

## **Practical No. 1**

**Aim:** Basic git commands

```
HP@DESKTOP-EC20IPO MINGW64 ~  
$ mkdir my-git-project
```

```
HP@DESKTOP-EC20IPO MINGW64 ~  
$ mkdir my-git-project
```

```
HP@DESKTOP-EC20IPO MINGW64 ~  
$ cd my-git-project
```

```
HP@DESKTOP-EC20IPO MINGW64 ~  
$ cd my-git-project
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/my-git-project
```

```
$ git init  
Initialized empty Git repository in C:/Users/HP/my-git-project/.git/
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/my-git-project  
$ git init  
Initialized empty Git repository in C:/Users/HP/my-git-project/.git/
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/my-git-project (master)
```

```
$ git config --global user.email devopsproject@example.com
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/my-git-project (master)  
$ git config --global user.email devopsproject@example.com
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/my-git-project (master)
```

```
$ git config --global user.name "DevOpsProject Group"
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/my-git-project (master)  
$ git config --global user.name "DevOpsProject Group"
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/my-git-project (master)
```

```
$ touch index.html
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/my-git-project (master)  
$ touch index.html
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/my-git-project (master)
```

```
$ vi index.html
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/my-git-project (master)  
$ vi index.html
```

```
MINGW64:/c/Users/HP/my-git-project  
Welcome to SSCMR!  
MCA Batch is performing a practical!!!  
~
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/my-git-project (master)
```

```
$ cat index.html
```

```
Welcome to SSCMR!
```

```
MCA Batch is performing a practical!!!
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/my-git-project (master)
$ cat index.html
Welcome to SSCMR!
MCA Batch is performing a practical!!!
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/my-git-project (master)
```

```
$ git add .
```

```
warning: in the working copy of 'index.html', LF will be replaced by CRLF the next time Git touches it
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/my-git-project (master)
$ git add .
warning: in the working copy of 'index.html', LF will be replaced by CRLF
next time Git touches it
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/my-git-project (master)
```

```
$ git status
```

```
On branch master
```

```
No commits yet
```

```
Changes to be committed:
```

```
(use "git rm --cached <file>..." to unstage)
```

```
    new file: index.html
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/my-git-project (master)
$ git status
On branch master

No commits yet

Changes to be committed:
(use "git rm --cached <file>..." to unstage)
    new file: index.html
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/my-git-project (master)
```

```
$ git commit -m "index.html create by DevOpsGroup"
```

```
[master (root-commit) d155245] index.html create by DevOpsGroup
```

```
1 file changed, 2 insertions(+)
```

```
create mode 100644 index.html
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/my-git-project (master)
$ git commit -m "index.html create by DevOpsGroup"
[master (root-commit) d155245] index.html create by DevOpsGroup
1 file changed, 2 insertions(+)
create mode 100644 index.html
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/my-git-project (master)
```

```
$ vim index.html
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/my-git-project (master)
$ vim index.html
```

```
MINGW64:/c/Users/HP/my-git-project
Welcome to SSCMR!
MCA Batch is performing a practical!!!|
~
```

HP@DESKTOP-EC20IPO MINGW64 ~/my-git-project (master)  
\$ git status

On branch master

nothing to commit, working tree clean

```
HP@DESKTOP-EC20IPO MINGW64 ~/my-git-project (master)
$ git status
On branch master
nothing to commit, working tree clean
```

HP@DESKTOP-EC20IPO MINGW64 ~/my-git-project (master)  
\$ git log  
commit d155245bca4b0e9db879119282ff6fa3d282f242 (HEAD -> master)  
Author: DevOpsProject Group <devopsproject@example.com>  
Date: Fri Apr 25 18:55:39 2025 +0530

index.html create by DevOpsGroup

```
HP@DESKTOP-EC20IPO MINGW64 ~/my-git-project (master)
$ git log
commit d155245bca4b0e9db879119282ff6fa3d282f242 (HEAD -> master)
Author: DevOpsProject Group <devopsproject@example.com>
Date: Fri Apr 25 18:55:39 2025 +0530

index.html create by DevOpsGroup
```

HP@DESKTOP-EC20IPO MINGW64 ~/my-git-project (master)  
\$ git restore index.html

```
HP@DESKTOP-EC20IPO MINGW64 ~/my-git-project (master)
$ git restore index.html
```

HP@DESKTOP-EC20IPO MINGW64 ~/my-git-project (master)  
\$ git status  
On branch master  
nothing to commit, working tree clean

```
HP@DESKTOP-EC20IPO MINGW64 ~/my-git-project (master)
$ git status
On branch master
nothing to commit, working tree clean
```

HP@DESKTOP-EC20IPO MINGW64 ~/my-git-project (master)  
\$ echo "node\_modules/" > .gitignore

```
HP@DESKTOP-EC20IPO MINGW64 ~/my-git-project (master)
$ echo "node_modules/" > .gitignore
```

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**#Git Ammend:**

```
HP@DESKTOP-EC20IPO MINGW64 ~  
$ mkdir DevA
```

```
HP@DESKTOP-EC20IPO MINGW64 ~  
$ mkdir DevA
```

```
HP@DESKTOP-EC20IPO MINGW64 ~  
$ cd DevA
```

```
HP@DESKTOP-EC20IPO MINGW64 ~  
$ cd DevA
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/DevA  
$ touch file1.txt
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/DevA  
$ touch file1.txt
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/DevA  
$ ls
```

```
file1.txt
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/DevA  
$ ls  
file1.txt
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/DevA
```

```
$ ls -al  
total 16  
drwxr-xr-x 1 HP 197121 0 Apr 25 19:01 ./  
drwxr-xr-x 1 HP 197121 0 Apr 25 19:00 ../  
-rw-r--r-- 1 HP 197121 0 Apr 25 19:01 file1.txt
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/DevA  
$ ls -al  
total 16  
drwxr-xr-x 1 HP 197121 0 Apr 25 19:01 ./  
drwxr-xr-x 1 HP 197121 0 Apr 25 19:00 ../  
-rw-r--r-- 1 HP 197121 0 Apr 25 19:01 file1.txt
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/DevA
```

```
$ vi file1.txt  
#To insert Text in file we need to first press (i)  
#After Insertion Press (esc), then Enter (:wq)
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/DevA  
$ vi file1.txt
```

```
MINGW64:/c/Users/HP/DevA  
Hello world, SSCMR Welcomes You all...  
~  
~  
file1.txt[+] [unix] (19:01 25/04/2025)  
:wq
```

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---

```
HP@DESKTOP-EC20IPO MINGW64 ~/DevA
```

```
$ cat file1.txt
```

```
Hello World, SSCMR Welcomes You all...
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/DevA
```

```
$ cat file1.txt
```

```
Hello World, SSCMR Welcomes You all...
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/DevA
```

```
$ git --version
```

```
git version 2.47.0.windows.1
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/DevA
```

```
$ git --version
```

```
git version 2.47.0.windows.1
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/DevA
```

```
$ git config --global user.name "SSCMRGroup"
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/DevA
```

```
$ git config --global user.name "SSCMRGroup"
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/DevA
```

```
$ git config --global user.email "abc@123gmail.com"
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/DevA
```

```
$ git config --global user.email "abc@123gmail.com"
```

```
$ git status
```

```
On branch master  
nothing to commit, working tree clean
```

```
$ git add .
```

```
$ git commit -m "Storing file1.txt"
```

```
[master (root-commit) 119d80c] Storing file1.txt  
2 files changed, 1 insertion(+)  
create mode 100644 .file1.txt.swp  
create mode 100644 file1.txt
```

```
$ git log
```

```
commit 119d80cf27b4187c5df086e7a506a2a390914bec (HEAD -> master)
```

```
Author: Saurabh <abc@123gmail.com>
```

```
Date: Mon Feb 10 14:36:15 2025 +0530
```

```
    Storing file1.txt
```

```
$ touch file2.txt
```

```
$ vi file2.txt
```

```
This is file2.txt
```

```
$ cat file2.txt
```

```
This is file2
```

```
$ git status
On branch master
Untracked files:
  (use "git add <file>..." to include in what will be committed)
```

```
$ git commit --amend
Ammended file2.txt
[master 17b8fc9] Ammended file2.txt
  Date: Mon Feb 10 15:09:16 2025 +0530
  1 file changed, 1 insertion(+)
  create mode 100644 file2.txt
```

```
$ git log
commit 17b8fc91fa6295728bbcf107e6a5ed7e0ec72472 (HEAD -> master)
Author: Saurabh <abc@123gmail.com>
Date:   Mon Feb 10 15:09:16 2025 +0530

    Ammended file2.txt

commit 119d80cf27b4187c5df086e7a506a2a390914bec
Author: Saurabh <abc@123gmail.com>
Date:   Mon Feb 10 14:36:15 2025 +0530

    Storing file1.txt
```

## **Practical No. 2**

**Aim: Create and fork Repositories in GitHub, Apply branch, merge, rebase concepts.**

**Code:**

**#Fork**

### **Step 1: Created a Repository in Amit6103 Account**

**Create a new repository**

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

Required fields are marked with an asterisk (\*).

Owner \*      Repository name \*

Amit6103 / DevOps\_Repo  
 DevOps\_Repo is available.

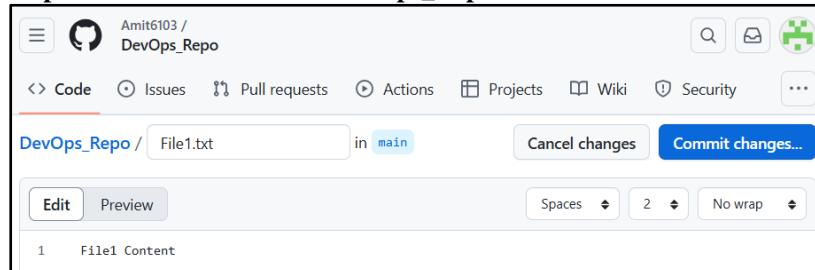
Great repository names are short and memorable. Need inspiration? How about [literate-octo-engine](#) ?

Description (optional)

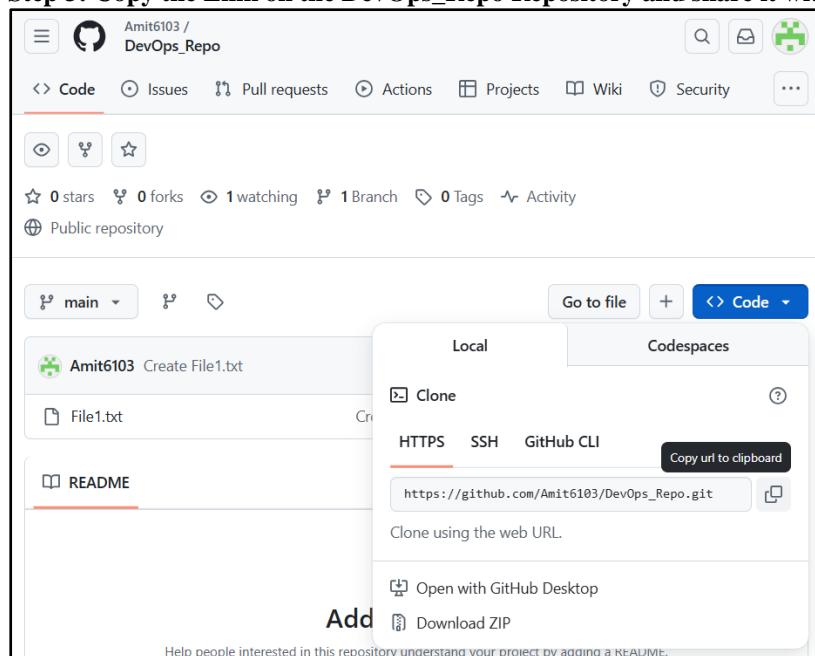
Public  
Anyone on the internet can see this repository. You choose who can commit.

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

### **Step 2: Add new File1.txt in DevOps\_Repo**

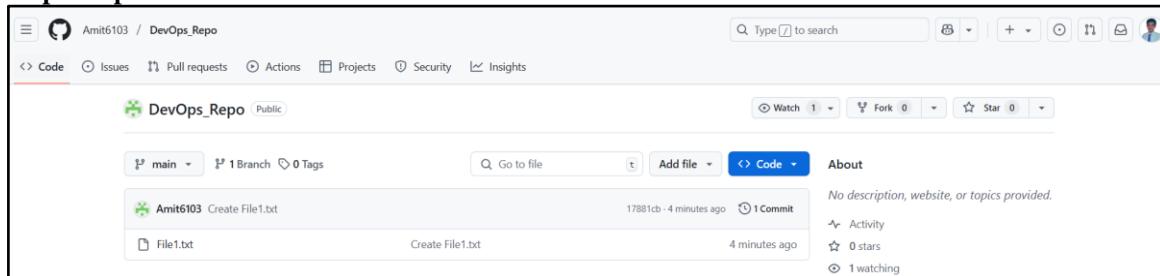


### **Step 3: Copy the Link on the DevOps\_Repo Repository and share it with Another Account.**



## **MCAL23 Devops Lab**

### **Step 4: Open the shared link in Another Account and then click on Fork**



Amit6103 / DevOps\_Repo

Code Issues Pull requests Actions Projects Security Insights

DevOps\_Repo (Public)

main 1 Branch 0 Tags Go to file Add file Code About

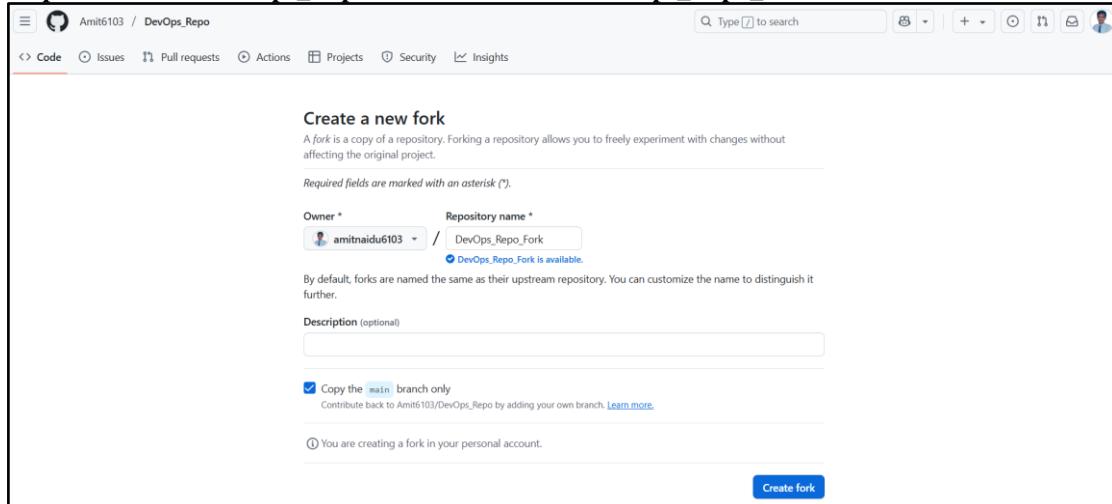
Amit6103 Create File1.txt 17881cb · 4 minutes ago 1 Commit

File1.txt Create File1.txt 4 minutes ago

No description, website, or topics provided.

Activity 0 stars 1 watching

### **Step 5: Fork The DevOps\_Repo from Main Acc as DevOps\_Repo\_Fork**



Amit6103 / DevOps\_Repo

Code Issues Pull requests Actions Projects Security Insights

Create a new fork

A fork is a copy of a repository. Forking a repository allows you to freely experiment with changes without affecting the original project.

Required fields are marked with an asterisk (\*).

Owner \* Repository name \*

amitnaidu6103 / DevOps\_Repo\_Fork DevOps\_Repo\_Fork is available.

By default, forks are named the same as their upstream repository. You can customize the name to distinguish it further.

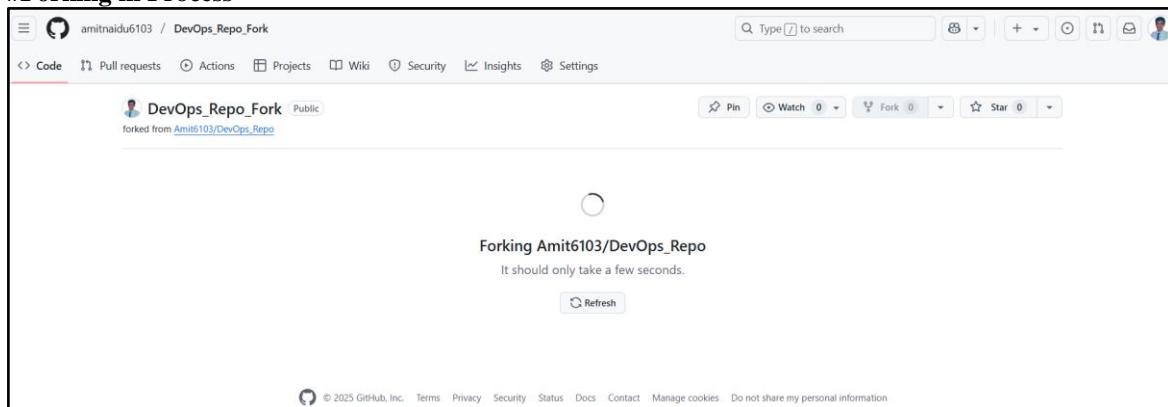
Description (optional)

Copy the main branch only  
Contribute back to Amit6103/DevOps\_Repo by adding your own branch. [Learn more](#).

You are creating a fork in your personal account.

Create fork

### **#Forking in Process**



amitnaidu6103 / DevOps\_Repo\_Fork

Code Pull requests Actions Projects Wiki Security Insights Settings

DevOps\_Repo\_Fork (Public)

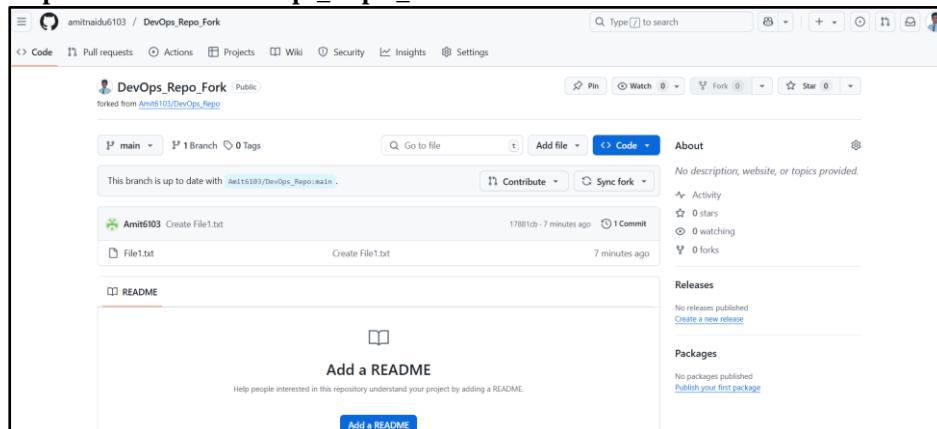
forked from Amit6103/DevOps\_Repo

Forking Amit6103/DevOps\_Repo

It should only take a few seconds.

Refresh

### **Step 6: Add File in DevOps\_Repo\_Fork.**



amitnaidu6103 / DevOps\_Repo\_Fork

Code Pull requests Actions Projects Wiki Security Insights Settings

DevOps\_Repo\_Fork (Public)

forked from Amit6103/DevOps\_Repo

main 1 Branch 0 Tags Go to file Add file Code About

This branch is up to date with Amit6103/DevOps\_Repo:main.

Amit6103 Create File1.txt 17881cb · 7 minutes ago 1 Commit

File1.txt Create File1.txt 7 minutes ago

README

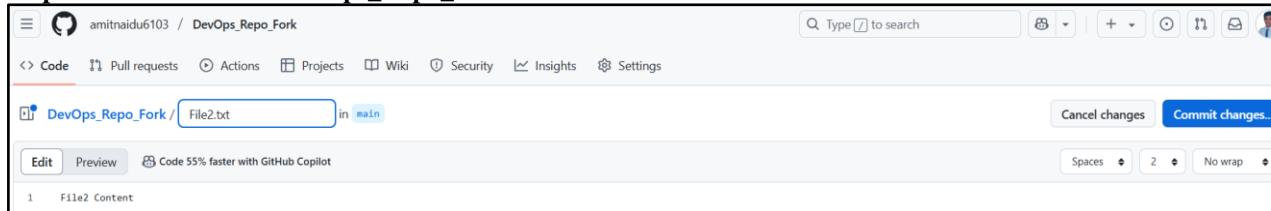
Add a README

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

Add a README

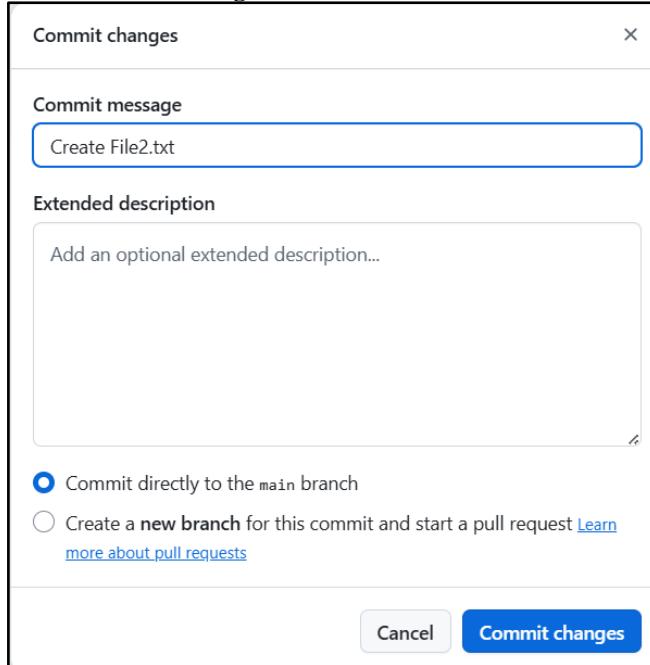
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**Step 7: Add File2.txt in DevOps\_Repo\_Fork**



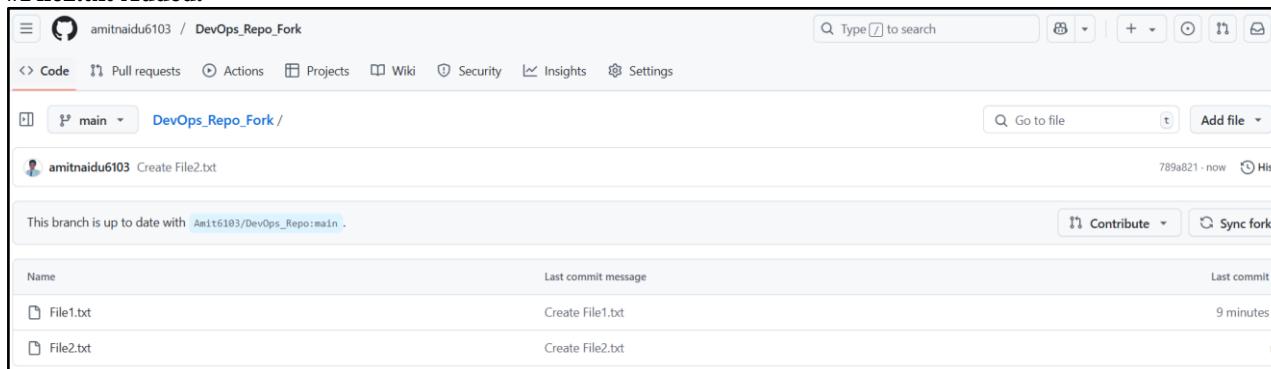
The screenshot shows a GitHub repository page for 'amitnaidu6103 / DevOps\_Repo\_Fork'. The 'Code' tab is selected. A file named 'File2.txt' is being added to the 'main' branch. The commit message is 'Create File2.txt'. The 'Commit changes...' button is visible at the top right.

**#Commit The Changes**



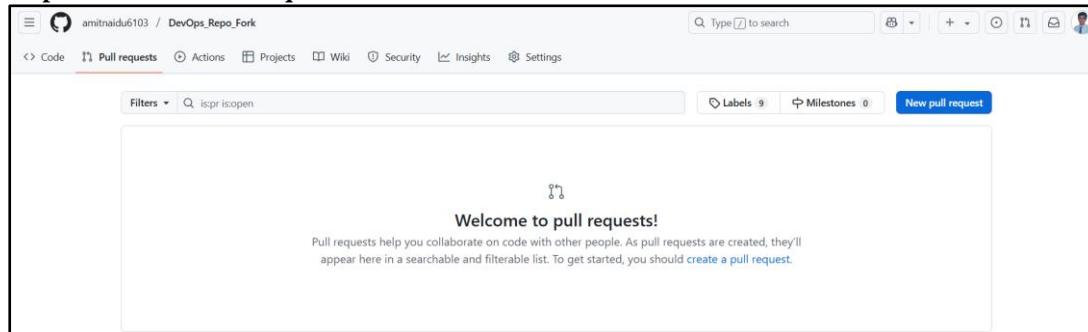
The screenshot shows the 'Commit changes' dialog box. The 'Commit message' field contains 'Create File2.txt'. The 'Extended description' field has the placeholder 'Add an optional extended description...'. Below the fields are two radio button options: 'Commit directly to the main branch' (selected) and 'Create a new branch for this commit and start a pull request'. At the bottom are 'Cancel' and 'Commit changes' buttons.

**#File2.txt Added.**



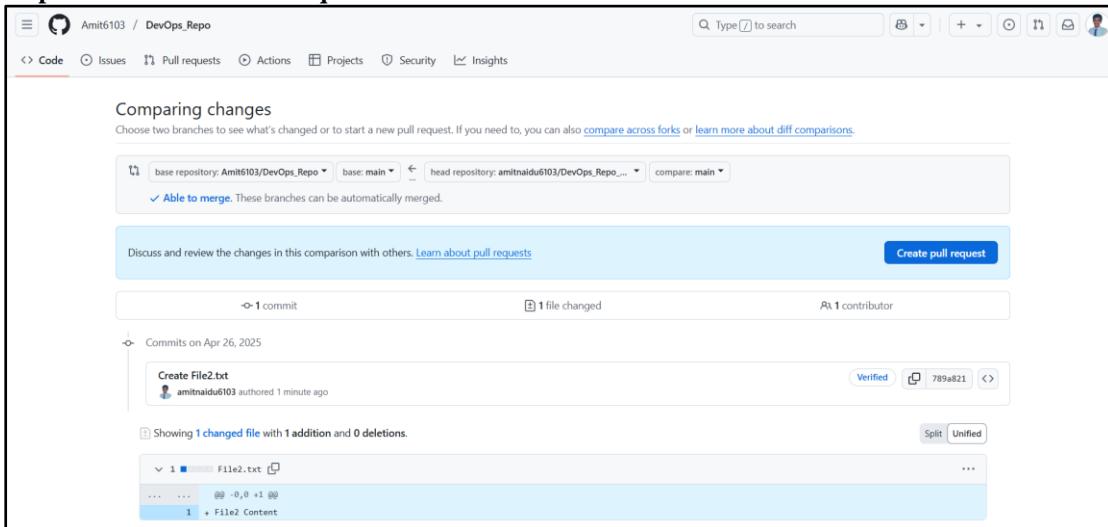
The screenshot shows the GitHub repository page again. The 'main' branch is selected. A commit titled 'Create File2.txt' by 'amitnaidu6103' is listed. The commit message is 'Create File2.txt'. The status bar indicates the branch is up to date with 'Amit6103/DevOps\_Repo:main'. The commit was made 9 minutes ago.

**Step 8: Click on Pull Request Tab.**



The screenshot shows the GitHub repository page with the 'Pull requests' tab selected. A search bar at the top includes filters for 'ispr' and 'isopen'. A large central area displays a message: 'Welcome to pull requests! Pull requests help you collaborate on code with other people. As pull requests are created, they'll appear here in a searchable and filterable list. To get started, you should [create a pull request](#)'. A 'New pull request' button is located at the top right of this section.

**Step 9: Create New Pull Request.**



Comparing changes

Choose two branches to see what's changed or to start a new pull request. If you need to, you can also compare across forks or learn more about diff comparisons.

base repository: Amit6103/DevOps\_Repo base: main head repository: amitnaidu6103/DevOps\_Repo... compare: main

Able to merge. These branches can be automatically merged.

Discuss and review the changes in this comparison with others. Learn about pull requests

Create pull request

1 commit 1 file changed 1 contributor

Commits on Apr 26, 2025

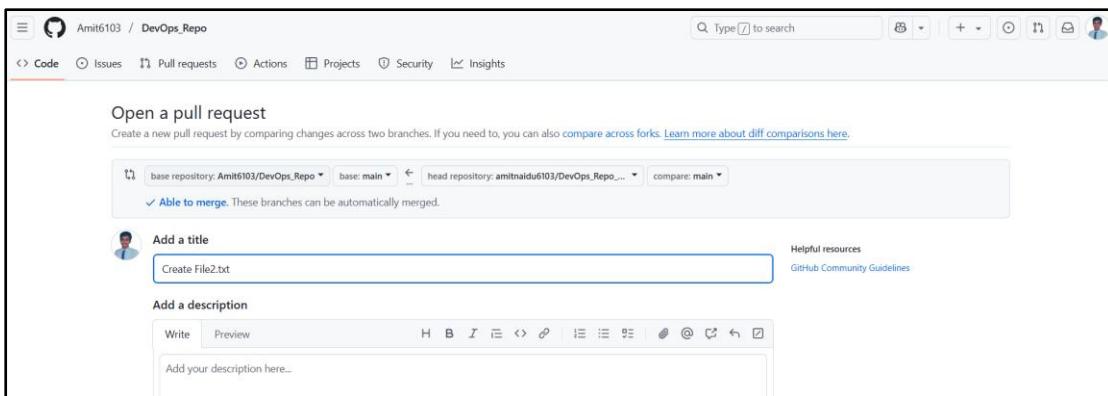
Create File2.txt  
amitnaidu6103 authored 1 minute ago

Verified 789a821

Showing 1 changed file with 1 addition and 0 deletions.

File2.txt

1 + File2 Content



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. Learn more about diff comparisons here.

base repository: Amit6103/DevOps\_Repo base: main head repository: amitnaidu6103/DevOps\_Repo... compare: main

Able to merge. These branches can be automatically merged.

Add a title

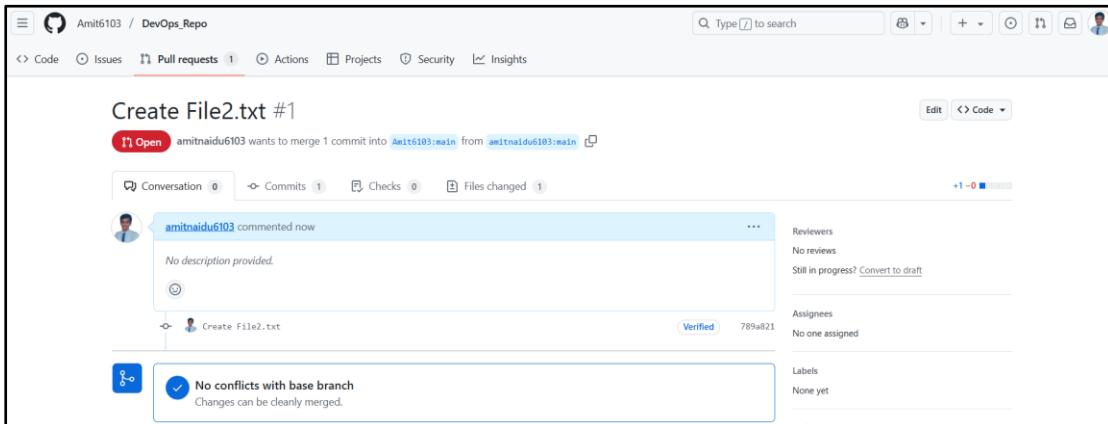
Create File2.txt

Add a description

Write Preview

Helpful resources

GitHub Community Guidelines



Create File2.txt #1

Open amitnaidu6103 wants to merge 1 commit into Amit6103:main from amitnaidu6103:main

Conversation 0 Commits 1 Checks 0 Files changed 1

amitnaidu6103 commented now

No description provided.

Create File2.txt

Verified 789a821

No conflicts with base branch

Changes can be cleanly merged.

Reviewers

No reviews

Still in progress? Convert to draft

Assignees

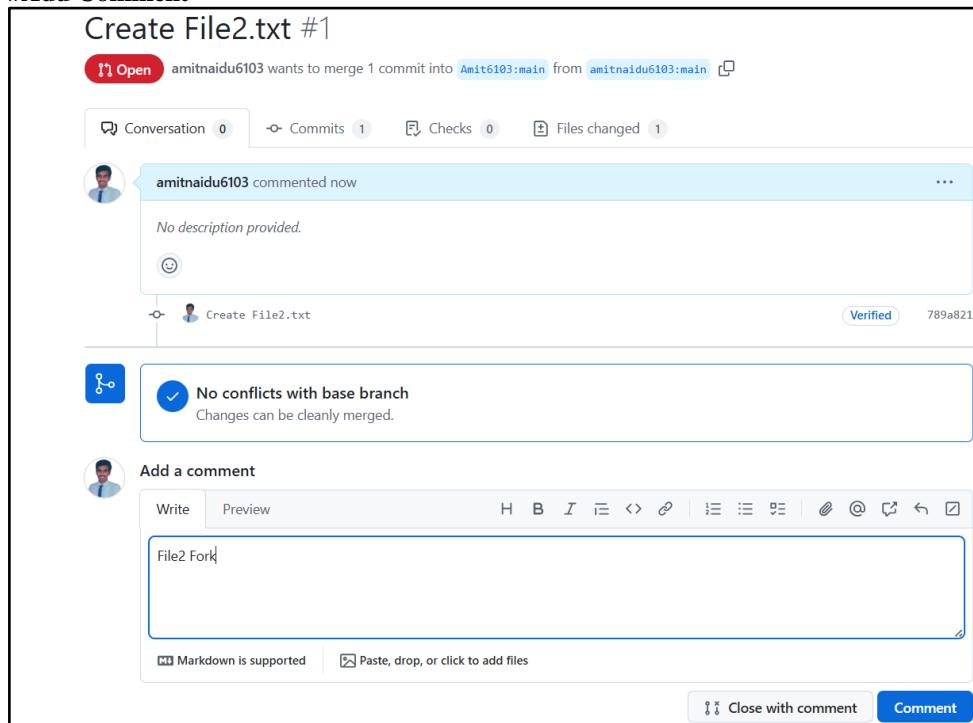
No one assigned

Labels

None yet

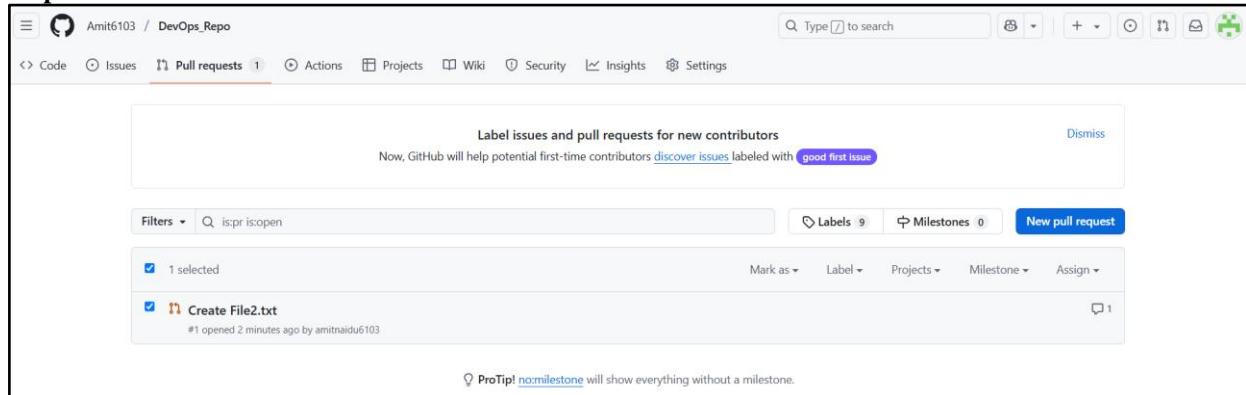
Projects

### #Add Comment



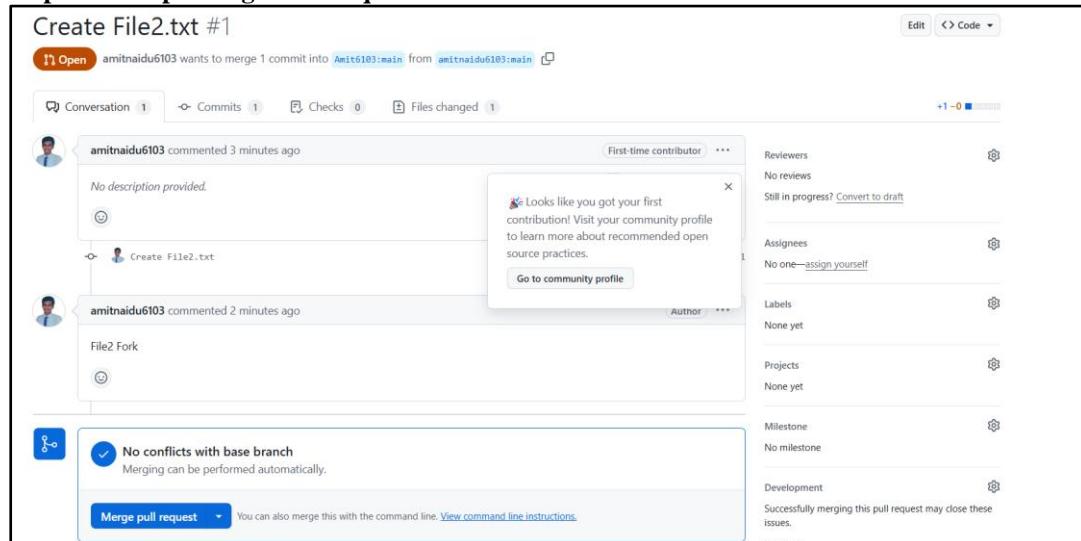
The screenshot shows a GitHub pull request for "Create File2.txt #1". The pull request has been merged, indicated by the "Verified" status and the merge commit hash "789a821". A comment from "amitnaidu6103" states "No description provided." Below this, a note says "No conflicts with base branch" and "Changes can be cleanly merged.". A new comment is being added by "File2 Fork", with the text "File2 Fork". The GitHub interface includes standard commenting tools like rich text editor and file upload.

### Step 10: Switch to the Main Account and Check the Inbox.



The screenshot shows the GitHub inbox for the account "Amit6103 / DevOps\_Repo". A new pull request titled "Create File2.txt" has been opened by "File2 Fork". The pull request summary indicates it was opened 2 minutes ago by "amitnaidu6103". The inbox also displays a message about labeling issues and pull requests for new contributors.

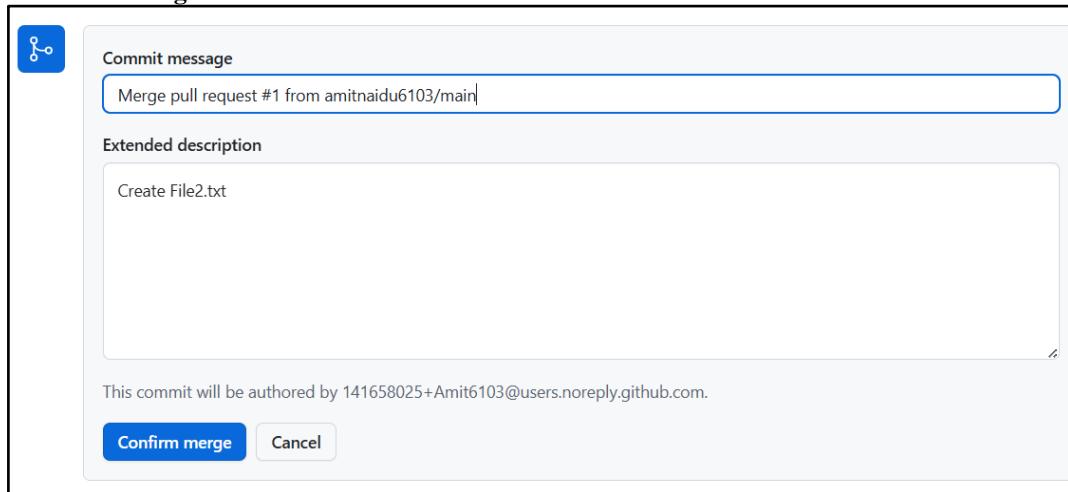
### Step 11: Accept Merge Pull Request.



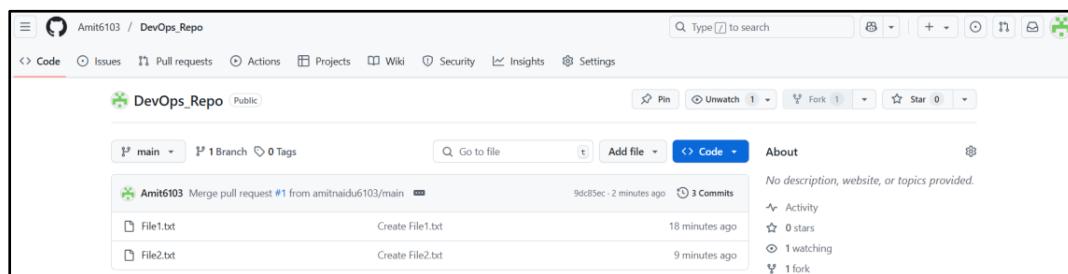
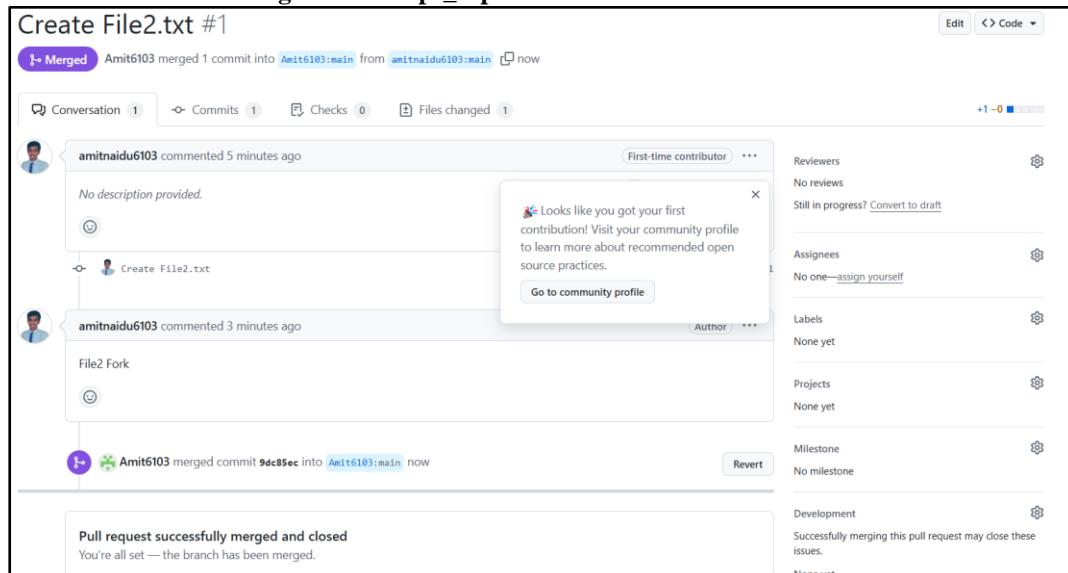
The screenshot shows the GitHub pull request interface for "Create File2.txt #1". The pull request has been merged, as indicated by the "Merged" status and the merge commit hash "789a821". A modal window provides feedback: "Looks like you got your first contribution! Visit your community profile to learn more about recommended open source practices." It also lists review details: "Reviewers: No reviews", "Assignees: No one—assign yourself", "Labels: None yet", "Projects: None yet", "Milestone: No milestone", and "Development: Successfully merging this pull request may close these issues." A "Merge pull request" button is visible at the bottom.

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#Confirm Merge



#File2.txt has Been Merged in DevOps\_repo.



#Creating New Branch and Merging it.

HP@DESKTOP-EC20IPO MINGW64 ~  
\$ mkdir BranchDemo

```
HP@DESKTOP-EC20IPO MINGW64 ~
$ mkdir BranchDemo
```

HP@DESKTOP-EC20IPO MINGW64 ~  
\$ cd BranchDemo

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```
HP@DESKTOP-EC20IPO MINGW64 ~  
$ cd BranchDemo
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo  
$ git init  
Initialized empty Git repository in C:/Users/HP/BranchDemo/.git/  
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo  
$ git init  
Initialized empty Git repository in C:/Users/HP/BranchDemo/.git/
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)  
$ touch file1.txt
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)  
$ touch file1.txt
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)  
$ ls  
file1.txt
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)  
$ ls  
file1.txt
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)  
$ vi file1.txt
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)  
$ vi file1.txt
```

```
MINGW64:/c/Users/HP/BranchDemo  
Hello, Welcome to SSCMR!!!  
~
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)  
$ cat file1.txt
```

Hello, Welcome to SSCMR!!!

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)  
$ cat file1.txt  
Hello, Welcome to SSCMR!!!
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)
```

```
$ git add .
```

warning: in the working copy of 'file1.txt', LF will be replaced by CRLF the next time Git touches it

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)  
$ git add .  
warning: in the working copy of 'file1.txt', LF will be replaced by CRLF the nex  
t time Git touches it
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)  
$ git config --global user.name "Devops"
```

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```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)
$ git config --global user.name "Devops"
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)
$ git config --global user.email "devops123@gmail.com"
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)
$ git config --global user.email "devops123@gmail.com"
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)
$ git commit -m "file1.txt added"
[master (root-commit) b275f43] file1.txt added
 1 file changed, 1 insertion(+)
 create mode 100644 file1.txt
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)
$ git commit -m "file1.txt added"
[master (root-commit) b275f43] file1.txt added
 1 file changed, 1 insertion(+)
 create mode 100644 file1.txt
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)
$ git log
commit b275f43e1a254b3368ce7df4883d58a3f0f3e572 (HEAD -> master)
Author: Devops <devops123@gmail.com>
Date:  Sat Apr 26 04:23:15 2025 +0530
```

file1.txt added

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)
$ git log
commit b275f43e1a254b3368ce7df4883d58a3f0f3e572 (HEAD -> master)
Author: Devops <devops123@gmail.com>
Date:  Sat Apr 26 04:23:15 2025 +0530

  file1.txt added
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)
$ git branch
* master
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)
$ git branch
* master
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)
$ git branch feature1
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)
$ git branch feature1
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)
$ git branch
  feature1
* master
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)
$ git branch
  feature1
* master
```

HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)  
\$ git checkout 'feature1'  
Switched to branch 'feature1'

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)
$ git checkout 'feature1'
Switched to branch 'feature1'
```

HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (feature1)  
\$ ls  
file1.txt

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (feature1)
$ ls
file1.txt
```

HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (feature1)  
\$ touch feat1.txt

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (feature1)
$ touch feat1.txt
```

HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (feature1)  
\$ vi feat1.txt

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (feature1)
$ vi feat1.txt
```

```
MINGW64:/c/Users/HP/BranchDemo
Hello Feature1!!!
~
```

HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (feature1)  
\$ cat feat1.txt  
Hello Feature1!!!

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (feature1)
$ cat feat1.txt
Hello Feature1!!!
```

HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (feature1)  
\$ git status  
On branch feature1  
Untracked files:  
(use "git add <file>..." to include in what will be committed)  
feat1.txt

nothing added to commit but untracked files present (use "git add" to track)

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```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (feature1)
$ git status
On branch feature1
Untracked files:
  (use "git add <file>..." to include in what will be committed)
    feat1.txt

nothing added to commit but untracked files present (use "git add" to track)
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (feature1)
$ git log
commit b275f43e1a254b3368ce7df4883d58a3f0f3e572 (HEAD -> feature1, master)
Author: Devops <devops123@gmail.com>
Date:  Sat Apr 26 04:23:15 2025 +0530
```

file1.txt added

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (feature1)
$ git log
commit b275f43e1a254b3368ce7df4883d58a3f0f3e572 (HEAD -> feature1, master)
Author: Devops <devops123@gmail.com>
Date:  Sat Apr 26 04:23:15 2025 +0530

  file1.txt added
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (feature1)
$ git checkout 'master'
Switched to branch 'master'
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (feature1)
$ git checkout 'master'
Switched to branch 'master'
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)
$ git merge feature1
Already up to date.
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)
$ git merge feature1
Already up to date.
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)
$ ls
feat1.txt file1.txt
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)
$ git branch -d feature1
Deleted branch feature1 (was b275f43).
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)
$ git branch -d feature1
Deleted branch feature1 (was b275f43).
```

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---

HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)

\$ git branch

\* master

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)
$ git branch
* master
```

HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)

\$ git branch feature2

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)
$ git branch feature2
```

HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)

\$ ls

feat1.txt file1.txt

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)
$ ls
feat1.txt file1.txt
```

HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)

\$ git checkout 'feature2'

Switched to branch 'feature2'

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)
$ git checkout 'feature2'
Switched to branch 'feature2'
```

HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (feature2)

\$ ls

feat1.txt file1.txt

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (feature2)
$ ls
feat1.txt file1.txt
```

HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (feature2)

\$ touch feat2.txt

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (feature2)
$ touch feat2.txt
```

HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (feature2)

\$ vi feat2.txt

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (feature2)
$ vi feat2.txt
```

```
MINGW64:/c/Users/HP/BranchDemo
Hello Feature2!!!
~
```

HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (feature2)

\$ cat feat2.txt

Hello Feature2!!!

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```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (feature2)
$ cat feat2.txt
Hello Feature2!!!
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (feature2)
$ git add .
warning: in the working copy of 'feat1.txt', LF will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'feat2.txt', LF will be replaced by CRLF the next time Git touches it
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (feature2)
$ git add .
warning: in the working copy of 'feat1.txt', LF will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'feat2.txt', LF will be replaced by CRLF the next time Git touches it
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (feature2)
$ git commit -m "Feat2.txt File Added"
[feature2 1c4f27a] Feat2.txt File Added
2 files changed, 2 insertions(+)
create mode 100644 feat1.txt
create mode 100644 feat2.txt
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (feature2)
$ git commit -m "Feat2.txt File Added"
[feature2 1c4f27a] Feat2.txt File Added
2 files changed, 2 insertions(+)
create mode 100644 feat1.txt
create mode 100644 feat2.txt
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (feature2)
$ git log
commit 1c4f27a37ae4275c5e5fa80b13e23725978ac0f5 (HEAD -> feature2)
Author: Devops <devops123@gmail.com>
Date: Sat Apr 26 04:38:21 2025 +0530
```

Feat2.txt File Added

```
commit b275f43e1a254b3368ce7df4883d58a3f0f3e572 (master)
Author: Devops <devops123@gmail.com>
Date: Sat Apr 26 04:23:15 2025 +0530
```

file1.txt added

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (feature2)
$ git log
commit 1c4f27a37ae4275c5e5fa80b13e23725978ac0f5 (HEAD -> feature2)
Author: Devops <devops123@gmail.com>
Date: Sat Apr 26 04:38:21 2025 +0530

Feat2.txt File Added

commit b275f43e1a254b3368ce7df4883d58a3f0f3e572 (master)
Author: Devops <devops123@gmail.com>
Date: Sat Apr 26 04:23:15 2025 +0530

file1.txt added
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (feature2)
```

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---

```
$ git checkout 'master'  
Switched to branch 'master'
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (feature2)  
$ git checkout 'master'  
Switched to branch 'master'
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)  
$ git merge branch feature2  
merge: branch - not something we can merge
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)  
$ git merge branch2  
Updating b275f43..1c4f27a  
Fast-forward
```

```
feat1.txt | 1 +  
feat2.txt | 1 +  
2 files changed, 2 insertions(+)  
create mode 100644 feat1.txt  
create mode 100644 feat2.txt
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)  
$ git merge feature2  
Updating b275f43..1c4f27a  
Fast-forward  
feat1.txt | 1 +  
feat2.txt | 1 +  
2 files changed, 2 insertions(+)  
create mode 100644 feat1.txt  
create mode 100644 feat2.txt
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)  
$ ls  
feat1.txt feat2.txt file1.txt
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)  
$ ls  
feat1.txt feat2.txt file1.txt
```

#Rebase

```
MINGW64:/c/Users/HP/BranchDemo/A  
This is a2 File!!!  
~
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)  
$ mkdir A
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)  
$ mkdir A
```

---

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)
```

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---

```
$ cd A
```

```
| HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)
| $ cd A
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (master)
```

```
$ git init
```

```
Initialized empty Git repository in C:/Users/HP/BranchDemo/A/.git/
```

```
| HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (master)
| $ git init
```

```
Initialized empty Git repository in C:/Users/HP/BranchDemo/A/.git/
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (master)
```

```
$ touch a1.txt
```

```
| HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (master)
| $ touch a1.txt
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (master)
```

```
$ vi a1.txt
```

```
| HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (master)
| $ vi a1.txt
```

```
| MINGW64:/c/Users/HP/BranchDemo/A
```

```
This is a1 File!!!
```

```
~
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (master)
```

```
$ cat a1.txt
```

```
This is a1 File!!!
```

```
| HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (master)
| $ cat a1.txt
```

```
This is a1 File!!!
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (master)
```

```
$ git add .
```

```
warning: in the working copy of 'a1.txt', LF will be replaced by CRLF the next time Git touches it
```

```
| HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (master)
```

```
| $ git add .
```

```
warning: in the working copy of 'a1.txt', LF will be replaced by CRLF the next time Git touches it
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (master)
```

```
$ git status
```

```
On branch master
```

```
No commits yet
```

```
Changes to be committed:
```

```
(use "git rm --cached <file>..." to unstage)
```

```
    new file: a1.txt
```

```
| HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (master)
```

```
| $ git status
```

```
On branch master
```

```
No commits yet
```

```
Changes to be committed:
```

```
(use "git rm --cached <file>..." to unstage)
```

```
    new file: a1.txt
```

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---

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (master)
$ git commit -m "First Commit"
[master (root-commit) 017cacd] First Commit
 1 file changed, 1 insertion(+)
 create mode 100644 a1.txt
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (master)
$ git commit -m "First Commit"
[master (root-commit) 017cacd] First Commit
 1 file changed, 1 insertion(+)
 create mode 100644 a1.txt
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (master)
$ git log
commit 017cacd619b4b0e2e1a4ee3b65261a462ffcf08a (HEAD -> master)
Author: Devops <devops123@gmail.com>
Date:   Sat Apr 26 04:48:12 2025 +0530
```

First Commit

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (master)
$ git log
commit 017cacd619b4b0e2e1a4ee3b65261a462ffcf08a (HEAD -> master)
Author: Devops <devops123@gmail.com>
Date:   Sat Apr 26 04:48:12 2025 +0530
```

First Commit

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (master)
$ touch a2.txt
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (master)
$ touch a2.txt
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (master)
$ vi a2.txt
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (master)
$ vi a2.txt
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (master)
$ git add a2.txt
warning: in the working copy of 'a2.txt', LF will be replaced by CRLF the next time Git touches it
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (master)
$ git add a2.txt
warning: in the working copy of 'a2.txt', LF will be replaced by CRLF the next time Git touches it
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (master)
$ git commit -m "Second Commit"
[master 163bd93] Second Commit
 1 file changed, 1 insertion(+)
 create mode 100644 a2.txt
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (master)
$ git commit -m "Second Commit"
[master 163bd93] Second Commit
 1 file changed, 1 insertion(+)
 create mode 100644 a2.txt
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (master)
$ git log
commit 163bd93a34cff73af59e637c87ae84efd3727980 (HEAD -> master)
```

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---

Author: Devops <devops123@gmail.com>  
Date: Sat Apr 26 04:49:47 2025 +0530

Second Commit

commit 017cacd619b4b0e2e1a4ee3b65261a462ffcf08a

Author: Devops <devops123@gmail.com>

Date: Sat Apr 26 04:48:12 2025 +0530

First Commit

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (master)
$ git log
commit 163bd93a34cff73af59e637c87ae84efd3727980 (HEAD -> master)
Author: Devops <devops123@gmail.com>
Date:   Sat Apr 26 04:49:47 2025 +0530
```

Second Commit

```
commit 017cacd619b4b0e2e1a4ee3b65261a462ffcf08a
Author: Devops <devops123@gmail.com>
Date:   Sat Apr 26 04:48:12 2025 +0530
```

First Commit

HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (master)

\$ git checkout -b Feat1

Switched to a new branch 'Feat1'

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (master)
$ git checkout -b Feat1
Switched to a new branch 'Feat1'
```

HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (Feat1)

\$ ls

a1.txt a2.txt

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (Feat1)
$ ls
a1.txt  a2.txt
```

HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (Feat1)

\$ touch b1

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (Feat1)
$ touch b1
```

HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (Feat1)

\$ git add .

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (Feat1)
$ git add .
```

HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (Feat1)

\$ git status

On branch Feat1

Changes to be committed:

(use "git restore --staged <file>..." to unstage)

new file: b1

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (Feat1)
$ git status
On branch Feat1
Changes to be committed:
(use "git restore --staged <file>..." to unstage)
    new file: b1
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (Feat1)
$ git commit -m "Third Commit"
[Feat1 c7c5a08] Third Commit
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 b1
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (Feat1)
$ git commit -m "Third Commit"
[Feat1 c7c5a08] Third Commit
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 b1
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (Feat1)
$ touch b1.txt
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (Feat1)
$ touch b1.txt
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (Feat1)
$ git add .
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (Feat1)
$ git add .
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (Feat1)
$ git status
```

On branch Feat1

Changes to be committed:

(use "git restore --staged <file>..." to unstage)

new file: b1.txt

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (Feat1)
$ git status
On branch Feat1
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file: b1.txt
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (Feat1)
```

```
$ git commit -m "Third Commit"
```

```
[Feat1 99b6900] Third Commit
```

```
1 file changed, 0 insertions(+), 0 deletions(-)
```

```
create mode 100644 b1.txt
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (Feat1)
$ git commit -m "Third Commit"
[Feat1 99b6900] Third Commit
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 b1.txt
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (Feat1)
```

```
$ git log
```

```
commit 99b69001d29858750c639d1292876631a4761c28 (HEAD -> Feat1)
```

```
Author: Devops <devops123@gmail.com>
```

```
Date: Sat Apr 26 04:51:22 2025 +0530
```

Third Commit

```
commit c7c5a08041b52ddab3a0674f60ba7e9a4a998189
```

```
Author: Devops <devops123@gmail.com>
```

```
Date: Sat Apr 26 04:50:55 2025 +0530
```

Third Commit

```
commit 163bd93a34cff73af59e637c87ae84efd3727980 (master)
Author: Devops <devops123@gmail.com>
Date: Sat Apr 26 04:49:47 2025 +0530
```

Second Commit

```
commit 017cacd619b4b0e2e1a4ee3b65261a462ffcf08a
Author: Devops <devops123@gmail.com>
Date: Sat Apr 26 04:48:12 2025 +0530
```

First Commit

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (Feat1)
$ git log
commit 99b69001d29858750c639d1292876631a4761c28 (HEAD -> Feat1)
Author: Devops <devops123@gmail.com>
Date: Sat Apr 26 04:51:22 2025 +0530
```

Third Commit

```
commit c7c5a08041b52ddab3a0674f60ba7e9a4a998189
Author: Devops <devops123@gmail.com>
Date: Sat Apr 26 04:50:55 2025 +0530
```

Third Commit

```
commit 163bd93a34cff73af59e637c87ae84efd3727980 (master)
Author: Devops <devops123@gmail.com>
Date: Sat Apr 26 04:49:47 2025 +0530
```

Second Commit

```
commit 017cacd619b4b0e2e1a4ee3b65261a462ffcf08a
Author: Devops <devops123@gmail.com>
Date: Sat Apr 26 04:48:12 2025 +0530
```

First Commit

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (Feat1)
```

```
$ git checkout master
Switched to branch 'master'
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (Feat1)
$ git checkout master
Switched to branch 'master'
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (master)
```

```
$ git log
commit 163bd93a34cff73af59e637c87ae84efd3727980 (HEAD -> master)
Author: Devops <devops123@gmail.com>
Date: Sat Apr 26 04:49:47 2025 +0530
```

Second Commit

```
commit 017cacd619b4b0e2e1a4ee3b65261a462ffcf08a
Author: Devops <devops123@gmail.com>
Date: Sat Apr 26 04:48:12 2025 +0530
```

First Commit

**MCAL23 Devops Lab**

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (master)
$ git log
commit 163bd93a34cff73af59e637c87ae84efd3727980 (HEAD -> master)
Author: Devops <devops123@gmail.com>
Date:   Sat Apr 26 04:49:47 2025 +0530

    Second Commit

commit 017cacd619b4b0e2e1a4ee3b65261a462ffcf08a
Author: Devops <devops123@gmail.com>
Date:   Sat Apr 26 04:48:12 2025 +0530

    First Commit
```

HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (master)

\$ git rebase Feat1

Successfully rebased and updated refs/heads/master.

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (master)
$ git rebase Feat1
Successfully rebased and updated refs/heads/master.
```

HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (master)

\$ git log

commit 99b69001d29858750c639d1292876631a4761c28 (HEAD -> master, Feat1)

Author: Devops <devops123@gmail.com>

Date: Sat Apr 26 04:51:22 2025 +0530

Third Commit

commit c7c5a08041b52ddab3a0674f60ba7e9a4a998189

Author: Devops <devops123@gmail.com>

Date: Sat Apr 26 04:50:55 2025 +0530

Third Commit

commit 163bd93a34cff73af59e637c87ae84efd3727980

Author: Devops <devops123@gmail.com>

Date: Sat Apr 26 04:49:47 2025 +0530

Second Commit

commit 017cacd619b4b0e2e1a4ee3b65261a462ffcf08a

Author: Devops <devops123@gmail.com>

Date: Sat Apr 26 04:48:12 2025 +0530

First Commit

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (master)
$ git log
commit 99b69001d29858750c639d1292876631a4761c28 (HEAD -> master, Feat1)
Author: Devops <devops123@gmail.com>
Date:   Sat Apr 26 04:51:22 2025 +0530

    Third Commit

commit c7c5a08041b52ddab3a0674f60ba7e9a4a998189
Author: Devops <devops123@gmail.com>
Date:   Sat Apr 26 04:50:55 2025 +0530

    Third Commit

commit 163bd93a34cff73af59e637c87ae84efd3727980
Author: Devops <devops123@gmail.com>
Date:   Sat Apr 26 04:49:47 2025 +0530

    Second Commit

commit 017cacd619b4b0e2e1a4ee3b65261a462ffcf08a
Author: Devops <devops123@gmail.com>
Date:   Sat Apr 26 04:48:12 2025 +0530

    First Commit
```

## **Practical No. 3**

**Aim:** Using Git for Collaboration.

**Code:**

#Public Collab

**Step 1: Created a Repository in Amit6103 Account**

**Create a new repository**

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

Required fields are marked with an asterisk (\*).

Owner \*      Repository name \*

 Amit6103 /   DevOps\_Repo is available.

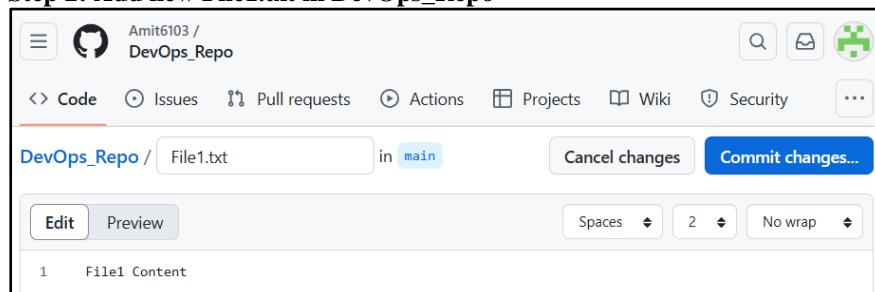
Great repository names are short and memorable. Need inspiration? How about [literate-octo-engine](#) ?

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.

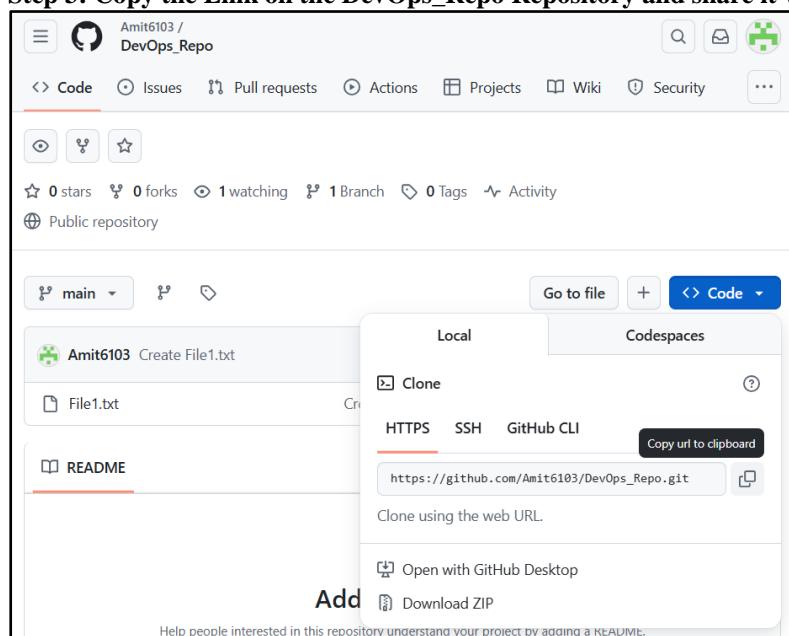
**Step 2: Add new File1.txt in DevOps\_Repo**



The screenshot shows the GitHub interface for the 'DevOps\_Repo' repository. A new file named 'File1.txt' is being created in the 'main' branch. The code editor displays the following content:

```
1 File1 Content
```

**Step 3: Copy the Link on the DevOps\_Repo Repository and share it with Another Account.**

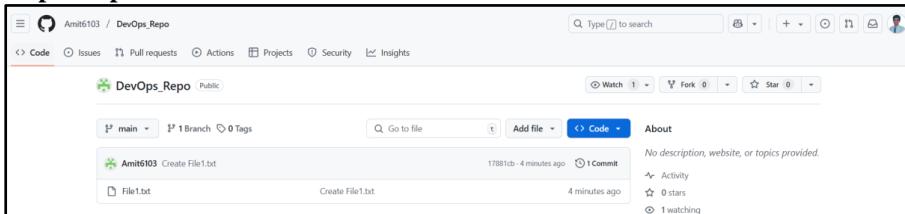


The screenshot shows the GitHub repository page for 'DevOps\_Repo'. The 'Clone' section displays the following options:

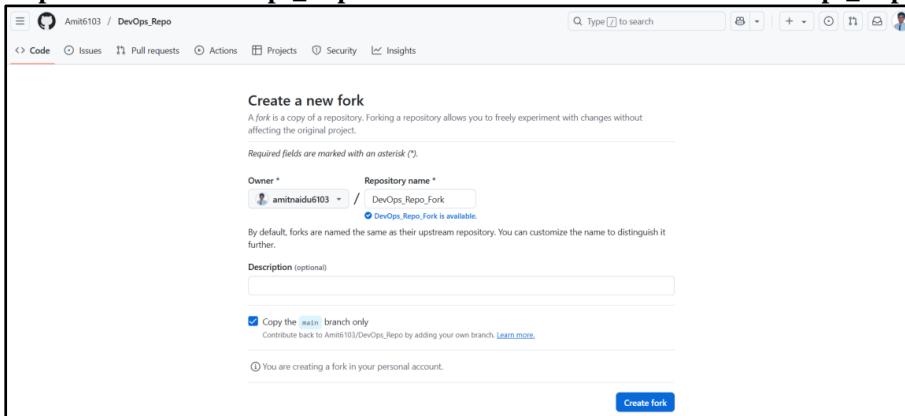
- HTTPS: [https://github.com/Amit6103/DevOps\\_Repo.git](https://github.com/Amit6103/DevOps_Repo.git) (Copy url to clipboard button)
- SSH
- GitHub CLI

## **MCAL23 Devops Lab**

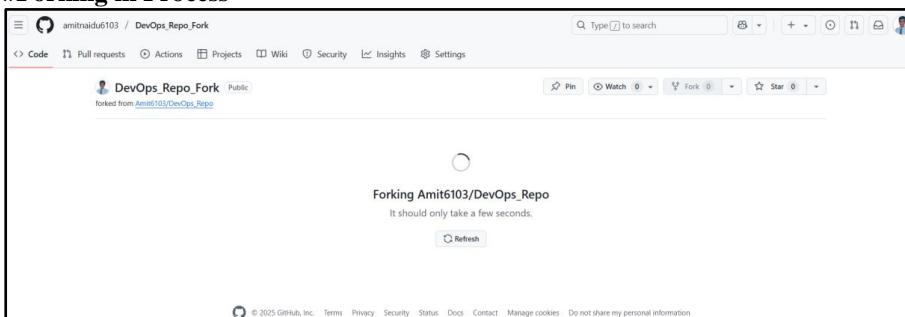
### **Step 4: Open the shared link in Another Account and then click on Fork**



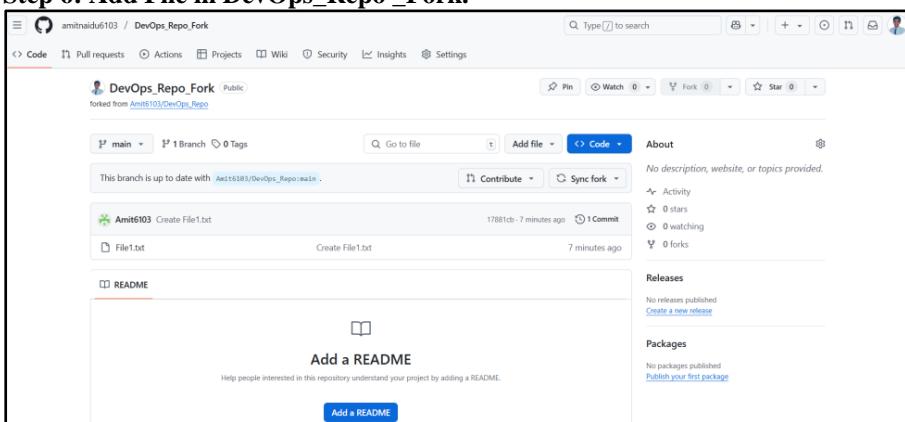
### **Step 5: Fork The DevOps\_Repo from amitnaidu6103 Account as DevOps\_Repo\_Fork**



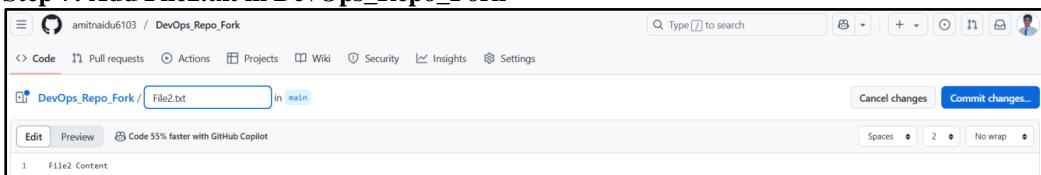
### **#Forking in Process**



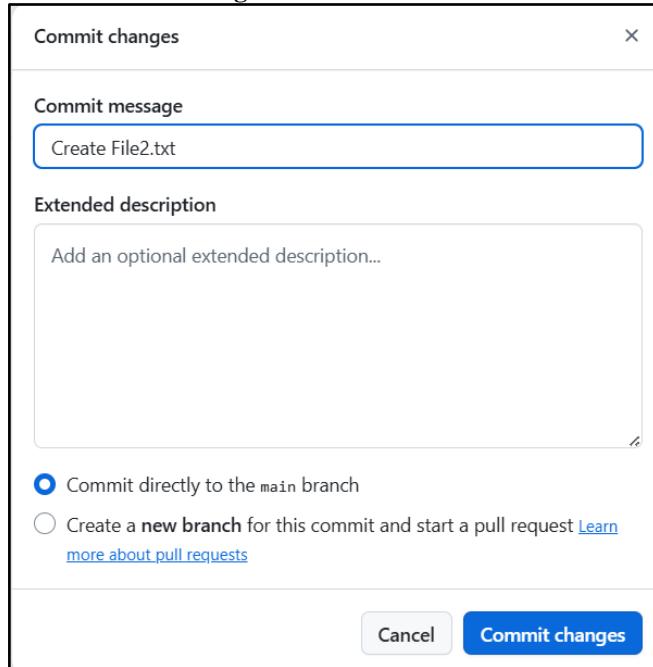
### **Step 6: Add File in DevOps\_Repo\_Fork.**



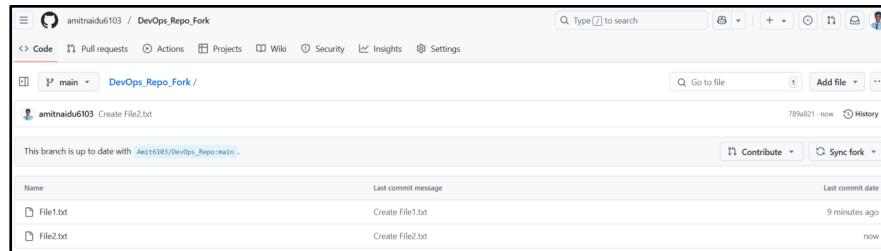
### **Step 7: Add File2.txt in DevOps\_Repo\_Fork**



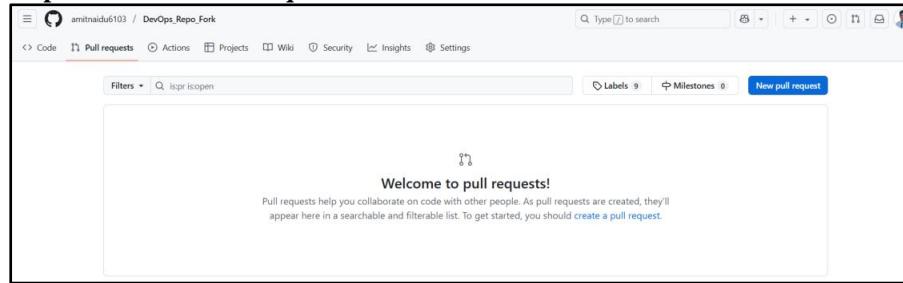
### #Commit The Changes



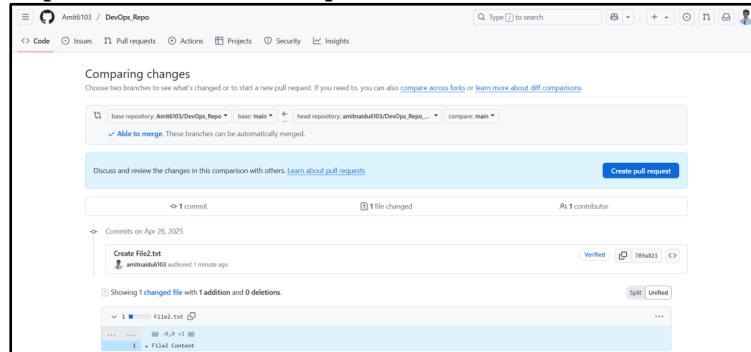
### #File2.txt Added.



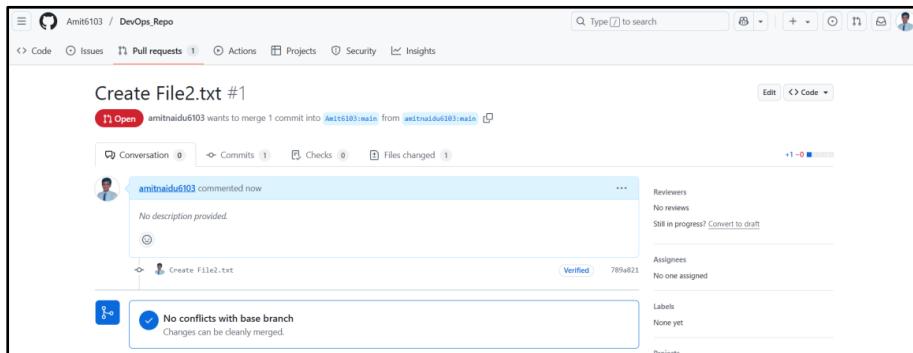
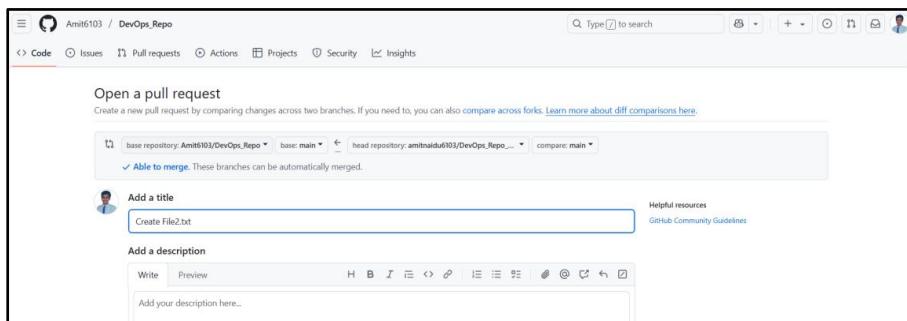
### Step 8: Click on Pull Request Tab.



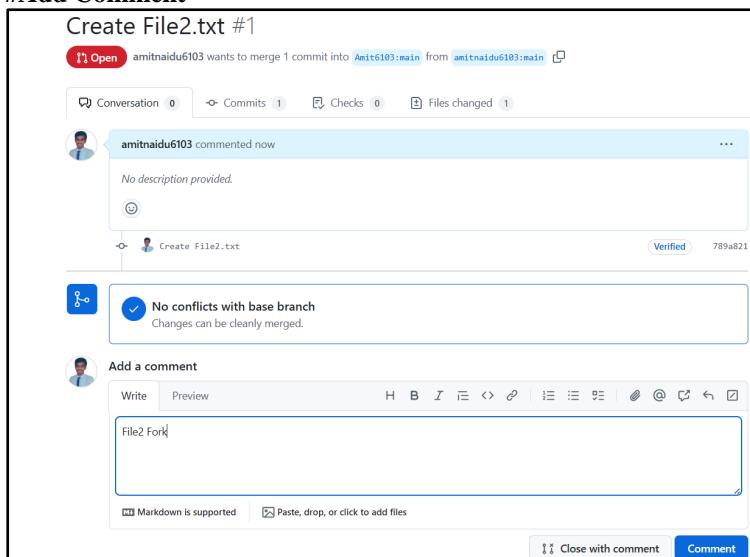
### Step 9: Create New Pull Request.



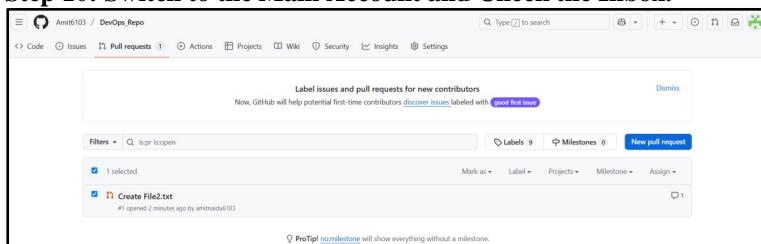
## **MCAL23 Devops Lab**



### #Add Comment



### Step 10: Switch to the Main Account and Check the Inbox.



### Step 11: Accept Merge Pull Request.

## **MCAL23 Devops Lab**

Create File2.txt #1

amitnaidu6103 wants to merge 1 commit into [Amit6103:main](#) from [amitnaidu6103:main](#)

Conversation 1 Commits 0 Checks 0 Files changed 1

First-time contributor

No description provided.

Looks like you got your first contribution! Visit your community profile to learn more about recommended open source practices.

Go to community profile

amitnaidu6103 commented 3 minutes ago

amitnaidu6103 commented 2 minutes ago

File2 Fork

No conflicts with base branch

Merging can be performed automatically.

Merge pull request You can also merge this with the command line. [View command line instructions](#).

Reviewers  
No reviews  
Still in progress? [Convert to draft](#)

Assignees  
No one—[Assign yourself](#)

Labels  
None yet

Projects  
None yet

Milestone  
No milestone

Development  
Successfully merging this pull request may close these issues.

### #Confirm Merge

Commit message

Merge pull request #1 from amitnaidu6103/main

Extended description

Create File2.txt

This commit will be authored by 141658025+Ami6103@users.noreply.github.com.

Confirm merge Cancel

### #File2.txt has Been Merged in DevOps\_repo.

Create File2.txt #1

1+ Merged Amit6103 merged 1 commit into [Amit6103:main](#) from [amitnaidu6103:main](#)

Conversation 1 Commits 0 Checks 0 Files changed 1

First-time contributor

No description provided.

Looks like you got your first contribution! Visit your community profile to learn more about recommended open source practices.

Go to community profile

amitnaidu6103 commented 5 minutes ago

amitnaidu6103 commented 3 minutes ago

File2 Fork

Amit6103 merged commit [9dc85ec](#) into [Amit6103:main](#) now

Pull request successfully merged and closed

You're all set — the branch has been merged.

Reviewers  
No reviews  
Still in progress? [Convert to draft](#)

Assignees  
No one—[Assign yourself](#)

Labels  
None yet

Projects  
None yet

Milestone  
No milestone

Development  
Successfully merging this pull request may close these issues.

Amit6103 / DevOps\_Repo

Code Issues Pull requests Actions Projects Wiki Security Insights Settings

DevOps\_Repo Public

main 1 Branch 0 Tags Go to file Add file Code About

Amit6103 Merge pull request #1 from amitnaidu6103/main 9dc85ec - 2 minutes ago 3 Commits

File1.txt Create File1.txt 18 minutes ago

File2.txt Create File2.txt 9 minutes ago

No description, website, or topics provided.

Activity 0 stars 1 watching 1 fork

```
#Git pull  
HP@DESKTOP-EC20IPO MINGW64 ~  
$ cd BranchDemo  
[HP@DESKTOP-EC20IPO MINGW64 ~]  
$ cd BranchDemo
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)  
$ cd A  
[HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo (master)  
$ cd A
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (master)  
$ git remote add origin "https://github.com/Amit6103/DevOps_Repo.git"  
error: remote origin already exists.  
[HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (master)  
$ git remote add origin "https://github.com/Amit6103/DevOps_Repo.git"  
error: remote origin already exists.
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (master)  
$ git log  
commit 99b69001d29858750c639d1292876631a4761c28 (HEAD -> master, Feat1)  
Author: Devops <devops123@gmail.com>  
Date: Sat Apr 26 04:51:22 2025 +0530
```

#### Third Commit

```
commit c7c5a08041b52ddab3a0674f60ba7e9a4a998189  
Author: Devops <devops123@gmail.com>  
Date: Sat Apr 26 04:50:55 2025 +0530
```

#### Third Commit

```
commit 163bd93a34cff73af59e637c87ae84efd3727980  
Author: Devops <devops123@gmail.com>  
Date: Sat Apr 26 04:49:47 2025 +0530
```

#### Second Commit

```
commit 017cacd619b4b0e2e1a4ee3b65261a462ffcf08a  
Author: Devops <devops123@gmail.com>  
Date: Sat Apr 26 04:48:12 2025 +0530
```

#### First Commit

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (master)  
$ git log  
commit 99b69001d29858750c639d1292876631a4761c28 (HEAD -> master, Feat1)  
Author: Devops <devops123@gmail.com>  
Date: Sat Apr 26 04:51:22 2025 +0530  
  
    Third Commit  
  
commit c7c5a08041b52ddab3a0674f60ba7e9a4a998189  
Author: Devops <devops123@gmail.com>  
Date: Sat Apr 26 04:50:55 2025 +0530  
  
    Third Commit  
  
commit 163bd93a34cff73af59e637c87ae84efd3727980  
Author: Devops <devops123@gmail.com>  
Date: Sat Apr 26 04:49:47 2025 +0530  
  
    Second Commit  
  
commit 017cacd619b4b0e2e1a4ee3b65261a462ffcf08a  
Author: Devops <devops123@gmail.com>  
Date: Sat Apr 26 04:48:12 2025 +0530  
  
    First Commit
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (master)
$ git clone "https://github.com/Amit6103/DevOps_Repo.git"
Cloning into 'DevOps_Repo'...
remote: Enumerating objects: 13, done.
remote: Counting objects: 100% (13/13), done.
remote: Compressing objects: 100% (7/7), done.
remote: Total 13 (delta 2), reused 6 (delta 1), pack-reused 0 (from 0)
Receiving objects: 100% (13/13), done.
Resolving deltas: 100% (2/2), done.
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (master)
$ git clone "https://github.com/Amit6103/DevOps_Repo.git"
Cloning into 'DevOps_Repo'...
remote: Enumerating objects: 13, done.
remote: Counting objects: 100% (13/13), done.
remote: Compressing objects: 100% (7/7), done.
remote: Total 13 (delta 2), reused 6 (delta 1), pack-reused 0 (from 0)
Receiving objects: 100% (13/13), done.
Resolving deltas: 100% (2/2), done.
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (master)
```

```
$ ls
DevOps_Repo/ NewRepo/ a1.txt a2.txt b1 b1.txt
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (master)
$ ls
DevOps_Repo/ NewRepo/ a1.txt a2.txt b1 b1.txt
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (master)
```

```
$ cd DevOps_Repo
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A (master)
$ cd DevOps_Repo
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A/DevOps_Repo (main)
```

```
$ ls
File1.txt File2.txt file3.txt file4.txt
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A/DevOps_Repo (main)
$ ls
File1.txt File2.txt file3.txt file4.txt
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A/DevOps_Repo (main)
```

```
$ git pull origin main
```

```
From https://github.com/Amit6103/DevOps_Repo
```

```
* branch      main      -> FETCH_HEAD
```

```
Already up to date.
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/BranchDemo/A/DevOps_Repo (main)
$ git pull origin main
From https://github.com/Amit6103/DevOps_Repo
 * branch      main      -> FETCH_HEAD
```

```
Already up to date.
```

## **Practical No. 4**

**Aim:** Collaborating and cloning using GitHub.

**Code:**

#Cloning

HP@DESKTOP-EC20IPO MINGW64 ~

\$ mkdir clonedemo

```
HP@DESKTOP-EC20IPO MINGW64 ~
$ mkdir clonedemo
```

HP@DESKTOP-EC20IPO MINGW64 ~

\$ cd clonedemo

```
HP@DESKTOP-EC20IPO MINGW64 ~
$ cd clonedemo
```

HP@DESKTOP-EC20IPO MINGW64 ~/clonedemo

\$ ls

```
HP@DESKTOP-EC20IPO MINGW64 ~/clonedemo
$ ls
```

HP@DESKTOP-EC20IPO MINGW64 ~/clonedemo

\$ git clone "https://github.com/Amit6103/DevOps\_Repo.git"

Cloning into 'DevOps\_Repo'...

remote: Enumerating objects: 7, done.

remote: Counting objects: 100% (7/7), done.

remote: Compressing objects: 100% (4/4), done.

remote: Total 7 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)

Receiving objects: 100% (7/7), done.

```
HP@DESKTOP-EC20IPO MINGW64 ~/clonedemo
$ git clone "https://github.com/Amit6103/DevOps_Repo.git"
Cloning into 'DevOps_Repo'...
remote: Enumerating objects: 7, done.
remote: Counting objects: 100% (7/7), done.
remote: Compressing objects: 100% (4/4), done.
remote: Total 7 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
Receiving objects: 100% (7/7), done.
```

HP@DESKTOP-EC20IPO MINGW64 ~/clonedemo

\$ ls

DevOps\_Repo/

```
HP@DESKTOP-EC20IPO MINGW64 ~/clonedemo
$ ls
DevOps_Repo/
```

HP@DESKTOP-EC20IPO MINGW64 ~/clonedemo

\$ cd DevOps\_Repo

```
HP@DESKTOP-EC20IPO MINGW64 ~/clonedemo
$ cd DevOps_Repo
```

HP@DESKTOP-EC20IPO MINGW64 ~/clonedemo/DevOps\_Repo (main)

\$ ls

---

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---

File1.txt File2.txt

```
HP@DESKTOP-EC20IPO MINGW64 ~/clonedemo/DevOps_Repo (main)
$ ls
File1.txt  File2.txt
```

HP@DESKTOP-EC20IPO MINGW64 ~/clonedemo/DevOps\_Repo (main)
\$ touch file3.txt

```
HP@DESKTOP-EC20IPO MINGW64 ~/clonedemo/DevOps_Repo (main)
$ touch file3.txt
```

HP@DESKTOP-EC20IPO MINGW64 ~/clonedemo/DevOps\_Repo (main)
\$ vi file3.txt

```
HP@DESKTOP-EC20IPO MINGW64 ~/clonedemo/DevOps_Repo (main)
$ vi file3.txt
```

```
MINGW64:/c/Users/HP/clonedemo/DevOps_Repo
This is file3 Content.
```

HP@DESKTOP-EC20IPO MINGW64 ~/clonedemo/DevOps\_Repo (main)

\$ cat file3.txt

This is file3 Content.

```
HP@DESKTOP-EC20IPO MINGW64 ~/clonedemo/DevOps_Repo (main)
$ cat file3.txt
This is file3 Content.
```

HP@DESKTOP-EC20IPO MINGW64 ~/clonedemo/DevOps\_Repo (main)

\$ git remote -v

origin https://github.com/Amit6103/DevOps\_Repo.git (fetch)

origin https://github.com/Amit6103/DevOps\_Repo.git (push)

```
HP@DESKTOP-EC20IPO MINGW64 ~/clonedemo/DevOps_Repo (main)
$ git remote -v
origin  https://github.com/Amit6103/DevOps_Repo.git (fetch)
origin  https://github.com/Amit6103/DevOps_Repo.git (push)
```

HP@DESKTOP-EC20IPO MINGW64 ~/clonedemo/DevOps\_Repo (main)

\$ git status

On branch main

Your branch is up to date with 'origin/main'.

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)

```
HP@DESKTOP-EC20IPO MINGW64 ~/clonedemo/DevOps_Repo (main)
$ git status
On branch main
Your branch is up to date with 'origin/main'.
```

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)

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```
HP@DESKTOP-EC20IPO MINGW64 ~/clonedemo/DevOps_Repo (main)
$ git commit -m "First Commit"
On branch main
Your branch is up to date with 'origin/main'.
```

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)

```
HP@DESKTOP-EC20IPO MINGW64 ~/clonedemo/DevOps_Repo (main)
$ git commit -m "First Commit"
On branch main
Your branch is up to date with 'origin/main'.

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)
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/clonedemo/DevOps_Repo (main)
$ git add .
```

warning: in the working copy of 'file3.txt', LF will be replaced by CRLF the next time Git touches it

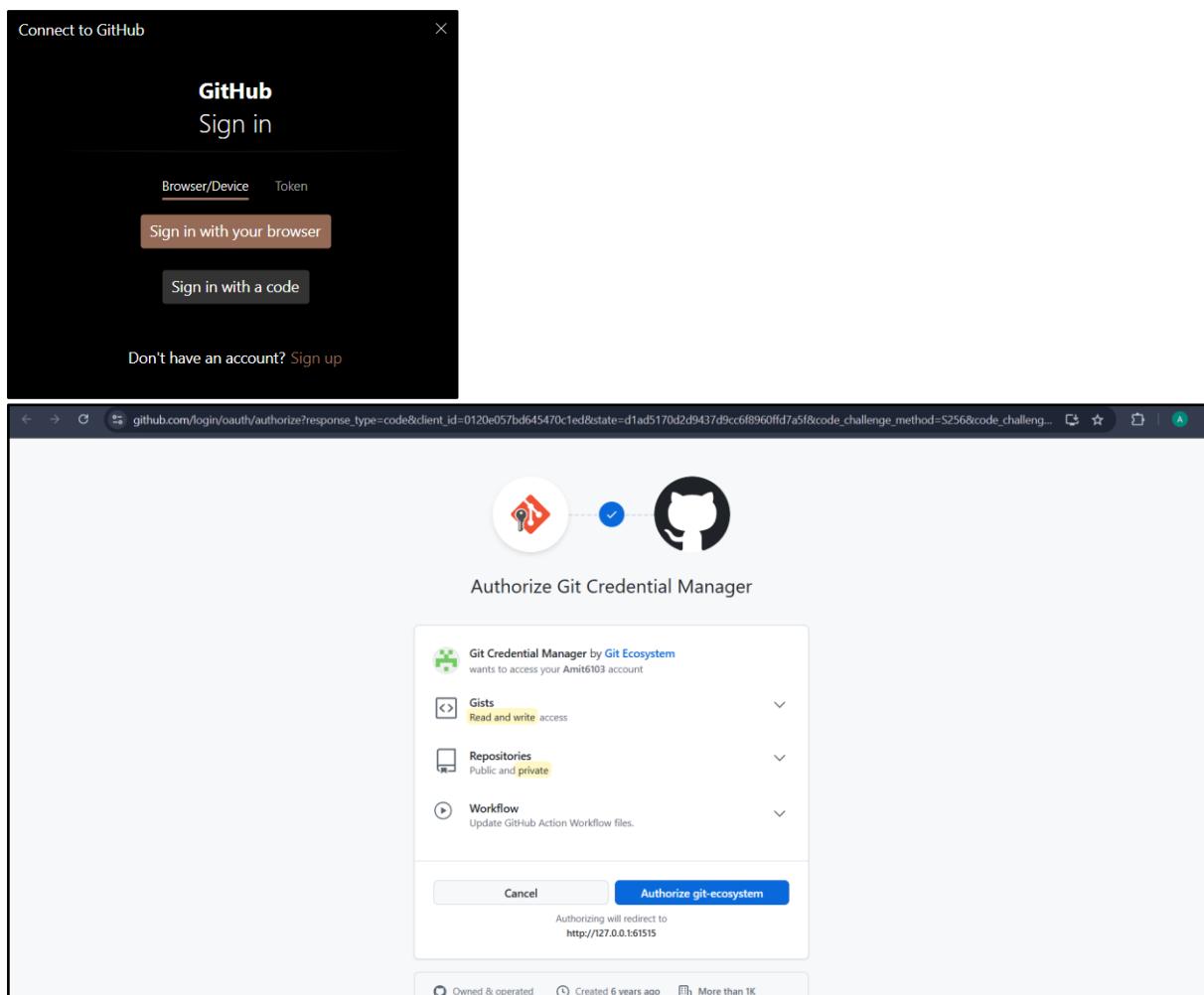
```
HP@DESKTOP-EC20IPO MINGW64 ~/clonedemo/DevOps_Repo (main)
$ git add .
warning: in the working copy of 'file3.txt', LF will be replaced by CRLF the next time G
it touches it
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/clonedemo/DevOps_Repo (main)
$ git commit -m "First Commit"
[main e4901e8] First Commit
1 file changed, 1 insertion(+)
create mode 100644 file3.txt
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/clonedemo/DevOps_Repo (main)
$ git commit -m "First Commit"
[main e4901e8] First Commit
1 file changed, 1 insertion(+)
create mode 100644 file3.txt
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/clonedemo/DevOps_Repo (main)
$ git push -u origin main
info: please complete authentication in your browser...
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 8 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)
To https://github.com/Amit6103/DevOps_Repo.git
  9dc85ec..e4901e8 main -> main
branch 'main' set up to track 'origin/main'.
```

**MCAL23 Devops Lab**



The image shows two overlapping windows. The top window is a "Connect to GitHub" dialog from GitHub, titled "Sign in". It has two tabs: "Browser/Device" (selected) and "Token". Below the tabs are two buttons: "Sign in with your browser" (highlighted in orange) and "Sign in with a code". At the bottom is a link "Don't have an account? Sign up". The bottom window is a browser window displaying the URL [github.com/login/oauth/authorize?response\\_type=code&client\\_id=0120e057bd645470c1ed&state=d1ad5170d2d9437d9cc6f8960ffd7a5f&code\\_challenge\\_method=S256&code\\_challenge=...](https://github.com/login/oauth/authorize?response_type=code&client_id=0120e057bd645470c1ed&state=d1ad5170d2d9437d9cc6f8960ffd7a5f&code_challenge_method=S256&code_challenge=...). The title bar of the browser says "Authorize Git Credential Manager". The main content area shows a list of permissions for "Git Credential Manager by Git Ecosystem": "Gists" (Read and write access), "Repositories" (Public and private), and "Workflow" (Update GitHub Action Workflow files). At the bottom are "Cancel" and "Authorize git-ecosystem" buttons, with a note that authorizing will redirect to <http://127.0.0.1:61515>.

```
HP@DESKTOP-EC20IPO MINGW64 ~/clonedemo/DevOps_Repo (main)
$ git push -u origin main
info: please complete authentication in your browser...
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 8 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)
To https://github.com/Amit6103/DevOps_Repo.git
  9dc85ec..e4901e8 main -> main
branch 'main' set up to track 'origin/main'.
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/clonedemo/DevOps_Repo (main)
$ touch file4.txt
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/clonedemo/DevOps_Repo (main)
$ touch file4.txt
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/clonedemo/DevOps_Repo (main)
$ ls
File1.txt File2.txt file3.txt file4.txt
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/clonedemo/DevOps_Repo (main)
$ ls
File1.txt File2.txt file3.txt file4.txt
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/clonedemo/DevOps_Repo (main)
```

MCAL23 Devops Lab

---

```
$ vi file4.txt
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/clonedemo/DevOps_Repo (main)
$ vi file4.txt
```

```
MINGW64:/c/Users/HP/clonedemo/DevOps_Repo
This is File4 Content!
```

HP@DESKTOP-EC20IPO MINGW64 ~/clonedemo/DevOps\_Repo (main)

```
$ cat file4.txt
```

This is File4 Content!

```
HP@DESKTOP-EC20IPO MINGW64 ~/clonedemo/DevOps_Repo (main)
$ cat file4.txt
```

```
This is File4 Content!
```

HP@DESKTOP-EC20IPO MINGW64 ~/clonedemo/DevOps\_Repo (main)

```
$ git add .
```

warning: in the working copy of 'file4.txt', LF will be replaced by CRLF the next time Git touches it

```
HP@DESKTOP-EC20IPO MINGW64 ~/clonedemo/DevOps_Repo (main)
$ git add .
warning: in the working copy of 'file4.txt', LF will be replaced by CRLF the next time G
it touches it
```

HP@DESKTOP-EC20IPO MINGW64 ~/clonedemo/DevOps\_Repo (main)

```
$ git commit -m "First Commit on file4.txt"
```

[main e1bd8cb] First Commit on file4.txt

```
1 file changed, 1 insertion(+)
```

```
create mode 100644 file4.txt
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/clonedemo/DevOps_Repo (main)
```

```
$ git commit -m "First Commit on file4.txt"
```

[main e1bd8cb] First Commit on file4.txt

```
1 file changed, 1 insertion(+)
```

```
create mode 100644 file4.txt
```

HP@DESKTOP-EC20IPO MINGW64 ~/clonedemo/DevOps\_Repo (main)

```
$ git log
```

commit e1bd8cb3463f312ec3208f45f6ce7ba65cda1761 (HEAD -> main)

Author: Devops <devops123@gmail.com>

Date: Sat Apr 26 05:31:00 2025 +0530

First Commit on file4.txt

commit e4901e8405752532698ea9973a60a88deb1a8e03 (origin/main, origin/HEAD)

Author: Devops <devops123@gmail.com>

Date: Sat Apr 26 05:28:17 2025 +0530

First Commit

commit 9dc85ec0833ddc609e364c7946da0004d2a86737

Merge: 17881cb 789a821

Author: Amit6103 <141658025+Amit6103@users.noreply.github.com>

Date: Sat Apr 26 04:16:14 2025 +0530

Merge pull request #1 from amitnaidu6103/main

**Create File2.txt**

commit 789a821c62c076347fb27d662e5ff8d2ad0d74ac  
Author: Amitkumar Naidu <139610601+amitnaidu6103@users.noreply.github.com>  
Date: Sat Apr 26 04:08:24 2025 +0530

**Create File2.txt**

commit 17881cba8d9cf51767fa5d610392d8d70d78201c  
Author: Amit6103 <141658025+Amit6103@users.noreply.github.com>  
Date: Sat Apr 26 03:59:32 2025 +0530

**Create File1.txt**

```
HP@DESKTOP-EC20IPO MINGW64 ~/clonedemo/DevOps_Repo (main)
$ git log
commit e1bd8cb3463f312ec3208f45f6ce7ba65cd1761 (HEAD -> main)
Author: Devops <devops123@gmail.com>
Date:   Sat Apr 26 05:31:00 2025 +0530

    First Commit on file4.txt

commit e4901e8405752532698ea9973a60a88deb1a8e03 (origin/main, origin/HEAD)
Author: Devops <devops123@gmail.com>
Date:   Sat Apr 26 05:28:17 2025 +0530

    First Commit

commit 9dc85ec0833ddc609e364c7946da0004d2a86737
Merge: 17881cb 789a821
Author: Amit6103 <141658025+Amit6103@users.noreply.github.com>
Date:   Sat Apr 26 04:16:14 2025 +0530

    Merge pull request #1 from amitnaidu6103/main

    Create File2.txt

commit 789a821c62c076347fb27d662e5ff8d2ad0d74ac
Author: Amitkumar Naidu <139610601+amitnaidu6103@users.noreply.github.com>
Date:   Sat Apr 26 04:08:24 2025 +0530

    Create File2.txt

commit 17881cba8d9cf51767fa5d610392d8d70d78201c
Author: Amit6103 <141658025+Amit6103@users.noreply.github.com>
Date:   Sat Apr 26 03:59:32 2025 +0530

    Create File1.txt
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/clonedemo/DevOps_Repo (main)
$ git push -u origin main
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 294 bytes | 294.00 KiB/s, done.
Total 3 (delta 1), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/Amit6103/DevOps_Repo.git
  e4901e8..e1bd8cb  main -> main
branch 'main' set up to track 'origin/main'.
```

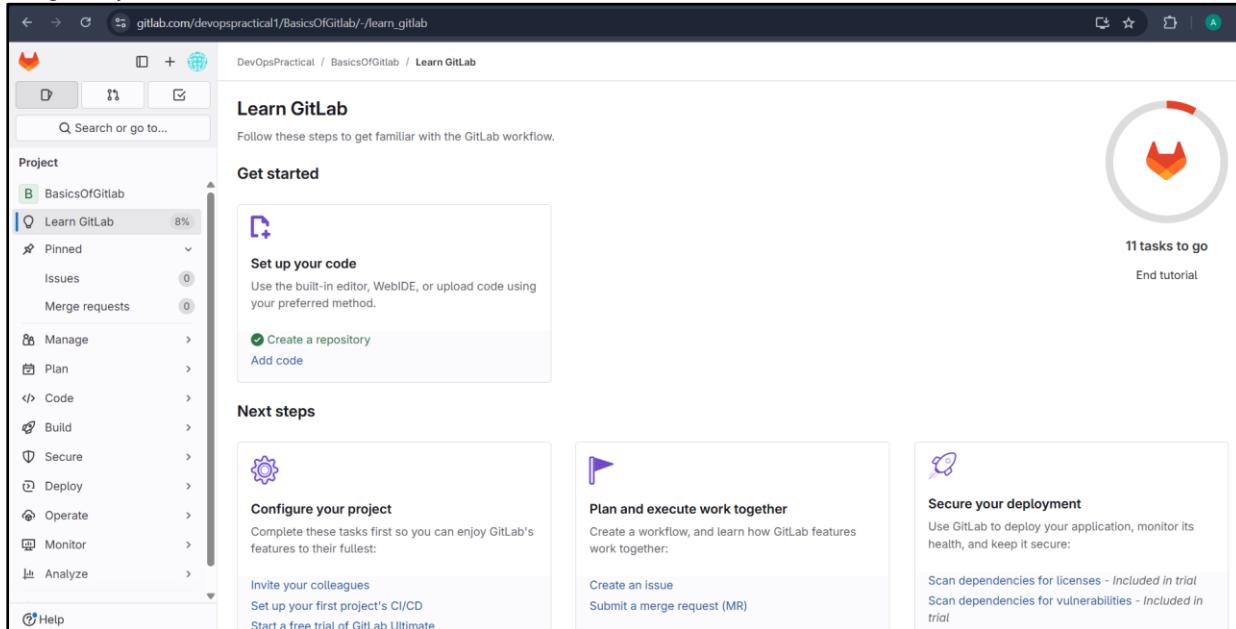
```
HP@DESKTOP-EC20IPO MINGW64 ~/clonedemo/DevOps_Repo (main)
$ git push -u origin main
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 294 bytes | 294.00 KiB/s, done.
Total 3 (delta 1), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/Amit6103/DevOps_Repo.git
  e4901e8..e1bd8cb  main -> main
branch 'main' set up to track 'origin/main'.
```

## **Practical No. 5**

**Aim:** Using GitLab Web IDE.

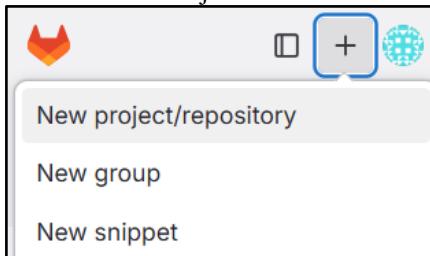
**Code:**

#Login to your GitLab Account:

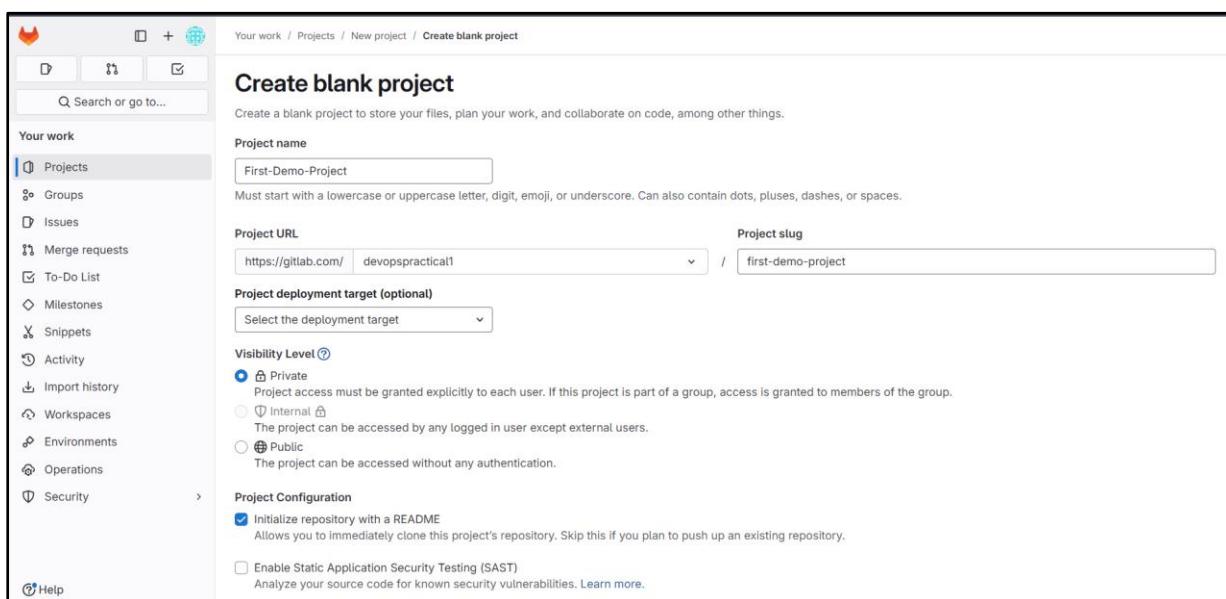


The screenshot shows the 'Learn GitLab' page. The main content area includes a 'Get started' section with a 'Set up your code' card (containing 'Create a repository' and 'Add code' options) and a 'Next steps' section with three cards: 'Configure your project', 'Plan and execute work together', and 'Secure your deployment'. A sidebar on the left lists various project management and monitoring options like 'Pinned', 'Issues', 'Merge requests', 'Manage', 'Plan', 'Code', 'Build', 'Secure', 'Deploy', 'Operate', 'Monitor', and 'Analyze'. A circular progress bar at the top right indicates '11 tasks to go'.

#Create a new Project:



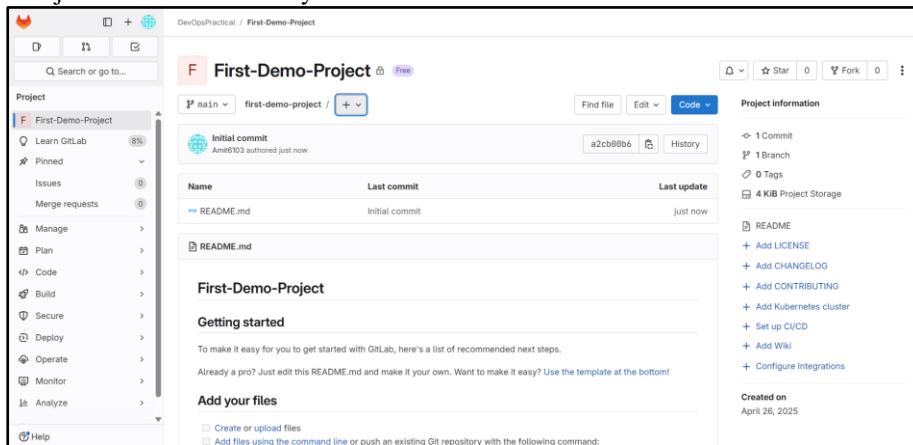
The screenshot shows the 'New project/repository' creation interface. It features a large input field for 'New project/repository' and two smaller options below it: 'New group' and 'New snippet'.



The screenshot shows the 'Create blank project' form. It includes fields for 'Project name' (set to 'First-Demo-Project'), 'Project URL' (set to 'https://gitlab.com/devopspractical1'), 'Project slug' (set to 'first-demo-project'), 'Project deployment target (optional)' (dropdown menu), 'Visibility Level' (radio buttons for 'Private', 'Internal', and 'Public', with 'Private' selected), and 'Project Configuration' (checkboxes for 'Initialize repository with a README' and 'Enable Static Application Security Testing (SAST)').

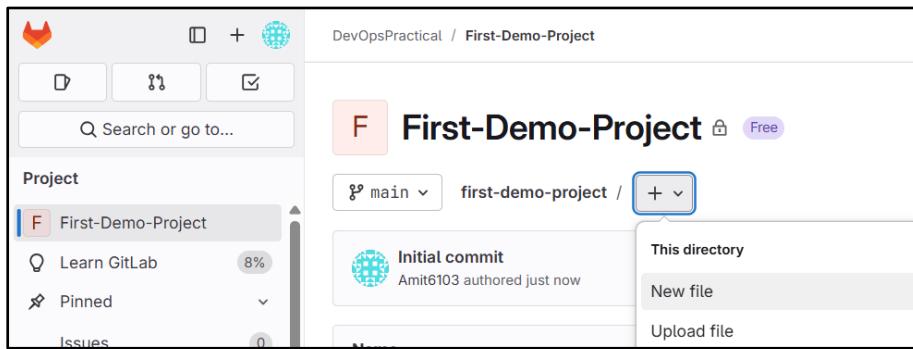
## **MCAL23 Devops Lab**

#Project created successfully



The screenshot shows a GitLab project page for 'First-Demo-Project'. The main content area displays the 'Initial commit' made by 'Amit6103' just now. The commit hash is 'a2cb0bb6'. Below the commit, the 'README.md' file is shown, containing the template content for a new project. The sidebar on the left provides navigation links for various project management tasks like Plan, Code, Build, Deploy, Operate, Monitor, and Analyze.

#Create a New File in GitLab



The screenshot shows the GitLab interface with a modal window titled 'This directory' open. Inside the modal, there are two options: 'New file' and 'Upload file'. This is likely a step in creating a new file within the repository's directory structure.

#Add content inside the file:

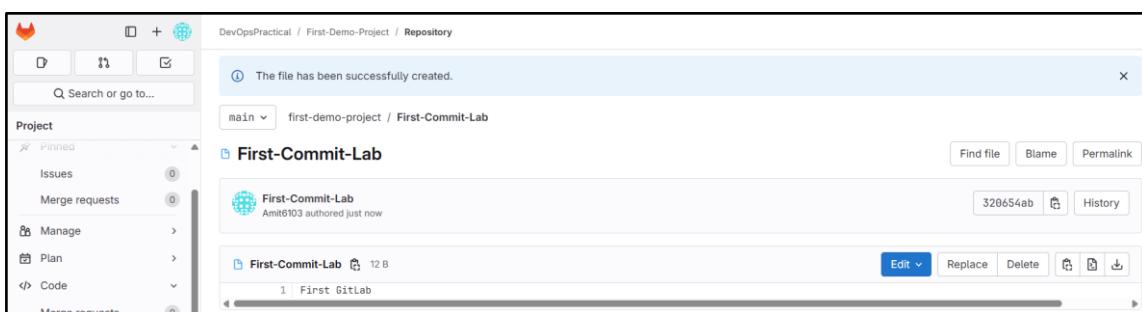


The screenshot shows the 'New file' editor in GitLab. The file is titled 'First-Commit-Lab' and contains the text 'First GitLab'. The editor has a 'Commit changes' button at the bottom right.

#Commit Changes:



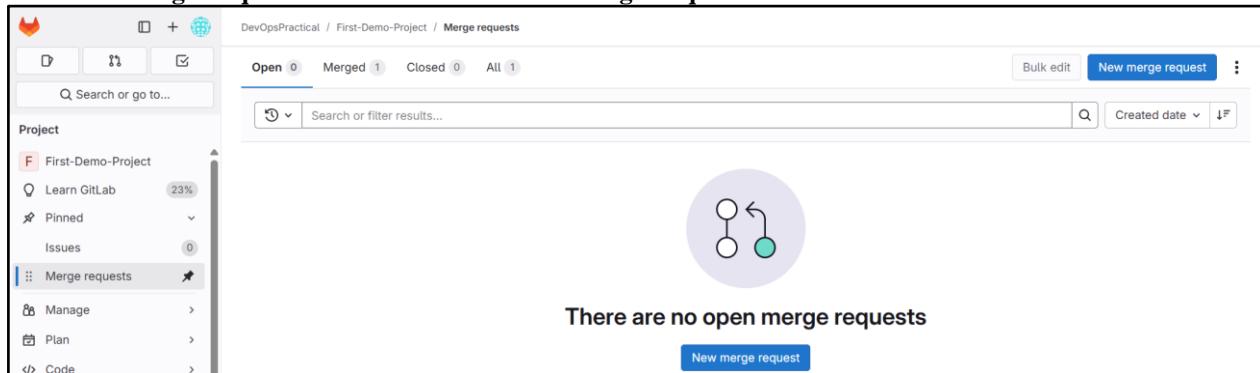
The screenshot shows the 'Commit changes' dialog box. It includes a 'Commit message' field containing 'First-Commit-Lab' and a 'Branch' section where 'Commit to the current main branch' is selected. At the bottom are 'Cancel' and 'Commit changes' buttons.



The screenshot shows the GitLab repository page for 'First-Demo-Project'. It displays the commit 'First-Commit-Lab' by 'Amit6103' with hash '320654ab'. The file content 'First GitLab' is shown in the preview pane. The sidebar on the left shows pinned issues and merge requests.

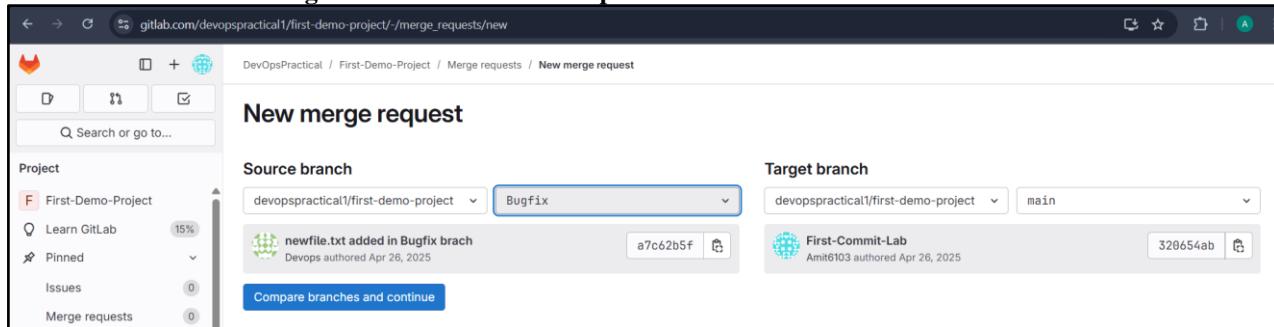
## **MCAL23 Devops Lab**

#Click on Merge Requests and then click on New Merge Request.



The screenshot shows the GitLab interface for a project named 'First-Demo-Project'. On the left sidebar, 'Merge requests' is selected. At the top, there's a search bar and a button for 'New merge request'. A central message says 'There are no open merge requests' with a small icon. Below it is a 'New merge request' button.

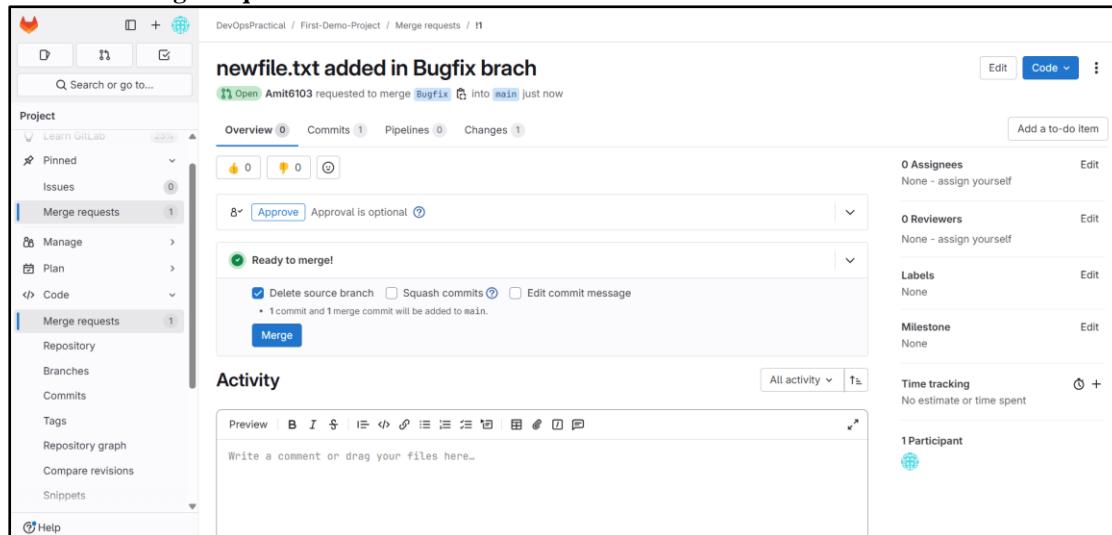
#Select the Source and target Branch. Click on Compare breaches and continue.



The screenshot shows the 'New merge request' page. It has sections for 'Source branch' (set to 'devopspractical1/first-demo-project' and 'Bugfix') and 'Target branch' (set to 'devopspractical1/first-demo-project' and 'main'). Below these are commit details: 'newfile.txt added in Bugfix brach' by 'Devops authored Apr 26, 2025' and 'First-Commit-Lab' by 'Amit6103 authored Apr 26, 2025'. At the bottom is a 'Compare branches and continue' button.

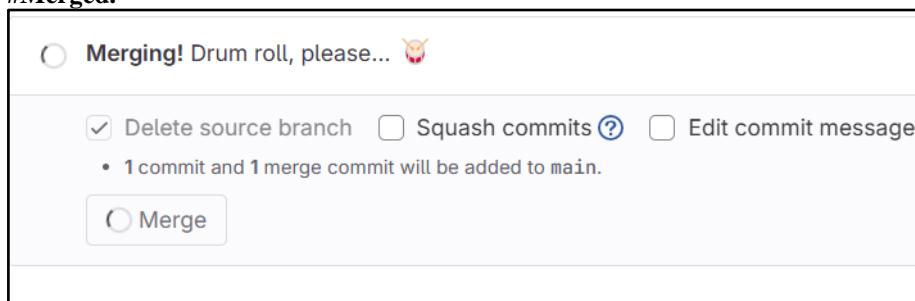
#Select New Merge Request, scroll down, and select “Delete Source Branch when merge request is accepted”.

#Create a Merge Request.



The screenshot shows a detailed view of a merge request. The title is 'newfile.txt added in Bugfix brach'. It shows an overview with 1 commit, 0 pipelines, and 1 change. Under 'Approve', there's an option to 'Delete source branch'. The right side of the screen lists project settings: 0 assignees, 0 reviewers, labels, milestone, time tracking, and 1 participant.

#Merged.



The screenshot shows the final step of merging. It says 'Merging! Drum roll, please...' with a drum icon. It includes checkboxes for 'Delete source branch' (checked), 'Squash commits' (unchecked), and 'Edit commit message' (unchecked). Below is a note: '1 commit and 1 merge commit will be added to main.' and a large 'Merge' button.

## **MCAL23 Devops Lab**

**newfile.txt added in Bugfix brach**

Merged Amit6103 requested to merge [Bugfix](#) into [main](#) just now

**Overview** 0    **Commits** 1    **Pipelines** 0    **Changes** 1    **Add a to-do item**

**Approval is optional**

**Merged by** Amit6103 just now    **Revert**    **Cherry-pick**

**Merge details**

- Changes merged into main with [c3aa9511](#).
- Deleted the source branch.

**Activity**

- Amit6103 mentioned in commit c3aa9511 just now
- Amit6103 merged just now

**Preview**    **Code**    **Issues**    **WIP**    **Comments**    **Commits**    **File**    **Review**

Write a comment or drag your files here...

**Assignees**: None - assign yourself    **Reviewers**: None - assign yourself    **Labels**: None    **Milestone**: None    **Time tracking**: No estimate or time spent    **Participants**: 1

### #New File Added

**F First-Demo-Project** Free

**main** / first-demo-project / [+](#)

**Merge branch 'Bugfix' into 'main'** Amit6103 authored 42 seconds ago    [c3aa9511](#)    [History](#)

Name	Last commit	Last update
First-Commit-Lab	First-Commit-Lab	13 minutes ago
README.md	Initial commit	16 minutes ago
<a href="#">newfile.txt</a>	newfile.txt added in Bugfix brach	5 minutes ago

**README.md**

**First-Demo-Project**

**Getting started**

To make it easy for you to get started with GitLab, here's a list of recommended next steps.

Already a pro? Just edit this README.md and make it your own. Want to make it easy? Use the template at the bottom!

**Project information**

- 2 Commits
- 1 Branch
- 0 Tags
- 4 KIB Project Storage
- README**
- + Add LICENSE
- + Add CHANGELOG
- + Add CONTRIBUTING
- + Enable Auto DevOps
- + Add Kubernetes cluster
- + Set up CI/CD
- + Add Wiki
- + Configure Integrations

**Created on**  
April 26, 2025

[https://gitlab.com/devopractical1/first-demo-project/-/blob/main/newfile.txt?ref\\_type=he...](https://gitlab.com/devopractical1/first-demo-project/-/blob/main/newfile.txt?ref_type=he...)

## **Practical No. 6**

**Aim:** Performing Merge Request using GitLab.

**Code:**

```
HP@DESKTOP-EC20IPO MINGW64 ~
```

```
$ mkdir gitlab
```

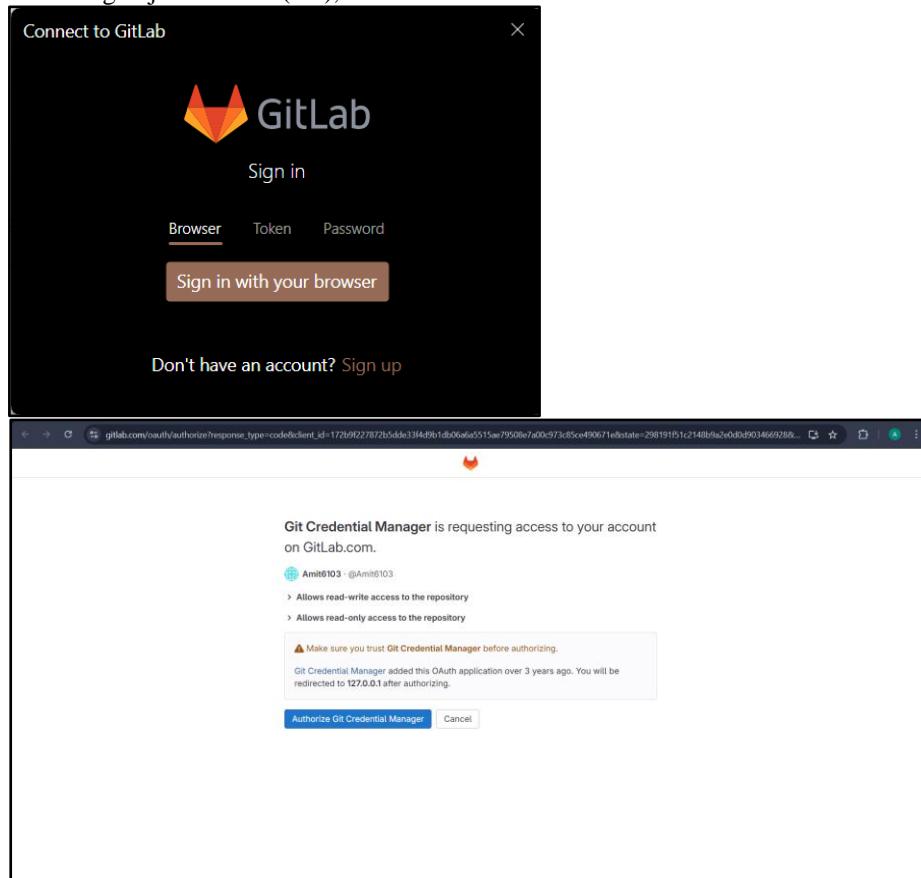
```
HP@DESKTOP-EC20IPO MINGW64 ~
$ mkdir gitlab
```

```
HP@DESKTOP-EC20IPO MINGW64 ~
```

```
$ cd gitlab
```

```
HP@DESKTOP-EC20IPO MINGW64 ~
$ cd gitlab
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/gitlab
$ git clone "https://gitlab.com/devopspractical1/first-demo-project.git"
Cloning into 'first-demo-project'...
info: please complete authentication in your browser...
remote: Enumerating objects: 6, done.
remote: Counting objects: 100% (6/6), done.
remote: Compressing objects: 100% (4/4), done.
remote: Total 6 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
Receiving objects: 100% (6/6), done.
```



MCAL23 Devops Lab

```
HP@DESKTOP-EC20IPO MINGW64 ~/gitlab
$ git clone "https://gitlab.com/devopspractical1/first-demo-project.git"
Cloning into 'first-demo-project'...
info: please complete authentication in your browser...
remote: Enumerating objects: 6, done.
remote: Counting objects: 100% (6/6), done.
remote: Compressing objects: 100% (4/4), done.
remote: Total 6 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
Receiving objects: 100% (6/6), done.
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/gitlab
$ ls
first-demo-project/
HP@DESKTOP-EC20IPO MINGW64 ~/gitlab
$ ls
first-demo-project/
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/gitlab
$ cd first-demo-project/
HP@DESKTOP-EC20IPO MINGW64 ~/gitlab/first-demo-project (main)
$ cd first-demo-project/
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/gitlab/first-demo-project (main)
$ ls
First-Commit-Lab README.md
HP@DESKTOP-EC20IPO MINGW64 ~/gitlab/first-demo-project (main)
$ ls
First-Commit-Lab README.md
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/gitlab/first-demo-project (main)
$ git pull origin main
From https://gitlab.com/devopspractical1/first-demo-project
 * branch      main      -> FETCH_HEAD
Already up to date.
HP@DESKTOP-EC20IPO MINGW64 ~/gitlab/first-demo-project (main)
$ git pull origin main
From https://gitlab.com/devopspractical1/first-demo-project
 * branch      main      -> FETCH_HEAD
Already up to date.
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/gitlab/first-demo-project (main)
$ git checkout -b Bugfix
Switched to a new branch 'Bugfix'
HP@DESKTOP-EC20IPO MINGW64 ~/gitlab/first-demo-project (main)
$ git checkout -b Bugfix
Switched to a new branch 'Bugfix'
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/gitlab/first-demo-project (Bugfix)
$ touch newfile.txt
HP@DESKTOP-EC20IPO MINGW64 ~/gitlab/first-demo-project (Bugfix)
$ touch newfile.txt
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/gitlab/first-demo-project (Bugfix)
$ vi newfile.txt
HP@DESKTOP-EC20IPO MINGW64 ~/gitlab/first-demo-project (Bugfix)
$ vi newfile.txt
```

**MCAL23 Devops Lab**

```
[MINGW64:/c/Users/HP/gitlab/first-demo-project]
New File created successfully!
~
```

HP@DESKTOP-EC20IPO MINGW64 ~/gitlab/first-demo-project (Bugfix)

\$ cat newfile.txt

New File created successfully!

```
[HP@DESKTOP-EC20IPO MINGW64 ~/gitlab/first-demo-project (Bugfix)]
$ cat newfile.txt
New File created successfully!
```

HP@DESKTOP-EC20IPO MINGW64 ~/gitlab/first-demo-project (Bugfix)

\$ git add .

warning: in the working copy of 'newfile.txt', LF will be replaced by CRLF the next time Git touches it

```
[HP@DESKTOP-EC20IPO MINGW64 ~/gitlab/first-demo-project (Bugfix)]
$ git add .
warning: in the working copy of 'newfile.txt', LF will be replaced by CRLF the n
ext time Git touches it
```

HP@DESKTOP-EC20IPO MINGW64 ~/gitlab/first-demo-project (Bugfix)

\$ git status

On branch Bugfix

Changes to be committed:

(use "git restore --staged <file>..." to unstage)

  new file:  newfile.txt

```
[HP@DESKTOP-EC20IPO MINGW64 ~/gitlab/first-demo-project (Bugfix)]
$ git status
On branch Bugfix
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:  newfile.txt
```

HP@DESKTOP-EC20IPO MINGW64 ~/gitlab/first-demo-project (Bugfix)

\$ git commit -m "newfile.txt added in Bugfix brach"

[Bugfix a7c62b5] newfile.txt added in Bugfix brach

1 file changed, 1 insertion(+)

create mode 100644 newfile.txt

```
[HP@DESKTOP-EC20IPO MINGW64 ~/gitlab/first-demo-project (Bugfix)]
$ git commit -m "newfile.txt added in Bugfix brach"
[Bugfix a7c62b5] newfile.txt added in Bugfix brach
 1 file changed, 1 insertion(+)
  create mode 100644 newfile.txt
```

HP@DESKTOP-EC20IPO MINGW64 ~/gitlab/first-demo-project (Bugfix)

\$ git log

commit a7c62b5f5aa6dcb04b1f9fa4a930676266aecdac (HEAD -> Bugfix)

Author: Devops <devops123@gmail.com>

Date: Sat Apr 26 06:10:06 2025 +0530

  newfile.txt added in Bugfix brach

commit 320654ab22b793309b1821d147e59ef004eedc55 (origin/main, origin/HEAD, main)

Author: Amit6103 <amitnaidu603@gmail.com>

Date: Sat Apr 26 00:32:29 2025 +0000

First-Commit-Lab

commit a2cb00b6aeb31b4e6993c0ba11e0f4e088eadcb1

Author: Amit6103 <amitnaidu603@gmail.com>

Date: Sat Apr 26 00:29:06 2025 +0000

Initial commit

```
HP@DESKTOP-EC20IPO MINGW64 ~/gitlab/first-demo-project (Bugfix)
$ git log
commit a7c62b5f5aa6dc04b1f9fa4a930676266aedac (HEAD -> Bugfix)
Author: Devops <devops123@gmail.com>
Date:   Sat Apr 26 06:10:06 2025 +0530

    newfile.txt added in Bugfix brach

commit 320654ab22b793309b1821d147e59ef004eedc55 (origin/main, origin/HEAD, main)
Author: Amit6103 <amitnaidu603@gmail.com>
Date:   Sat Apr 26 00:32:29 2025 +0000

    First-Commit-Lab

commit a2cb00b6aeb31b4e6993c0ba11e0f4e088eadcb1
Author: Amit6103 <amitnaidu603@gmail.com>
Date:   Sat Apr 26 00:29:06 2025 +0000

    Initial commit
```

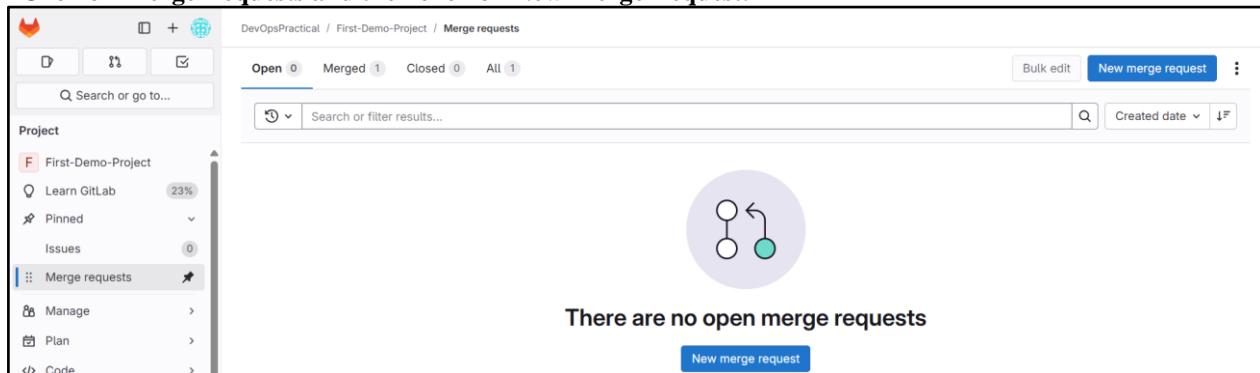
HP@DESKTOP-EC20IPO MINGW64 ~/gitlab/first-demo-project (Bugfix)

```
$ git push origin Bugfix
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 363 bytes | 363.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: To create a merge request for Bugfix, visit:
remote: https://gitlab.com/devopspractical1/first-demo-project/-
/merge_requests/new?merge_request%5Bsource_branch%5D=Bugfix
remote:
To https://gitlab.com/devopspractical1/first-demo-project.git
 * [new branch]      Bugfix -> Bugfix
```

```
HP@DESKTOP-EC20IPO MINGW64 ~/gitlab/first-demo-project (Bugfix)
$ git push origin Bugfix
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 363 bytes | 363.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: To create a merge request for Bugfix, visit:
remote: https://gitlab.com/devopspractical1/first-demo-project/-/merge_requests/new?merge_request%5Bsource_branch%5D=Bugfix
remote:
To https://gitlab.com/devopspractical1/first-demo-project.git
 * [new branch]      Bugfix -> Bugfix
```

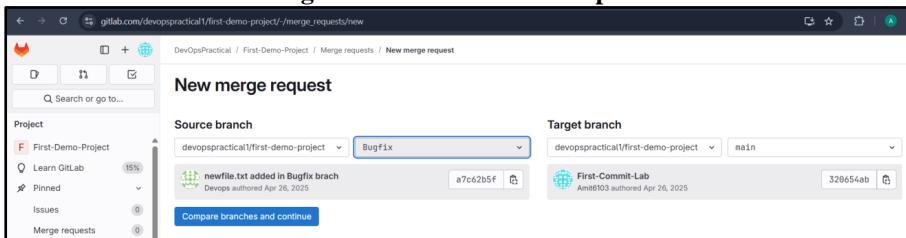
#### **Output:**

#Click on Merge Requests and then click on New Merge Request.

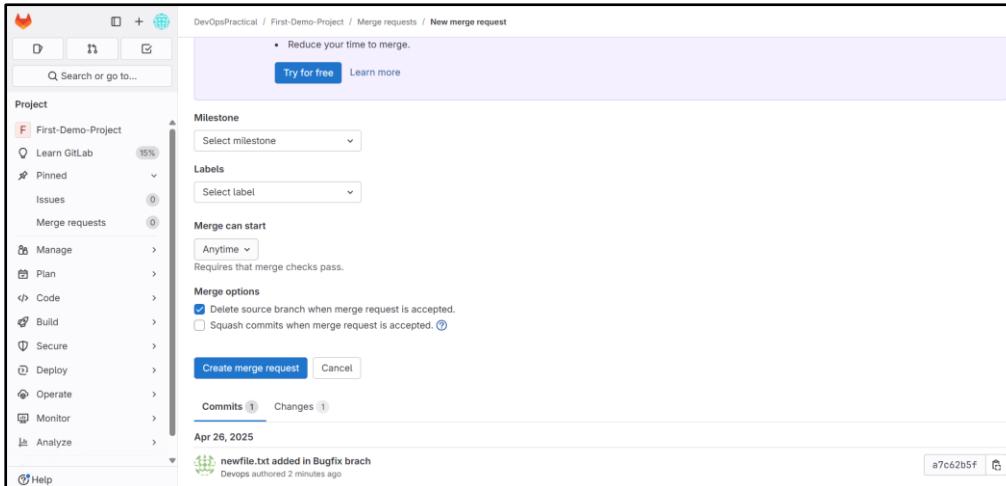
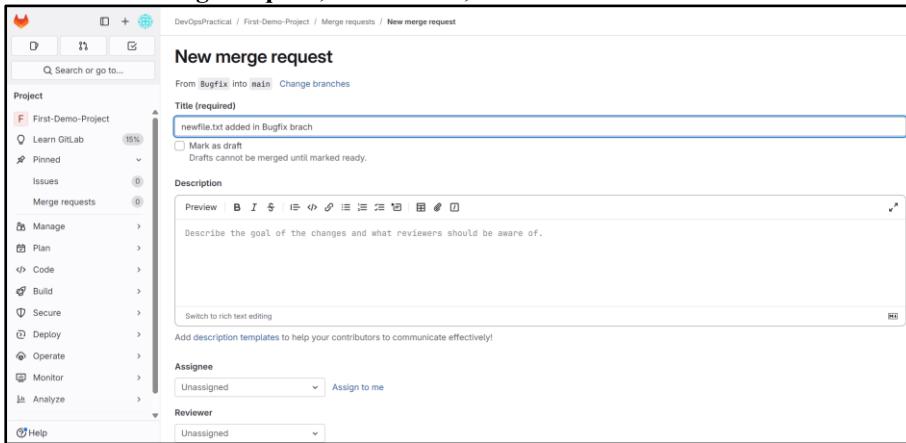


### **MCAL23 Devops Lab**

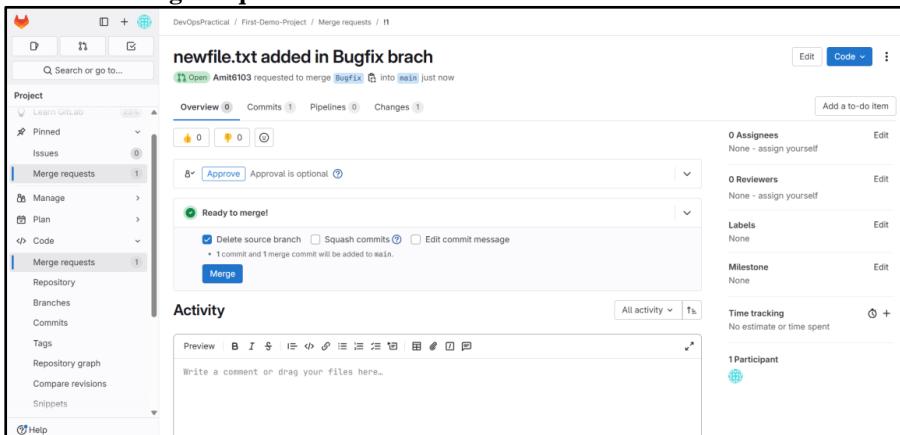
#Select the Source and target Branch. Click on Compare breaches and continue.



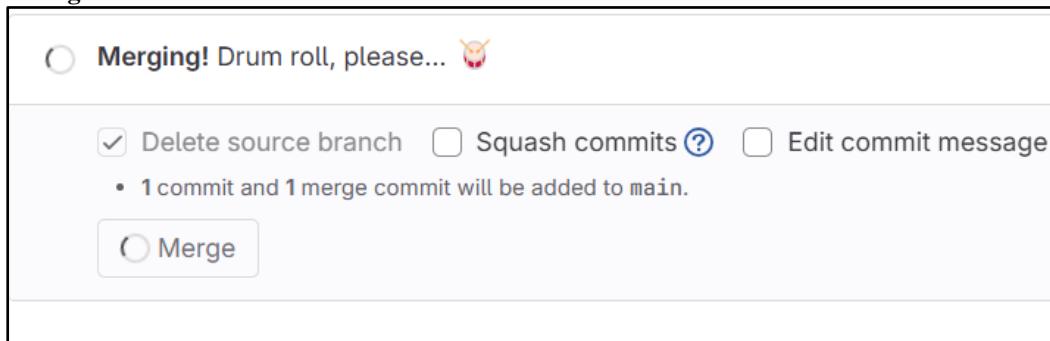
#Select New Merge Request, scroll down, and select “Delete Source Branch when merge request is accepted”.



#Create a Merge Request.



#Merged.



This screenshot shows a GitLab Merge Request page. The title is "newfile.txt added in Bugfix brach". It indicates that the merge request has been merged by "Amit6103 just now". The merge details show that changes were merged into "main" with commit "c3aa9511". The sidebar on the left shows the project structure with "Merge requests" selected. The right side of the page contains sections for "Activity", "Assignees", "Reviewers", "Labels", "Milestone", "Time tracking", and "Participants".

#New File Added

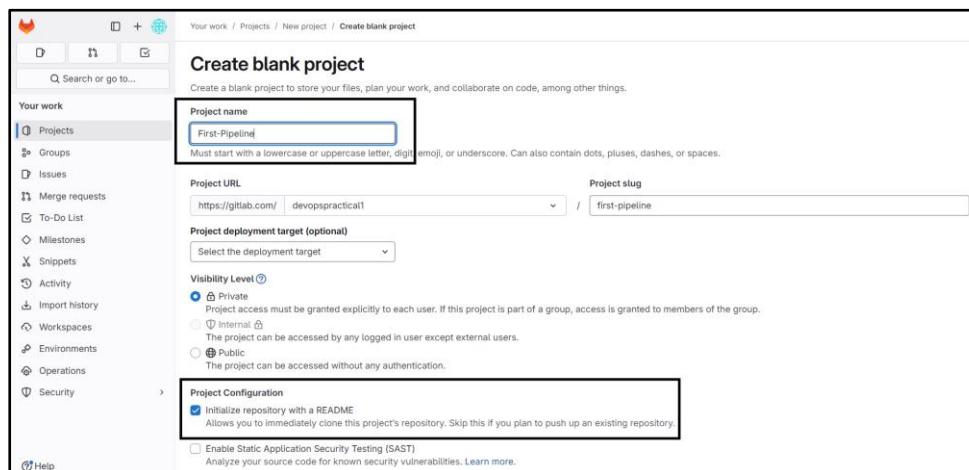
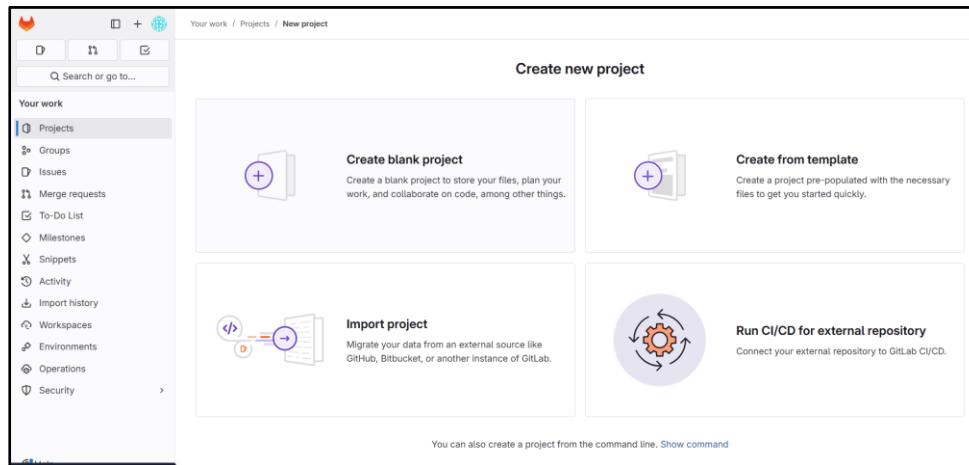
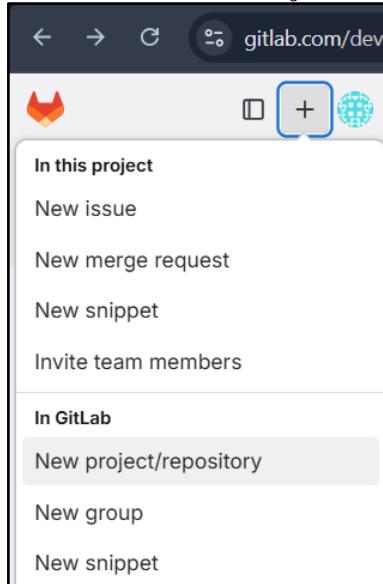
This screenshot shows a GitLab Project page for "First-Demo-Project". The main content area displays a table of files in the "main" branch. One file, "newfile.txt", is highlighted, showing its content: "newfile.txt added in Bugfix brach". The sidebar on the left shows various project management and development tools like Learn GitLab, Issues, Merge requests, Plan, Code, Build, Secure, Deploy, Operate, Monitor, and Analyze. The right sidebar provides project information such as "2 Commits", "1 Branch", "0 Tags", "4 KIB Project Storage", and links to README, LICENSE, CHANGELOG, CONTRIBUTING, Auto DevOps, Kubernetes cluster, CI/CD, Wiki, and Integrations. It also shows the project was created on April 26, 2023.

## **Practical No. 7**

**Aim: Workflow Management in GitLab.**

**Code:**

**Click on Create New Project:**



## MCAL23 Devops Lab

Pipeline created Successfully:

The screenshot shows the GitLab interface for a project named 'First-Pipeline'. The main area displays a message: 'Project 'First-Pipeline' was successfully created.' Below this, there's a summary of the project's status: 1 Commit, 1 Branch, 0 Tags, and 4 KiB Project Storage. On the right, there are several buttons for managing the project, such as 'README', 'Add LICENSE', 'Add CHANGELOG', etc. The sidebar on the left contains links for Learn GitLab, Pinned issues, Merge requests, Manage, Plan, Code, Build, Secure, Deploy, Operate, Monitor, Analyze, and Help.

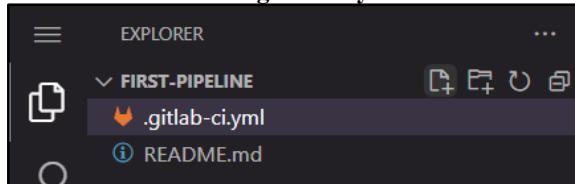
Click on Edit → Web IDE

This screenshot shows the same 'First-Pipeline' project page. The 'Edit' button in the top right is highlighted with a blue border. A tooltip for 'Web IDE' appears, stating: 'Quickly and easily edit multiple files'. The rest of the interface is identical to the previous screenshot, showing the project details and sidebar.

Web IDE:

This screenshot shows the GitLab Web IDE in a browser window. The interface has a dark theme. On the left, there's an 'EXPLORER' sidebar with a tree view showing a single file named 'README.md'. The main workspace is titled 'Welcome' and features a heading 'Get started with the GitLab Web IDE'. It includes a sub-section 'Make it yours' with a note about customizing themes and panel layouts. There are also buttons for 'What's next for the Web IDE?', 'Let us know what you think', and 'Mark Done'. On the right, there's a preview of the code editor interface.

Create a file named “.gitlab-ci.yml”:

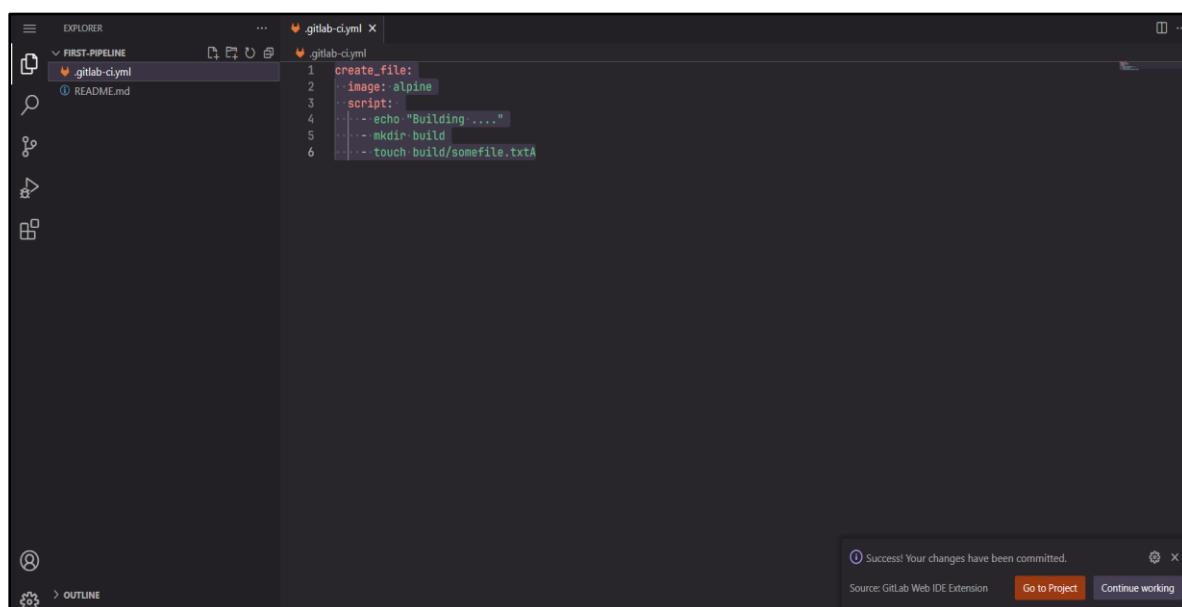
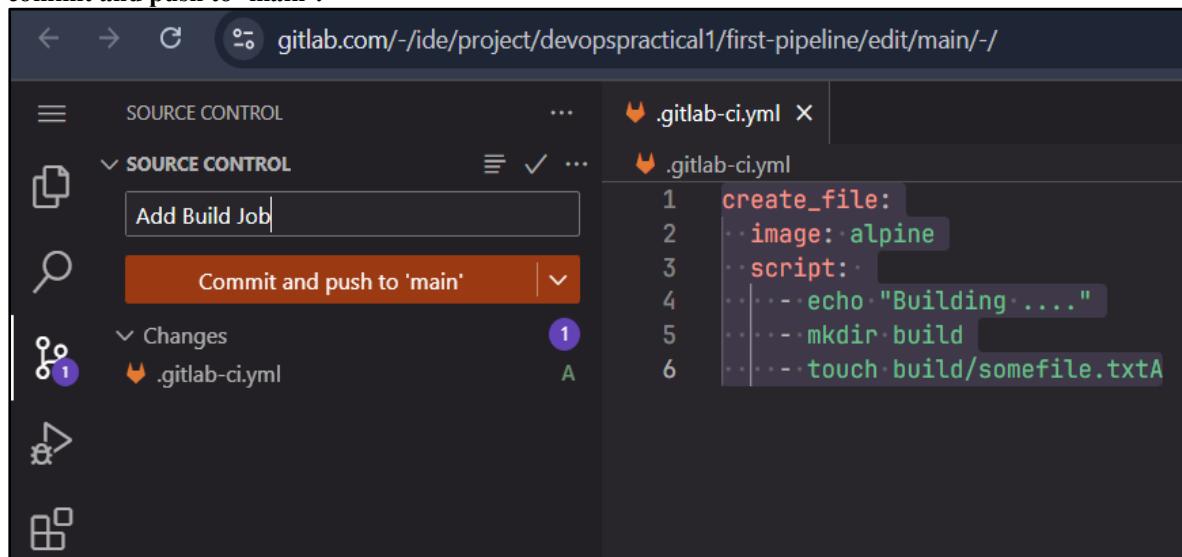


.gitlab-ci.yml

Code:

```
create_file:  
image: alpine  
script:  
- echo "Building ...."  
- mkdir build  
- touch build/somefile.txtA
```

Write the above code and save, then click on Build button and write “Add Build Job” and then click on commit and push to ‘main’:



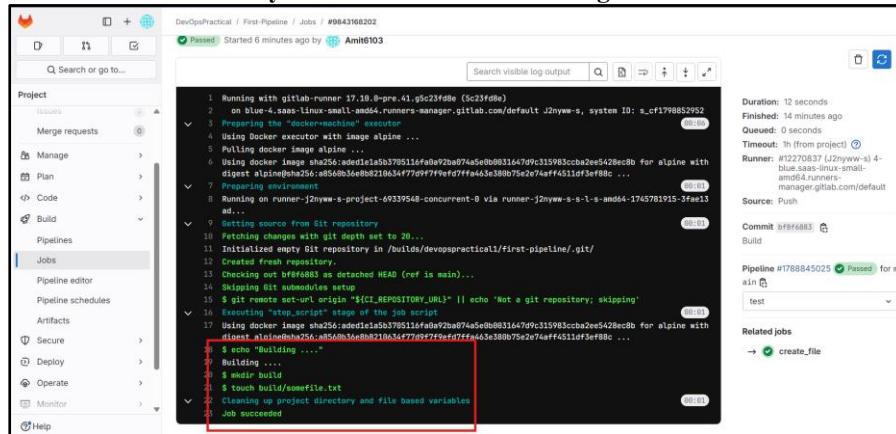
### **MCAL23 Devops Lab**

After clicking on build, go back to your project on gitlab and see the status of your project code written on the code editor:

Click on Build → Pipeline on the left side

## MCAL23 Devops Lab

Click on “Create File” you will find the code running status:



The screenshot shows the GitLab interface for a project named 'DevOpsPractical / First-Pipeline'. A specific job, '#0843166202', is displayed as 'Passed' with a duration of 12 seconds. The log output shows several steps, including cloning the repository and running a script. A red box highlights the final step where the script fails with the message '\$ echo "Building ...."' followed by '\$ Building ....' and '\$ mkdir build'. The log concludes with 'Job succeeded'.

```

1 Running with gitlab-runner 17.10.0-pre.41.g5c23fdbe (5c23fdbe)
2 on blue-4-saas-linux-small-amd64-runners-manager.gitlab.com/default J2nyww-s, system ID: s_cf1798852952
3 Preparing the "docker-machine" executor
4 Using Docker executor with image alpine ...
5 Pulling docker image alpine ...
6 Using docker image sha256:aedc1e1a5b3785116fa0e92ba074a5e0b0831647d9c315985ccbaee5428ec8b for alpine with
7 digest alpine@sha256:aedc1e1a5b3785116fa0e92ba074a5e0b0831647d9c315985ccbaee5428ec8b for alpine with
8 digest alpine@sha256:aedc1e1a5b3785116fa0e92ba074a5e0b0831647d9c315985ccbaee5428ec8b for alpine with
9 Getting source from Git depth set to 20...
10 Initialized empty Git repository in /builds/devopspractical1/first-pipeline/.git/
11 Created fresh repository.
12 Checking out bf8f6883 (ref is main)...
13 Skipping Git submodules setup
14 $ git remote add origin ${CI_PROJECT_URL} || echo 'Not a git repository; skipping'
15 $ git pull --tags --rebase origin ${CI_COMMIT_REF_NAME}
16 $ cd build
17 Using docker image sha256:aedc1e1a5b3785116fa0e92ba074a5e0b0831647d9c315985ccbaee5428ec8b for alpine with
    digest alpine@sha256:aedc1e1a5b3785116fa0e92ba074a5e0b0831647d9c315985ccbaee5428ec8b for alpine with
$ echo "Building ...."
$ Building ....
$ mkdir build
$ touch build/somefile.txt
$ Cleaning up project directory and file based variables
Job succeeded
  
```

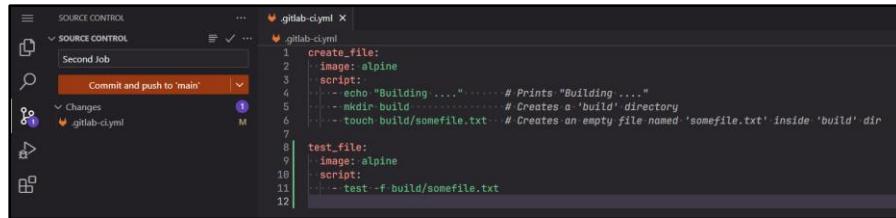
Add the below code in the the Web IDE and click on Commit and push to ‘main’:

test\_file:

image: alpine

script:

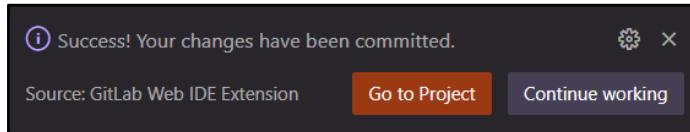
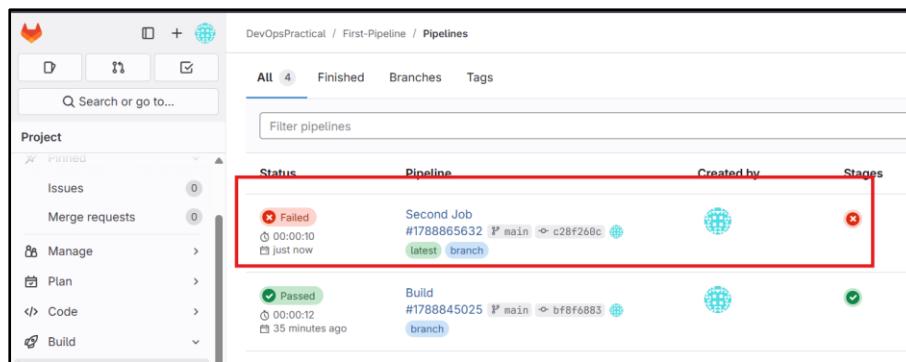
- test -f build/somefile.txt



The screenshot shows the GitLab Web IDE interface. A new branch named 'Second Job' is selected. The 'Commit and push to 'main'' button is highlighted. The commit message 'Success! Your changes have been committed.' is shown. The commit details show the code for the 'test\_file' job.

```

1 create_file:
2   image: alpine
3   script:
4     - echo "Building ...." # Prints "Building ...."
5     - mkdir build # Creates a 'build' directory
6     - touch build/somefile.txt # Creates an empty file named 'somefile.txt' inside 'build' directory
7
8 test_file:
9   image: alpine
10  script:
11    - test -f build/somefile.txt
12
  
```

The screenshot shows the Pipelines interface for the 'First-Pipeline' project. It lists two pipelines: 'Second Job' (status: Failed) and 'Build' (status: Passed). The failed pipeline has a duration of 00:00:10 and was just now created. The passed pipeline has a duration of 00:00:12 and was 35 minutes ago. A red box highlights the failed pipeline entry.

Status	Pipeline	Created by	Stages
Failed	Second Job #1788865632 ⌚ 00:00:10 just now	c28f260c latest branch	<span style="color: red;">✖</span>
Passed	Build #1788845025 ⌚ 00:00:12 35 minutes ago	bf8f6883 branch	<span style="color: green;">✓</span>

On clicking the failed button, you will find where it got failed and wher the changes are needed in the code:

## MCAL23 Devops Lab

**Second Job**

Failed Amit6103 created pipeline for commit c28f260c 6 minutes ago, finished 6 minutes ago

For main

latest branch 2 jobs 0.36 10 seconds, queued for 1 seconds

Pipeline Jobs Failed Jobs Tests

**test**

Failed jobs

- test\_file

create\_file

Click on test\_file where the error is seen:

Running with gitlab-runner 17.10.0-pre.41.g5c23fd8e (5c23fd8e)

on blue-5.saa5-linux-small-amd64-runners-manager.gitlab.com/default -AzERasQ, system ID: s\_4cb9fcee29e2

Preparing the "docker-machine" executor

Using Docker executor with image alpine ...

Pulling docker image alpine ...

Using docker image sha256:ade11eab53785110fa9a92ba074a5e0b0031647d9c315983ccb2ee5428ec8b for alpine with digest alpine@sha256:a8560b36e0b821863477d9ff7fef07ffa463e380b75e2e74af#4511df3ef88c ...

Preparing environment

Running on runner-azerasq-project-69339548-concurrent-0 via runner-azerasq-s-1-s-amd64-1745784152-42bf7d9

Fetching changes with git depth set to 20...

Initialized empty Git repository in /builds/devopspractical1/first-pipeline/.git/

Created fresh repository.

Checking out c28f260c as detected HEAD (ref is main)...

Skipping Git submodules setup

Execution 'step\_script' stage of the job script

Executing step\_script stage of the job script

Using docker image sha256:ade11eab53785110fa9a92ba074a5e0b0031647d9c315983ccb2ee5428ec8b for alpine with digest alpine@sha256:a8560b36e0b821863477d9ff7fef07ffa463e380b75e2e74af#4511df3ef88c ...

test -f build/somefile.txt

Cleaning up project directory and file based variables

ERROR: Job failed: exit code 1

Make changes in the code to get the correct output:

- Create stages in the code and also mention the stage in the following code:

```

stages:
  - build
  - test

create_file:
  image: alpine
  stage: build
  script:
    - echo "Building ...." # Prints "Building ...."
    - mkdir build # Creates a 'build' directory
    - touch build/somefile.txt # Creates an empty file named 'somefile.txt' inside 'build' dir

test_file:
  image: alpine
  stage: test
  script:
    - test -f build/somefile.txt

```

The code now is partially correct and now have to make some more changes:

Status	Pipeline	Created by	Stages	Actions
Failed	Commit stages #1788873622	Commit stages #1788873622	Passed	↻ ↴
Failed	Second Job #1788865632	Second Job #1788865632	Failed	↻ ↴
Passed	Build #1788845025	Build #1788845025	Passed	↻ ↴

## MCAL23 Devops Lab

The screenshot shows the GitLab interface for a project named 'DevOpsPractical'. In the center, under 'Commit stages', there is a failed stage for commit '95f57de2'. The stage is labeled 'test' and contains a job named 'test\_file' which failed. A red arrow points from the text 'Failed jobs' in the pipeline summary to the failed job in the stage diagram.

Add artifacts in our code= and also defin the path of running the process:

The screenshot shows the GitLab pipeline editor for a file named '.gitlab-ci.yml'. It defines two stages: 'build' and 'test'. The 'build' stage has a job 'create\_file' which creates a directory 'build' and a file 'somefile.txt'. The 'test' stage has a job 'test\_file' which runs a test command. A red box highlights the 'artifacts' section where the path 'build/' is defined, and a red arrow points to it from the text 'paths:' in the pipeline summary.

```

stages:
  - build
  - test

create_file:
  image: alpine
  stage: build
  script:
    - echo "Building ...." # Prints "Building ...."
    - mkdir build # Creates a 'build'-directory
    - touch build/somefile.txt # Creates an empty file named 'somefile.txt' inside 'build'-dir
  artifacts:
    paths:
      - build/
test_file:
  image: alpine
  stage: test
  script:
    - test -f build/somefile.txt
  
```

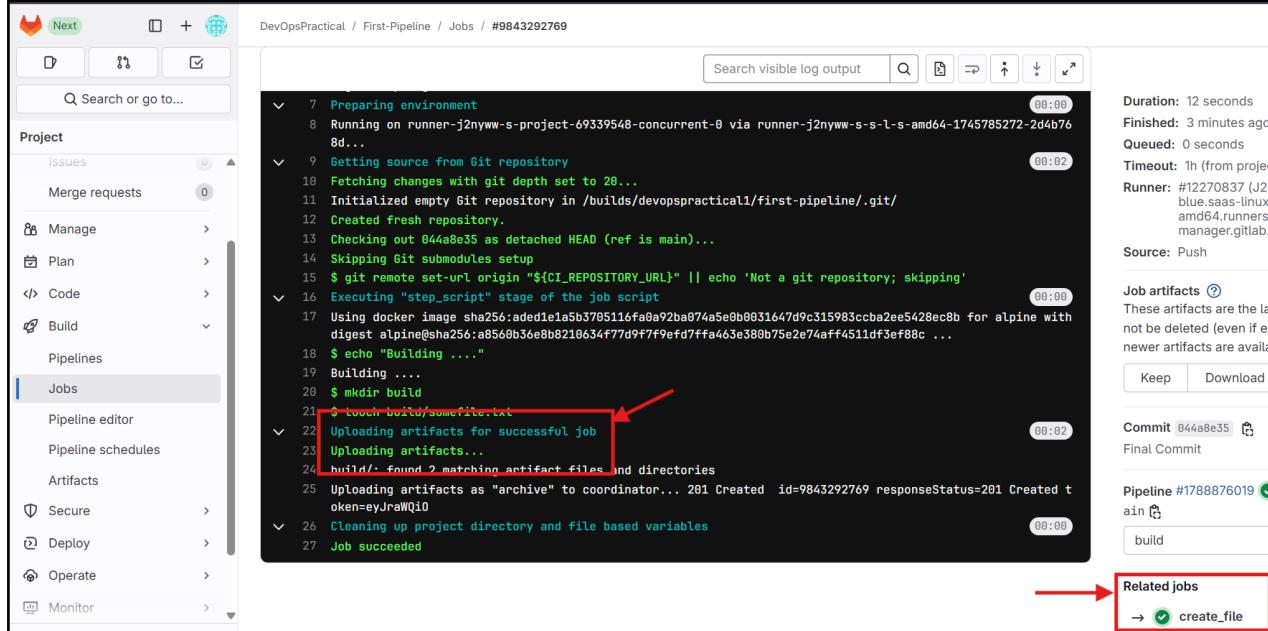
After adding artifacts in the code, the final commit is passed and the code is running successfully:

The screenshot shows the GitLab pipeline list. It lists several pipelines: 'Final Commit' (Passed), 'Commit stages' (Failed), 'Second Job' (Failed), and 'Build' (Passed). A red box highlights the 'Final Commit' row, and a red arrow points to the green checkmark indicating success.

The screenshot shows the details of the 'Final Commit' pipeline. It displays a successful pipeline run for commit '044a8e35'. The pipeline consists of a 'build' stage followed by a 'test' stage. Both stages are shown as successful (green checkmarks). A red box highlights the 'test' stage, and a red arrow points to the green checkmark indicating success.

## MCAL23 Devops Lab

When clicked on create file, the artifacts were uploading and we can see the artifacts while clicking on the browse button on the right-hand side:



The screenshot shows a GitLab pipeline log for job #9843292769. The log output includes several steps: preparing environment, fetching source from Git repository, building, and uploading artifacts. A red box highlights the step "Uploading artifacts for successful job". Another red box highlights the "Related jobs" section, which contains a link to "create\_file".

```

7 Preparing environment
8 Running on runner-j2nyww-s-project-69339548-concurrent-0 via runner-j2nyww-s-s-l-s-amd64-1745785272-2d4b76
8d...
9 Getting source from Git repository
10 Fetching changes with git depth set to 20...
11 Initialized empty Git repository in /builds/devopspractical1/first-pipeline/.git/
12 Created fresh repository.
13 Checking out 044a8e35 as detached HEAD (ref is main)...
14 Skipping Git submodules setup
15 $ git remote set-url origin "${CI_REPOSITORY_URL}" || echo 'Not a git repository; skipping'
16 Executing "step_script" stage of the job script
17 Using docker image sha256:aded1ea5b3705116fa0a92ba074a5e0b0031647d9c315983ccba2ee5428ec8b for alpine with
digest alpine@sha256:a8560b36e8b8210634f77d9f7f9efdf7ffa463e380b75e2e74aff4511df3ef88c ...
18 $ echo "Building ...."
19 Building ...
20 $ mkdir build
21 $ touch build/somefile.txt
22 Uploading artifacts for successful job
23 Uploading artifacts...
24 build/- found 2 matching artifact files and directories
25 Uploading artifacts as "archive" to coordinator... 201 Created id=9843292769 responseStatus=201 Created token=eyJrAWi0
26 Cleaning up project directory and file based variables
27 Job succeeded
  
```

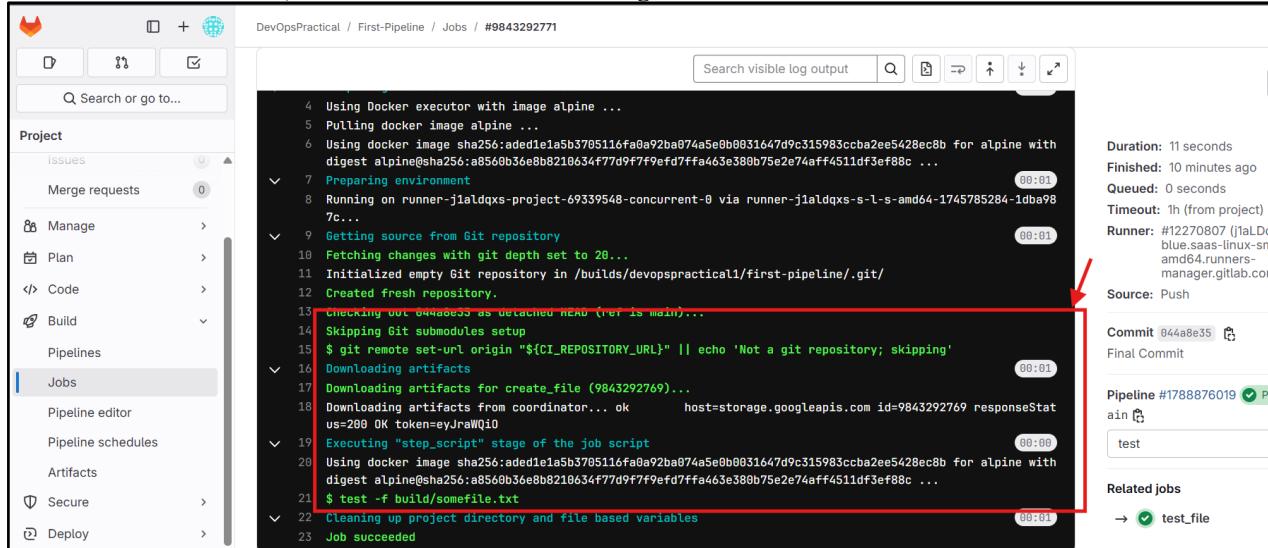
Click on Browse → Build → “somefile.txt”, the artifacts are stored.



The screenshot shows the artifacts page for job #9843292769. It lists a single artifact named "somefile.txt" with a size of 0 B. A red box highlights this file entry.

Name	Size
somefile.txt	0 B

When clicked on test file, the artifacts were downloading:



The screenshot shows a GitLab pipeline log for job #9843292769. The log output includes steps for preparing environment, fetching source, and executing a step script. A red box highlights the step "Downloading artifacts for create\_file (9843292769)". Another red box highlights the "Related jobs" section, which contains a link to "test\_file".

```

4 Using Docker executor with image alpine ...
5 Pulling docker image alpine ...
6 Using docker image sha256:aded1ea5b3705116fa0a92ba074a5e0b0031647d9c315983ccba2ee5428ec8b for alpine with
digest alpine@sha256:a8560b36e8b8210634f77d9f7f9efdf7ffa463e380b75e2e74aff4511df3ef88c ...
7 Preparing environment
8 Running on runner-j1aldqxs-project-69339548-concurrent-0 via runner-j1aldqxs-s-s-l-s-amd64-1745785284-1dba98
7c...
9 Getting source from Git repository
10 Fetching changes with git depth set to 20...
11 Initialized empty Git repository in /builds/devopspractical1/first-pipeline/.git/
12 Created fresh repository.
13 Checking out 044a8e35 as detached HEAD (ref is main)...
14 Skipping Git submodules setup
15 $ git remote set-url origin "${CI_REPOSITORY_URL}" || echo 'Not a git repository; skipping'
16 Executing "step_script" stage of the job script
17 Downloading artifacts for create_file (9843292769)...
18 Downloading artifacts from coordinator... ok host=storage.googleapis.com id=9843292769 responseStatus=200 OK token=eyJrAWi0
19 $ test -f build/somefile.txt
20 Using docker image sha256:aded1ea5b3705116fa0a92ba074a5e0b0031647d9c315983ccba2ee5428ec8b for alpine with
digest alpine@sha256:a8560b36e8b8210634f77d9f7f9efdf7ffa463e380b75e2e74aff4511df3ef88c ...
21 $ test -f build/somefile.txt
22 Cleaning up project directory and file based variables
23 Job succeeded
  
```

## **Practical No. 8**

**Aim:** Demonstrate Continuous Integration and development using Jenkins.

**Code:**

### **1) Setting up a CI/CD Pipeline for a Web Development Project:**

- Install Jenkins on the system and start the Jenkins server.
  - Navigate to <http://localhost:8080>.
  - Install suggested plugins during setup.
  - Configure Java, Maven, and Git under Manage Jenkins > Global Tool Configuration.
  - Connect Jenkins to GitHub by adding GitHub credentials.
- 

### **2) Setting up Apache Tomcat Server:**

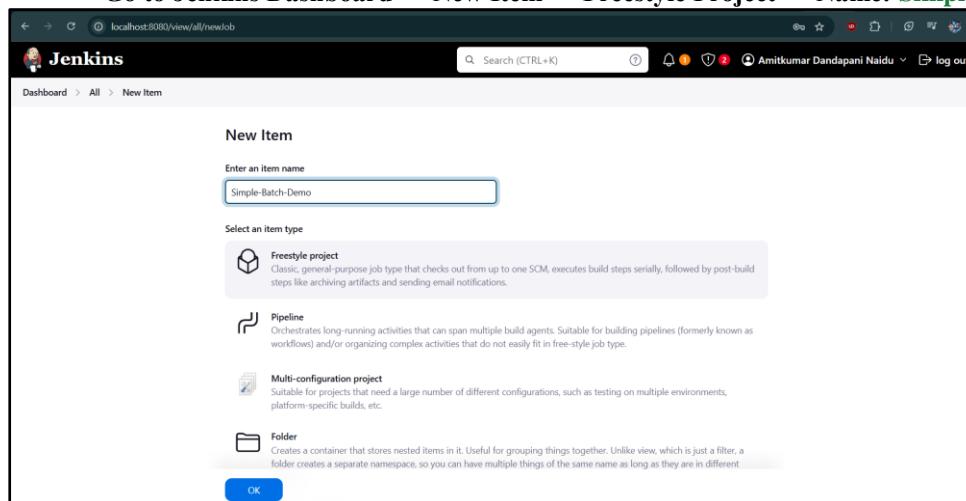
- Download Apache Tomcat from [tomcat.apache.org](http://tomcat.apache.org).
- Extract and configure the `server.xml` and `tomcat-users.xml` for remote deployment.
- Add the `manager-script` role to the `tomcat-users.xml`:

```
<role rolename="manager-script"/>
<user username="admin" password="admin123" roles="manager-script"/>
```

- Start Tomcat.
- 

### **3) Create a Freestyle Project and Execute Windows Batch Commands:**

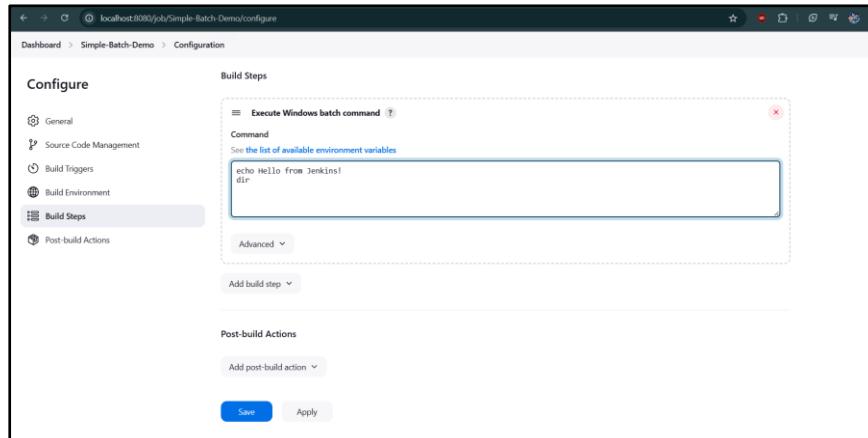
- Go to Jenkins Dashboard → New Item → Freestyle Project → Name: **Simple-Batch-Demo**.



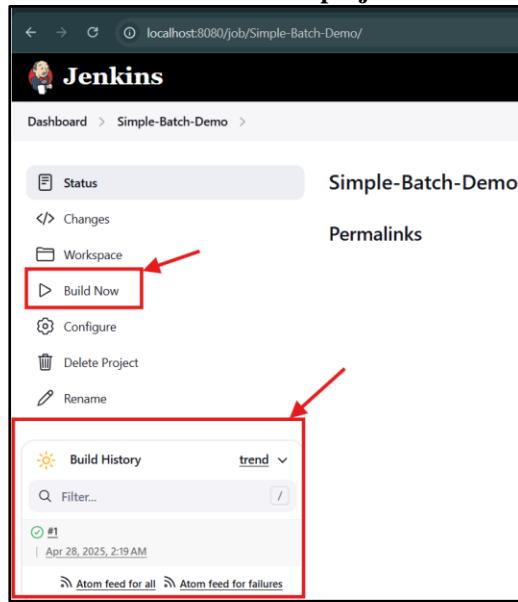
- In the Build section, select Execute Windows batch command.
- Add a command like:

**echo Hello from Jenkins!**

**dir**

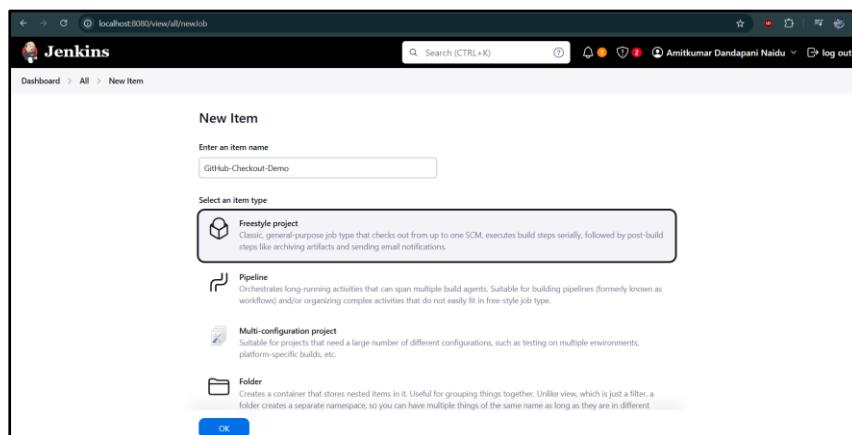


- **Save and build the project.**

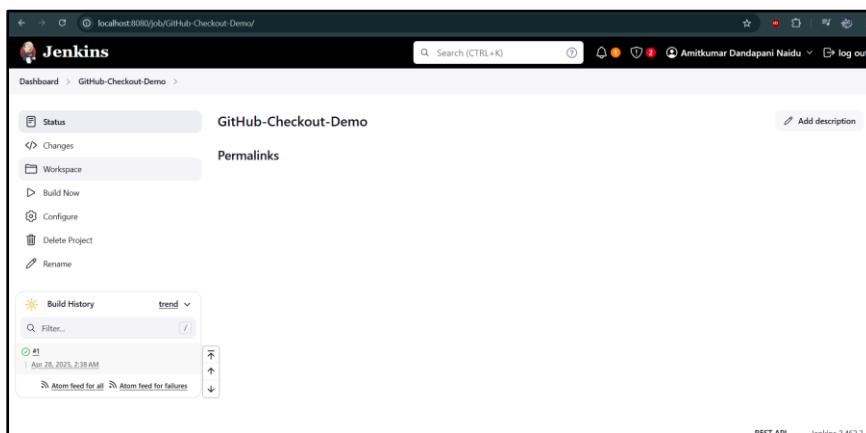
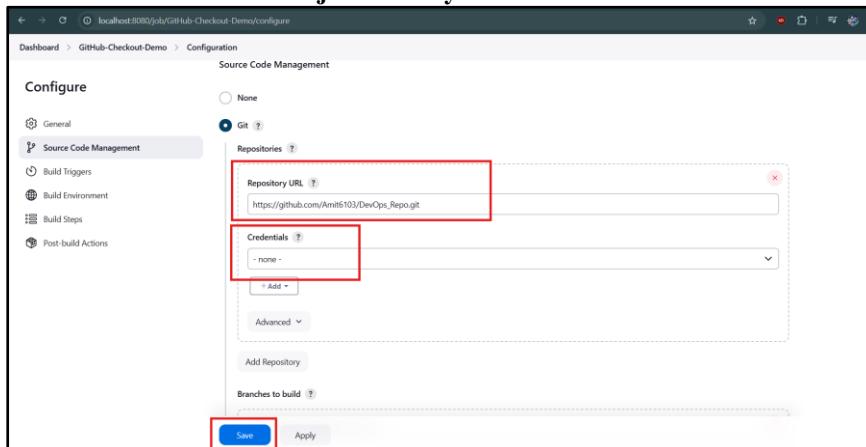


#### 4) Create a Freestyle Job to Checkout Code from GitHub:

- **Create a new Freestyle job: GitHub-Checkout-Demo.**

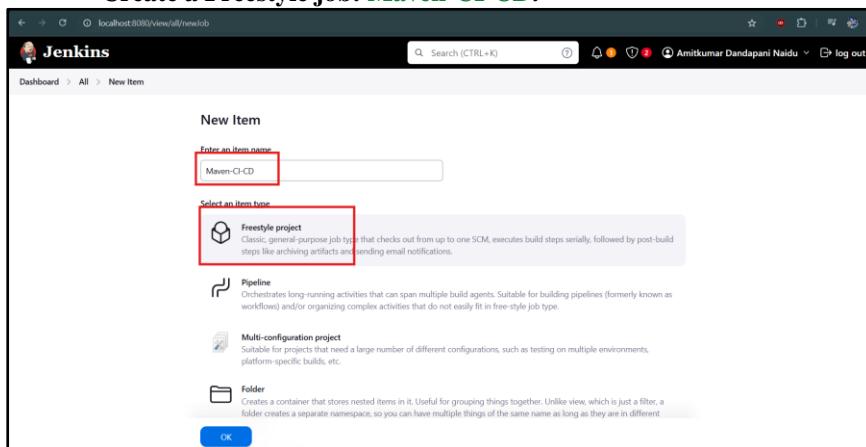


- Under Source Code Management, select Git.
- Enter the GitHub repository URL.
- Add credentials if required.
- Save and build the job to verify checkout.



## 5) Create a Freestyle Job for Full CI/CD (Checkout, Compile, Test, Package, Deploy):

- Create a Freestyle job: **Maven-CI-CD**.



- Source Code Management → Git → Add GitHub repo URL.
- Build Triggers → Select Poll SCM or GitHub hook trigger.
- Build → Add Invoke top-level Maven targets:

The screenshot shows the Jenkins 'Tools' configuration page under 'Manage Jenkins'. It displays the 'Maven Configuration' section. Under 'Default settings provider', the 'File path' dropdown is set to 'C:\Program Files\Apache-maven-3.9.9-bin\apache-maven-3.9.9\bin'. There are also sections for 'Default global settings provider' and 'Use default maven global settings'. At the bottom are 'Save' and 'Apply' buttons.

The screenshot shows two side-by-side configuration panels. On the left is the 'JDK installations' panel, which includes an 'Add JDK' button, a 'JDK' section with a dropdown menu, and an 'Install automatically' checkbox. On the right is the 'Git installations' panel, which includes a 'Git' section with a 'Name' field set to 'Git', a 'Path to Git executable' field containing 'C:\Program Files\Git\bin\git.exe', and an 'Install automatically' checkbox. Both panels have 'Add JDK' and 'Add Git' buttons at the bottom.

The screenshot shows the 'Source Code Management' configuration page. It is set to 'Git' and has a 'Repository URL' field containing 'https://github.com/kanizfatemaaansari/springwebproject.git'. In the 'Credentials' dropdown, 'tomcat/\*\*\*\*\*' is selected. There are 'Advanced' and '+ Add' buttons at the bottom.

The screenshot shows the 'Branches to build' configuration page. It has a 'Branch Specifier (blank for 'any')' field containing '/main' and an 'Add Branch' button at the bottom.

### Build Steps

Automate your build process with ordered tasks like code compilation, testing, and deployment.

Add build step ^

Filter

- Execute Windows batch command
- Execute shell
- Invoke Ant
- Invoke Gradle script
- Invoke top-level Maven targets
- Run with timeout
- Set build status to "pending" on GitHub commit

sending notifications, archiving artifacts, or triggering other jobs.

### Build Steps

Automate your build process with ordered tasks like code compilation, testing, and deployment.

☰ Invoke top-level Maven targets ?

Goals

- clean
- package

Advanced ▾    Edited

Dashboard > Manage Jenkins > Plugins

### Plugins

Updates

Available plugins

Installed plugins

Advanced settings

Deploy

Install

Released

Deploy to container 1.3.6

Artifact Uploader

This plugin allows you to deploy a war to a container after a successful build.

Glassfish 3.x remote deployment

4 yr 4 mo ago

Filter

- Aggregate downstream test results
- Archive the artifacts
- Build other projects
- Publish JUnit test result report
- Record fingerprints of files to track usage
- Git Publisher
- Deploy war/ear to a container
- E-mail Notification
- Editable Email Notification
- Set GitHub commit status (universal)
- Set build status on GitHub commit [deprecated]
- Delete workspace when build is done

sending notifications

Add post-build action ^

Save    Apply

## Practical No. 9

**Aim:** Explore docker commands for content management.

**Code:**

### 1. Update:

Sudo apt update

```
ubuntu@ip-172-31-0-133:~$ sudo apt update
Hit:1 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy InRelease
Hit:2 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-updates InRelease
Hit:3 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-backports InRelease
Hit:4 http://security.ubuntu.com/ubuntu jammy-security InRelease
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
58 packages can be upgraded. Run 'apt list --upgradable' to see them.
```

### 2. Install Docker:

sudo apt install docker.io

```
ubuntu@ip-172-31-0-133:~$ sudo apt install docker.io
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
docker.io is already the newest version (26.1.3-0ubuntu1~22.04.1).
0 upgraded, 0 newly installed, 0 to remove and 58 not upgraded.
```

### 3. Check Docker Version:

docker --version

```
root@ip-172-31-0-133:/home/ubuntu# docker --version
Docker version 26.1.3, build 26.1.3-0ubuntu1~22.04.1
```

### 4. Permission Issue with Docker:

docker ps

```
ubuntu@ip-172-31-0-133:~$ docker ps
permission denied while trying to connect to the Docker daemon socket at unix:///var/run/docker.sock: Get "http://<2Fvar%2Frun%2Fdocker.sock/v1.45/containers/json": dial unix /var/run/docker.sock: connect: permission denied
```

### 5. Check Current User and Fix Permission:

whoami

```
ubuntu@ip-172-31-0-133:~$ whoami
ubuntu
```

sudo chown ubuntu /var/run/docker.sock

```
ubuntu@ip-172-31-0-133:~$ sudo chown ubuntu /var/run/docker.sock
```

### 6. Verify Docker Commands After Fix:

docker ps

```
ubuntu@ip-172-31-0-133:~$ docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
ubuntu@ip-172-31-0-133:~$
```

docker images

```
ubuntu@ip-172-31-0-133:~$ docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
```

docker ps -al

---

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```
ubuntu@ip-172-31-0-133:~$ docker ps -al
CONTAINER ID        IMAGE               COMMAND       CREATED          STATUS          PORTS
-
```

**7. Setup Workspace Directory:**

```
pwd
```

```
ubuntu@ip-172-31-0-133:~$ pwd
/home/ubuntu
```

```
mkdir docker-demo
```

```
ubuntu@ip-172-31-0-133:~$ mkdir docker-demo
```

```
cd docker-demo/
```

```
ubuntu@ip-172-31-0-133:~/docker-demo/
ubuntu@ip-172-31-0-133:~/docker-demo$
```

**8. Pull and Run Hello World Image:**

```
docker pull hello-world
```

```
ubuntu@ip-172-31-0-133:~/docker-demo$ docker pull hello-world
Using default tag: latest
latest: Pulling from library/hello-world
e6590344b1a5: Pull complete
Digest: sha256:c41088499908a59aae84b0a49c70e86f4731e588a737f1637e73c8c09d995654
Status: Downloaded newer image for hello-world:latest
docker.io/library/hello-world:latest
```

```
docker run hello-world
```

```
ubuntu@ip-172-31-0-133:~/docker-demo$ docker run hello-world
Hello from Docker!
This message shows that your installation appears to be working correctly.

To generate this message, Docker took the following steps:
 1. The Docker client contacted the Docker daemon.
 2. The Docker daemon pulled the "hello-world" image from the Docker Hub.
    (amd64)
 3. The Docker daemon created a new container from that image which runs the
    executable that produces the output you are currently reading.
 4. The Docker daemon streamed that output to the Docker client, which sent it
    to your terminal.

To try something more ambitious, you can run an Ubuntu container with:
 $ docker run -it ubuntu bash

Share images, automate workflows, and more with a free Docker ID:
 https://hub.docker.com/

For more examples and ideas, visit:
 https://docs.docker.com/get-started/
```

**9. Check Images After Running Container:**

```
docker images
```

```
ubuntu@ip-172-31-0-133:~/docker-demo$ docker images
REPOSITORY      TAG      IMAGE ID      CREATED          SIZE
hello-world    latest    74cc54e27dc4   3 months ago   10.1kB
```

**10. Install Vim and Create Dockerfile:**

```
sudo apt install vim
```

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```
ubuntu@ip-172-31-0-133:~/docker-demo$ sudo apt install vim
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  vim-common vim-runtime vim-tiny
Suggested packages:
  ctags vim-doc vim-scripts indent
The following packages will be upgraded:
  vim vim-common vim-runtime vim-tiny
4 upgraded, 0 newly installed, 0 to remove and 54 not upgraded.
Need to get 9349 kB of archives.
After this operation, 0 B of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 vim amd64 2:8.2.3995-1ubuntu2.24 [1728 kB]
Get:2 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 vim-tiny amd64 2:8.2.3995-1ubuntu2.24 [707 kB]
Get:3 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 vim-runtime all 2:8.2.3995-1ubuntu2.24 [6833 kB]
Get:4 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 vim-common all 2:8.2.3995-1ubuntu2.24 [81.5 kB]
Fetched 9349 kB in 0s (60.4 MB/s)
(Reading database ... 66224 files and directories currently installed.)
Preparing to unpack .../vim_233a8.2.3995-1ubuntu2.24_amd64.deb ...
Unpacking vim (2:8.2.3995-1ubuntu2.24) over (2:8.2.3995-1ubuntu2.23) ...
```

vim Dockerfile

```
ubuntu@ip-172-31-0-133:~/docker-demo$ vim Dockerfile
```

**Dockerfile Content:**

```
FROM ubuntu:22.04
RUN echo "Hello From DevOps Group"
```

```
FROM ubuntu:22.04
RUN echo "Hello From DevOps Group"
```

**11. Build Image Without Tag (Legacy Method):**

docker build .

```
ubuntu@ip-172-31-0-133:~/docker-demo$ docker build .
DEPRECATED: The legacy builder is deprecated and will be removed in a future release.
  Install the buildx component to build images with BuildKit:
    https://docs.docker.com/go/buildx/

Sending build context to Docker daemon 2.048kB
Step 1/2 : FROM ubuntu:22.04
22.04: Pulling from library/ubuntu
30a9c22ae099: Pull complete
Digest: sha256:d80997daaa3811b175119350d84305e1ec9129e1799bba0bd1e3120da3ff52c3
Status: Downloaded newer image for ubuntu:22.04
--> cc934a90cd99
Step 2/2 : RUN echo "Hello From DevOps Group"
--> Running in 87ea786d4f4b
Hello From DevOps Group
--> Removed intermediate container 87ea786d4f4b
--> 34c747dedd91
Successfully built 34c747dedd91
```

**12. Build Tagged Image:**

docker build -t myapp:latest .

```
ubuntu@ip-172-31-0-133:~/docker-demo$ docker build -t myapp:latest .
DEPRECATED: The legacy builder is deprecated and will be removed in a future release.
  Install the buildx component to build images with BuildKit:
    https://docs.docker.com/go/buildx/

Sending build context to Docker daemon 2.048kB
Step 1/2 : FROM ubuntu:22.04
--> cc934a90cd99
Step 2/2 : RUN echo "Hello From DevOps Group"
--> Using cache
--> 34c747dedd91
Successfully built 34c747dedd91
Successfully tagged myapp:latest
```

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---

**13. Verify Images:**

docker images

```
ubuntu@ip-172-31-0-133:~/docker-demo$ docker images
REPOSITORY      TAG          IMAGE ID      CREATED        SIZE
myapp           latest       34c747dedd91   About a minute ago   77.9MB
ubuntu          22.04       cc934a90cd99   2 weeks ago    77.9MB
hello-world     latest       74cc54e27dc4   3 months ago   10.1kB
ubuntu@ip-172-31-0-133:~/docker-demo$
```

**14. Run Docker Container With Port Mapping:**

docker run -itd -p 8888:80 myapp:latest

```
ubuntu@ip-172-31-0-133:~/docker-demo$ docker run -itd -p 8888:80 myapp:latest
8378b13fac645b087bec794918ea268c5d78669ab4162b1310f34b15c8463c99
```

**15. View and Stop Container:**

docker ps

```
ubuntu@ip-172-31-0-133:~/docker-demo$ docker ps
CONTAINER ID   IMAGE      COMMAND      CREATED      STATUS      PORTS
8378b13fac64  myapp:latest "bin/bash"   About a minute ago   Up About a minute   0.0.0.0:8888->80/tcp, :::8888->80/tcp
N
u
```

docker stop <container\_id>(in my case container\_id is 8378b13fac64)

```
ubuntu@ip-172-31-0-133:~/docker-demo$ docker stop 8378b13fac64
8378b13fac64
```

docker rm <container\_id>(in my case container\_id is 8378b13fac64)

```
ubuntu@ip-172-31-0-133:~/docker-demo$ docker rm 8378b13fac64
8378b13fac64
```

docker ps

```
ubuntu@ip-172-31-0-133:~/docker-demo$ docker ps
CONTAINER ID   IMAGE      COMMAND      CREATED      STATUS      PORTS      NAMES
```

**16. Remove Image:**

docker images

```
ubuntu@ip-172-31-0-133:~/docker-demo$ docker images
REPOSITORY      TAG          IMAGE ID      CREATED        SIZE
myapp           latest       34c747dedd91   7 minutes ago   77.9MB
ubuntu          22.04       cc934a90cd99   2 weeks ago    77.9MB
hello-world     latest       74cc54e27dc4   3 months ago   10.1kB
ubuntu@ip-172-31-0-133:~/docker-demo$
```

docker rmi <image\_id>(in my case container\_id is 34c747dedd91)

```
ubuntu@ip-172-31-0-133:~/docker-demo$ docker rmi 34c747dedd91
Untagged: myapp:latest
Deleted: sha256:34c747dedd918b45d1ace5e8cc548eee68a3f45b1c480ee98330427394c5baf5
```

**17. Rebuild with DockerHub Username:**

docker build -t devopsgroup/myapp:latest .

```
ubuntu@ip-172-31-0-133:~/docker-demo$ docker build -t devopsgroup/myapp:latest .
DEPRECATED: The legacy builder is deprecated and will be removed in a future release.
Install the buildx component to build images with BuildKit:
https://docs.docker.com/go/buildx/

Sending build context to Docker daemon 2.048kB
Step 1/2 : FROM ubuntu:22.04
--> cc934a90cd99
Step 2/2 : RUN echo "Hello From DevOps Group"
--> Running in dadcb9fff5bb
Hello From DevOps Group
--> Removed intermediate container dadcb9fff5bb
--> 8fd9da068e07
Successfully built 8fd9da068e07
Successfully tagged devopsgroup/myapp:latest
```

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**18. Login and Push to Docker Hub:**

docker login

```
ubuntu@ip-172-31-0-133:~/docker-demo$ docker login
Log in with your Docker ID or email address to push and pull images from Docker Hub. If you
You can log in with your password or a Personal Access Token (PAT). Using a limited-scope PA
cs.docker.com/go/access-tokens/
Username: _____
Password: _____
WARNING! Your password will be stored unencrypted in /home/ubuntu/.docker/config.json.
Configure a credential helper to remove this warning. See
https://docs.docker.com/engine/reference/commandline/login/#credentials-store
Login Succeeded
```

docker push devopsgroup/myapp:latest

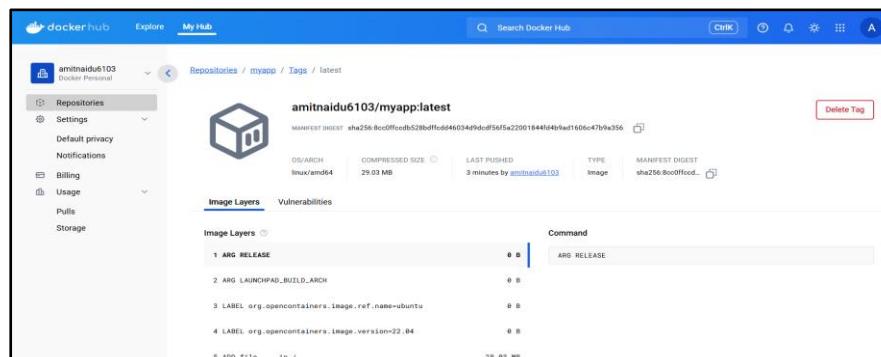
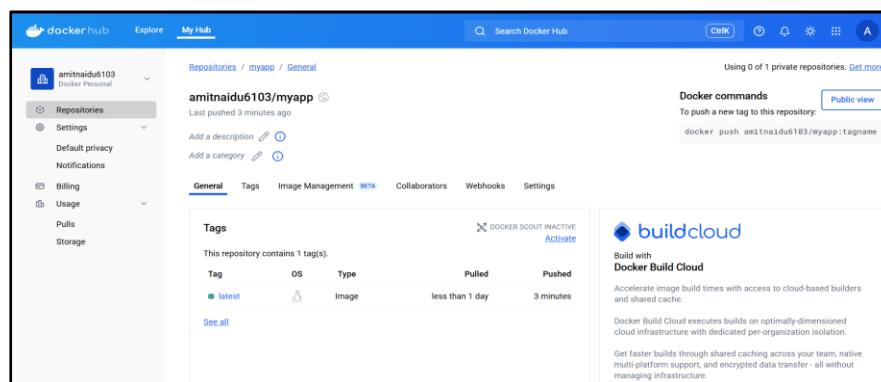
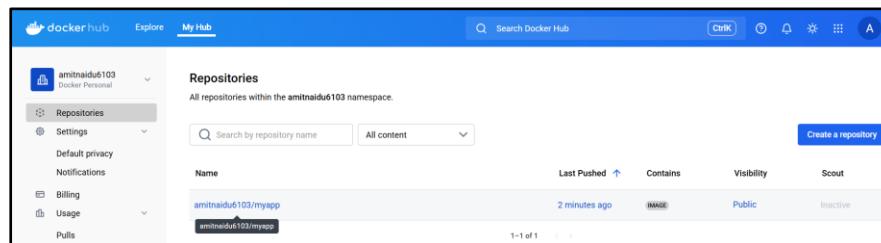
```
ubuntu@ip-172-31-0-133:~/docker-demo$ docker push devopsgroup/myapp:latest
The push refers to repository [docker.io/devopsgroup/myapp]
65c636ce09f2: Preparing
denied: requested access to the resource is denied
```

docker tag devopsgroup/myapp:latest amitnaidu6103/myapp:latest

```
ubuntu@ip-172-31-0-133:~/docker-demo$ docker tag devopsgroup/myapp:latest amitnaidu6103/myapp:latest
```

docker push amitnaidu6103/myapp:latest

```
ubuntu@ip-172-31-0-133:~/docker-demo$ docker push amitnaidu6103/myapp:latest
The push refers to repository [docker.io/amitnaidu6103/myapp]
65c636ce09f2: Pushed
latest: digest: sha256:8cc0ffccdb528bdfccdd46034d9dcdf56f5a22001844fd4b9ad1606c47b9a356 size: 529
```



## **Practical No. 10**

**Aim:** Develop a simple containerized application using Docker

**Code:**

**Step-by-Step Procedure:**

### **1. Clone the Spring Boot Project**

```
ubuntu@ubuntu:~$ git clone https://github.com/kanizfatemaaansari/springwebproject.git
ubuntu@ip-172-31-0-133:~$ git clone https://github.com/kanizfatemaaansari/springwebproject.git
Cloning into 'springwebproject'...
remote: Enumerating objects: 33, done.
remote: Counting objects: 100% (33/33), done.
remote: Compressing objects: 100% (22/22), done.
remote: Total 33 (delta 3), reused 33 (delta 3), pack-reused 0 (from 0)
Receiving objects: 100% (33/33), 62.18 KiB | 7.77 MiB/s, done.
Resolving deltas: 100% (3/3), done.
```

### **2. Navigate to the Project Directory**

```
ls
ubuntu@ip-172-31-0-133:~$ ls
docker-demo  springwebproject
```

```
cd springwebproject/
```

```
ubuntu@ip-172-31-0-133:~$ cd springwebproject/
```

### **3. Install Maven and check the version:**

```
sudo apt install maven -y
```

```
ubuntu@ip-172-31-0-133:~$ sudo apt install maven -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  alsatopology-conf alsaucm-conf ca-certificates-java default-jre-headless fontconfig-config fonts-dejavu-core java-common lib
  libasound2-data libatinject-jsr330-api-jar libavahi-client3 libavahi-common-data libavahi-common3 libcdi-api-jar libcommons-
  libcommons-parent-jar libcups2 libfontconfig1 libgeronimo-annotation-1.3-spec-jar libgeronimo-interceptor-3.0-spec-jar lib
  libhawtjni-runtime-jar libjansi-jar libjansi-native-jar libjpeg-turbo8 libjpeg8 libjsr305-jar liblcms2-2 libmaven-parent-
  libmaven3-core-jar libpcsc-lite1 libplexus-cipher-jar libplexus-classworlds-jar libplexus-component-annotations-jar libplex
  libplexus-utils2-jar libsisu-inject-jar libsisu-plexus-jar libslf4j-jar libwagon-file-jar libwagon-http-shaded-jar libwa
Suggested packages:
  default-jre libapolliance-jar-doc libasound2-plugins alsau-utils libatinject-jsr330-api-jar-doc libel-api-jar libcommons-i
  libasm-jar libcglib-jar libjsr305-jar-doc liblcms2-utils libmaven-shared-utils-jar-doc liblogback-jar pcscd libplexus-cla
  libplexus-utils2-jar-doc junit4 testing libcommons-logging-jar liblog4j1.2-jar libnss-mdns fonts-dejavu-extra fonts-ipafont-
  fonts-wqy-zenhei fonts-indic
The following NEW packages will be installed:
  alsatopology-conf alsaucm-conf ca-certificates-jar default-jre-headless fontconfig-config fonts-dejavu-core java-common lib
  libasound2-data libatinject-jsr330-api-jar libavahi-client3 libavahi-common-data libavahi-common3 libcdi-api-jar libcommons-
  libcommons-parent-jar libcups2 libfontconfig1 libgeronimo-annotation-1.3-spec-jar libgeronimo-interceptor-3.0-spec-jar lib
  libhawtjni-runtime-jar libjansi-jar libjansi-native-jar libjpeg-turbo8 libjpeg8 libjsr305-jar liblcms2-2 libmaven-parent-
  libmaven3-core-jar libpcsc-lite1 libplexus-cipher-jar libplexus-classworlds-jar libplexus-component-annotations-jar libplex
  libplexus-utils2-jar libsisu-inject-jar libsisu-plexus-jar libslf4j-jar libwagon-file-jar libwagon-http-shaded-jar libwa
0 upgraded, 54 newly installed, 0 to remove and 54 not upgraded.
Need to get 55.6 MB of archives.
After this operation, 199 MB of additional disk space will be used.
Get:1 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 alsatopology-conf all 1.2.5.1-2 [15.5 kB]
Get:2 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 libasound2-data all 1.2.6.1-1ubuntul [19.1 kB]
Get:3 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 libasound2 amd64 1.2.6.1-1ubuntul [390 kB]
Get:4 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 alsaucm-conf all 1.2.6.3-1ubuntul.12 [43.5 kB]
Get:5 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 java-common all 0.72build2 [6782 B]
```

```
mvn -version
```

```
ubuntu@ip-172-31-0-133:~$ mvn -version
Apache Maven 3.6.3
Maven home: /usr/share/maven
Java version: 11.0.26, vendor: Ubuntu, runtime: /usr/lib/jvm/java-11-openjdk-amd64
Default locale: en, platform encoding: UTF-8
OS name: "linux", version: "6.8.0-1024-aws", arch: "amd64", family: "unix"
```

### **4. Build the Project Using Maven**

```
mvn clean package
```

```
ubuntu@ip-172-31-0-133:~/springwebproject$ mvn clean package
```

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```
Downloaded from central: https://repo.maven.apache.org/maven2/com/google/j2objc/
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/commons/
Downloaded from central: https://repo.maven.apache.org/maven2/com/google/guava/
[INFO] Replacing main artifact with repackaged archive
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 05:52 min
[INFO] Finished at: 2025-04-26T02:44:34Z
[INFO] -----
ubuntu@ip-172-31-0-133:~/springwebproject$
```

This command cleans the target folder and creates a **.war** file.

### 4. Verify the Build Output

ls

```
ubuntu@ip-172-31-0-133:~/springwebproject$ ls
mvnw mvnw.cmd pom.xml src target
```

You should see a **target** directory with the **.war** file inside.

### 5. Create a Dockerfile

vim Dockerfile

```
ubuntu@ip-172-31-0-133:~/springwebproject$ vim Dockerfile
```

#### Dockerfile Content:

```
FROM tomcat:9.0
RUN mv webapps webappsbkp
RUN mv webapps.dist webapps
COPY **/*.war /var/lib/tomcat9/webapps/calculator.war
```

```
FROM tomcat:9.0
RUN mv webapps webappsbkp
RUN mv webapps.dist webapps
COPY **/*.war /var/lib/tomcat9/webapps/calculator.war
[]
```

### 6. Build the Docker Image

docker build -t amitnaidu6103/myfirstapp:1.0 .

```
ubuntu@ip-172-31-0-133:~/springwebproject$ docker build -t amitnaidu6103/myfirstapp:1.0 .
DEPRECATED: The legacy builder is deprecated and will be removed in a future release.
Install the buildx component to build images with BuildKit:
https://docs.docker.com/go/buildx/
```

```
Sending build context to Docker daemon 43.72MB
Step 1/4 : FROM tomcat:9.0
9.0: Pulling from library/tomcat
2726e237d1a3: Pull complete
4dff2e8f490: Pull complete
551745135a2a: Pull complete
aed71c0b623c: Pull complete
1d5fef8a5378: Pull complete
a2fc1a8910ca: Pull complete
4f4fb700ef54: Pull complete
8d27092a50b3: Pull complete
Digest: sha256:f07476c749fd1162f81a500b99efca0086e6457d26a7e9abe31cf4fff64861ef
Status: Downloaded newer image for tomcat:9.0
--> 910239e4b24d
Step 2/4 : RUN mv webapps webappsbkp
--> Running in 8feb823ee943
--> Removed intermediate container 8feb823ee943
--> 3d6c99ba324c
Step 3/4 : RUN mv webapps.dist webapps
--> Running in b1a6b4d3ab72
--> Removed intermediate container b1a6b4d3ab72
--> 2e763a61c3c0
Step 4/4 : COPY **/*.war /var/lib/tomcat9/webapps/calculator.war
--> 5c43df29c33d
Successfully built 5c43df29c33d
Successfully tagged amitnaidu6103/myfirstapp:1.0
```

## 7. Verify the Docker Image

docker images

```
ubuntu@ip-172-31-0-133:~/springwebproject$ docker images
REPOSITORY          TAG      IMAGE ID      CREATED        SIZE
amitnaidu6103/myfirstapp   1.0      5c43df29c33d  34 seconds ago  500MB
amitnaidu6103/myapp       latest    8fd9da068e07  44 minutes ago  77.9MB
devopsgroup/myapp        latest    8fd9da068e07  44 minutes ago  77.9MB
tomcat                9.0      910239e4b24d  2 weeks ago   477MB
ubuntu                 22.04    cc934a90cd99  2 weeks ago   77.9MB
hello-world            latest    74cc54e27dc4  3 months ago   10.1kB
```

## 8. Run the Docker Container

docker run -itd -p 7777:8080 amitnaidu6103/myfirstapp:1.0

```
ubuntu@ip-172-31-0-133:~/springwebproject$ docker run -itd -p 7777:8080 amitnaidu6103/myfirstapp:1.0
0168d1088c9d45873a1c76937529dde6282da235944abf59d6c7c5cc18ab7649
```

## 9. Check the Running Container

docker ps

```
ubuntu@ip-172-31-0-133:~/springwebproject$ docker ps
CONTAINER ID   IMAGE           COMMAND                  CREATED             STATUS              PORTS               NAMES
0168d1088c9d   amitnaidu6103/myfirstapp:1.0   "catalina.sh run"   33 seconds ago   Up 31 seconds   0.0.0.0:7777->8080/tcp, :::7777->8080/tcp   pedanti
```

## 10. Push the Image to Docker Hub

docker push amitnaidu6103/myfirstapp:1.0

```
ubuntu@ip-172-31-0-133:~/springwebproject$ docker push amitnaidu6103/myfirstapp:1.0
The push refers to repository [docker.io/amitnaidu6103/myfirstapp]
91e2429138b4: Pushed
1aa31c08d48a: Pushed
218bc53c112d: Pushed
5f70bf18a086: Mounted from library/tomcat
228f0e6a7fef: Mounted from library/tomcat
cb12b491a0e3: Mounted from library/tomcat
9df20c7cbc86: Mounted from library/tomcat
4ac16bc33072: Mounted from library/tomcat
0a52207ca5e8: Mounted from library/tomcat
71692ed877e9: Mounted from library/tomcat
3abdd8a5e7a8: Mounted from library/tomcat
1.0: digest: sha256:aefffb160eafb81b9b2ec712e61cd6b0a4ef44ba87168c89cfcca75e95d7bbe9 size: 2831
```

## **Practical No. 11**

**Aim: Ad-hoc Ansible commands.**

**Code:**

### **1. Run Command on CMD**

```
wsl -- install #Installs WSL on your Windows machine
```

### **2. Now OPEN WSL and Install Ansible**

```
HP@DESKTOP-EC20IPO:~$ sudo apt install ansible #Installs Ansible package in the Linux environment
```

### **3. Now Switch Directory**

```
HP@DESKTOP-EC20IPO:~$ cd etc
```

```
#Check if ansible is available in etc
```

### **4. HP@DESKTOP-EC20IPO:/etc\$ ls**

```
#If not Then Create ansible folder and switch in
```

### **5. HP@DESKTOP-EC20IPO:/etc\$ sudo mkdir ansible**

```
[sudo] password for DevOpsGroup:(enter your password)
```

### **6. HP@DESKTOP-EC20IPO:/etc\$ cd ansible**

```
#Now in
```

```
HP@DESKTOP-EC20IPO:/etc/ansible$ sudo vi hosts #Opens the 'hosts' file in vi editor to add inventory details
```

```
[local]
localhost ansible_connection=local
~
```

### **7. HP@DESKTOP-EC20IPO:/etc/ansible\$ ansible local -m ping**

```
#Tests connectivity with localhost using Ansible's ping module
```

```
localhost | SUCCESS => {
    "ansible_facts": {
        "discovered_interpreter_python": "/usr/bin/python3"
    },
    "changed": false,
    "ping": "pong"
} ansible
```

### **8. HP@DESKTOP-EC20IPO:/etc/ansible\$ ansible local -m shell -a "whoami"**

```
#Runs 'whoami' to check current user
```

```
localhost | CHANGED | rc=0 >>
```

```
DevOpsGroup
```

### **9. HP@DESKTOP-EC20IPO:/etc/ansible\$ ansible local -m shell -a "ls"**

```
#Lists files in current directory
```

```
localhost | CHANGED | rc=0 >>
```

```
hosts
```

### **10. HP@DESKTOP-EC20IPO:/etc/ansible\$ ansible local -m shell -a "ls -al"**

```
#Lists all files with detailed info in current directory
```

```
localhost | CHANGED | rc=0 >>
```

```
total 12
```

```
drwxr-xr-x 2 root root 4096 Apr 23 05:25 .
```

```
drwxr-xr-x 88 root root 4096 Apr 23 05:21 ..
```

```
-rw-r--r-- 1 root root 43 Apr 23 05:25 hosts
```

### **11. HP@DESKTOP-EC20IPO:/etc/ansible\$ ansible local -m shell -a "ls -al /home/\$USER"**

```
#Lists user's home directory contents
```

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---

```
localhost | CHANGED | rc=0 >>
total 36
drwxr-x--- 5 DevOpsGroup DevOpsGroup 4096 Apr 23 05:28 .
drwxr-xr-x 3 root root 4096 Apr 22 15:17 ..
drwxr-xr-x 3 DevOpsGroup DevOpsGroup 4096 Apr 23 05:28 .ansible
-rw----- 1 DevOpsGroup DevOpsGroup 93 Apr 23 05:20 .bash_history
-rw-r--r-- 1 DevOpsGroup DevOpsGroup 220 Apr 22 15:17 .bash_logout
-rw-r--r-- 1 DevOpsGroup DevOpsGroup 3771 Apr 22 15:17 .bashrc
drwx----- 2 DevOpsGroup DevOpsGroup 4096 Apr 22 15:18 .cache
drwxr-xr-x 2 DevOpsGroup DevOpsGroup 4096 Apr 23 05:15 .landscape
-rw-r--r-- 1 DevOpsGroup DevOpsGroup 0 Apr 23 05:15 .motd_shown
-rw-r--r-- 1 DevOpsGroup DevOpsGroup 807 Apr 22 15:17 .profile
-rw-r--r-- 1 DevOpsGroup DevOpsGroup 0 Apr 23 05:16 .sudo_as_admin_successful
```

**12. HP@DESKTOP-EC20IPO:/etc/ansible\$ ansible local -m shell -a "echo 'Hello' > /tmp/hello.txt" #Creates a file with 'Hello' text in /tmp**

```
localhost | CHANGED | rc=0 >>
```

**13.HP@DESKTOP-EC20IPO:/etc/ansible\$ ansible local -m shell -a "ls -l /tmp" #Lists files in /tmp directory**

```
localhost | CHANGED | rc=0 >>
total 32
drwx----- 2 DevOpsGroup DevOpsGroup 4096 Apr 23 05:43 ansible_ansible.legacy.command_payload_v0dqdf1qv
-rw-r--r-- 1 DevOpsGroup DevOpsGroup 6 Apr 23 05:41 hello.txt
drwx----- 2 root root 4096 Apr 23 05:15 snap-private-tmp
drwx----- 3 root root 4096 Apr 23 05:17 systemd-private-a6623b3bb5814d1d94f96cbde2b89c6f-polkit.service-T3pPbH
drwx----- 3 root root 4096 Apr 23 05:15 systemd-private-a6623b3bb5814d1d94f96cbde2b89c6f-systemd-logind.service-bukRIF
drwx----- 3 root root 4096 Apr 23 05:15 systemd-private-a6623b3bb5814d1d94f96cbde2b89c6f-systemd-resolved.service-yzrxf5
drwx----- 3 root root 4096 Apr 23 05:15 systemd-private-a6623b3bb5814d1d94f96cbde2b89c6f-systemd-timesyncd.service-TCRApO
drwx----- 3 root root 4096 Apr 23 05:15 systemd-private-a6623b3bb5814d1d94f96cbde2b89c6f-wsl-pro.service-Db8yVs
```

**14. HP@DESKTOP-EC20IPO:/etc/ansible\$ ansible local -m shell -a "uptime" #Shows system uptime**

```
localhost | CHANGED | rc=0 >>
05:45:32 up 31 min, 1 user, load average: 0.08, 0.02, 0.01
```

**15. HP@DESKTOP-EC20IPO:/etc/ansible\$ ansible local -m command -a "cat /etc/os-release" #Displays OS version details**

```
localhost | CHANGED | rc=0 >>
PRETTY_NAME="Ubuntu 24.04.1 LTS"
NAME="Ubuntu"
VERSION_ID="24.04"
VERSION="24.04.1 LTS (Noble Numbat)"
VERSION_CODENAME=noble
ID=ubuntu
ID_LIKE=debian
HOME_URL="https://www.ubuntu.com/"
SUPPORT_URL="https://help.ubuntu.com/"
BUG_REPORT_URL="https://bugs.launchpad.net/ubuntu/"
PRIVACY_POLICY_URL="https://www.ubuntu.com/legal/terms-and-policies/privacy-policy"
UBUNTU_CODENAME=noble
LOGO=ubuntu-logo
```

**16. HP@DESKTOP-EC20IPO:/home/ansible-demo\$ whoami**

```
DevOpsGroup
```

**17. HP@DESKTOP-EC20IPO:/home/ansible-demo\$ sudo visudo #Opens sudoers file to give sudo permissions**

---

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---

safely (manual configuration)

**#Add Code By Scrolling at Bottom**

DevOpsGroup ALL=(ALL:ALL) ALL

**#Then Click ctrl+x and give permission Yes**

**18. HP@DESKTOP-EC20IPO:/home/ansible-demo\$ ansible local -m user -a "name=testuser state=present" -b**

#Creates a new user 'testuser'

localhost | CHANGED => {

    "ansible\_facts": {

        "discovered\_interpreter\_python": "/usr/bin/python3"

    },

    "changed": true,

    "comment": "",

    "create\_home": true,

    "group": 1001,

    "home": "/home/testuser",

    "name": "testuser",

    "shell": "/bin/sh",

    "state": "present",

    "system": false,

    "uid": 1001

}

**19. HP@DESKTOP-EC20IPO:/home/ansible-demo\$ ansible local -m user -a "name=testuser state=absent" -b**

#Deletes the user 'testuser'

localhost | CHANGED => {

    "ansible\_facts": {

        "discovered\_interpreter\_python": "/usr/bin/python3"

    },

    "changed": true,

    "force": false,

    "name": "testuser",

    "remove": false,

    "state": "absent"

}

**20. HP@DESKTOP-EC20IPO:/etc/ansible\$ ansible local -m file -a "path=/tmp/myfile.txt state=touch"**

#Creates an empty file

localhost | CHANGED => {

    "ansible\_facts": {

        "discovered\_interpreter\_python": "/usr/bin/python3"

    },

    "changed": true,

    "dest": "/tmp/myfile.txt",

    "gid": 1000,

    "group": "DevOpsGroup",

    "mode": "0644",

    "owner": "DevOpsGroup",

    "size": 0,

    "state": "file",

    "uid": 1000

}

**21. HP@DESKTOP-EC20IPO:/etc/ansible\$ ansible local -m shell -a "echo 'This is a First Line.' > /tmp/myfile.txt"**

#Writes line to file

localhost | CHANGED | rc=0 >>

**22. HP@DESKTOP-EC20IPO:/etc/ansible\$ ansible local -m shell -a "echo 'This is a Additional Line.' >>**

**/tmp/myfile.txt"**

#Appends line to file

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---

```
localhost | CHANGED | rc=0 >>
```

**23. HP@DESKTOP-EC20IPO:/etc/ansible\$ ansible local -m command -a "cat /tmp/myfile.txt"**  
#Reads and shows content of the file  
localhost | CHANGED | rc=0 >>  
This is a First Line.  
This is a Additional Line.

**24. HP@DESKTOP-EC20IPO:/etc/ansible\$ ansible local -m file -a "path=/tmp/myfile.txt state=absent"**  
#Deletes the file  
localhost | CHANGED => {  
 "ansible\_facts": {  
 "discovered\_interpreter\_python": "/usr/bin/python3"  
 },  
 "changed": true,  
 "path": "/tmp/myfile.txt",  
 "state": "absent"  
}

**25. HP@DESKTOP-EC20IPO:/etc/ansible\$ ansible local -m file -a "path=/tmp/mydir state=directory mode=0755"**  
#Creates a directory with specific permissions  
localhost | CHANGED => {  
 "ansible\_facts": {  
 "discovered\_interpreter\_python": "/usr/bin/python3"  
 },  
 "changed": true,  
 "gid": 1000,  
 "group": "DevOpsGroup",  
 "mode": "0755",  
 "owner": "DevOpsGroup",  
 "path": "/tmp/mydir",  
 "size": 4096,  
 "state": "directory",  
 "uid": 1000  
}

**26. HP@DESKTOP-EC20IPO:/etc/ansible\$ ansible local -m file -a "path=/tmp/mydir state=absent"**  
#Deletes the directory  
localhost | CHANGED => {  
 "ansible\_facts": {  
 "discovered\_interpreter\_python": "/usr/bin/python3"  
 },  
 "changed": true,  
 "path": "/tmp/mydir",  
 "state": "absent"  
}

## Practical No. 12

Aim: Using Ansible playbooks.

Code:

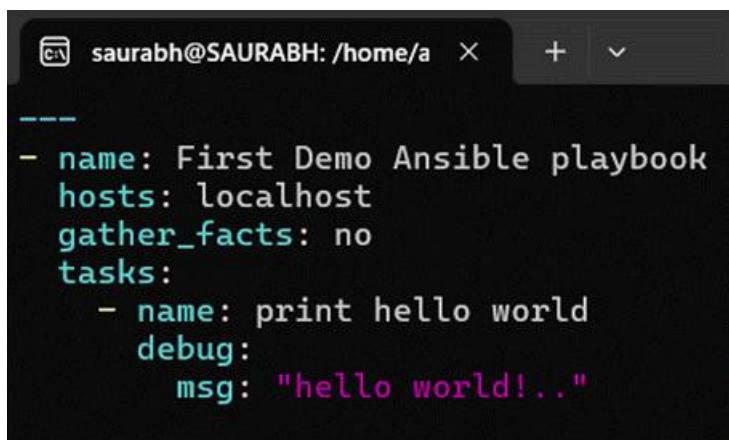
1. HP@DESKTOP-EC20IPO:\$ cd home

2. HP@DESKTOP-EC20IPO:/home\$ sudo mkdir ansible-demo #Creates a directory for playbooks  
[sudo] password for DevOpsGroup:

3. HP@DESKTOP-EC20IPO:/home\$ ls  
ansible-demo DevOpsGroup

4. HP@DESKTOP-EC20IPO:/home\$ cd ansible-demo/

5. HP@DESKTOP-EC20IPO:/home/ansible-demo\$ sudo vi firstplaybook.yml  
#Write a simple playbook (manually)



```
saurabh@SAURABH: /home/a X + v
-----
- name: First Demo Ansible playbook
  hosts: localhost
  gather_facts: no
  tasks:
    - name: print hello world
      debug:
        msg: "hello world!.."
```

6. HP@DESKTOP-EC20IPO:/home/ansible-demo\$ ansible-playbook firstplaybook.yml  
#Runs the first demo playbook

PLAY [First Demo Ansible playbook] \*\*\*\*\*

TASK [print hello world] \*\*\*\*\*  
ok: [localhost] => {  
 "msg": "hello world!.."}

PLAY RECAP \*\*\*\*\*  
localhost : ok=1 changed=0 unreachable=0 failed=0 skipped=0 rescued=0 ignored=0

7. HP@DESKTOP-EC20IPO:/home/ansible-demo\$ sudo vi infrasacode.yml  
#Write infrastructure setup playbook (manually)

```
---
- name: Simple Infrastructure setup
  hosts: localhost
  become: yes

  tasks:
    - name: Install Apache
      apt:
        name: apache2
        state: present
        update_cache: yes
    - name: Start Apache Service
      service:
        name: apache2
        state: started
        enabled: yes
    - name: Deploy index.html
      copy:
        content: "<h1> Hello From Ansible...! </h1>"
        dest: /var/www/html/index.html
~
```

```
8. HP@DESKTOP-EC20IPO:/home/ansible-demo$ ansible-playbook infrasacode.yml
#Runs the infrastructure setup playbook
PLAY [Simple Infrastructure setup] ****
TASK [Gathering Facts] ****
ok: [localhost]

TASK [Install Apache] ****
changed: [localhost]

TASK [Start Apache Service] ****
ok: [localhost]

TASK [Deploy index.html] ****
changed: [localhost]

PLAY RECAP ****
localhost : ok=4  changed=2  unreachable=0    failed=0  skipped=0  rescued=0   ignored=0
```