

Trainee Name : Hirapara Sagar

Mentor Name : Kashyap Vadhel

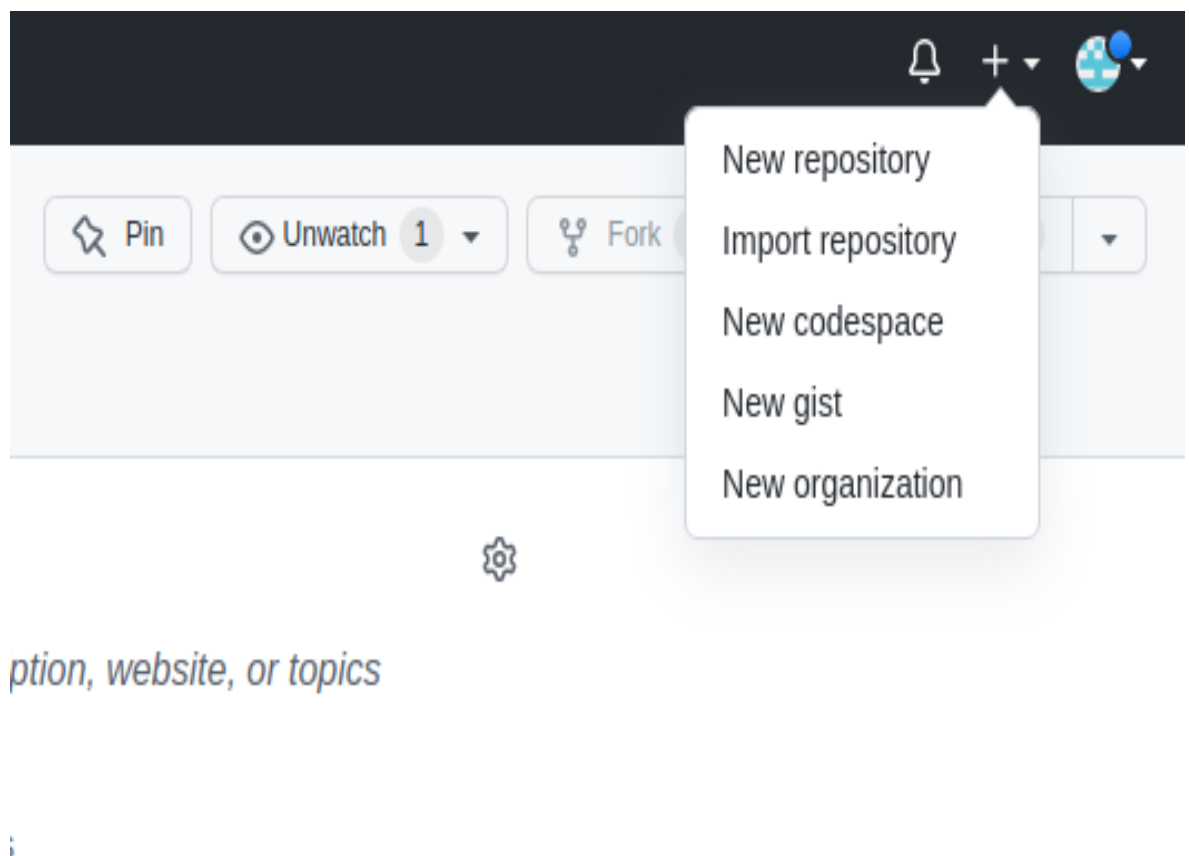
Practical : Git-Practical Exam

[Git Repository Link](#) Where Practical I Have Done.

[Git Repository Link](#) where I put practical assignment File.

General Work:

1. Creating repository in GitHub: By clicking on “New Repository”.



Create a new repository

A repository contains all project files, including the revision history. Already have a project repository elsewhere? [Import a repository.](#)

Owner *

sagarHirpara ▾

/

Repository name *

Git_practices ✓

Great repository names are short, descriptive, and unique. [Get inspiration?](#) How about **fluffy-spork**?

Description (optional)

☒ **Public**
Anyone on the internet can see this repository. You choose who can commit.

☐ **Private**
You choose who can see and commit to this repository.

Initialize this repository with:
Skip this step if you're importing an existing repository.

☐ **Add a README file**
This is where you can write a long description for your project. [Learn more.](#)

Add .gitignore
Choose which files not to track from a list of templates. [Learn more.](#)

.gitignore template: None ▾

Choose a license
A license tells others what they can and can't do with your code. [Learn more.](#)

License: None ▾

You are creating a public repository in your personal account.

Create repository

2. Initialized local git repository, configuring remote origin and pushing “first commit” to remote repository.

...or create a new repository on the command line

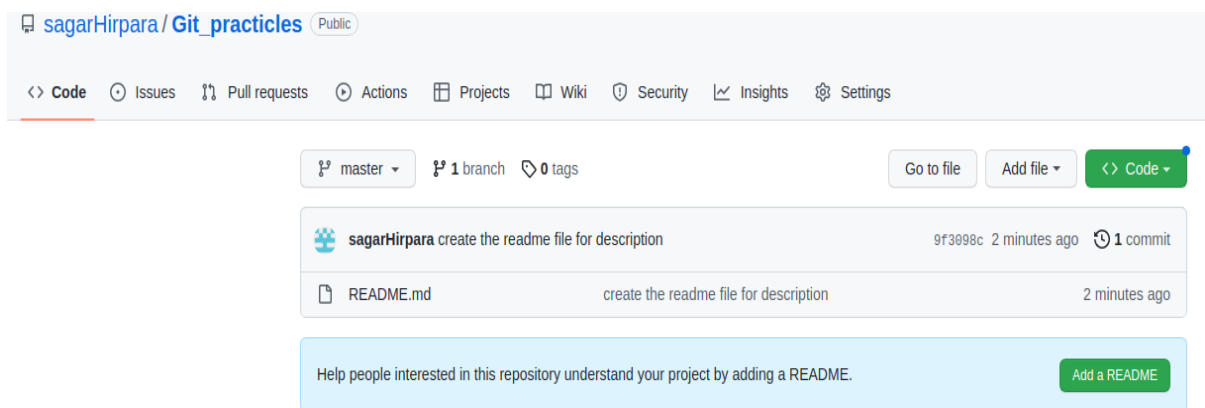
```
echo "# Git_practices" >> README.md
git init
git add README.md
git commit -m "first commit"
git branch -M main
git remote add origin git@github.com:sagarHirpara/Git_practices.git
git push -u origin main
```



```
sagar@sf-cpu-782:~$ cd Git_practicle/
sagar@sf-cpu-782:~/Git_practicle$ 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/sagar/Git_practicle/.git/
```

```
sagar@sf-cpu-782:~/Git_practicle$ git config --global user.email "19cssag046@ldce.ac.in"
sagar@sf-cpu-782:~/Git_practicle$ git config --global user.name "sagarHirpara"
sagar@sf-cpu-782:~/Git_practicle$ touch README.md
sagar@sf-cpu-782:~/Git_practicle$ git add .
sagar@sf-cpu-782:~/Git_practicle$ git commit -m "create the readme file for description"
[master (root-commit) 9f3098c] create the readme file for description
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 README.md
sagar@sf-cpu-782:~/Git_practicle$ git remote add origin git@github.com:sagarHirpara/Git_practicles.git
sagar@sf-cpu-782:~/Git_practicle$ git origin
git: 'origin' is not a git command. See 'git --help'.
sagar@sf-cpu-782:~/Git_practicle$ git remote
origin
sagar@sf-cpu-782:~/Git_practicle$ git push -u origin master
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Writing objects: 100% (3/3), 232 bytes | 232.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To github.com:sagarHirpara/Git_practicles.git
 * [new branch]      master -> master
Branch 'master' set up to track remote branch 'master' from 'origin'.
sagar@sf-cpu-782:~/Git_practicles$
```

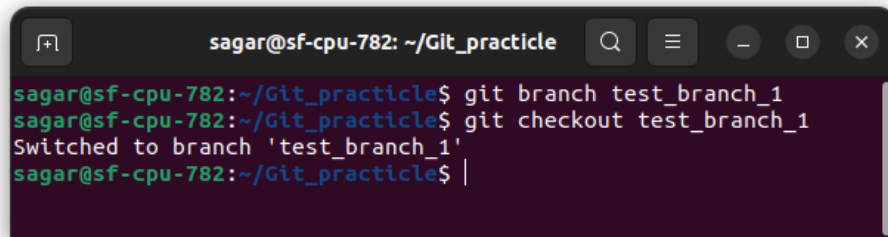
: This picture shows remote repository after above operations.



Practical-1:

Pull and Merge difference: Make example of pull request and two branch merge events.

1. Created new branch "test_branch_1" and checkout to that

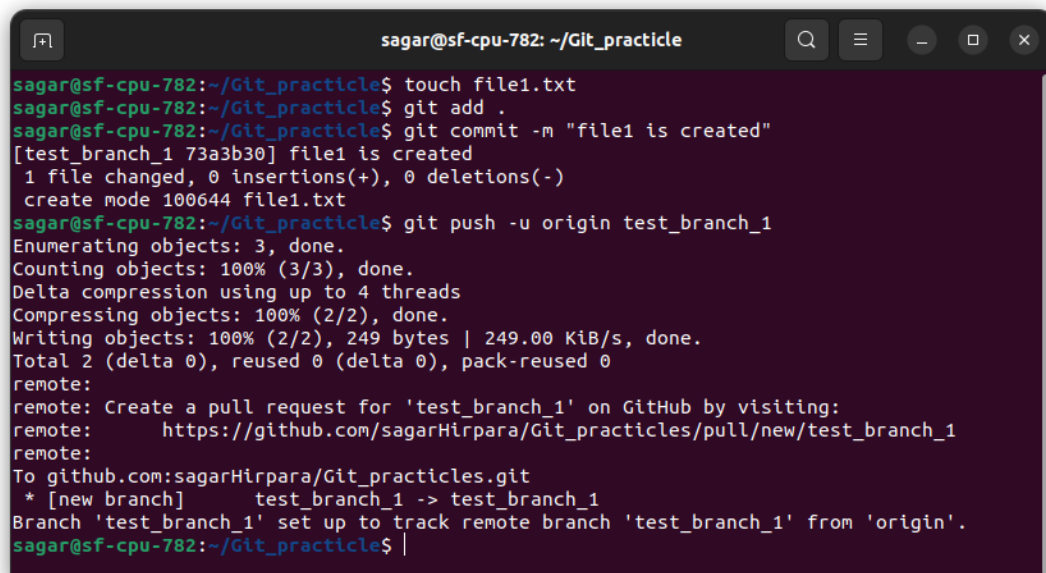


```
sagar@sf-cpu-782: ~/Git_practicle
sagar@sf-cpu-782:~/Git_practicle$ git branch test_branch_1
sagar@sf-cpu-782:~/Git_practicle$ git checkout test_branch_1
Switched to branch 'test_branch_1'
sagar@sf-cpu-782:~/Git_practicle$ |
```

2. Created new file "file1.txt". (In test_branch_1 branch) and

Operations performed after creating "file1.txt"

- Added to staging area.
- Committed the changes.
- Pushed to the remote repository.



```
sagar@sf-cpu-782:~/Git_practicle$ touch file1.txt
sagar@sf-cpu-782:~/Git_practicle$ git add .
sagar@sf-cpu-782:~/Git_practicle$ git commit -m "file1 is created"
[test_branch_1 73a3b30] file1 is created
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 file1.txt
sagar@sf-cpu-782:~/Git_practicle$ git push -u origin test_branch_1
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Delta compression using up to 4 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (2/2), 249 bytes | 249.00 KiB/s, done.
Total 2 (delta 0), reused 0 (delta 0), pack-reused 0
remote:
remote: Create a pull request for 'test_branch_1' on GitHub by visiting:
remote:   https://github.com/sagarHirpara/Git_practicles/pull/new/test_branch_1
remote:
To github.com:sagarHirpara/Git_practicles.git
 * [new branch]      test_branch_1 -> test_branch_1
Branch 'test_branch_1' set up to track remote branch 'test_branch_1' from 'origin'.
sagar@sf-cpu-782:~/Git_practicle$ |
```

- View of GitHub Repository after done above operation.

test_branch_1 had recent pushes 2 minutes ago

Compare & pull request

test_branch_1

2 branches

0 tags

Go to file

Add file

<> Code

This branch is 1 commit ahead of master.

Contribute

sagarHirpara file1 is created

73a3b30 2 minutes ago 2 commits

README.md	create the readme file for description	16 minutes ago
file1.txt	file1 is created	2 minutes ago

Help people interested in this repository understand your project by adding a README.

Add a README

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3.Generated a Pull Request to merge “master” and “development” branch.

- First approach: “Used Pull Request to merge”.

test_branch_1 had recent pushes 2 minutes ago

Compare & pull request

test_branch_1

2 branches

0 tags

Go to file

Add file

<> Code

This branch is 1 commit ahead of master.

Contribute

sagarHirpara file1 is created

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Open a pull request

Create a new pull request by comparing changes across two branches. If you need to, you can also [compare across forks](#).

 base: master

 compare: test_branch_1

✓ **Able to merge.** These branches can be automatically merged.



first commit in test_branch_1

Write

Preview

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Leave a comment

Attach files by dragging & dropping, selecting or pasting them.

Create pull request

first commit in test_branch_1 #1

Open


sagarHirpara wants to merge 1 commit into master from test_branch_1

Conversation 0

Commits 1

Checks 0


Files changed 1




sagarHirpara commented now


Owner 😊 ⋮

No description provided.

 file1 is created 73a3b30


Add more commits by pushing to the test_branch_1 branch on sagarHirpara/Git_practices.




 **Require approval from specific reviewers before merging**

Branch protection rules ensure specific people approve pull requests before they're merged.

Add rule ×

 **Continuous integration has not been set up**


GitHub Actions and several other apps can be used to automatically catch bugs and enforce style.

 **This branch has no conflicts with the base branch**

Merging can be performed automatically.

Merge pull request

or view command line instructions.



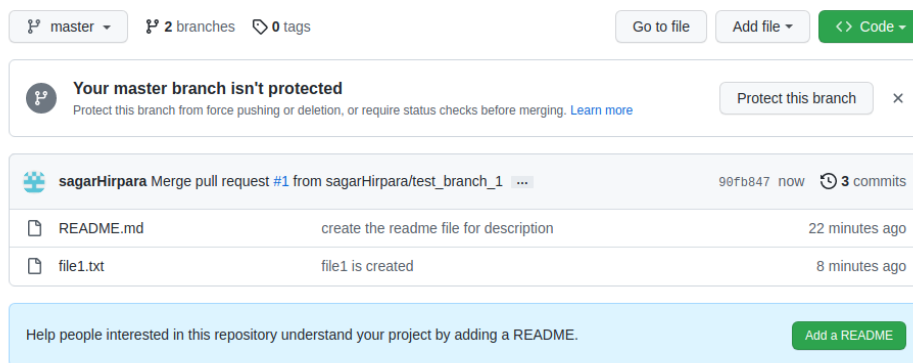
Write

Preview

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Leave a comment

Attach files by dragging & dropping, selecting or pasting them.



Second approach:


“Used git to merge ‘master’ and “test_branch-1” branch and pushed it to remote repository”.




1. Create a new branch test2 and checkout it
2. Make new file test.txt
3. Push into remote repository
4. Merge with the master branch

```
sagar@sf-cpu-782:~/Git_practicle$ git branch test2
sagar@sf-cpu-782:~/Git_practicle$ git checkout test2
Switched to branch 'test2'
sagar@sf-cpu-782:~/Git_practicle$ touch test.txt
sagar@sf-cpu-782:~/Git_practicle$ git add .
sagar@sf-cpu-782:~/Git_practicle$ git commit -m "test file created"
[test2 c4d0903] test file created
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 test.txt
sagar@sf-cpu-782:~/Git_practicle$ git push -u origin test2
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Delta compression using up to 4 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (2/2), 257 bytes | 257.00 KiB/s, done.
Total 2 (delta 0), reused 0 (delta 0), pack-reused 0
remote:
remote: Create a pull request for 'test2' on GitHub by visiting:
remote: https://github.com/sagarHirpara/Git_practicles/pull/new/test2
remote:
To github.com:sagarHirpara/Git_practicles.git
* [new branch] test2 -> test2
Branch 'test2' set up to track remote branch 'test2' from 'origin'.
sagar@sf-cpu-782:~/Git_practicle$ git checkout master
Switched to branch 'master'
Your branch is up to date with 'origin/master'.
sagar@sf-cpu-782:~/Git_practicle$ git merge test2
Updating 9f3098c..c4d0903
Fast-forward
 file1.txt | 0
 test.txt | 0
2 files changed, 0 insertions(+), 0 deletions(-)
create mode 100644 file1.txt
create mode 100644 test.txt
```

- View after above operation has run.

master ▾
3 branches
0 tags
Go to file
Add file ▾
<> Code ▾


sagarHirpara Merge pull request #2 from sagarHirpara/test2 ...
 235f4e3 now
🕒 5 commits

 README.md	create the readme file for description	29 minutes ago
 file1.txt	file1 is created	15 minutes ago
 test.txt	test file created	2 minutes ago

Help people interested in this repository understand your project by adding a README.

Add a README

Practical-2:

Rebase: Try to rebase feature branch with master branch

- Created new branch named “development_2”
- checkout to development_2, created “file3.txt”
- committed changes.


```
sagar@sf-cpu-782:~/Git_practice$ git branch development_2
sagar@sf-cpu-782:~/Git_practice$ git checkout development_2
Switched to branch 'development_2'
sagar@sf-cpu-782:~/Git_practice$ git touch file3.txt
git: 'touch' is not a git command. See 'git --help'.
sagar@sf-cpu-782:~/Git_practice$ touch file3.txt
sagar@sf-cpu-782:~/Git_practice$ git commit -m "first commit in development2"
On branch development_2
Untracked files:
  (use "git add <file>..." to include in what will be committed)
        file3.txt

nothing added to commit but untracked files present (use "git add" to track)
sagar@sf-cpu-782:~/Git_practice$ git add .
sagar@sf-cpu-782:~/Git_practice$ git commit -m "first commit in development2"
[development_2 811e855] first commit in development2
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 file3.txt
```

- Checkout to master branch, updated “file1.txt” and committed changes.

```
sagar@sf-cpu-782:~/Git_practice$ git checkout master
M       file1.txt
Switched to branch 'master'
Your branch is ahead of 'origin/master' by 2 commits.
  (use "git push" to publish your local commits)
sagar@sf-cpu-782:~/Git_practice$ git status
On branch master
Your branch is ahead of 'origin/master' by 2 commits.
  (use "git push" to publish your local commits)

Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
        modified:   file1.txt

no changes added to commit (use "git add" and/or "git commit -a")
sagar@sf-cpu-782:~/Git_practice$ git commit -a -m "modified file1 in master"
[master 05bbb00] modified file1 in master
 1 file changed, 1 insertion(+)
```

- Checkout to development_2 branch and fired “git rebase master” command.

```
sagar@sf-cpu-782:~/Git_practicle$ git checkout development_2
Switched to branch 'development_2'
sagar@sf-cpu-782:~/Git_practicle$ git rebase master
Successfully rebased and updated refs/heads/development_2.
sagar@sf-cpu-782:~/Git_practicle$ git status
On branch development_2
nothing to commit, working tree clean
sagar@sf-cpu-782:~/Git_practicle$ git checkout master
Switched to branch 'master'
Your branch is ahead of 'origin/master' by 3 commits.
  (use "git push" to publish your local commits)
sagar@sf-cpu-782:~/Git_practicle$ git rebase development_2
Successfully rebased and updated refs/heads/master.
sagar@sf-cpu-782:~/Git_practicle$ |
```

```
sagar@sf-cpu-782:~/Git_practicle$ git checkout development_2
Switched to branch 'development_2'
sagar@sf-cpu-782:~/Git_practicle$ git rebase master
Successfully rebased and updated refs/heads/development_2.
sagar@sf-cpu-782:~/Git_practicle$ git status
On branch development_2
nothing to commit, working tree clean
sagar@sf-cpu-782:~/Git_practicle$ git checkout master
Switched to branch 'master'
Your branch is ahead of 'origin/master' by 3 commits.
  (use "git push" to publish your local commits)
sagar@sf-cpu-782:~/Git_practicle$ git rebase development_2
Successfully rebased and updated refs/heads/master.
sagar@sf-cpu-782:~/Git_practicle$ |
```

Practical-3:

Change commit message:

Commit in feature branch and then change commit message

- Last commit has message “First commit in development_2”.

```
sagar@sf-cpu-782:~/Git_practicle$ git log
commit 807cb655de8b97ef2f34f498993219a650ecc3 (HEAD -> master, development_2)
Author: sagarHirpara <19cssag046@ldce.ac.in>
Date:   Fri Feb 17 14:18:51 2023 +0530

    first commit in development2

commit 05bbb0063edc744061cbd07470efd3ab54a21198
Author: sagarHirpara <19cssag046@ldce.ac.in>
Date:   Fri Feb 17 14:23:59 2023 +0530

    modified file1 in master

commit c4d0903474218f11b0826948afb876d2a4e78d88 (origin/test2, test2)
Author: sagarHirpara <19cssag046@ldce.ac.in>
Date:   Fri Feb 17 13:58:58 2023 +0530

    test file created

commit 73a3b30c162a7d6994f4e3eb8a50557c2996d027 (origin/test_branch_1, test_branch_1)
Author: sagarHirpara <19cssag046@ldce.ac.in>
Date:   Fri Feb 17 13:46:20 2023 +0530

    file1 is created

commit 9f3098c803e75fd69e6c662e43f6e27473c3a127
Author: sagarHirpara <19cssag046@ldce.ac.in>
Date:   Fri Feb 17 13:32:03 2023 +0530

    create the readme file for description
sagar@sf-cpu-782:~/Git_practicle$
```

Fired: git commit --amend -m "Very First commit in development_2 branch" command.

- So, the message of last commit has been changed.

```
sagar@sf-cpu-782:~/Git_practicle$ git commit --amend -m "very first commit in development_2 branch"
[master c0961ec] very first commit in development_2 branch
Date: Fri Feb 17 14:18:51 2023 +0530
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 file3.txt
sagar@sf-cpu-782:~/Git_practicle$ git log
commit c0961ec297a976689df57480f5b4f940c2b9ba06 (HEAD -> master)
Author: sagarHirpara <19cssag046@ldce.ac.in>
Date:   Fri Feb 17 14:18:51 2023 +0530

    very first commit in development_2 branch
```

Practical-4:

cherry pick: Pick some commits from feature branch to master branch

- Below image shows latest commit in cherry branch.

```
sagar@sf-cpu-782:~/Git_practicle$ git log
commit e80d1b390142581b538edf55fa2d2bf534be636b (HEAD -> cheryy)
Author: sagarHirpara <19cssag046@ldce.ac.in>
Date:   Fri Feb 17 14:54:19 2023 +0530

    add abcd.txt file in cheryy branch
```

- Below Use the cherry-pick command and change the commit of cherry branch into master branch.

```
and have 2 and 2 different commits each, respectively.
(use "git pull" to merge the remote branch into yours)
sagar@sf-cpu-782:~/Git_practicle$ git cherry-pick e80d1b3
[master 2134b9f] add abcd.txt file in cheryy branch
Date: Fri Feb 17 14:54:19 2023 +0530
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 abcd.txt
sagar@sf-cpu-782:~/Git_practicle$ git log
commit 2134b9f8e27d940b5de5063c96de8ff5d42e5c75 (HEAD -> master)
Author: sagarHirpara <19cssag046@ldce.ac.in>
Date:   Fri Feb 17 14:54:19 2023 +0530

    add abcd.txt file in cheryy branch
```

Practical-5:

Drop commit: Remove some commit from branch.

“git reset --soft <commit>” : this command remove commit but don't change in workspace

```
commit 2134b9f8e27d940b5de5063c96de8ff5d42e5c75 (HEAD -> master)
Author: sagarHirpara <19cssag046@ldce.ac.in>
Date:   Fri Feb 17 14:54:19 2023 +0530

    add abcd.txt file in cheryy branch

commit c0961ec297a976689df57480f5b4f940c2b9ba06
Author: sagarHirpara <19cssag046@ldce.ac.in>
Date:   Fri Feb 17 14:18:51 2023 +0530

    very first commit in devlopment_2 branch

commit 05bbb0063edc744061cbd07470efd3ab54a21198
Author: sagarHirpara <19cssag046@ldce.ac.in>
Date:   Fri Feb 17 14:23:59 2023 +0530

    modified file1 in master
```

```
sagar@sf-cpu-782:~/Git_practicle$ git reset --soft c0961e
sagar@sf-cpu-782:~/Git_practicle$ git lo
git: 'lo' is not a git command. See 'git --help'.

The most similar commands are
    log
    clone
sagar@sf-cpu-782:~/Git_practicle$ git log --oneline
c0961ec (HEAD -> master) very first commit in devlopment_2 branch
05bbb00 modified file1 in master
c4d0903 (origin/test2, test2) test file created
73a3b30 (origin/test_branch_1, test_branch_1) file1 is created
9f3098c create the readme file for description
```

If we use git rest –hard <commit> then it will remove commit and remove changes in workspace