

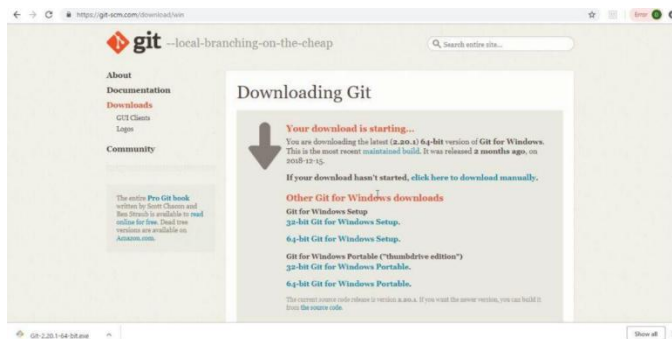
## Practical -1

### Aim:Installing Git on Windows

**Step 1:** Go to <https://www.git-scm.com/>. Click on Download [latest version] for Windows.



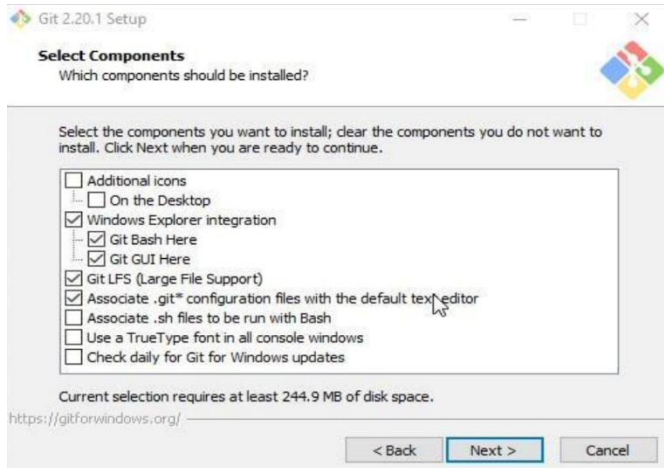
**Step 2:** You will view the below screen. Download has started and the .exe file is downloading.



**Step 3:** Click on Next when this popup window opens.



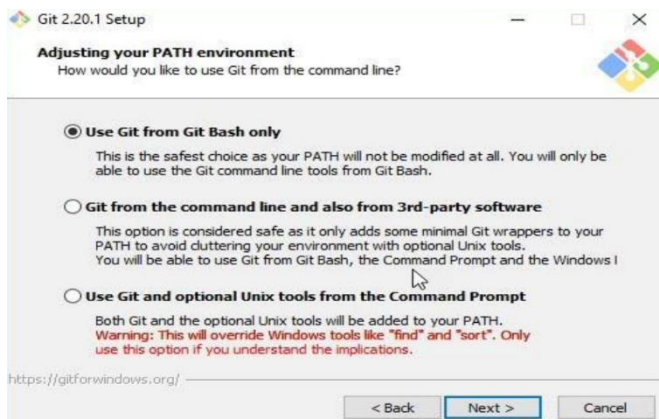
**Step 4:** Check the below options and click Next.



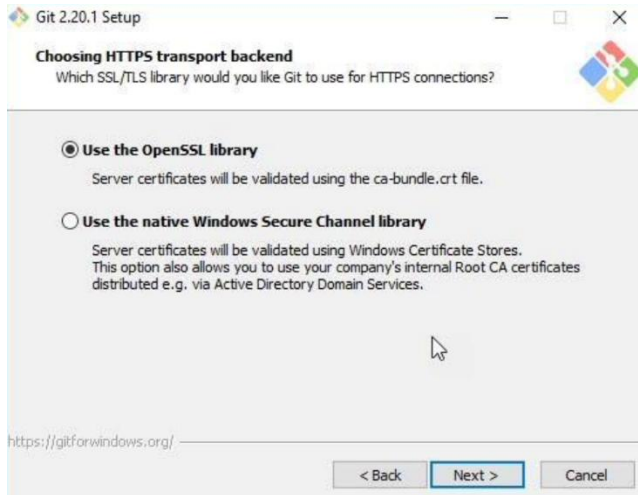
**Step 5:** The below screen comes. Click Next.



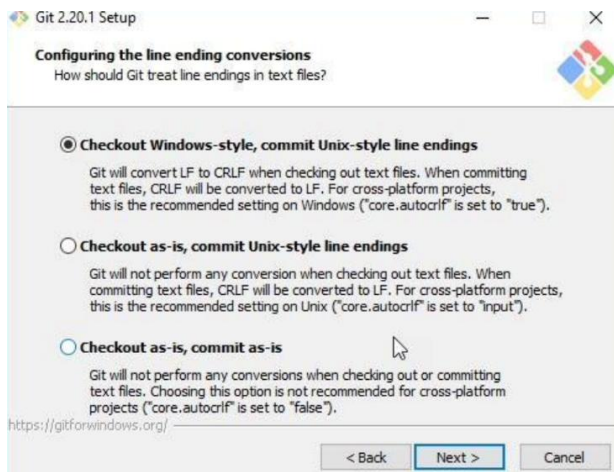
**Step 6:** Choose the appropriate option and click Next.



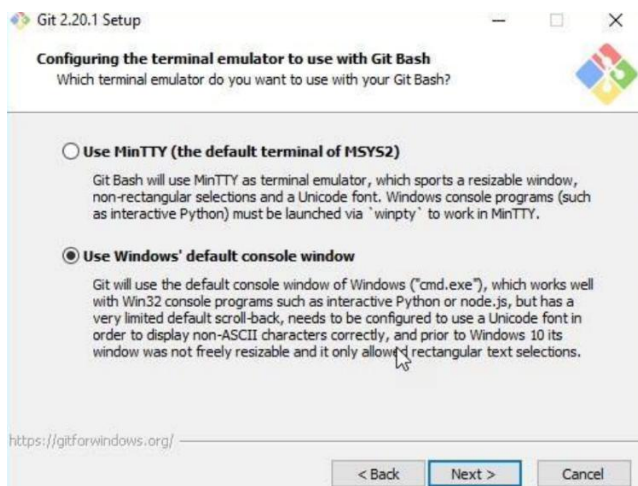
**Step 7:** Choose the library option and click on Next.



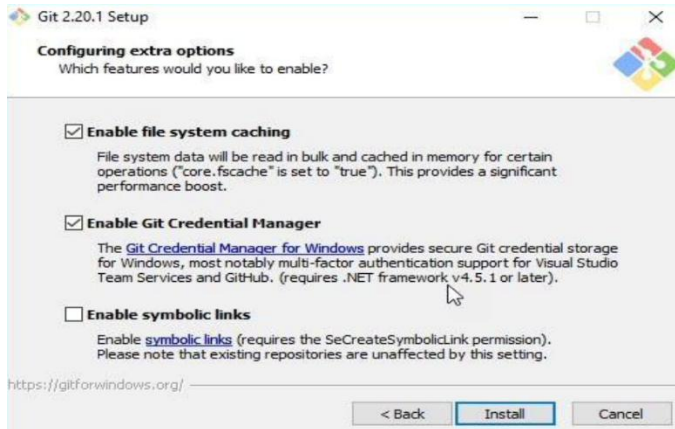
**Step 8:** Choose the checkout option and click Next.



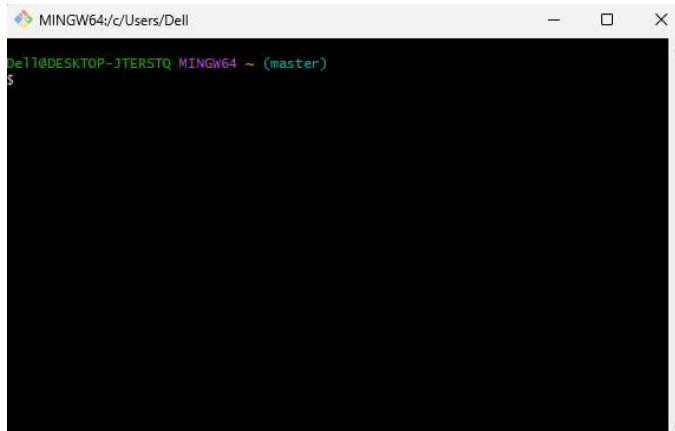
**Step 9:** Choose the emulator and click Next.



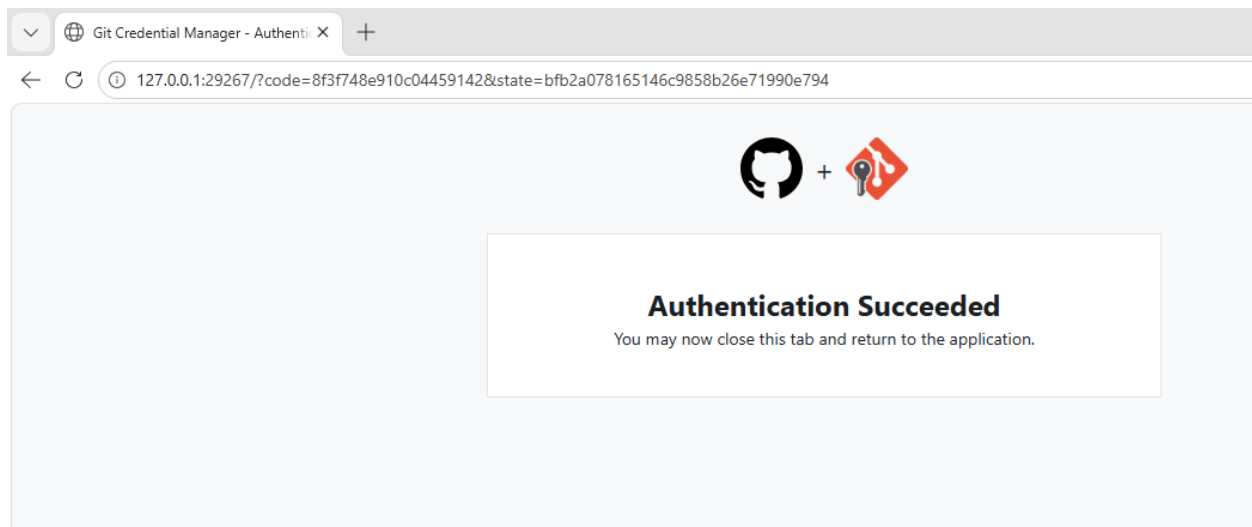
**Step 10:** Choose configuration options and click on Install.



**Step 11:** Once the installation completes, the Git GUI opens.



**Checks if Git is installed.**



git --version

```
USER@DESKTOP-846S1HM MINGW64 ~ (update-readme)
$ git --version
git version 2.54.0.windows.1
```

git config --global user.name "Bhargavi Keni"

git config --global user.email [bhargavikeni12@example.com](mailto:bhargavikeni12@example.com)

```
USER@DESKTOP-846S1HM MINGW64 ~ (update-readme)
$ git config --global user.name BHARGAVI
```

```
USER@DESKTOP-846S1HM MINGW64 ~ (update-readme)
$ git config --global user.email bhargavikeni12@gmail.com
```

Check Configuration

git config --list

```
USER@DESKTOP-846S1HM MINGW64 ~ (update-readme)
$ git config --list
diff.astextplain.textconv=astextplain
filter.lfs.clean=git-lfs clean -- %f
filter.lfs.smudge=git-lfs smudge -- %f
filter.lfs.process=git-lfs filter-process
filter.lfs.required=true
http.sslbackend=openssl
http.sslcainfo=C:/Program Files/Git/mingw64/etc/ssl/
core.autocrlf=true
core.fscache=true
core.symlinks=false
pull.rebase=false
credential.helper=manager
credential.https://dev.azure.com.usehttppath=true
init.defaultbranch=master
user.name=BHARGAVI
user.email=bhargavikeni12@gmail.com
credential.helper=mana
credential.modalprompt=true
core.repositoryformatversion=0
core.filemode=false
core.bare=false
core.logallrefupdates=true
core.symlinks=false
```

## Working with Branches

### Create a Branch

git branch feature1

git branch

```
USER@DESKTOP-846S1HM MINGW64 ~/bhargavifolder89 (master)
$ git branch feature1
```

### Switch Branch

git checkout feature

```
USER@DESKTOP-846S1HM MINGW64 ~/bhargavifolder89 (master)
$ git checkout feature1
Switched to branch 'feature1'
```

### Merge Branches

git checkout master

git merge feature1

```
USER@DESKTOP-846S1HM MINGW64 ~/bhargavifolder89 (feature1)
$ git checkout master
Switched to branch 'master'

USER@DESKTOP-846S1HM MINGW64 ~/bhargavifolder89 (master)
$ git merge feature1
Already up to date.
```

```
USER@DESKTOP-846S1HM MINGW64 ~/bhargavifolder89 (master)
$ git remote remove origin
```

### Connect Remote Repository

git remote add origin https://github.com/bhargavi12/bhargavifolder89.git

git remote -v

git push -u origin master

```
USER@DESKTOP-846S1HM MINGW64 ~/bhargavifolder89 (master)
$ git remote add origin https://github.com/bhargavikeni12/bhargavifolder89.git
```

```
USER@DESKTOP-846S1HM MINGW64 ~/bhargavifolder89 (master)
$ git init
Reinitialized existing Git repository in C:/Users/USER/bhargavifolder89/.git/
```

## Clone Existing Repository

```
USER@DESKTOP-846S1HM MINGW64 ~/bhargavifolder89 (master)
$ git clone https://github.com/bhargavikeni12/bhargavifolder89.git
Cloning into 'bhargavifolder89'...
warning: You appear to have cloned an empty repository.
```

## Git status

```
USER@DESKTOP-846S1HM MINGW64 ~/bhargavifolder89 (master)
$ git status
On branch master
Untracked files:
  (use "git add <file>..." to include in what will be committed)
    bhargavifolder89/
```

## Git log

```
USER@DESKTOP-846S1HM MINGW64 ~/bhargavifolder89 (master)
$ git log
commit 4395b8c4c5ecdb04e49fef76dadfb2deab459ab7 (HEAD -> master, feature1)
Author: BHARGAVI <bhargavikeni12@gmail.com>
Date: Thu May 7 14:55:23 2026 +0530

    Updated bhargavi file

commit 673f08a3a64b3fc9a83446441c62b61b2eb29152
Author: BHARGAVI <bhargavikeni12@gmail.com>
Date: Thu May 7 14:51:20 2026 +0530

    First commit

USER@DESKTOP-846S1HM MINGW64 ~/bhargavifolder89 (master)
$ git log --oneline
4395b8c (HEAD -> master, feature1) Updated bhargavi file
673f08a First commit
```

## Git log --oneline

```

FIRST COMMIT
USER@DESKTOP-846S1HM MINGW64 ~/bhargavifolder89 (master)
$ git log --oneline
4395b8c (HEAD -> master, feature1) Updated bhargavi file
673f08a First commit

```

## Git add .

```


USER@DESKTOP-846S1HM MINGW64 ~/bhargavifolder89 (master)
$ git add .

USER@DESKTOP-846S1HM MINGW64 ~/bhargavifolder89 (master)
$ git commit -m "bhargavi first commit"
On branch master
nothing to commit, working tree clean

USER@DESKTOP-846S1HM MINGW64 ~/bhargavifolder89 (master)
$ git push origin master
info: please complete authentication in your browser...
git: 'credential-mana' is not a git command. See 'git --help'.




The most similar command is
  credential-manager
Enumerating objects: 6, done.
Counting objects: 100% (6/6), done.
Delta compression using up to 20 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (6/6), 511 bytes | 511.00 KiB/s, done.
Total 6 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/bhargavikeni12/bhargavifolder89.git
 * [new branch]      master -> master



```


 bhargavifolder89 Public

Pin
Watch 0

---

 master ▾
  1 Branch
 0 Tags
Go to file
T
Add file ▾
Code ▾

 bhargavikeni12 Updated bhargavi file
4395b8c · 50 minutes ago
 2 Commits

 bhargavi.txt
Updated bhargavi file
50 minutes ago

## Git pull

```

USER@DESKTOP-846S1HM MINGW64 ~/bhargavifolder89 (master)
$ git pull
Already up to date.

```

Git push

```
USER@DESKTOP-846S1HM MINGW64 ~/bhargavifolder89 (master)
$ git push
git: 'credential-mana' is not a git command. See 'git --help'.

The most similar command is
    credential-manager
Everything up-to-date
```

## Undo & Fix Mistakes

Discards local changes in a file.

git restore <file\_name>

```
USER@DESKTOP-846S1HM MINGW64 ~/bhargavifolder89 (master)
$ git restore bhargavi.txt
```

Unstages a file.

git reset <file\_name>

```
USER@DESKTOP-846S1HM MINGW64 ~/bhargavifolder89 (master)
$ git reset bhargavi.txt
```

Discards all local changes (use carefully).

git reset --hard

```
USER@DESKTOP-846S1HM MINGW64 ~/bhargavifolder89 (master)
$ git reset --hard
HEAD is now at 4395b8c Updated bhargavi file
```

Shows differences before staging.

git diff

```
USER@DESKTOP-846S1HM MINGW64 ~/bhargavifolder89 (master)
$ git diff
```

Displays details of a commit.

git show

```
USER@DESKTOP-846S1HM MINGW64 ~/bhargavifolder89 (master)
$ git show
commit 4395b8c4c5ecdb04e49fef76dadfb2deab459ab7 (HEAD -> master, origin/master, origin/HEAD, feature1)
Author: BHARGAVI <bhargavikeni12@gmail.com>
Date: Thu May 7 14:55:23 2026 +0530

    Updated bhargavi file

diff --git a/bhargavi.txt b/bhargavi.txt
index 76b1a4f..6b820f7 100644
--- a/bhargavi.txt
+++ b/bhargavi.txt
@@ -1,2 @@
 My first Git project
+Learning Git step by step
```

## Practical No - 2

### Create and Fork Repositories in GitHub – Branch, Merge, Rebase 1.

#### 1. Create a GitHub account and log in.

General

Owner \*  / Repository name \*

✔ MySecondRepo89 is available.

Great repository names are short and memorable. How about [fictional-rotary-phone?](#)

Description

0 / 350 characters

2 Configuration

Choose visibility \*

Choose who can see and commit to this repository

Add README  Off

READMEs can be used as longer descriptions. [About READMEs](#)

Add .gitignore

.gitignore tells git which files not to track. [About ignoring files](#)

Add license

Licenses explain how others can use your code. [About licenses](#)

#### Clone the forked repo:

Git clone <https://github.com/bhargavikeni12/MySecondRepo89.git>

```
USER@DESKTOP-846S1HM MINGW64 ~/bhargavifolder89 (master)
$ git clone https://github.com/bhargavikeni12/MySecondRepo89.git
Cloning into 'MySecondRepo89'...
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
Receiving objects: 100% (3/3), done.
```

Cd MysecondRepo89

```
USER@DESKTOP-846S1HM MINGW64 ~/bhargavifolder89 (master)
$ cd MySecondRepo89
```

**Create a branch:**

git checkout -b feature

```
USER@DESKTOP-846S1HM MINGW64 ~/bhargavifolder89/MySecondRepo89 (main)
$ git checkout -b feature
Switched to a new branch 'feature'
```

**. Make Changes & Commit**

echo "Feature added" >> newfile.txt

git add .

git commit -m "Added new feature"

```
USER@DESKTOP-846S1HM MINGW64 ~/bhargavifolder89/MySecondRepo89 (feature)
$ echo "Feature added" >> bharnewfile.txt
```

Git add .

```
USER@DESKTOP-846S1HM MINGW64 ~/bhargavifolder89/MySecondRepo89 (feature)
$ git add .
warning: in the working copy of 'bharnewfile.txt', LF will be replaced by CRLF the next time Git touches it
```

```
USER@DESKTOP-846S1HM MINGW64 ~/bhargavifolder89/MySecondRepo89 (feature)
$ git commit -m "Added new feature"
[feature bd49875] Added new feature
1 file changed, 1 insertion(+)
create mode 100644 bharnewfile.txt
```

**Merge branch into main:**

git checkout main

git merge feature

```
USER@DESKTOP-846S1HM MINGW64 ~/bhargavifolder89/MySecondRepo89 (feature)
$ git branch
* feature
  main
```

```
USER@DESKTOP-846S1HM MINGW64 ~/bhargavifolder89/MySecondRepo89 (feature)
$ git checkout main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.
```

### Rebase branch (alternative to merge):

git checkout feature

git rebase main

```
USER@DESKTOP-846S1HM MINGW64 ~/bhargavifolder89/MySecondRepo89 (main)
$ git checkout feature
Switched to branch 'feature'
```

```
USER@DESKTOP-846S1HM MINGW64 ~/bhargavifolder89/MySecondRepo89 (feature)
$ git checkout main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.
```

```
USER@DESKTOP-846S1HM MINGW64 ~/bhargavifolder89/MySecondRepo89 (main)
$ git merge feature
Updating fd2c729..bd49875
Fast-forward
 bharnewfile.txt | 1 +
 1 file changed, 1 insertion(+)
 create mode 100644 bharnewfile.txt
```

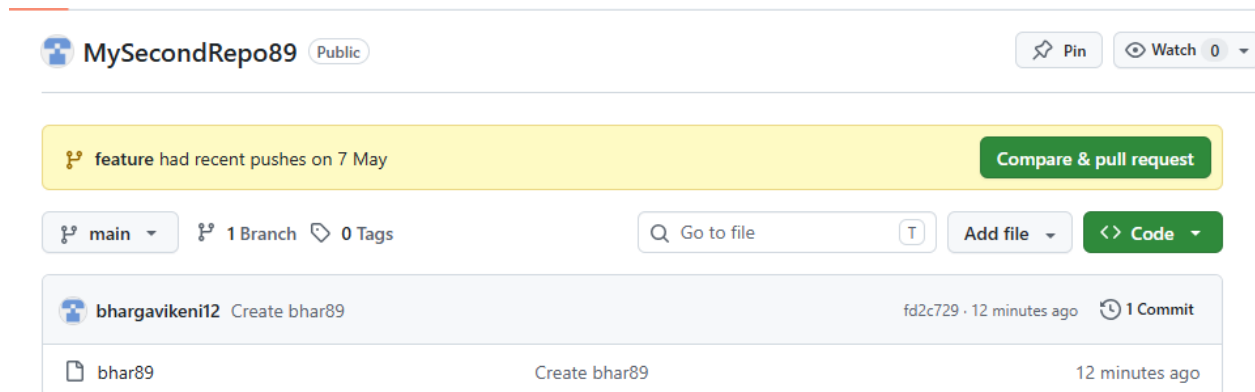
```
USER@DESKTOP-846S1HM MINGW64 ~/bhargavifolder89/MySecondRepo89 (main)
$ git rebase main
Current branch main is up to date.
```

## Push to GitHub: git push origin feature


```
USER@DESKTOP-846S1HM MINGW64 ~/bhargavifolder89/MySecondRepo89 (main)
$ git push origin feature
git: 'credential-mana' is not a git command. See 'git --help'.


The most similar command is
  credential-manager
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 20 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 299 bytes | 299.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: Create a pull request for 'feature' on GitHub by visiting:
remote:   https://github.com/bhargavikeni12/MySecondRepo89/pull/new/feature
remote:
To https://github.com/bhargavikeni12/MySecondRepo89.git
 * [new branch]      feature -> feature
```




## Output



MySecondRepo89 Public Pin Watch 0

 feature had recent pushes on 7 May Compare & pull request

 main 1 Branch 0 Tags  Add file Code

Commit	Author	Message	Time
 fd2c729	 bhargavikeni12	Create bhar89	12 minutes ago
 bhar89		Create bhar89	12 minutes ago

## Practical - 3

### Using Git for Collaboration

Clones the repo: git clone

git clone https://github.com/bhargavikeni12/MysecondRepo.git

```
USER@DESKTOP-846S1HM MINGW64 ~/bhargavifolder89 (master)
$ git clone https://github.com/bhargavikeni12/MySecondRepo89.git
Cloning into 'MySecondRepo89'...
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
Receiving objects: 100% (3/3), done.
```

cd MySecondRepo

```
USER@DESKTOP-846S1HM MINGW64 ~/bhargavifolder89 (master)
$ cd MySecondRepo89
```

git checkout -b feature

```
USER@DESKTOP-846S1HM MINGW64 ~/bhargavifolder89/MySecondRepo89 (main)
$ git checkout -b feature
Switched to a new branch 'feature'
```

```
USER@DESKTOP-846S1HM MINGW64 ~/bhargavifolder89/MySecondRepo89 (feature)
$ echo "Feature added" >> bharnewfile.txt
```

git add .

```
USER@DESKTOP-846S1HM MINGW64 ~/bhargavifolder89/MySecondRepo89 (feature)
$ git add .
warning: in the working copy of 'bharnewfile.txt', LF will be replaced by CRLF the next time Git touches it
```

```
USER@DESKTOP-846S1HM MINGW64 ~/bhargavifolder89/MySecondRepo89 (feature)
$ git commit -m "Added new feature"
[feature bd49875] Added new feature
1 file changed, 1 insertion(+)
create mode 100644 bharnewfile.txt
```

## Git merge feature

```
USER@DESKTOP-846S1HM MINGW64 ~/bhargavifolder89/MySecondRepo89 (main)
$ git merge feature
Updating fd2c729..bd49875
Fast-forward
 bharnewfile.txt | 1 +
 1 file changed, 1 insertion(+)
 create mode 100644 bharnewfile.txt
```



## Git rebase main

```
USER@DESKTOP-846S1HM MINGW64 ~/bhargavifolder89/MySecondRepo89 (main)
$ git rebase main
Current branch main is up to date.
```

## git checkout -b bug-fix

```
USER@DESKTOP-846S1HM MINGW64 ~/bhargavifolder89/MySecondRepo89 (bug-fix)
$ git commit -m "Fixed a bug"
[bug-fix c90c081] Fixed a bug
 2 files changed, 2 insertions(+)
 create mode 160000 bhargavifolder89
 create mode 100644 bug.txt
```

Output:

 + 

[bhargavikeni](#) invited you to collaborate on  
**bhargavikeni/bhargav\_keni**

[Accept invitation](#)



[Decline invitation](#)

 **Owners** of bhargav\_keni will be able to see:


- Your public profile information
- [Certain activity](#) within this repository
- Country of request origin
- Your access level for this repository
- Your IP address


Is this user sending spam or malicious content?


[Block bhargavikeni](#)


  bhargavikeni12 / MySecondRepo89




[Code](#) [Issues](#) [Pull requests](#) [Actions](#) [Projects](#) [Wiki](#) [Security and quality](#) [Insights](#) [Settings](#)



 **MySecondRepo89** Public [Pin](#) [Watch](#) 0


 **feature** had recent pushes 46 minutes ago [Compare & pull request](#)

 **bug-fix** had recent pushes 9 minutes ago [Compare & pull request](#)

 **bhar** had recent pushes 44 seconds ago [Compare & pull request](#)

 **main**  4 Branches  0 Tags  [Add file](#) [Code](#)

 **bhargavikeni12** Create bhar89 fd2c729 · 54 minutes ago  1 Commit

 bhar89 Create bhar89 54 minutes ago