 PM
Edit: deck
Slides, Inc. [US] | https://slides.com/hiteshchoudhary/git/edit
Git Reset Mixed
Mixed - points towards another SHA and
makes your staging area a copy of repo
Local files
Staging area
Repository
LearnCodeOnline.in
03:55


Chrome File Edit View History Bookmarks People Window Help
3:53 PM
Edit: deck
Slides, Inc. [US] | https://slides.com/hiteshchoudhary/git/edit
Git Reset - HARD
Mixed - points towards another SHA, makes
your staging area a copy of repo and makes
your local files exactly same as repo
Local files
Staging area
Repository
LearnCodeOnline.in
04:34

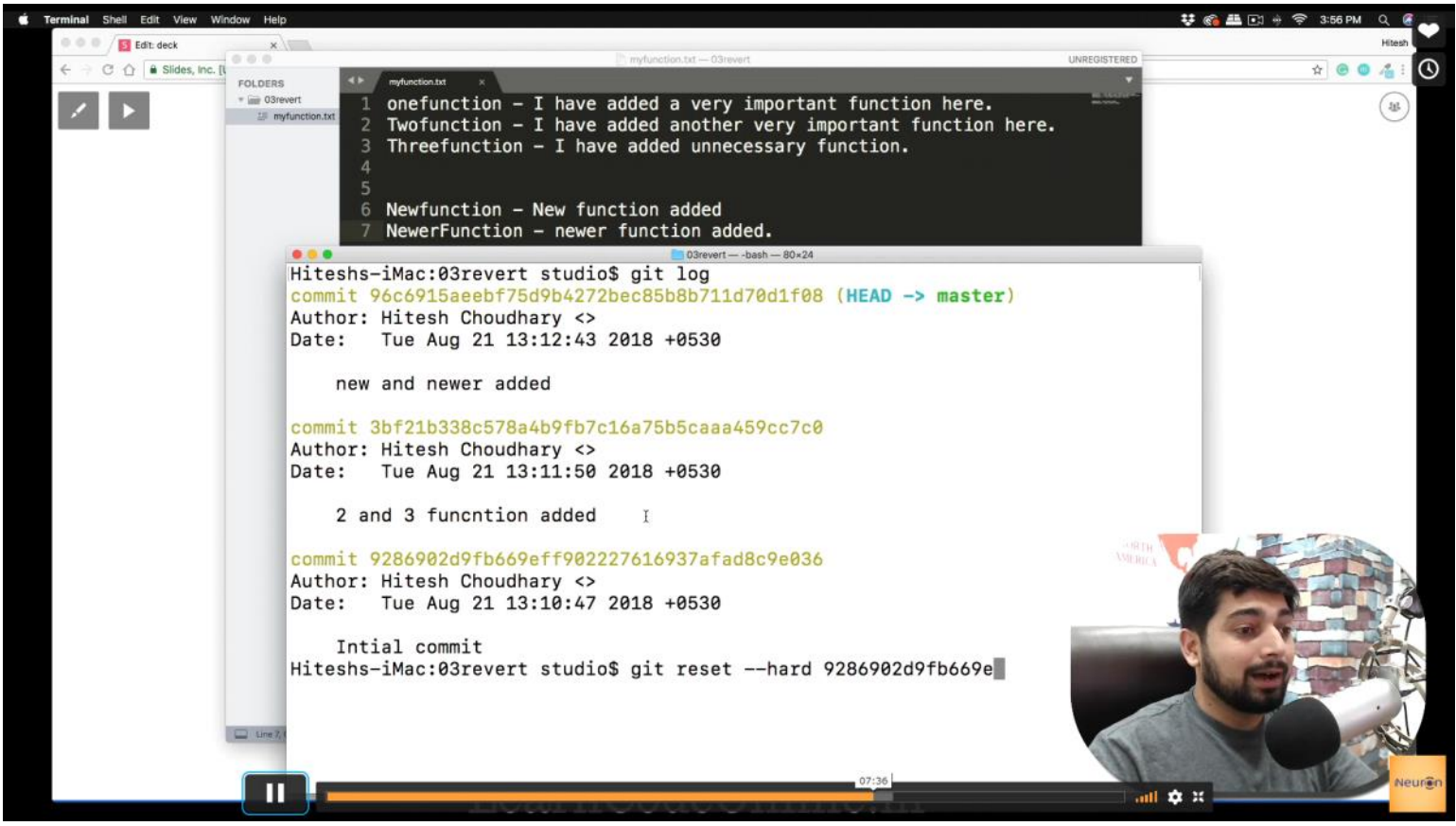
```
Hiteshs-iMac:03revert studio$ git log
commit 96c6915aeebf75d9b4272bec85b8b711d70d1f08 (HEAD -> master)
Author: Hitesh Choudhary <>
Date:   Tue Aug 21 13:12:43 2018 +0530

    new and newer added

commit 3bf21b338c578a4b9fb7c16a75b5caaa459cc7c0
Author: Hitesh Choudhary <>
Date:   Tue Aug 21 13:11:50 2018 +0530

    2 and 3 funcntion added

commit 9286902d9fb669eff902227616937afad8c9e036
Author: Hitesh Choudhary <>
Date:   Tue Aug 21 13:10:47 2018 +0530

    Intial commit
Hiteshs-iMac:03revert studio$ git reset --hard 9286902d9fb669e
```

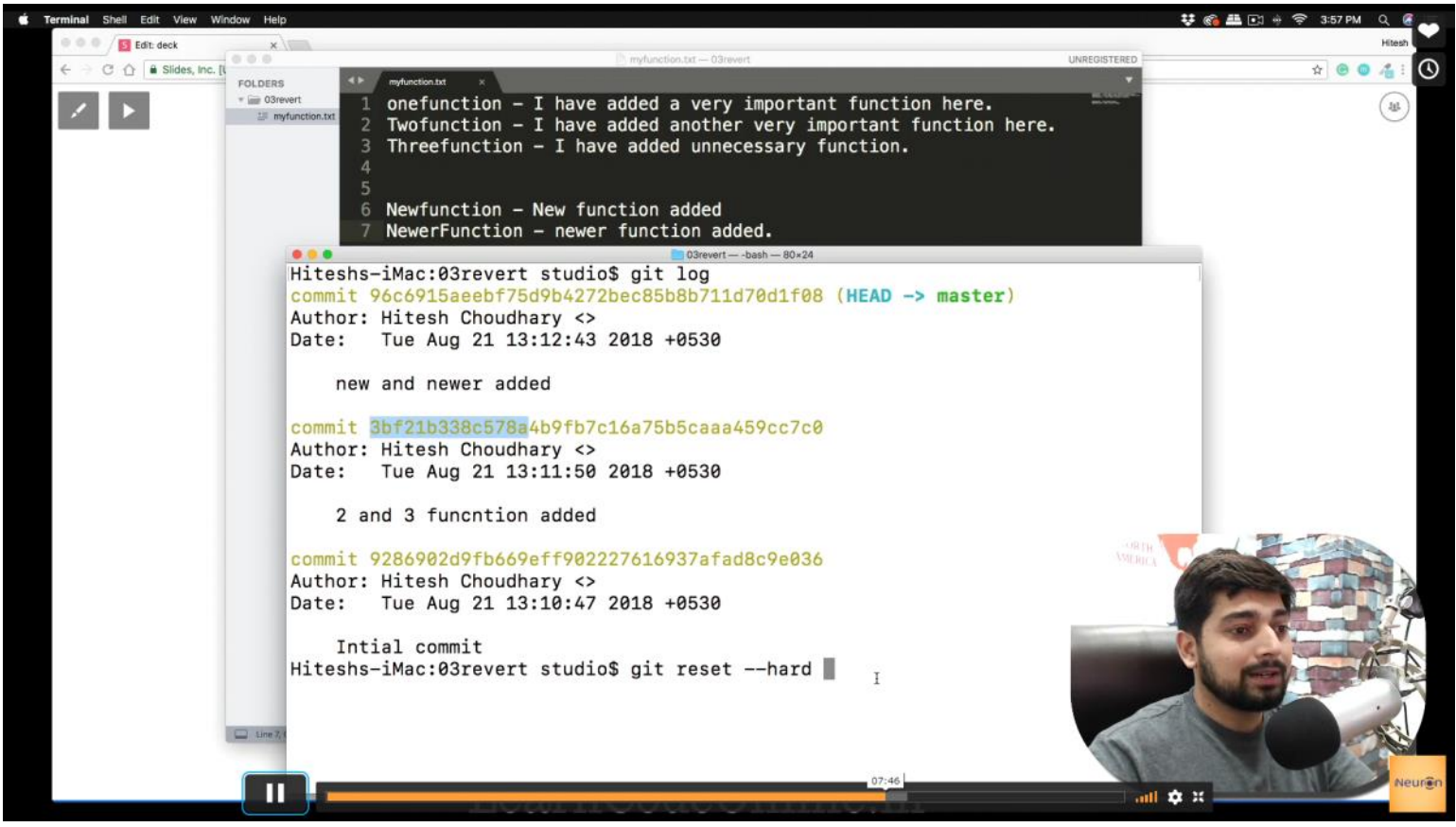
LearnCodeOnline.in

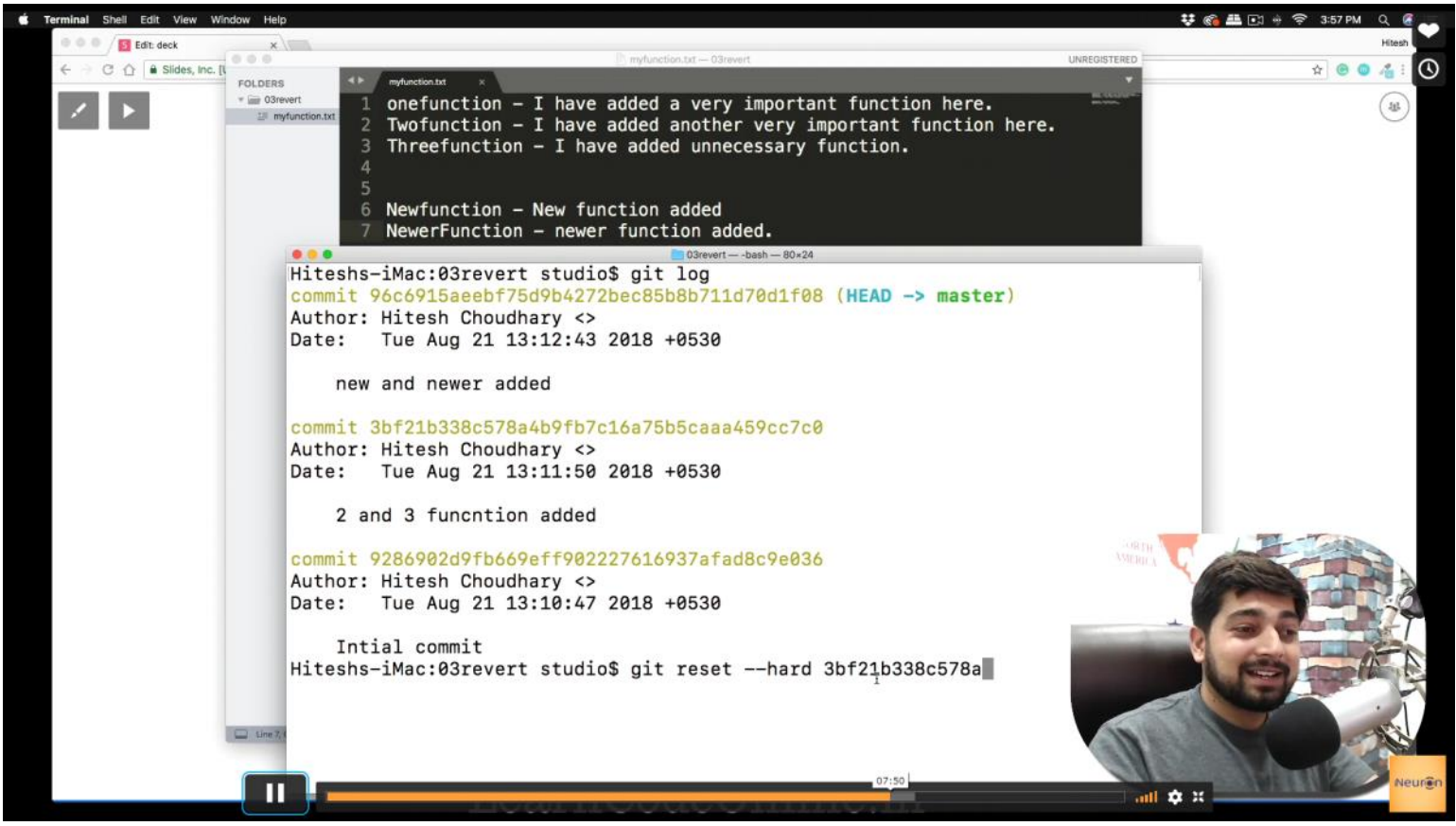
Git Reset

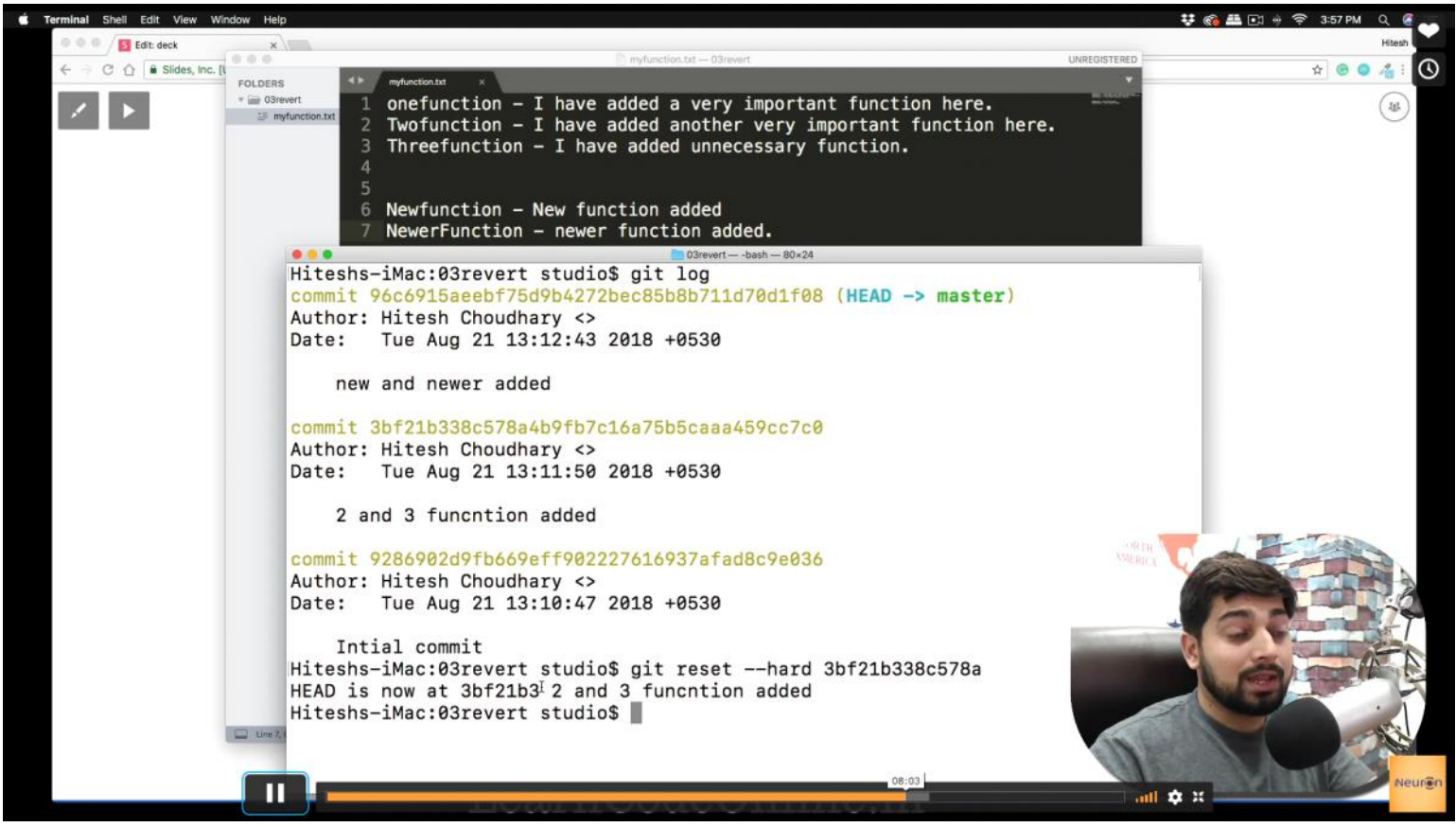


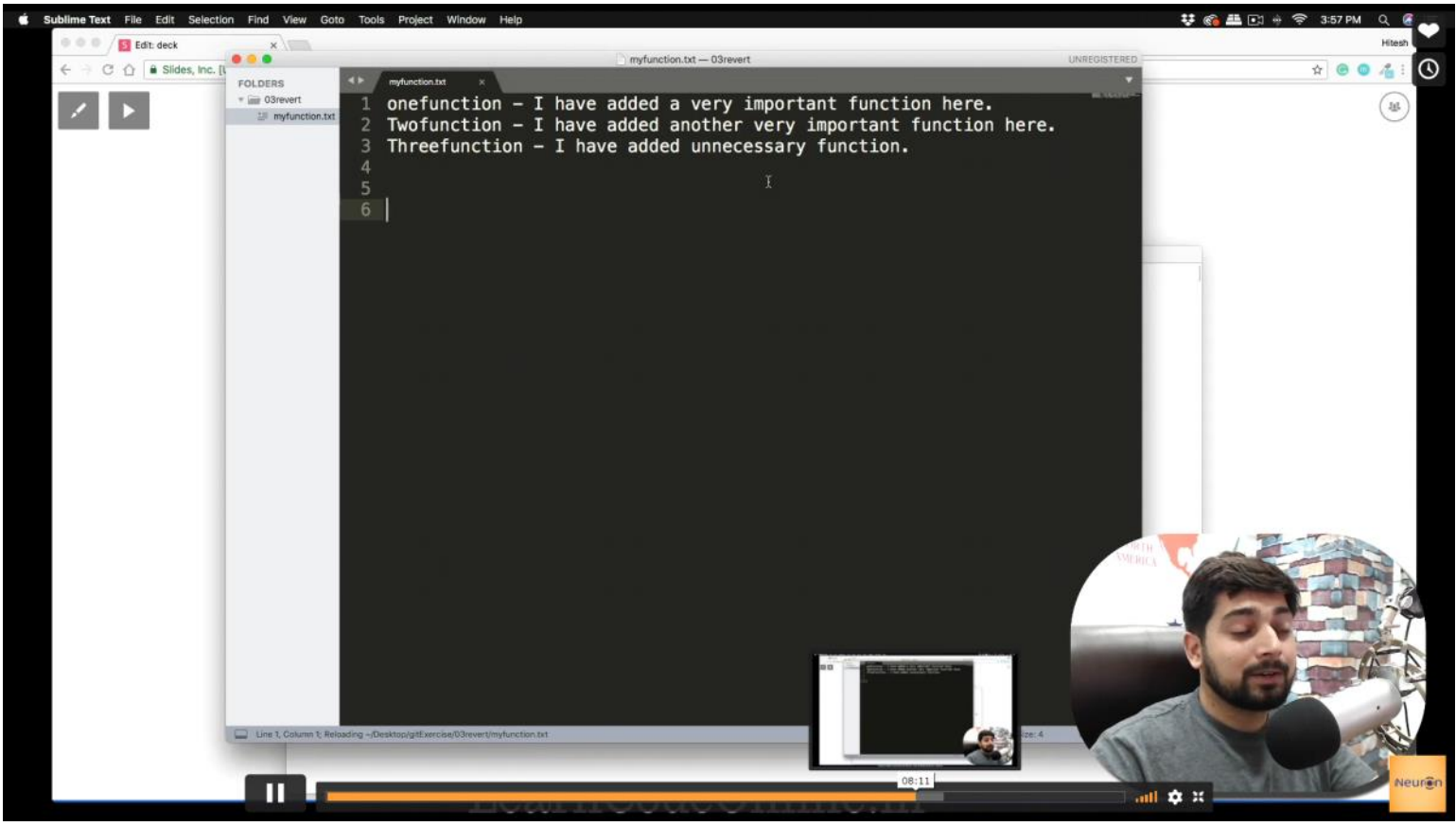
LearnCodeOnline.in

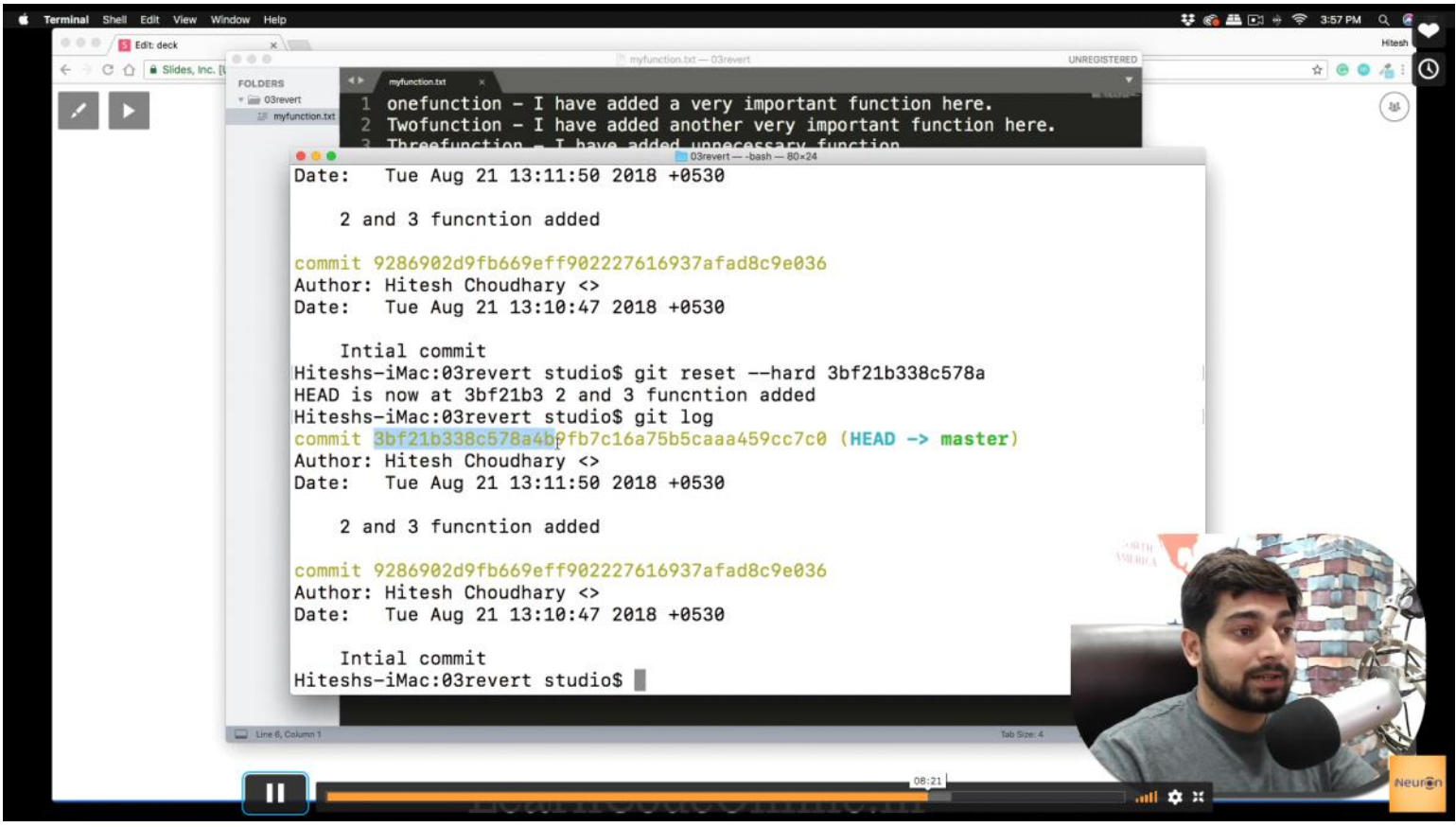

myfunction.txt
1 onefunction - I have added a very important function here.
2 Twofunction - I have added another very important function here.
3 Threefunction - I have added unnecessary function.
4
5
6 Newfunction - New function added
7 NewerFunction - newer function added.
03revert — -bash — 80×24
Hiteshs-iMac:03revert studio$ git log
commit 96c6915aeebf75d9b4272bec85b8b711d70d1f08 (HEAD -> master)
Author: Hitesh Choudhary <>
Date: Tue Aug 21 13:12:43 2018 +0530
new and newer added
commit 3bf21b338c578a4b9fb7c16a75b5caaa459cc7c0
Author: Hitesh Choudhary <>
Date: Tue Aug 21 13:11:50 2018 +0530
2 and 3 funcntion added
commit 9286902d9fb669eff902227616937afad8c9e036
Author: Hitesh Choudhary <>
Date: Tue Aug 21 13:10:47 2018 +0530
Intial commit
Hiteshs-iMac:03revert studio$ git reset --hard 9286902d9fb669e
07:36

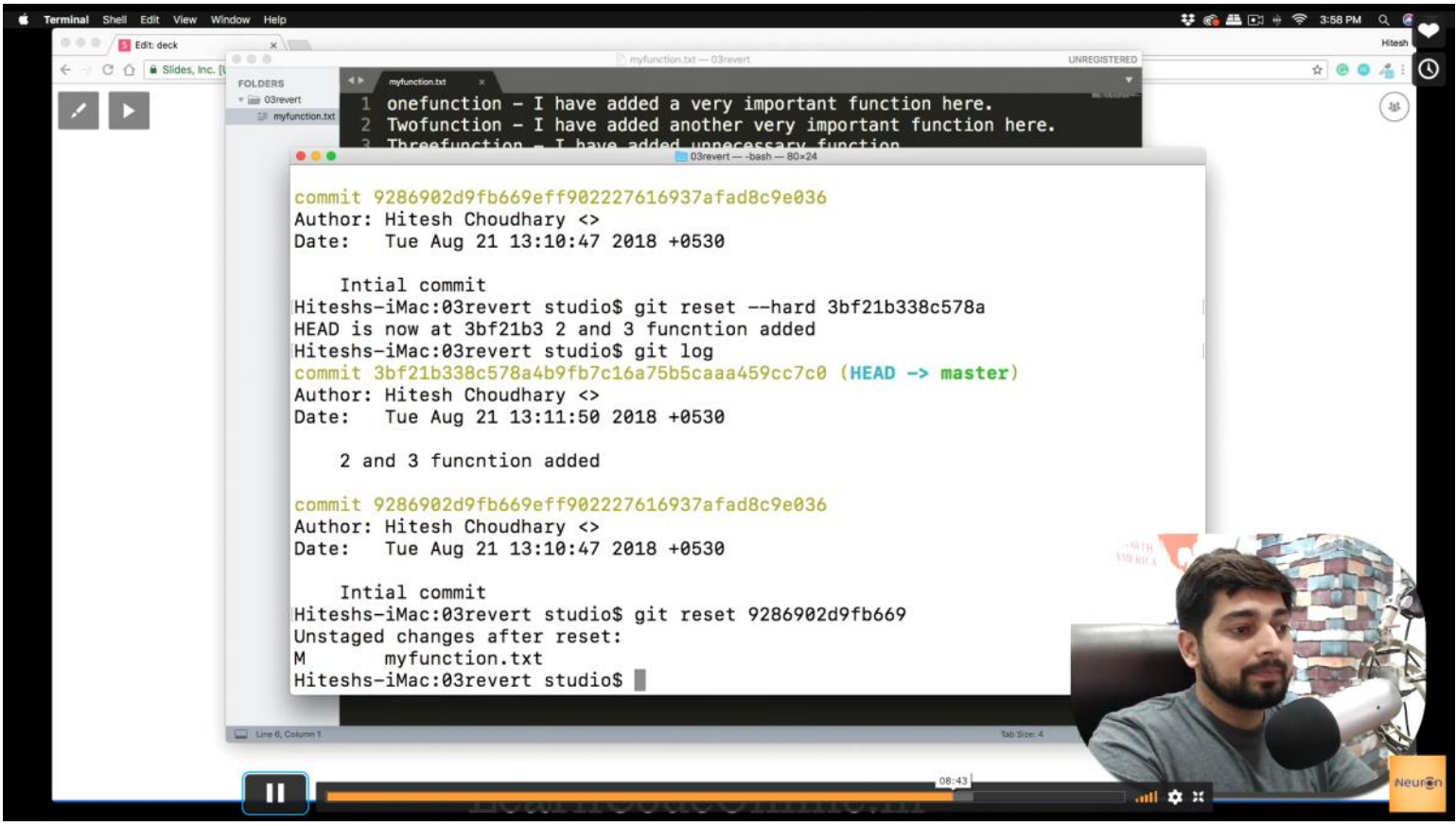

myfunction.txt
1 onefunction - I have added a very important function here.
2 Twofunction - I have added another very important function here.
3 Threefunction - I have added unnecessary function.
4
5
6 Newfunction - New function added
7 NewerFunction - newer function added.
03revert — -bash — 80×24
Hiteshs-iMac:03revert studio$ git log
commit 96c6915aeebf75d9b4272bec85b8b711d70d1f08 (HEAD -> master)
Author: Hitesh Choudhary <>
Date: Tue Aug 21 13:12:43 2018 +0530
new and newer added
commit 3bf21b338c578a4b9fb7c16a75b5caaa459cc7c0
Author: Hitesh Choudhary <>
Date: Tue Aug 21 13:11:50 2018 +0530
2 and 3 funcntion added
commit 9286902d9fb669eff902227616937afad8c9e036
Author: Hitesh Choudhary <>
Date: Tue Aug 21 13:10:47 2018 +0530
Intial commit
Hiteshs-iMac:03revert studio$ git reset --hard
07:46

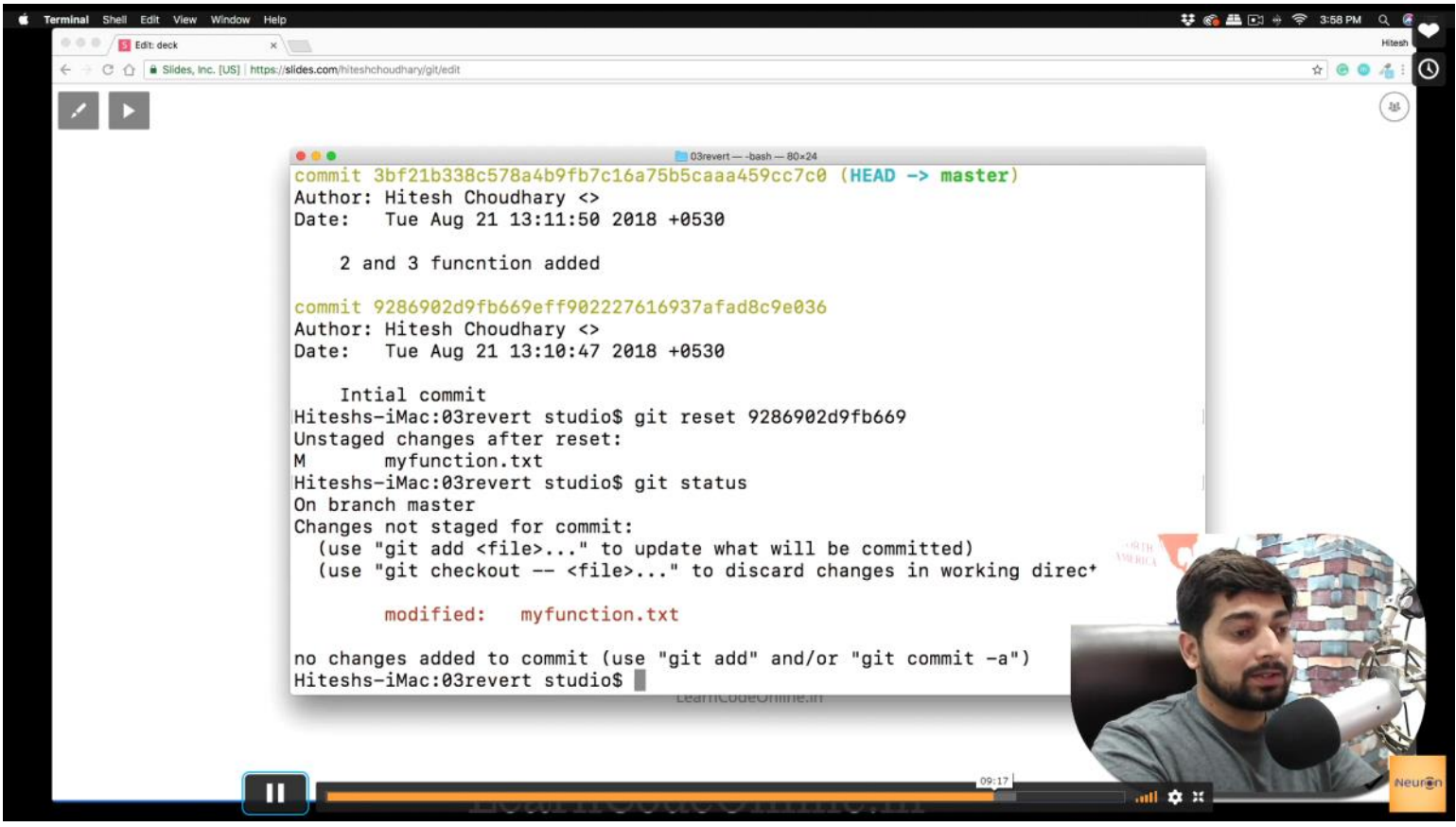

myfunction.txt
1 onefunction - I have added a very important function here.
2 Twofunction - I have added another very important function here.
3 Threefunction - I have added unnecessary function.
4
5
6 Newfunction - New function added
7 NewerFunction - newer function added.
03revert — -bash — 80×24
Hiteshs-iMac:03revert studio$ git log
commit 96c6915aeebf75d9b4272bec85b8b711d70d1f08 (HEAD -> master)
Author: Hitesh Choudhary <>
Date: Tue Aug 21 13:12:43 2018 +0530
new and newer added
commit 3bf21b338c578a4b9fb7c16a75b5caaa459cc7c0
Author: Hitesh Choudhary <>
Date: Tue Aug 21 13:11:50 2018 +0530
2 and 3 funcntion added
commit 9286902d9fb669eff902227616937afad8c9e036
Author: Hitesh Choudhary <>
Date: Tue Aug 21 13:10:47 2018 +0530
Intial commit
Hiteshs-iMac:03revert studio$ git reset --hard 3bf21b338c578a
07:50

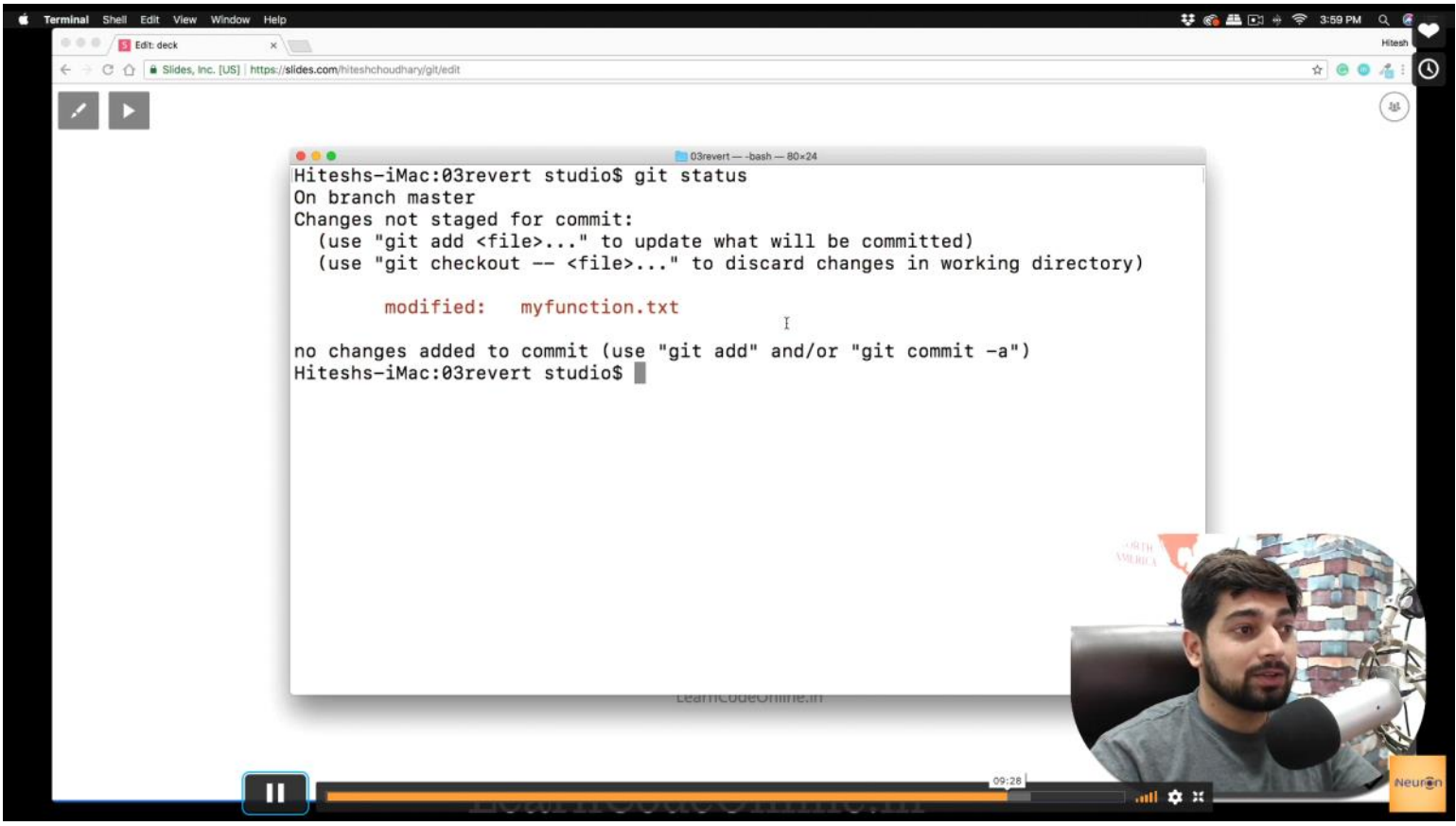

myfunction.txt
1 onefunction - I have added a very important function here.
2 Twofunction - I have added another very important function here.
3 Threefunction - I have added unnecessary function.
4
5
6 Newfunction - New function added
7 NewerFunction - newer function added.
03revert — -bash — 80×24
Hiteshs-iMac:03revert studio$ git log
commit 96c6915aeebf75d9b4272bec85b8b711d70d1f08 (HEAD -> master)
Author: Hitesh Choudhary <>
Date: Tue Aug 21 13:12:43 2018 +0530
new and newer added
commit 3bf21b338c578a4b9fb7c16a75b5caaa459cc7c0
Author: Hitesh Choudhary <>
Date: Tue Aug 21 13:11:50 2018 +0530
2 and 3 funcntion added
commit 9286902d9fb669eff902227616937afad8c9e036
Author: Hitesh Choudhary <>
Date: Tue Aug 21 13:10:47 2018 +0530
Intial commit
Hiteshs-iMac:03revert studio$ git reset --hard 3bf21b338c578a
HEAD is now at 3bf21b3 2 and 3 funcntion added
Hiteshs-iMac:03revert studio$
08:03

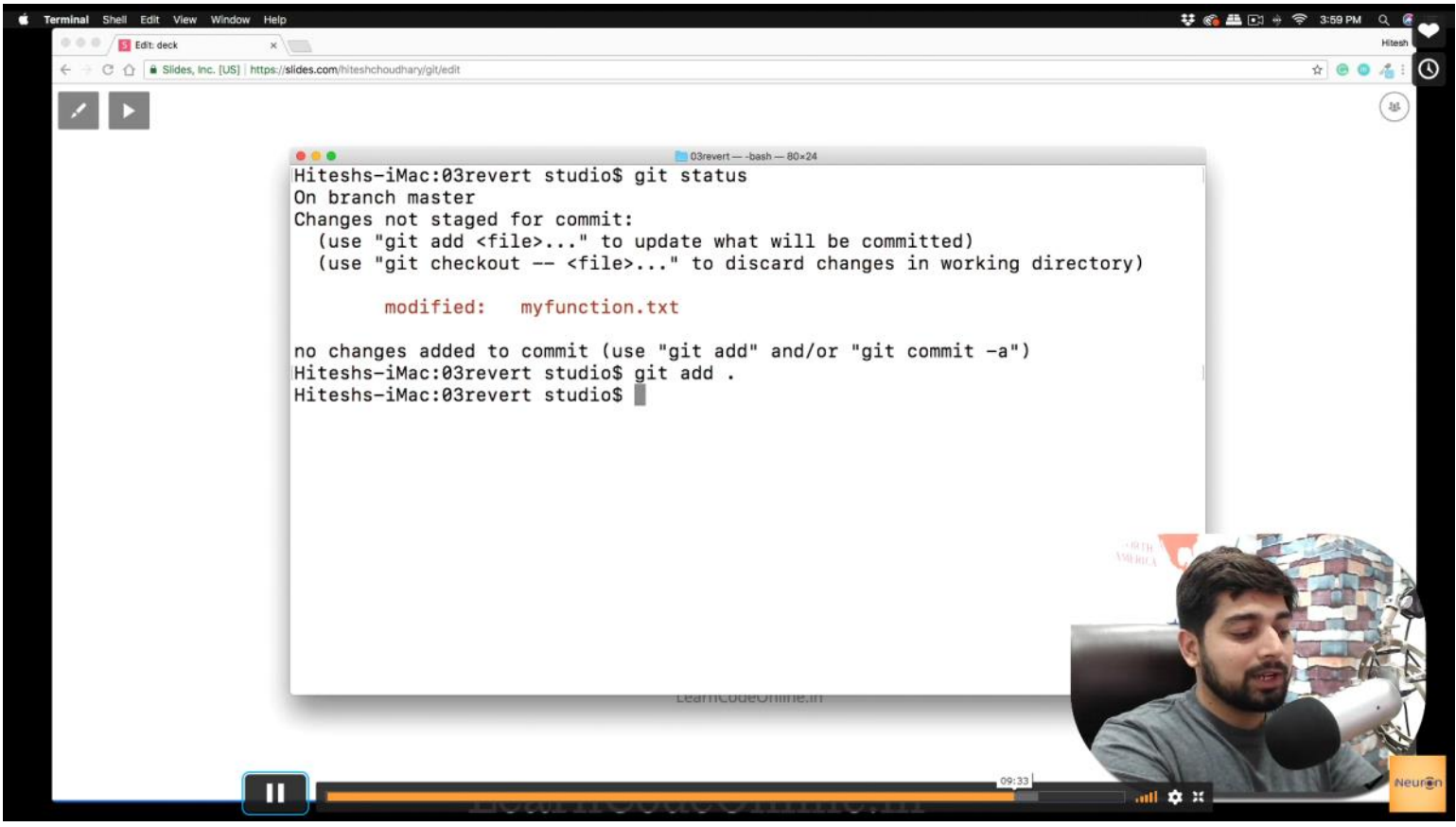

myfunction.txt — 03revert
onefunction - I have added a very important function here.
Twofunction - I have added another very important function here.
Threefunction - I have added unnecessary function.

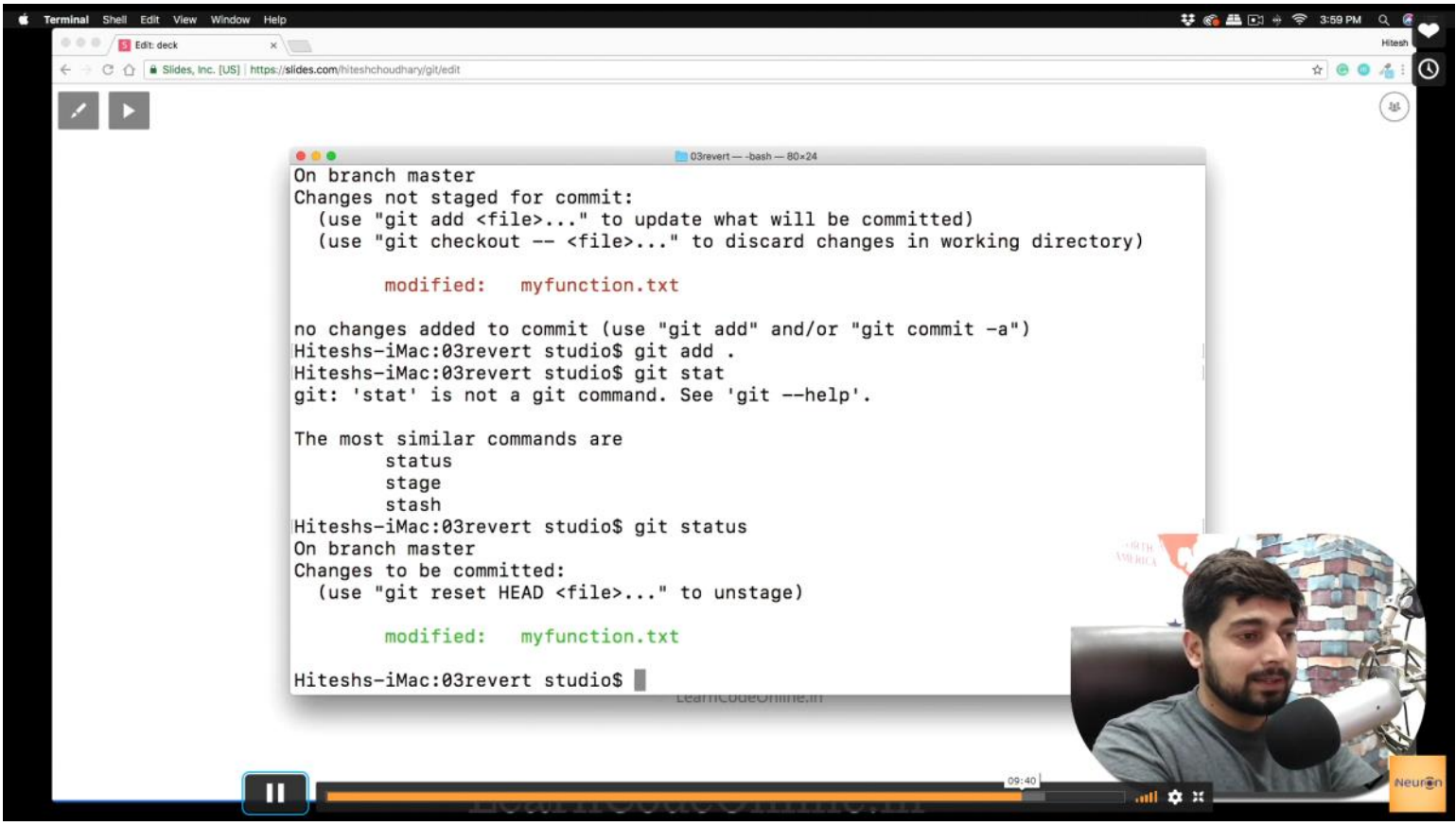

03revert — -bash — 80×24
Date: Tue Aug 21 13:11:50 2018 +0530
2 and 3 funcntion added
commit 9286902d9fb669eff902227616937afad8c9e036
Author: Hitesh Choudhary <>
Date: Tue Aug 21 13:10:47 2018 +0530
Intial commit
Hiteshs-iMac:03revert studio$ git reset --hard 3bf21b338c578a
HEAD is now at 3bf21b3 2 and 3 funcntion added
Hiteshs-iMac:03revert studio$ git log
commit 3bf21b338c578a4b9fb7c16a75b5caaa459cc7c0 (HEAD -> master)
Author: Hitesh Choudhary <>
Date: Tue Aug 21 13:11:50 2018 +0530
2 and 3 funcntion added
commit 9286902d9fb669eff902227616937afad8c9e036
Author: Hitesh Choudhary <>
Date: Tue Aug 21 13:10:47 2018 +0530
Intial commit
Hiteshs-iMac:03revert studio$

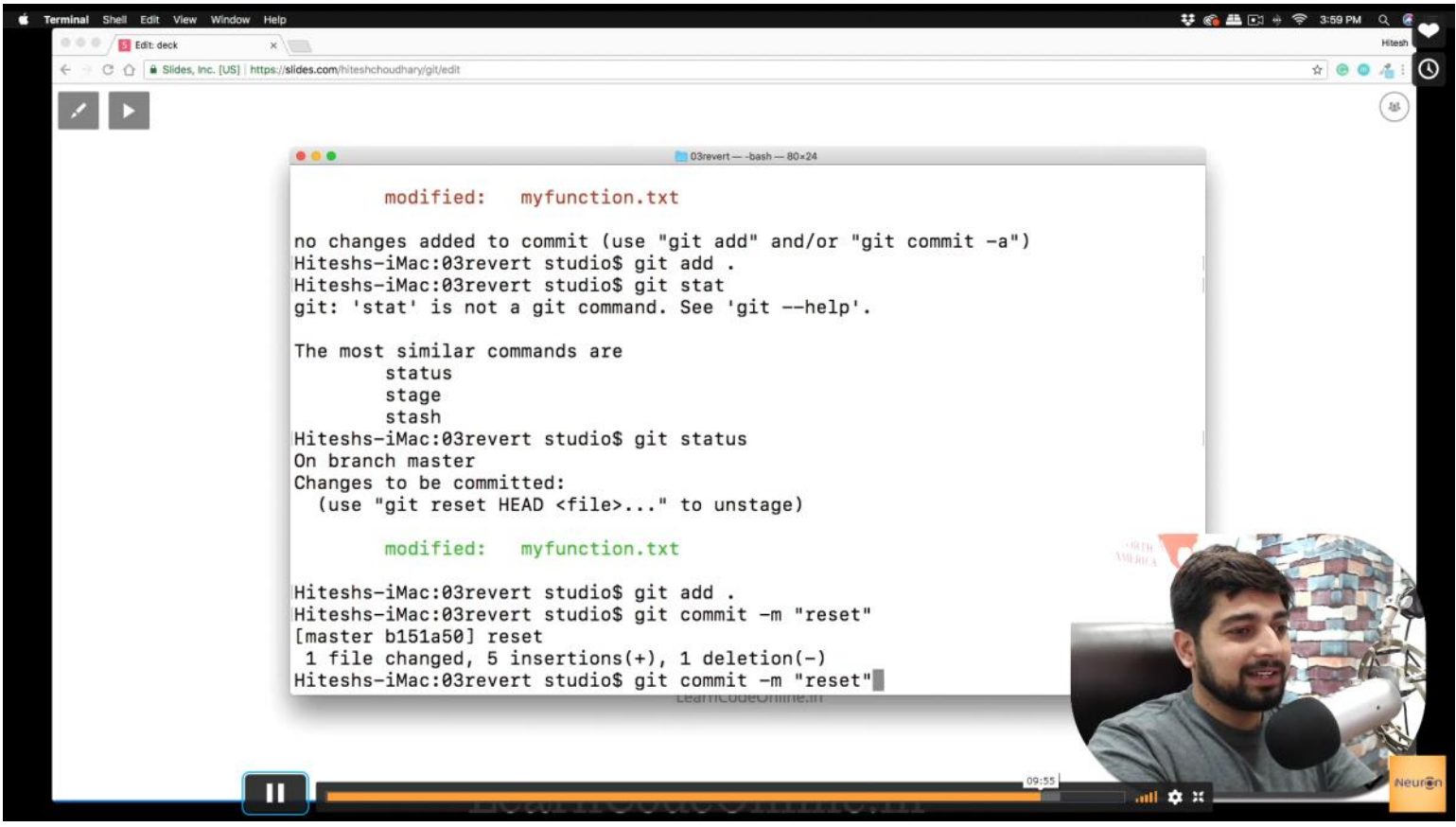

Terminal Shell Edit View Window Help
3:58 PM
Edit: deck
Slides, Inc. [US] | https://slides.com/hiteshchoudhary/git/edit
FOLDERS
03revert
myfunction.txt
UNREGISTERED
1 onefunction - I have added a very important function here.
2 Twofunction - I have added another very important function here.
03revert — -bash — 80×24
commit 9286902d9fb669eff902227616937afad8c9e036
Author: Hitesh Choudhary <>
Date: Tue Aug 21 13:10:47 2018 +0530
Intial commit
Hiteshs-iMac:03revert studio$ git reset --hard 3bf21b338c578a
HEAD is now at 3bf21b3 2 and 3 funcntion added
Hiteshs-iMac:03revert studio$ git log
commit 3bf21b338c578a4b9fb7c16a75b5caaa459cc7c0 (HEAD -> master)
Author: Hitesh Choudhary <>
Date: Tue Aug 21 13:11:50 2018 +0530
2 and 3 funcntion added
commit 9286902d9fb669eff902227616937afad8c9e036
Author: Hitesh Choudhary <>
Date: Tue Aug 21 13:10:47 2018 +0530
Intial commit
Hiteshs-iMac:03revert studio$ git reset 9286902d9fb669
Unstaged changes after reset:
M myfunction.txt
Hiteshs-iMac:03revert studio$
Line 6, Column 1
Tab Size: 4
08:43

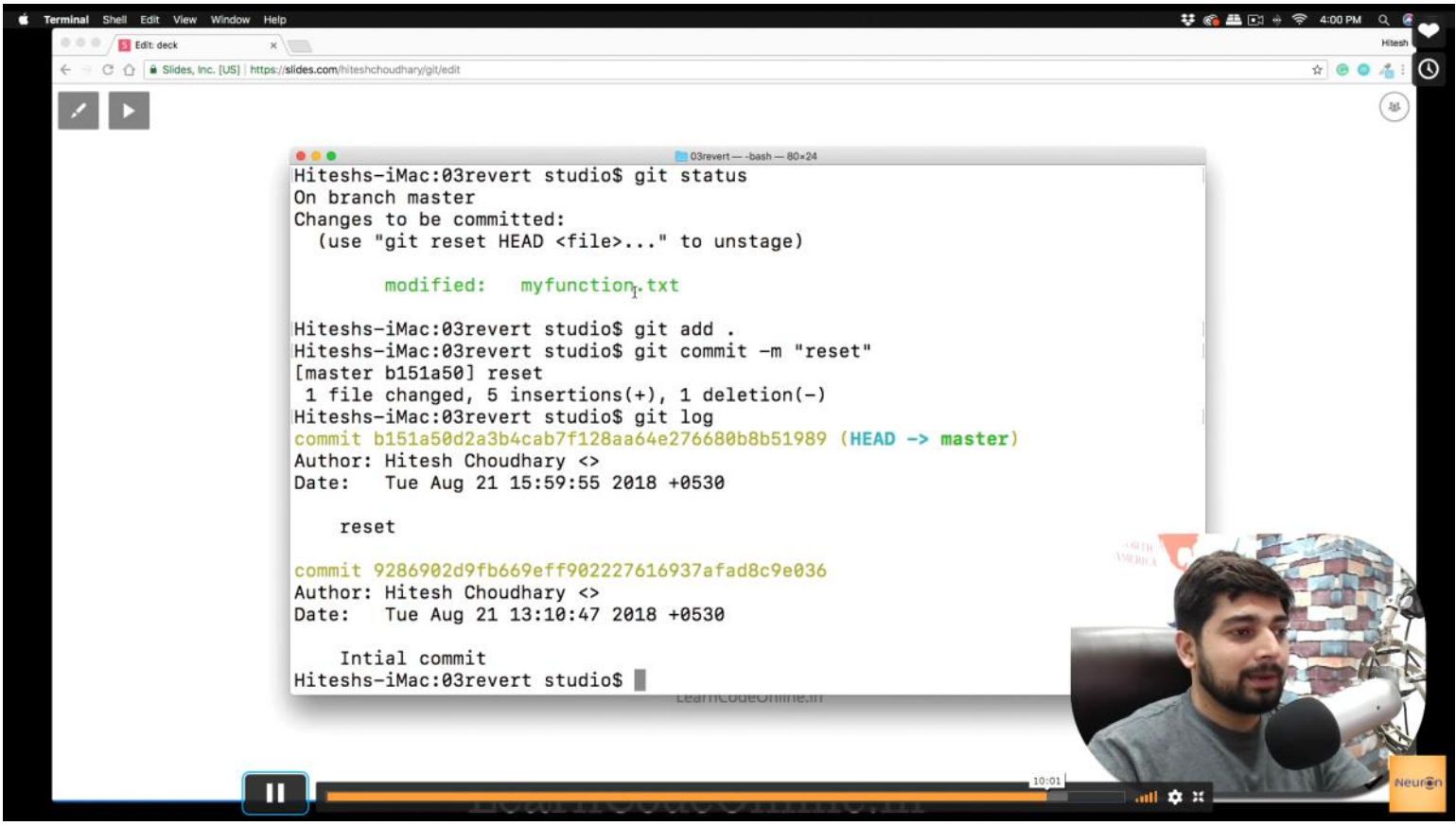

Terminal Shell Edit View Window Help
3:58 PM
Edit: deck
Slides, Inc. [US] | https://slides.com/hiteshchoudhary/git/edit
03revert — -bash — 80×24
commit 3bf21b338c578a4b9fb7c16a75b5caaa459cc7c0 (HEAD -> master)
Author: Hitesh Choudhary <>
Date: Tue Aug 21 13:11:50 2018 +0530
2 and 3 funcntion added
commit 9286902d9fb669eff902227616937afad8c9e036
Author: Hitesh Choudhary <>
Date: Tue Aug 21 13:10:47 2018 +0530
Intial commit
Hiteshs-iMac:03revert studio$ git reset 9286902d9fb669
Unstaged changes after reset:
M myfunction.txt
Hiteshs-iMac:03revert studio$ 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 direc
modified: myfunction.txt
no changes added to commit (use "git add" and/or "git commit -a")
Hiteshs-iMac:03revert studio$
09:17


Terminal Shell Edit View Window Help
3:59 PM
Edit: deck
Slides, Inc. [US] | https://slides.com/hiteshchoudhary/git/edit
Hitesh
03revert — -bash — 80×24
Hiteshs-iMac:03revert studio$ 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: myfunction.txt
no changes added to commit (use "git add" and/or "git commit -a")
Hiteshs-iMac:03revert studio$
09:28


Terminal Shell Edit View Window Help
3:59 PM
Edit: deck
Slides, Inc. [US] | https://slides.com/hiteshchoudhary/git/edit
Hitesh
03revert — -bash — 80×24
Hiteshs-iMac:03revert studio$ 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: myfunction.txt
no changes added to commit (use "git add" and/or "git commit -a")
Hiteshs-iMac:03revert studio$ git add .
Hiteshs-iMac:03revert studio$
09:33


Terminal Shell Edit View Window Help
3:59 PM
Edit: deck
Slides, Inc. [US] | https://slides.com/hiteshchoudhary/git/edit
Hitesh
03revert — -bash — 80×24
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: myfunction.txt
no changes added to commit (use "git add" and/or "git commit -a")
Hiteshs-iMac:03revert studio$ git add .
Hiteshs-iMac:03revert studio$ git stat
git: 'stat' is not a git command. See 'git --help'.
The most similar commands are
status
stage
stash
Hiteshs-iMac:03revert studio$ git status
On branch master
Changes to be committed:
(use "git reset HEAD <file>..." to unstage)
modified: myfunction.txt
Hiteshs-iMac:03revert studio$
09:40


Terminal Shell Edit View Window Help
3:59 PM
Edit: deck
Slides, Inc. [US] | https://slides.com/hiteshchoudhary/git/edit
Hitesh
03revert — -bash — 80×24
modified: myfunction.txt
no changes added to commit (use "git add" and/or "git commit -a")
Hiteshs-iMac:03revert studio$ git add .
Hiteshs-iMac:03revert studio$ git stat
git: 'stat' is not a git command. See 'git --help'.
The most similar commands are
status
stage
stash
Hiteshs-iMac:03revert studio$ git status
On branch master
Changes to be committed:
(use "git reset HEAD <file>..." to unstage)
modified: myfunction.txt
Hiteshs-iMac:03revert studio$ git add .
Hiteshs-iMac:03revert studio$ git commit -m "reset"
[master b151a50] reset
1 file changed, 5 insertions(+), 1 deletion(-)
Hiteshs-iMac:03revert studio$ git commit -m "reset"
09:55


Terminal Shell Edit View Window Help
4:00 PM
Edit: deck
Slides, Inc. [US] | https://slides.com/hiteshchoudhary/git/edit
03revert — -bash — 80×24
Hiteshs-iMac:03revert studio$ git status
On branch master
Changes to be committed:
(use "git reset HEAD <file>..." to unstage)
modified: myfunction.txt
Hiteshs-iMac:03revert studio$ git add .
Hiteshs-iMac:03revert studio$ git commit -m "reset"
[master b151a50] reset
1 file changed, 5 insertions(+), 1 deletion(-)
Hiteshs-iMac:03revert studio$ git log
commit b151a50d2a3b4cab7f128aa64e276680b8b51989 (HEAD -> master)
Author: Hitesh Choudhary <>
Date: Tue Aug 21 15:59:55 2018 +0530
reset
commit 9286902d9fb669eff902227616937afad8c9e036
Author: Hitesh Choudhary <>
Date: Tue Aug 21 13:10:47 2018 +0530
Intial commit
Hiteshs-iMac:03revert studio$
10:01

Git merge master

Monday, March 21, 2022 3:44 PM

How to update master changes to the branch

Git checkout master
Git pull
Git checkout 'branch'
Git merge master