

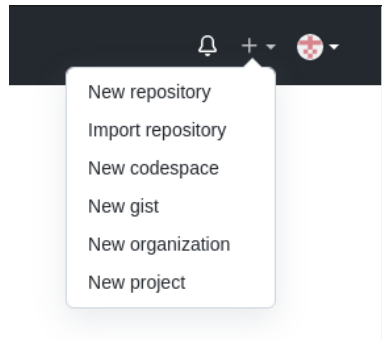
Git Practical

Name: Prashant Patel

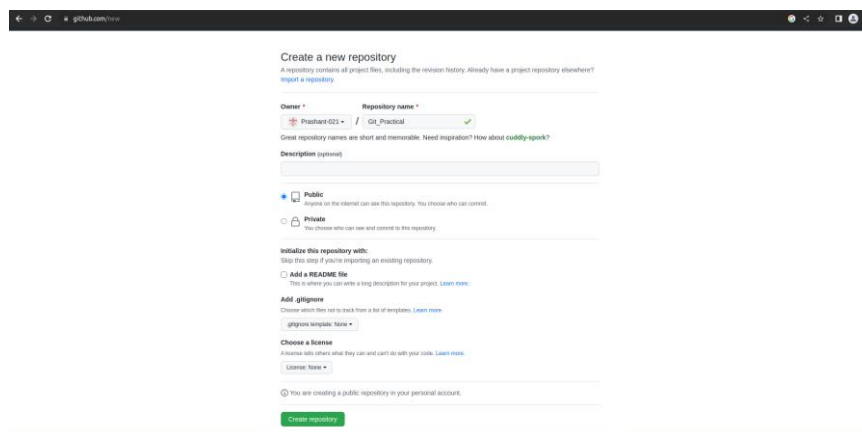
GitHub Repository Link: [Git_Practical](#)

Create an empty repository in GitHub.

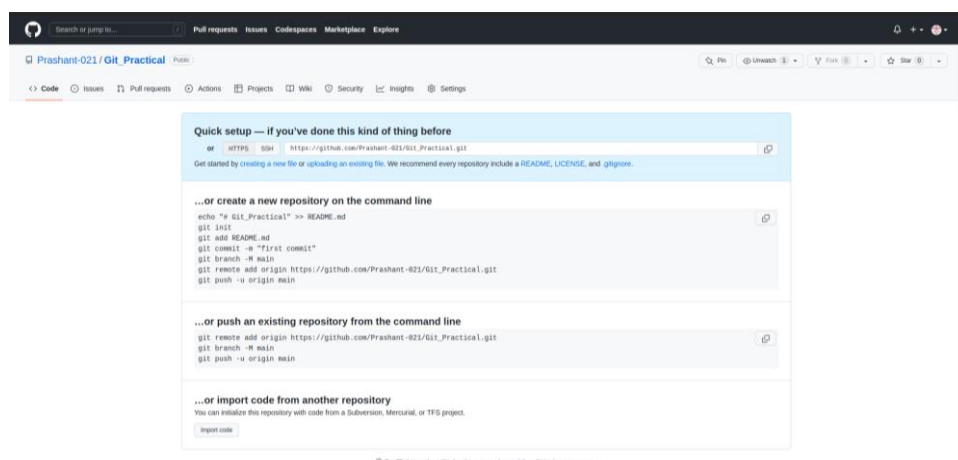
- In GitHub click on “+” sign and then New repository.



- Now, enter the repository name and create repository.

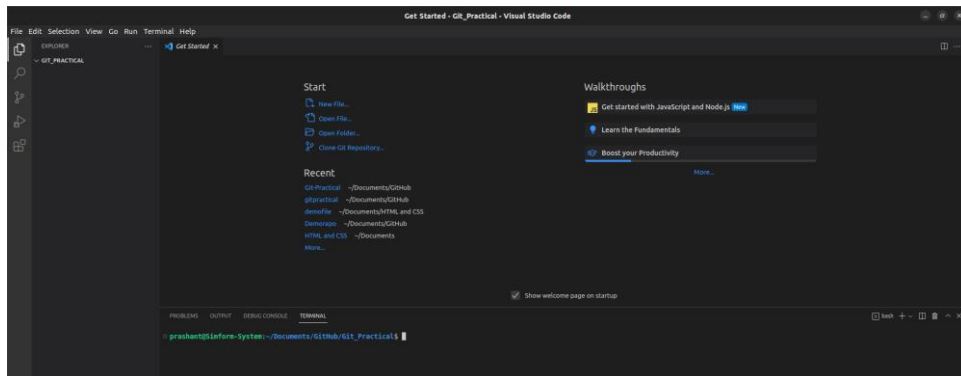


- New repository is created



Git Setup in Editor

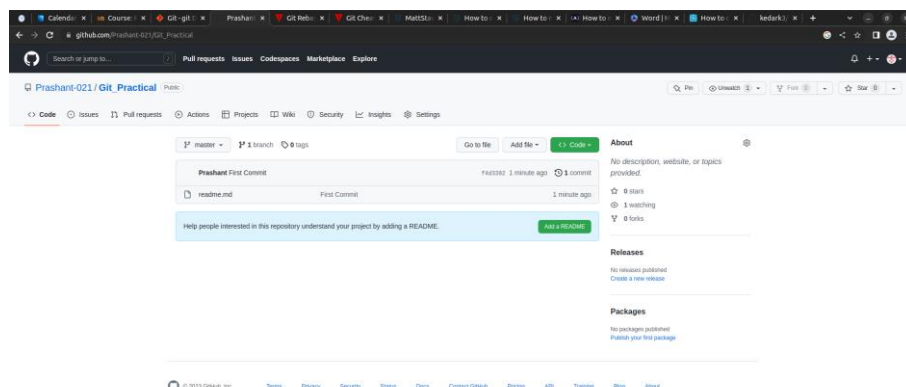
- Open an empty folder in VScode and open new terminal.



- After that type following commands in terminal:
 - Git init
 - git remote add origin https://github.com/Prashant-021/Git_Practical.git
 - Git config --global user.name <name>
 - Git config --global user.email <email>
 - Touch readme.md
 - Git add .
 - Git commit -m "message"
 - Git push -f origin branch name

After typing above commands in terminal repository in terminal and GitHub will look like below.

```
prashant@Simform-System:~/Documents/GitHub/Git_Practical$ git init
hint: Using 'master' as the name for the initial branch. This default branch name
hint: is subject to change. To configure the initial branch name to use in all
hint: of your new repositories, which will suppress this warning, call:
hint:
hint:   git config --global init.defaultBranch <name>
hint:
hint: Names commonly chosen instead of 'master' are 'main', 'trunk' and
hint: 'development'. The just-created branch can be renamed via this command:
hint:
hint:   git branch -m <name>
Initialized empty Git repository in /home/prashant/Documents/GitHub/Git_Practical/.git/
prashant@Simform-System:~/Documents/GitHub/Git_Practical$ git remote add origin https://github.com/Prashant-021/Git_Practical.git
prashant@Simform-System:~/Documents/GitHub/Git_Practical$ git config --global user.name Prashant Patel
prashant@Simform-System:~/Documents/GitHub/Git_Practical$ git config --global user.email prashant.p@simformsolutions.com
prashant@Simform-System:~/Documents/GitHub/Git_Practical$ touch readme.md
prashant@Simform-System:~/Documents/GitHub/Git_Practical$ git add .
prashant@Simform-System:~/Documents/GitHub/Git_Practical$ git commit -m "First Commit"
[master (root-commit) f4d3392] First Commit
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 readme.md
prashant@Simform-System:~/Documents/GitHub/Git_Practical$ git push -f origin master
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Writing objects: 100% (3/3), 219 bytes | 219.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/Prashant-021/Git_Practical.git
+ [new branch] master -> master
prashant@Simform-System:~/Documents/GitHub/Git_Practical$
```



Create new branch and change branch using following commands:

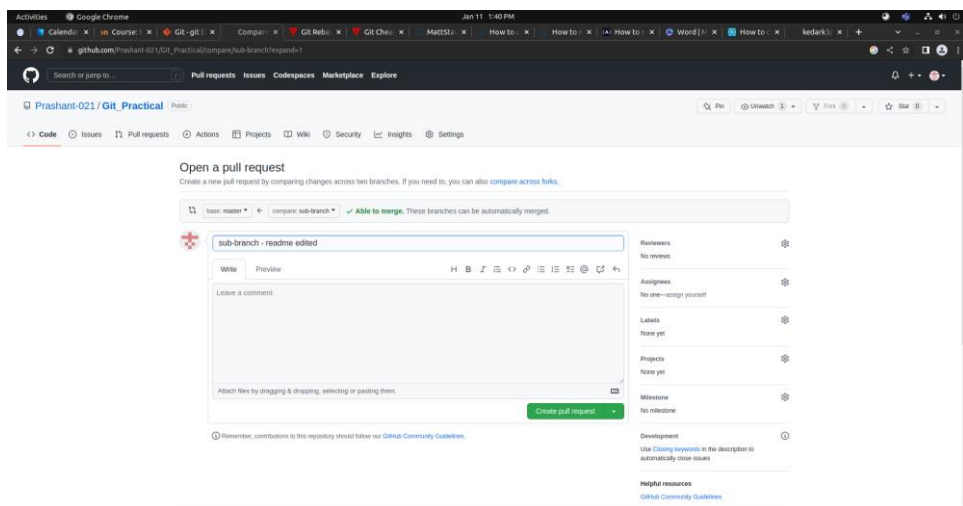
- Git branch “branch name”
- Git checkout “branch name”

```
prashant@Simform-System:~/Documents/GitHub/Git_Practical$ git branch
* master
prashant@Simform-System:~/Documents/GitHub/Git_Practical$ git branch sub-branch
* master
  sub-branch
prashant@Simform-System:~/Documents/GitHub/Git_Practical$ git checkout sub-branch
Switched to branch 'sub-branch'
prashant@Simform-System:~/Documents/GitHub/Git_Practical$
```

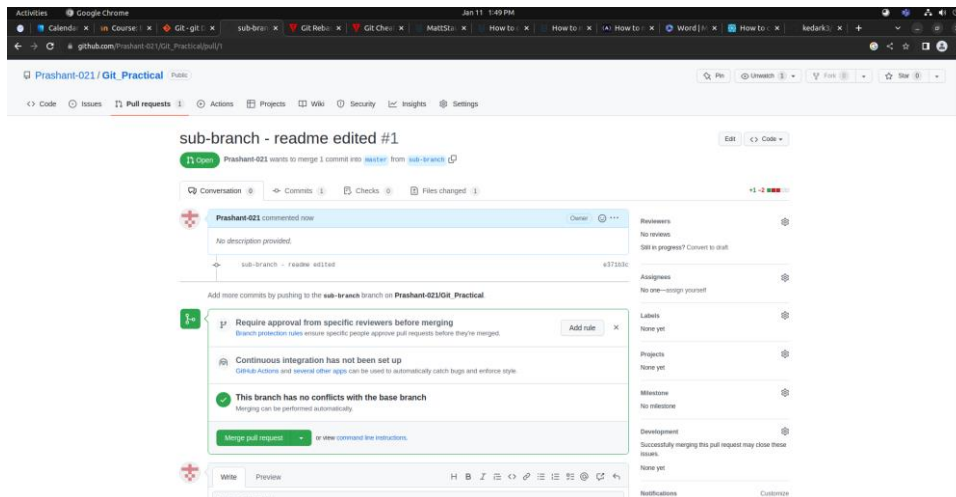
1. Pull request and Merge branches

```
prashant@Simform-System:~/Documents/GitHub/Git_Practical$ git branch
* master
  sub-branch
prashant@Simform-System:~/Documents/GitHub/Git_Practical$ git add .
prashant@Simform-System:~/Documents/GitHub/Git_Practical$ git commit -m "sub-branch - readme edited"
[sub-branch e371b3c] sub-branch - readme edited
1 file changed, 1 insertion(+), 2 deletions(-)
prashant@Simform-System:~/Documents/GitHub/Git_Practical$ git push
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 8 threads
Compressing objects: 100% (1/1), done.
Writing objects: 100% (3/3), 300 bytes | 300.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/Prashant-021/Git_Practical.git
823eba7..e371b3c sub-branch -> sub-branch
prashant@Simform-System:~/Documents/GitHub/Git_Practical$
```

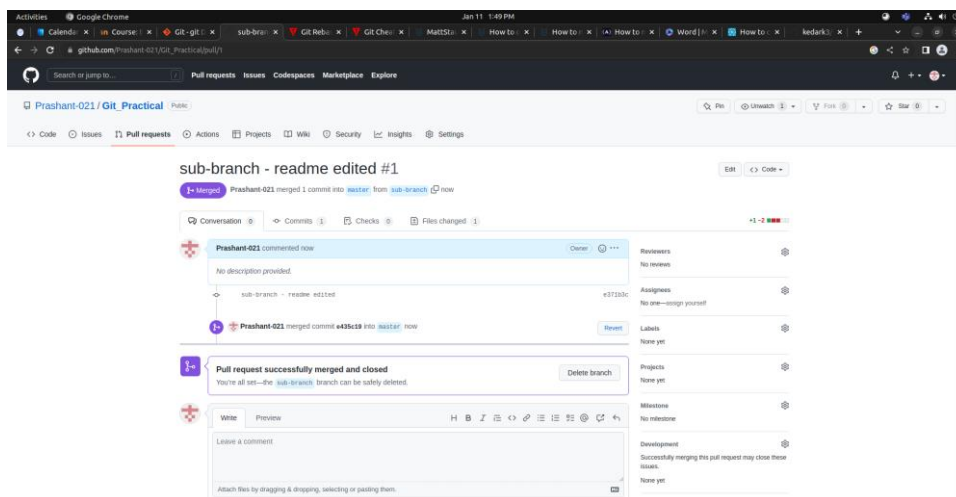
In GitHub repository click on **create pull request**



Pull request is generated, then click on **merge pull request**



Now, the pull request is merged to master.



2. Rebase

Rebasing is the process of moving or combining a sequence of commits to a new base commit.

Go to the branch which you want to rebase and type command

git rebase branch name, here branch name is the branch you want to rebase from

```

PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL
prashant@Simform-System:~/Documents/GitHub/Git_Practical$ git checkout sub-branch
Switched to branch 'sub-branch'
Your branch is up to date with 'origin/sub-branch'.
prashant@Simform-System:~/Documents/GitHub/Git_Practical$ git rebase master
Successfully rebased and updated refs/heads/sub-branch.

```

After successfully rebasing the write **git push** command.

```

prashant@Simform-System:~/Documents/GitHub/Git_Practical$ git push
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 8 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 532 bytes | 532.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/Prashant-021/Git_Practical.git
a48bfe5..f905c26 sub-branch -> sub-branch
prashant@Simform-System:~/Documents/GitHub/Git_Practical$

```

3. Change commit message

To get the log of commits type **git log** command.

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
Date: Wed Jan 11 13:31:28 2023 +0530

• prashant@Simform-System:~/Documents/GitHub/Git_Practical$ git checkout master
Switched to branch 'master'
Your branch is up to date with 'origin/master'.
• prashant@Simform-System:~/Documents/GitHub/Git_Practical$ git log
commit 823eba78ec69301fd35718d5ef92926318dd0072 (HEAD -> master, origin/master)
Author: Prashant <prashant.p@simformsolutions.com>
Date: Wed Jan 11 13:31:28 2023 +0530

    master - readme edited

commit d74df60c8009dac9f1b312d70e3e8d529100938e
Author: Prashant <prashant.p@simformsolutions.com>
Date: Wed Jan 11 13:28:38 2023 +0530

    readme edited by master

commit f4d3392f1e1267e8ab23bb3b556fa1c1ae6115b4
Author: Prashant <prashant.p@simformsolutions.com>
Date: Wed Jan 11 12:25:02 2023 +0530
```

Type **git rebase -i HEAD~nth commit** command in terminal.

```
prashant@Simform-System:~/Documents/GitHub/Git_Practical$ git rebase -i HEAD~2
Stopped at d74df60... readme edited by master
You can amend the commit now, with

    git commit --amend

Once you are satisfied with your changes, run

    git rebase --continue
```

After typing above command all commits till the nth commit enter will be displayed and then change the pick to edit in whichever commit message you want to change and save and exit.

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
GNU nano 6.2 /home/prashant/Documents/GitHub/Git_Practical/.git/rebase-merge/git-rebase-todo
pick d74df60 readme edited by master
pick 823eba7 master - readme edited
#
# Rebase f4d3392..823eba7 onto f4d3392 (2 commands)
#
# Commands:
# p, pick <commit> = use commit
# r, reword <commit> = use commit, but edit the commit message
# e, edit <commit> = use commit, but stop for amending
# s, squash <commit> = use commit, but meld into previous commit
# f, fixup [-C | -c] <commit> = like "squash" but keep only the previous
#                               commit's log message, unless -C is used, in which case
#                               keep only this commit's message; -c is same as -C but
#                               opens the editor
# x, exec <command> = run command (the rest of the line) using shell
# b, break = stop here (continue rebase later with 'git rebase --continue')
# d, drop <commit> = remove commit
# l, label <label> = label current HEAD with a name
# t, reset <label> = reset HEAD to a label
# m, merge [-C <commit> | -c <commit>] <label> [# <oneline>]
#     create a merge commit using the original merge commit's
#     message (or the oneline, if no original merge commit was
#     specified); use -c <commit> to reword the commit message
#
# These lines can be re-ordered; they are executed from top to bottom.
#
# If you remove a line here THAT COMMIT WILL BE LOST.
#
# However, if you remove everything, the rebase will be aborted.
^G Help      ^O Write Out  ^W Where Is   ^K Cut        ^T Execute    ^C Location   M-U Undo
^X Exit      ^P Read File  ^R Replace    ^U Paste      ^J Justify    ^_ Go To Line  M-E Redo
```

Then, type **git commit --amend** command to change commit message.

```

git rebase --continue
● prashant@Simform-System:~/Documents/GitHub/Git_Practical$ git commit --amend
[detached HEAD a0ea3ef] readme edited by master changed commit message
Date: Wed Jan 11 13:28:38 2023 +0530
1 file changed, 1 insertion(+)

```

Now, change the commit message as per required and then save and exit.

```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
GNU nano 6.2 /home/prashant/Documents/GitHub/Git_Practical/.git/COMMIT_EDITMSG
readme edited by master changed commit message

# Please enter the commit message for your changes. Lines starting
# with '#' will be ignored, and an empty message aborts the commit.
#
# Date:      Wed Jan 11 13:28:38 2023 +0530
#
# interactive rebase in progress; onto f4d3392
# Last command done (1 command done):
#   edit d74df60 readme edited by master
# Next command to do (1 remaining command):
#   pick 823eba7 master - readme edited
# You are currently editing a commit while rebasing branch 'master' on 'f4d3392'.
#
# Changes to be committed:
#   modified:   readme.md
#

```

As, below image shows that the commit message is changed.

```

● prashant@Simform-System:~/Documents/GitHub/Git_Practical$ git log
commit a0ea3ef310c79a30ea0081e828f59792203adfa2 (HEAD)
Author: Prashant <prashant.p@simformsolutions.com>
Date:   Wed Jan 11 13:28:38 2023 +0530

    readme edited by master changed commit message

commit f4d3392f1e1267e8ab23bb3b556falc1ae6115b4
Author: Prashant <prashant.p@simformsolutions.com>
Date:   Wed Jan 11 12:25:02 2023 +0530

    First Commit

```

4. Cherry-pick

```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
● prashant@Simform-System:~/Documents/GitHub/Git_Practical$ git log
commit a48bfe573c90397746491b8ca3226b0f9ef7b463 (HEAD -> sub-branch, origin/sub-branch)
Author: Prashant <prashant.p@simformsolutions.com>
Date:   Wed Jan 11 15:08:21 2023 +0530

    sub-branch - feature 1 added

commit 336a116cd564587947950c9d154bd61dcd390972 (login)
Author: Prashant <prashant.p@simformsolutions.com>
Date:   Wed Jan 11 13:31:28 2023 +0530

    master - readme edited

commit 339039b58d8661c7878a2f3e3cc8aadcddeb9a5d4
Author: Prashant <prashant.p@simformsolutions.com>
Date:   Wed Jan 11 14:01:56 2023 +0530

    sub-branch - New module adding

commit e371b3c1b66415ef002177625bf5bdbfd2a77b98
Author: Prashant <prashant.p@simformsolutions.com>
Date:   Wed Jan 11 13:39:41 2023 +0530

    sub-branch - readme edited

commit 823eba78ec69301fd35718d5ef92926318dd0072
Author: Prashant <prashant.p@simformsolutions.com>
Date:   Wed Jan 11 13:31:28 2023 +0530

    master - readme edited

```

Type `git cherry-pick <<commit address>>` in the terminal.

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
prashant@Simform-System:~/Documents/GitHub/Git_Practical$ git checkout master
Switched to branch 'master'
Your branch is up to date with 'origin/master'.
prashant@Simform-System:~/Documents/GitHub/Git_Practical$ git cherry-pick a48bfe573c90397746491b8ca3226b0f9ef7b463
[master a0028fd] sub-branch - feature 1 added
Date: Wed Jan 11 15:08:21 2023 +0530
1 file changed, 12 insertions(+)
create mode 100644 feature1.html
prashant@Simform-System:~/Documents/GitHub/Git_Practical$ git log
commit a0028fd823daa642df5ec3cc3d1b90831fb20cdb (HEAD -> master)
Author: Prashant <prashant.p@simformsolutions.com>
Date: Wed Jan 11 15:08:21 2023 +0530

    sub-branch - feature 1 added

commit b80691c738a60a003b004df28a5d5c9fb32a37ed (origin/master)
Merge: e7b25d3 336a116
Author: Prashant S Patel <pspatel021@gmail.com>
Date: Wed Jan 11 14:49:52 2023 +0530

    Merge pull request #3 from Prashant-021/sub-branch

    Sub branch

commit 336a116cd564587947950c9d154bd61dcd390972 (login)
Author: Prashant <prashant.p@simformsolutions.com>
Date: Wed Jan 11 13:31:28 2023 +0530

    master - readme edited

commit e7b25d327684ae4e53adf07618f210c11884feb8
Merge: e435c19 658305c
Author: Prashant S Patel <pspatel021@gmail.com>
Date: Wed Jan 11 14:03:07 2023 +0530

    Merge pull request #2 from Prashant-021/login

    login - index.html added

...skipping...
```

As shown in above image the commit of sub-branch is cherry picked in master branch.

5. Drop commit

Type `git rebase -i HEAD~nth commit` command.

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
prashant@Simform-System:~/Documents/GitHub/Git_Practical$ git log
commit 658305c40d1433833691e83138480ae5b177027a (HEAD -> login, origin/login)
Author: Prashant <prashant.p@simformsolutions.com>
Date: Wed Jan 11 13:59:40 2023 +0530

    login - index.html added

commit e371b3c1b66415ef002177625bf5bdbfd2a77b98
Author: Prashant <prashant.p@simformsolutions.com>
Date: Wed Jan 11 13:39:41 2023 +0530

    sub-branch - readme edited

commit 823eba78ec69301fd35718d5ef92926318dd0072
Author: Prashant <prashant.p@simformsolutions.com>
Date: Wed Jan 11 13:31:28 2023 +0530

    master - readme edited

commit d74df60c8009dac9f1b312d70e3e8d529100938e
Author: Prashant <prashant.p@simformsolutions.com>
Date: Wed Jan 11 13:28:38 2023 +0530

    readme edited by master

commit f4d3392f1e1267e8ab23bb3b556fa1c1ae6115b4
Author: Prashant <prashant.p@simformsolutions.com>
Date: Wed Jan 11 12:25:02 2023 +0530

    First Commit
prashant@Simform-System:~/Documents/GitHub/Git_Practical$ git rebase -i HEAD~4
```

Change the **pick** to **drop** whichever commit you want to drop.

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
GNU nano 6.2 /home/prashant/Documents/GitHub/Git_Practical/..
pick d74df60 readme edited by master
pick 823eba7 master - readme edited
pick e371b3c sub-branch - readme edited
drop 658305c login - index.html added

# Rebase f4d3392..658305c onto f4d3392 (4 commands)
#
# Commands:
# p, pick <commit> = use commit
# r, reword <commit> = use commit, but edit the commit message
# e, edit <commit> = use commit, but stop for amending
# s, squash <commit> = use commit, but meld into previous commit
# f, fixup [-C | -c] <commit> = like "squash" but keep only the previous
#                               commit's log message, unless -C is used, in which case
#                               keep only this commit's message; -c is same as -C but
#                               opens the editor
# x, exec <command> = run command (the rest of the line) using shell
# b, break = stop here (continue rebase later with 'git rebase --continue')
# d, drop <commit> = remove commit
# l, label <label> = label current HEAD with a name
# t, reset <label> = reset HEAD to a label
# m, merge [-C <commit> | -c <commit>] <label> [# <oneline>]
# .       create a merge commit using the original merge commit's
#         message (or the oneline, if no original merge commit was
#         specified); use -c <commit> to reword the commit message
#
# These lines can be re-ordered; they are executed from top to bottom.
#
# If you remove a line here THAT COMMIT WILL BE LOST.
[ Read 32 lines ]
^G Help      ^O Write Out  ^W Where Is   ^K Cut        ^T Execute    ^C Location   M-U Un
^X Exit      ^R Read File  ^N Replace    ^U Paste      ^J Justify    ^_/ Go To Line  M-E R
```

Then type **git log** to check whether the commit is deleted or not.

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
prashant@Simform-System:~/Documents/GitHub/Git_Practical$ git rebase -i HEAD~4
Successfully rebased and updated refs/heads/login.
prashant@Simform-System:~/Documents/GitHub/Git_Practical$ git log
commit e371b3c1b66415ef002177625bf5bdbfd2a77b98 (HEAD -> login)
Author: Prashant <prashant.p@simformsolutions.com>
Date:   Wed Jan 11 13:39:41 2023 +0530

    sub-branch - readme edited

commit 823eba78ec69301fd35718d5ef92926318dd0072
Author: Prashant <prashant.p@simformsolutions.com>
Date:   Wed Jan 11 13:31:28 2023 +0530

    master - readme edited

commit d74df60c8009dac9f1b312d70e3e8d529100938e
Author: Prashant <prashant.p@simformsolutions.com>
Date:   Wed Jan 11 13:28:38 2023 +0530

    readme edited by master

commit f4d3392f1e1267e8ab23bb3b556fa1cae6115b4
Author: Prashant <prashant.p@simformsolutions.com>
Date:   Wed Jan 11 12:25:02 2023 +0530

    First Commit
prashant@Simform-System:~/Documents/GitHub/Git_Practical$
```

As in above image the commit is deleted with commit address **658305c**