

Name: Rajvardhan Ganpatrao Patil
Div: A Roll No. 40

Assignment 2

- **Basic Git Commands**

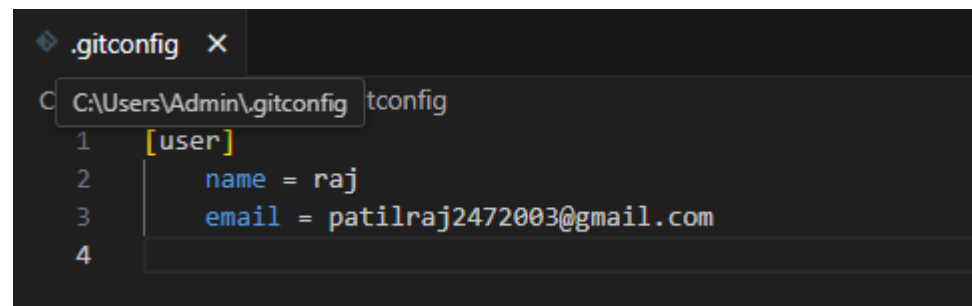
git version: Displays the installed Git version on your system.

```
Admin@L2-12 MINGW64 ~ (master)
$ git --version
git version 2.47.1.windows.1
```

git config --global: Sets global configuration settings like username and email for Git.

```
Admin@L2-12 MINGW64 ~ (master)
$ git config --global user.name "raj"

Admin@L2-12 MINGW64 ~ (master)
$ git config --global user.email "patilraj@gmail.com"
```



git init: Initializes a new Git repository in the current directory.

```
Admin@L2-12 MINGW64 ~ (master)
$ git init
Reinitialized existing Git repository in C:/Users/Admin/.git/
```

git remote add origin: Links the local repository to a remote repository.

```
Admin@L2-12 MINGW64 ~ (master)
$ git remote add origin https://github.com/rajgpatil/devopsDemo.git

Admin@L2-12 MINGW64 ~ (master)
$ git remote -v
origin https://github.com/rajgpatil/devopsDemo.git (fetch)
origin https://github.com/rajgpatil/devopsDemo.git (push)
```

Create new file

```
Admin@L2-12 MINGW64 ~ (master)
$ vi newflie.txt

Admin@L2-12 MINGW64 ~ (master)
$ vi ignore.txt
```

git add: Stages changes (files) for the next commit.

```
Admin@L2-12 MINGW64 ~ (master)
$ git add newflie.txt
warning: in the working copy of 'newflie.txt', LF will be replaced by CRLF the next time Git touches it
```

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```
Admin@L2-12 MINGW64 ~ (master)
$ git add ignore.txt
```

git reset: Unstages changes or resets commits based on provided options.

```
Admin@L2-12 MINGW64 ~ (master)
$ git reset newflie.txt
```

git diff --cached: Shows differences between the staged changes and the last commit.

```
Admin@L2-12 MINGW64 ~ (master)
$ git diff --cached
diff --git a/ignore.txt b/ignore.txt
new file mode 100644
index 0000000..e69de29
diff --git a/newflie.txt b/newflie.txt
new file mode 100644
index 0000000..3e033fa
--- /dev/null
+++ b/newflie.txt
@@ -0,0 +1 @@
+Welcom to bvimit
```

git diff --staged: Same as git diff --cached, showing staged changes.

```
Admin@L2-12 MINGW64 ~ (master)
$ git diff --staged
diff --git a/ignore.txt b/ignore.txt
new file mode 100644
index 0000000..e69de29
diff --git a/newflie.txt b/newflie.txt
new file mode 100644
index 0000000..3e033fa
--- /dev/null
+++ b/newflie.txt
@@ -0,0 +1 @@
+Welcom to bvimit

Admin@L2-12 MINGW64 ~ (master)
```

git commit: Saves staged changes as a commit with a message.

```
Admin@L2-12 MINGW64 ~ (master)
$ git commit -m "This is my first commit"
[master (root-commit) cbaa6bf] This is my first commit
2 files changed, 1 insertion(+)
create mode 100644 ignore.txt
create mode 100644 newflie.txt

Admin@L2-12 MINGW64 ~ (master)
$
```

git log: Displays the commit history of the repository.

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```
Admin@L2-12 MINGW64 ~ (master)
$ git log
commit cbaa6bf8ca8253886d8f3708f3a07bb3a2b5ee23 (HEAD -> master)
Author: raj <patilraj2472003@gmail.com>
Date: Mon Jan 20 10:01:40 2025 +0530

    This is my first commit

Admin@L2-12 MINGW64 ~ (master)
```

git clone: Creates a copy of a remote repository on your local machine.

```
Admin@L2-12 MINGW64 ~ (master)
$ git clone https://github.com/rajgpatil/devopsDemo.git
Cloning into 'devopsDemo'...
info: please complete authentication in your browser...
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.

Admin@L2-12 MINGW64 ~ (master)
```

git branch: Lists, creates, or deletes branches in a Git repository.

```
Admin@L2-12 MINGW64 ~ (master)
$ git branch newbranch

Admin@L2-12 MINGW64 ~ (master)
```

git checkout: Switches to a different branch or restores files from a commit.

```
Admin@L2-12 MINGW64 ~ (master)
$ git checkout newbranch
Switched to branch 'newbranch'

Admin@L2-12 MINGW64 ~ (newbranch)
```

git push: Uploads local commits to a remote repository (e.g., GitHub).

```
Admin@L2-12 MINGW64 ~ (master)
$ git push origin master
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 12 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (4/4), 279 bytes | 279.00 KiB/s, done.
Total 4 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: Create a pull request for 'master' on GitHub by visiting:
remote:   https://github.com/rajgpatil/devopsDemo/pull/new/master
remote:
To https://github.com/rajgpatil/devopsDemo.git
 * [new branch]      master -> master

Admin@L2-12 MINGW64 ~ (master)
```

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- Create and fork repositories in GitHub, Apply branch, merge, rebase concepts.

Clone the repository

```
Admin@L2-12 MINGW64 ~ (master)
$ git clone https://github.com/rajgpatil/devopsDemo.git
Cloning into 'devopsDemo'...
info: please complete authentication in your browser...
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.

Admin@L2-12 MINGW64 ~ (master)
```

Create 2 branches, 1 is for merge and another is for rebase then switch to mergebranch

```
Admin@L2-12 MINGW64 ~ (newbranch)
$ git branch mergebranch

Admin@L2-12 MINGW64 ~ (newbranch)
$ git branch rebasebranch

Admin@L2-12 MINGW64 ~ (newbranch)
$ git checkout mergebranch
Switched to branch 'mergebranch'
```

Create new file and add, commit or push that file

```
Admin@L2-12 MINGW64 ~ (mergebranch)
$ vi newfile.txt
```

```
Admin@L2-12 MINGW64 ~ (mergebranch)
$ git add newfile.txt
warning: in the working copy of 'newfile.txt', LF will be replaced by CRLF the next time Git touches it

Admin@L2-12 MINGW64 ~ (mergebranch)
$ git commit -m "add newfile"
[mergebranch 23d0151] add newfile
1 file changed, 1 insertion(+)
create mode 100644 newfile.txt
```

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```
Admin@L2-12 MINGW64 ~ (mergebranch)
$ git push origin mergebranch
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 12 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 316 bytes | 316.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: Create a pull request for 'mergebranch' on GitHub by visiting:
remote:   https://github.com/rajgpatil/devopsDemo/pull/new/mergebranch
remote:
To https://github.com/rajgpatil/devopsDemo.git
 * [new branch]      mergebranch -> mergebranch
```

Switch to master branch

```
Admin@L2-12 MINGW64 ~ (mergebranch)
$ git checkout master
Switched to branch 'master'

Admin@L2-12 MINGW64 ~ (master)
```

Pull the content from github

```
Admin@L2-12 MINGW64 ~ (master)
$ git pull origin master
From https://github.com/rajgpatil/devopsDemo
 * branch      master      -> FETCH_HEAD
Already up to date.

Admin@L2-12 MINGW64 ~ (master)
$ git branch --merged
* master
  newbranch
  rebasebranch
```

Merge the mergebranch with master branch

```
Admin@L2-12 MINGW64 ~ (master)
$ git merge mergebranch
Updating cbaa6bf..23d0151
Fast-forward
 newfile.txt | 1 +
 1 file changed, 1 insertion(+)
 create mode 100644 newfile.txt
```

Rebase the rebasebranch with master branch

```
Admin@L2-12 MINGW64 ~ (master)
$ git rebase rebasebranch
Current branch master is up to date.
```

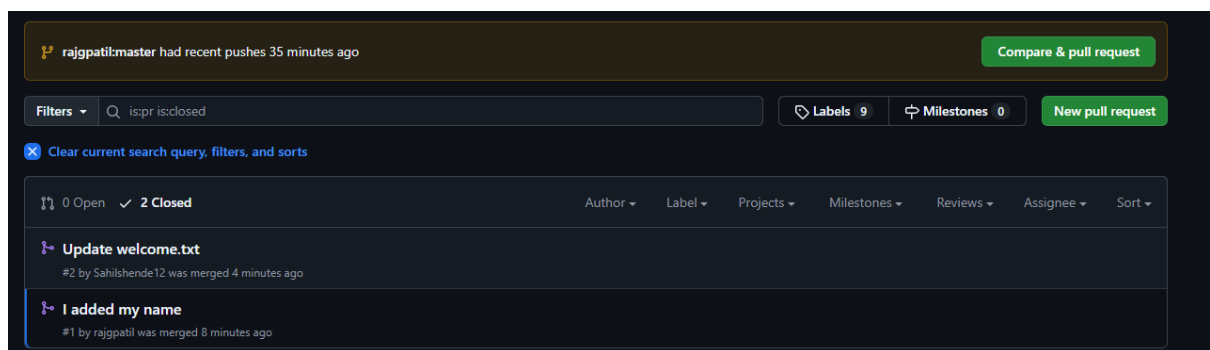
- **Using Git for Collaboration**

Go to Settings->>Collaborators->> Add people->>Search id of that person which you want to Collaborate ->> The invited person will get a GitHub notification or email.->> They must accept the invitation to get access.

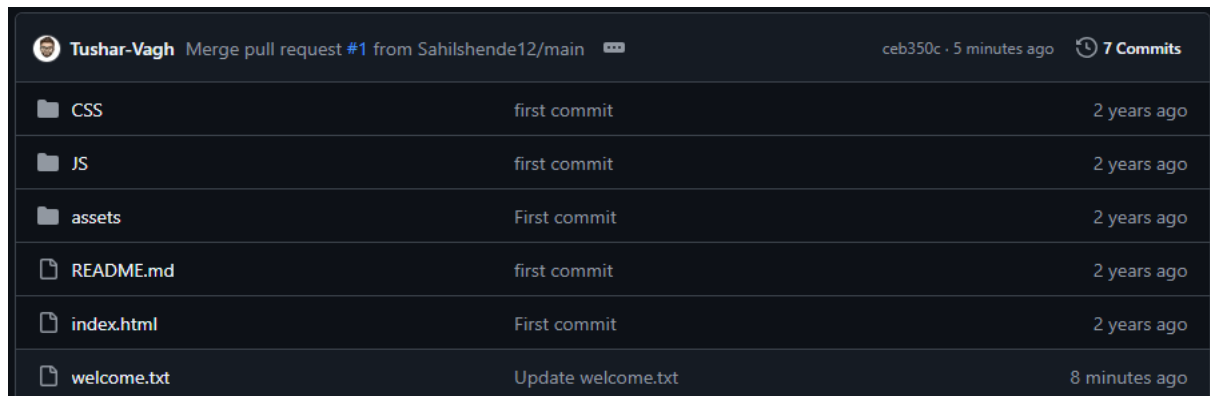
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Add a new file

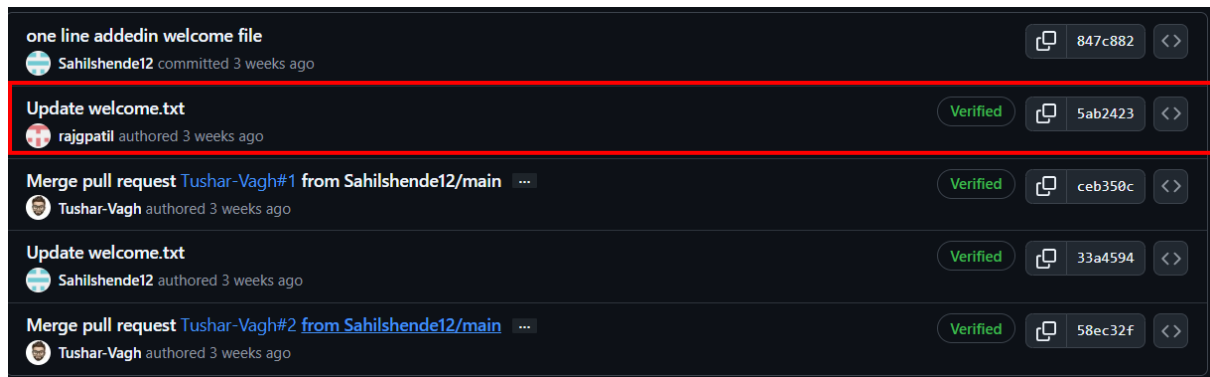


Send pull request



After Merge the pull request

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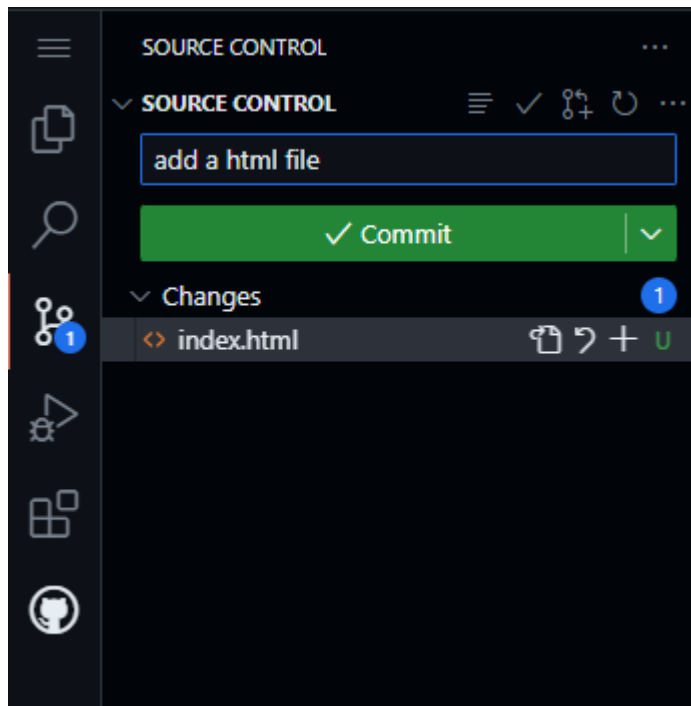


- Collaborating and Cloning using Github

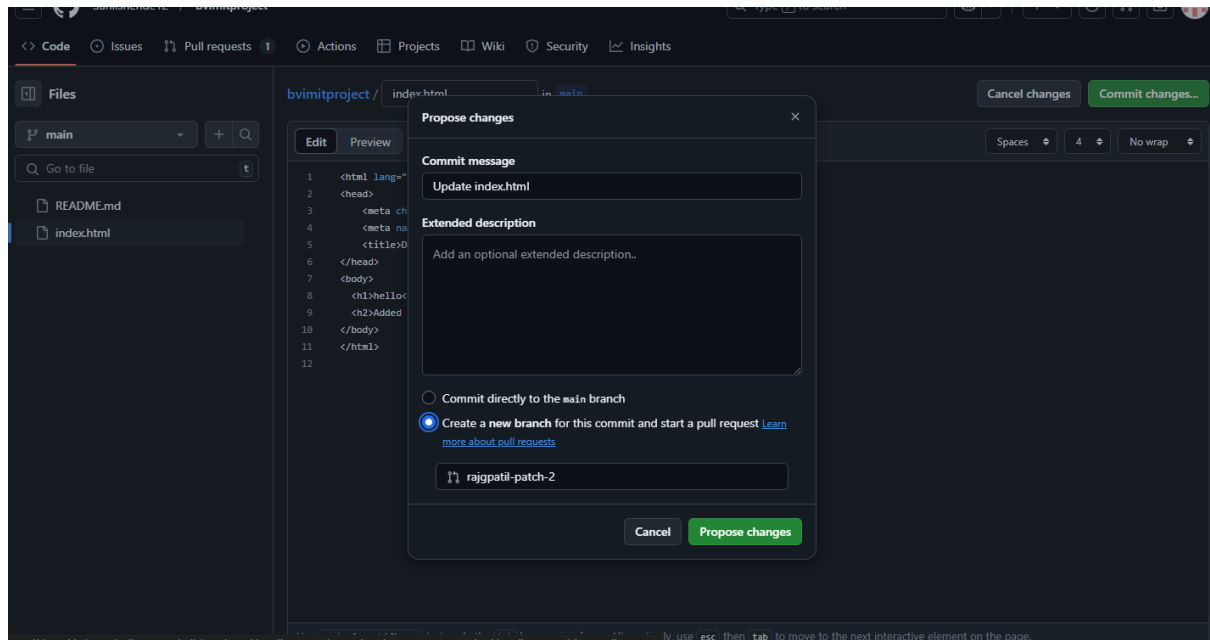
Go to Settings->>Collaborators->> Add people->>Search id of that person which you want to Collaborate ->> The invited person will get a GitHub notification or email.->> They must accept the invitation to get access.



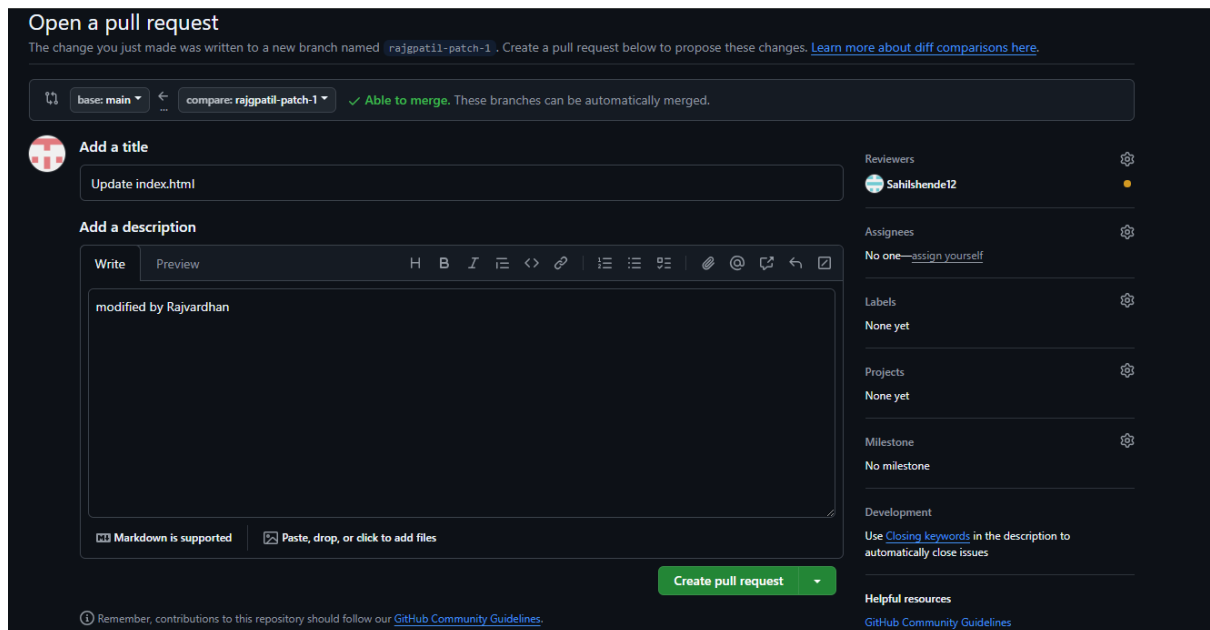
Create the new file



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Create pull Request








Add the comment message

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Update index.html #1


 Open rajgpatil wants to merge 1 commit into `main` from `rajgpatil-patch-1` 



 Conversation **0**  Commits **1**  Checks **0**  Files changed **1**






rajgpatil commented 3 minutes ago Collaborator ...

modified by Rajvardhan




 Update index.html ... Verified 51eebd3

 **rajgpatil** requested a review from **Sahilshende12** 3 minutes ago




rajgpatil commented now Collaborator Author ...

please accept my req. sahil




After Accept the merge request

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 **bvimitproject** Public


Pin Unwatch 1


 **Your main branch isn't protected**
Protect this branch from force pushing or deletion, or require status checks before merging. [View documentation.](#) Protect this branch ×

main 4 Branches 0 Tags

t


Add file <> Code

 **Sahilshende12** Merge pull request #1 from Sahilshende12/rajgpatil-patch-1 a1ca0b8 · 1 minute ago 9 Commits

 README.md

Create README.md

30 minutes ago

 index.html

Merge branch 'main' into rajgpatil-patch-1

1 minute ago

README

bvimitproject

Updated File

bvimitproject / index.html

...

 **Sahilshende12** Merge branch 'main' into rajgpatil-patch-1 2202371 · 2 minutes ago History

Code Blame 11 lines (11 loc) · 253 Bytes Code 55% faster with GitHub Copilot

Raw

```
1 <html lang="en">
2 <head>
3   <meta charset="UTF-8">
4   <meta name="viewport" content="width=device-width, initial-scale=1.0">
5   <title>Document</title>
6 </head>
7 <body>
8   <h1>hello</h1>
9   <h2>Added new Content by Rajvardhan Patil</h2>
10 </body>
11 </html>
```

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Cloning

Make Clone of Repo

```
Admin@IMITNM-DES-0032 MINGW64 ~/project_demo (master)
$ git clone https://github.com/rajgpatil/collaburationDemo.git
Cloning into 'collaburationDemo'...
remote: Enumerating objects: 6, done.
remote: Counting objects: 100% (6/6), done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 6 (delta 0), reused 3 (delta 0), pack-reused 0 (from 0)
Receiving objects: 100% (6/6), done.

Admin@IMITNM-DES-0032 MINGW64 ~/project_demo (master)
$ ls
Readme.md  collaburationDemo/
```

Create new branch

```
Admin@IMITNM-DES-0032 MINGW64 ~/project_demo (master)
$ git checkout -b featureAddContent
Switched to a new branch 'featureAddContent'
```

Add, commit and push the new file

```
Admin@IMITNM-DES-0032 MINGW64 ~/project_demo (featureAddContent)
$ git add Readme.md
warning: in the working copy of 'Readme.md', LF will be replaced by CRLF the next time Git touches it

Admin@IMITNM-DES-0032 MINGW64 ~/project_demo (featureAddContent)
$ git status
On branch featureAddContent
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        modified:   Readme.md

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

Admin@IMITNM-DES-0032 MINGW64 ~/project_demo (featureAddContent)
$ git commit -m "add new file by anather user"
[featureAddContent 322a3ea] add new file by anather user
1 file changed, 1 insertion(+)

Admin@IMITNM-DES-0032 MINGW64 ~/project_demo (featureAddContent)
$ git push -u origin featureAddContent
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Writing objects: 100% (3/3), 279 bytes | 279.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: Create a pull request for 'featureAddContent' on GitHub by visiting:
remote:   https://github.com/rajgpatil/collaburationDemo/pull/new/featureAddContent
remote:
To https://github.com/rajgpatil/collaburationDemo.git
 * [new branch]      featureAddContent -> featureAddContent
branch 'featureAddContent' set up to track 'origin/featureAddContent'.
```

Commits

featureAddConte...

All usersAll time

Commits on Feb 3, 2025

add new file by anather user

raj committed 1 minute ago322a3ea

add a readme.md file

raj committed 15 minutes agoe25dFdb

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Create pull Request

The screenshot shows the GitHub 'Comparing changes' page. At the top, it says 'Comparing changes' and provides a link to 'compare across forks' or 'learn more about diff comparisons'. Below this, there are two dropdown menus: 'base: master' and 'compare: featureAddContent'. A green checkmark indicates 'Able to merge. These branches can be automatically merged.' To the right of these dropdowns is a green button labeled 'Create pull request'. Below the dropdowns, there is a section for 'Discuss and review the changes in this comparison with others. Learn about pull requests'. Further down, it shows '1 commit', '1 file changed', and '1 contributor'. A commit message 'add new file by another user' by 'raj' is shown, committed 7 minutes ago. At the bottom, it shows a diff for 'Readme.md' with a table of changes:

File	Changes
1 Project Demo	1 Project Demo
	2 + Collaboration Demo

Add Comment for pull request

The screenshot shows the GitHub pull request page for 'add new file by another user #1'. The title is 'add new file by another user #1'. Below the title, it says 'rajgpatil wants to merge 1 commit into master from featureAddContent'. There are tabs for 'Conversation' (0), 'Commits' (1), 'Checks' (0), and 'Files changed' (1). A comment by 'rajgpatil' is shown, stating 'create a pull req'. Below the comment, there is a section for 'add new file by another user' by '322a3ea'. At the bottom, there are three status messages: 'Require approval from specific reviewers before merging', 'Continuous integration has not been set up', and 'This branch has no conflicts with the base branch'. A green button labeled 'Merge pull request' is at the bottom left, and a link to 'open this in GitHub Desktop' or 'view command line instructions' is at the bottom right.

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After accept the merge request



Updated file

