St. Francis Institute of Technology, Mumbai-400 103
**Department Of Information Technology**

A.Y. 2024-2025
Class: TE-ITA/B, Semester: V

Subject: **DevOps Lab**

# Experiment – 3: To Perform various GIT operations on local and Remote repositories using GIT Cheat-Sheet

1. **Aim:** To understand version control using Git and create a GitHub account
2. **Objectives:** Aim of this experiment is that, the students will be able
   - To be aware of different Version Control tools like GIT and GitHub
   - To obtain complete knowledge of the "version control system" to effectively track changes augmented with Git and GitHub
3. **Outcomes:** After study of this experiment, the students will be able to
   - Create and fork repositories in GitHub
   - Apply branching, merging and rebasing concepts.
   - Implement different Git workflow strategies in real-time scenarios
   - Understand Git operations in IDE
4. **Prerequisite:** Knowledge of software engineering concept of version control
5. **Requirements:** Git, Personal Computer, Windows operating system, browser, Internet Connection, Microsoft Word.
6. **Pre-Experiment Exercise:**
   **Brief Theory:** Refer shared material
7. **Laboratory Exercise**
   A. **Procedure:**
      a. **Answer the following:**
         - Give differences between Git and GitHub
         - What is Git Cheat sheet?
         - Attach sample Git Cheat sheet

      b. **Execute following on Git and GitHub (Refer the shared material) and attach screenshots:**
         - Create a repository in GitHub
         - Create a branch on repository
         - Fork, push and Pull request
         - Fetch and merge on Git

8. **Post-Experiments Exercise**
   A. **Extended Theory:**
      Nil

   B. **Questions:**
      - What are the different Git workflow strategies in real-time scenarios?
      - What are the different Git IDEs available?

   C. **Conclusion:**
      - Write what was performed in the experiment.
      - Write the significance of the topic studied in the experiment.

   D. **References:**
      **https://github.com/**
      **https://guides.github.com/activities/hello-world/**
      **https://git-scm.com/docs/gittutorial**

Name: Vishal Rajesh Mahajan Devops EXP 3
Class: TE IT A Roll No: 62

## 7. Laboratory Exercise:

### Differences Between Git and GitHub

Answer: **Git**:

- **Definition**: A distributed version control system for tracking changes in source code during software development.
- **Usage**: Manages and tracks changes in code across multiple developers.
- **Functionality**: Allows for local repositories, branching, merging, and managing commit histories.
- **Installation**: Must be installed on the user's local machine.
- **Commands**: Utilizes command-line tools for operations such as git init, git commit, git push, git pull, etc.

**GitHub**:

- **Definition**: A web-based platform that uses Git for version control and also provides collaboration features.
- **Usage**: Hosts Git repositories online and facilitates collaboration among developers through pull requests, issue tracking, and project management tools.
- **Functionality**: Provides a web interface, access controls, and various integrations with other services.
- **Installation**: No installation required; it's accessible through a web browser.
- **Features**: Includes additional features like wikis, GitHub Actions for CI/CD, and GitHub Pages for hosting static websites.

### What is a Git Cheat Sheet?

Answer:

A Git cheat sheet is a concise reference guide that provides quick access to commonly used Git commands and workflows. It is designed to help developers quickly find the syntax and usage of various Git commands without needing to consult extensive documentation. A typical Git cheat sheet includes:

- **Basic Commands**: git init, git clone, git add, git commit, git status, git log
- **Branching and Merging**: git branch, git checkout, git merge, git rebase
- **Remote Repositories**: git remote, git fetch, git pull, git push
- **Undoing Changes**: git reset, git revert, git stash
- **Advanced Features**: git tag, git cherry-pick, git bisect

# Git Cheat Sheet

GitLab

## 01 Git configuration

| | |
|---|---|
| `git config --global user.name "Your Name"` | Set the name that will be attached to your commits and tags. |
| `git config --global user.email "you@example.com"` | Set the e-mail address that will be attached to your commits and tags. |
| `git config --global color.ui auto` | Enable some colorization of Git output. |

## 02 Starting a project

| | |
|---|---|
| `git init [project name]` | Create a new local repository in the current directory. If **[project name]** is provided, Git will create a new directory named **[project name]** and will initialize a repository inside it. |
| `git clone <project url>` | Downloads a project with the entire history from the remote repository. |

## 03 Day-to-day work

| | |
|---|---|
| `git status` | Displays the status of your working directory. Options include new, staged, and modified files. It will retrieve branch name, current commit identifier, and changes pending commit. |
| `git add [file]` | Add a file to the **staging** area. Use. in place of the full file path to add all changed files from the **current directory** down into the **directory tree.** |
| `git diff [file]` | Show changes between **working directory** and **staging area.** |
| `git diff --staged [file]` | Shows any changes between the **staging area** and the **repository.** |
| `git checkout -- [file]` | Discard changes in **working directory.** This operation is **unrecoverable**. |
| `git reset [<path>...]` | Revert some paths in the index (or the whole index) to their state in **HEAD.** |
| `git commit` | Create a new commit from changes added to the **staging area.** The **commit** must have a message! |
| `git rm [file]` | Remove file from **working directory** and **staging area.** |

## 04 Storing your work

| | |
|---|---|
| `git stash` | Put current changes in your **working directory** into **stash** for later use. |
| `git stash pop` | Apply stored **stash** content into **working directory,** and clear **stash.** |
| `git stash drop` | Delete a specific **stash** from all your previous **stashes.** |

## 05 Git branching model

| | |
|---|---|
| `git branch [-a]` | List all local branches in repository. With **-a**: show all branches (with remote). |
| `git branch [branch_name]` | Create new branch, referencing the current **HEAD**. |
| `git rebase [branch_name]` | Apply commits of the current working branch and apply them to the HEAD of [branch] to make the history of your branch more linear. |
| `git checkout [-b] [branch_name]` | Switch working directory to the specified branch. With **-b**: Git will create the specified branch if it does not exist. |
| `git merge [branch_name]` | Join specified **[branch_name]** branch into your current branch (the one you are on currently). |
| `git branch -d [branch_name]` | Remove selected branch, if it is already merged into any other. **-D** instead of **-d** forces deletion. |

| | |
|---|---|
| **Commit** | a state of the code base |
| **Branch** | a reference to a commit; can have a **tracked upstream** |
| **Tag** | a reference (standard) or an object (annotated) |
| **HEAD** | a place where your **working directory** is now |

## 06 Inspect history

| | |
|---|---|
| `git log [-n count]` | List commit history of current branch. **-n count** limits list to last **n** commits. |
| `git log --oneline --graph --decorate` | An overview with reference labels and history graph. One commit per line. |
| `git log ref..` | List commits that are present on the current branch and not merged into **ref**. A **ref** can be a branch name or a tag name. |
| `git log ..ref` | List commit that are present on **ref** and not merged into current branch. |
| `git reflog` | List operations (e.g. checkouts or commits) made on local repository. |

## 07 Tagging commits

| | |
|---|---|
| `git tag` | List all tags. |
| `git tag [name] [commit sha]` | Create a tag reference named **name** for current commit. Add **commit sha** to tag a specific commit instead of current one. |
| `git tag -a [name] [commit sha]` | Create a tag object named **name** for current commit. |
| `git tag -d [name]` | Remove a tag from local repository. |

## 08 Reverting changes

| | |
|---|---|
| `git reset [--hard] [target reference]` | Switches the current branch to the **target reference**, leaving a difference as an uncommitted change. When **--hard** is used, all changes are discarded. It's easy to lose uncommitted changes with **--hard.** |
| `git revert [commit sha]` | Create a new commit, reverting changes from the specified commit. It generates an **inversion** of changes. |

## 09 Synchronizing repositories

| | |
|---|---|
| `git fetch [remote]` | Fetch changes from the **remote**, but not update tracking branches. |
| `git fetch --prune [remote]` | Delete remote Refs that were removed from the **remote** repository. |
| `git pull [remote]` | Fetch changes from the **remote** and merge current branch with its upstream. |
| `git push [--tags] [remote]` | Push local changes to the **remote**. Use **--tags** to push tags. |
| `git push -u [remote] [branch]` | Push local branch to **remote** repository. Set its copy as an upstream. |

## 10 Git installation

For GNU/Linux distributions, Git should be available in the standard system repository. For example, in Debian/Ubuntu please type inthe terminal:

```
sudo apt-get install git
```

If you need to install Git from source, you can get it from **git-scm.com/downloads**.

An excellent Git course can be found in the great Pro Git book by Scott Chacon and Ben Straub. The book is available online for free at **git-scm.com/book.**

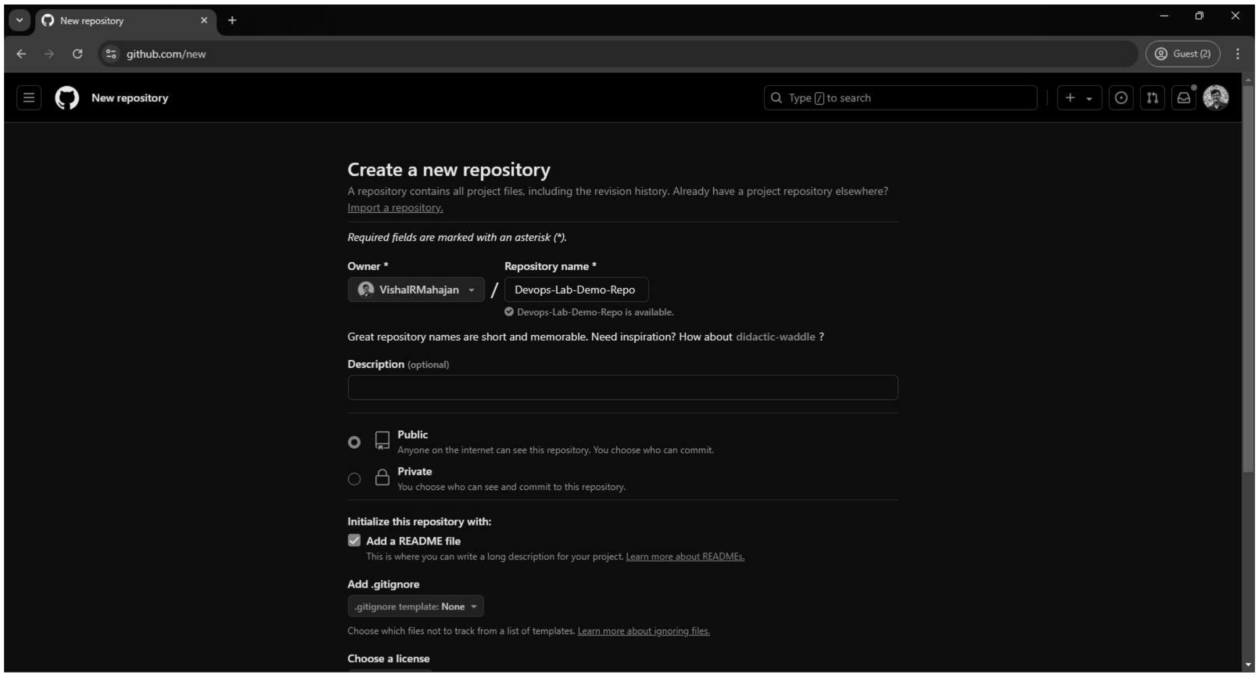
## 11 Ignoring files

```
cat   <<EOF >  .gitignore
/logs/*
!logs/.gitkeep
/tmp
*.swp
EOF
```

To ignore files, create a .gitignore file in your repository with a line for each pattern. File ignoring will work for the current and sub directories where .gitignore file is placed. In this example, all files are ignored in the logs directory (excluding the .gitkeep file), whole tmp directory and all files *.swp.

**B. Execute following on Git and GitHub (Refer the shared material) and attach screenshots:**

**GitHub Repository Creation:**


github.com/new

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 *: VishalRMahajan / Repository name *: Devops-Lab-Demo-Repo

Devops-Lab-Demo-Repo is available.

Great repository names are short and memorable. Need inspiration? How about didactic-waddle ?

Description (optional)

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

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

Initialize this repository with:

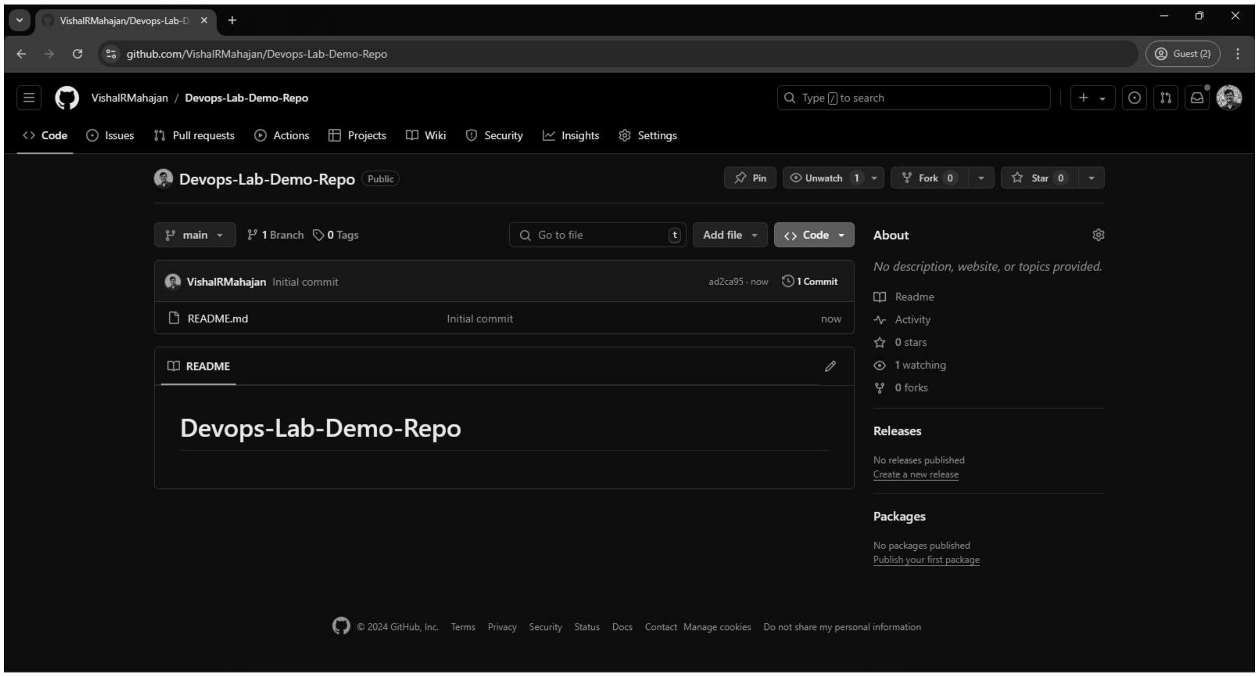
✓ Add a README file — This is where you can write a long description for your project. Learn more about READMEs.

Add .gitignore

.gitignore template: None

Choose which files not to track from a list of templates. Learn more about ignoring files.

Choose a license


github.com/VishalRMahajan/Devops-Lab-Demo-Repo

VishalRMahajan / Devops-Lab-Demo-Repo

Devops-Lab-Demo-Repo (Public)

main · 1 Branch · 0 Tags

| | | |
|---|---|---|
| VishalRMahajan Initial commit | | ad2ca95 · now · 1 Commit |
| README.md | Initial commit | now |

README

Devops-Lab-Demo-Repo

About

*No description, website, or topics provided.*

Readme · Activity · 0 stars · 1 watching · 0 forks

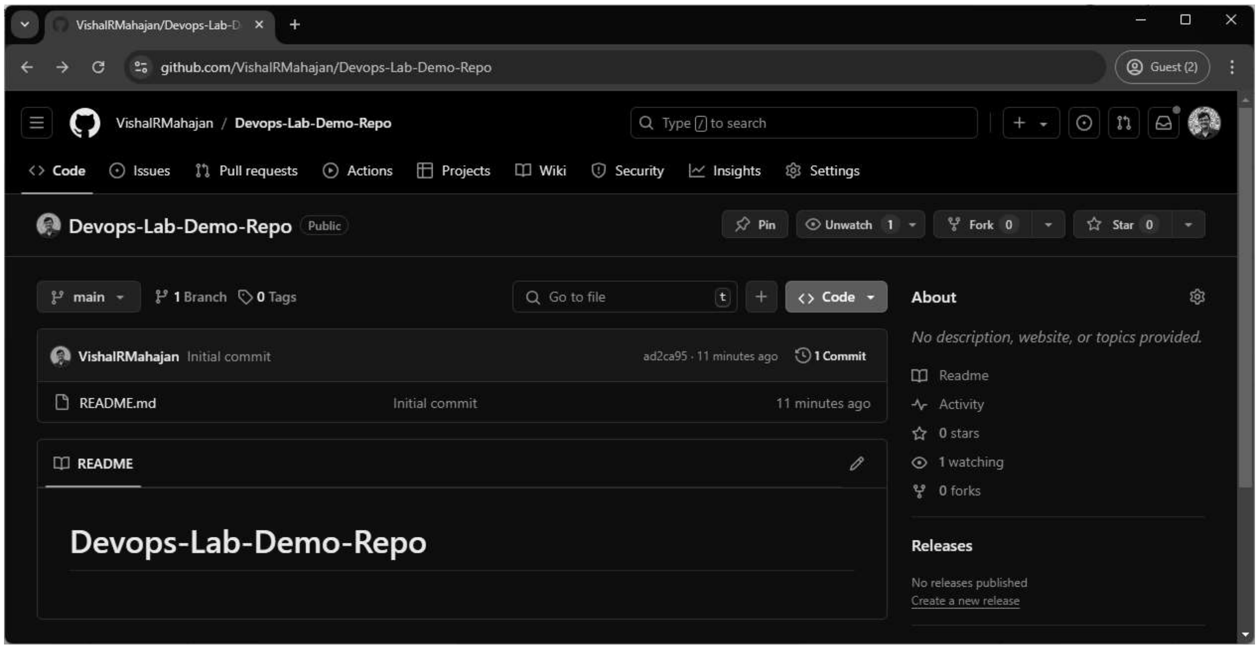
Releases — No releases published — Create a new release

Packages — No packages published — Publish your first package

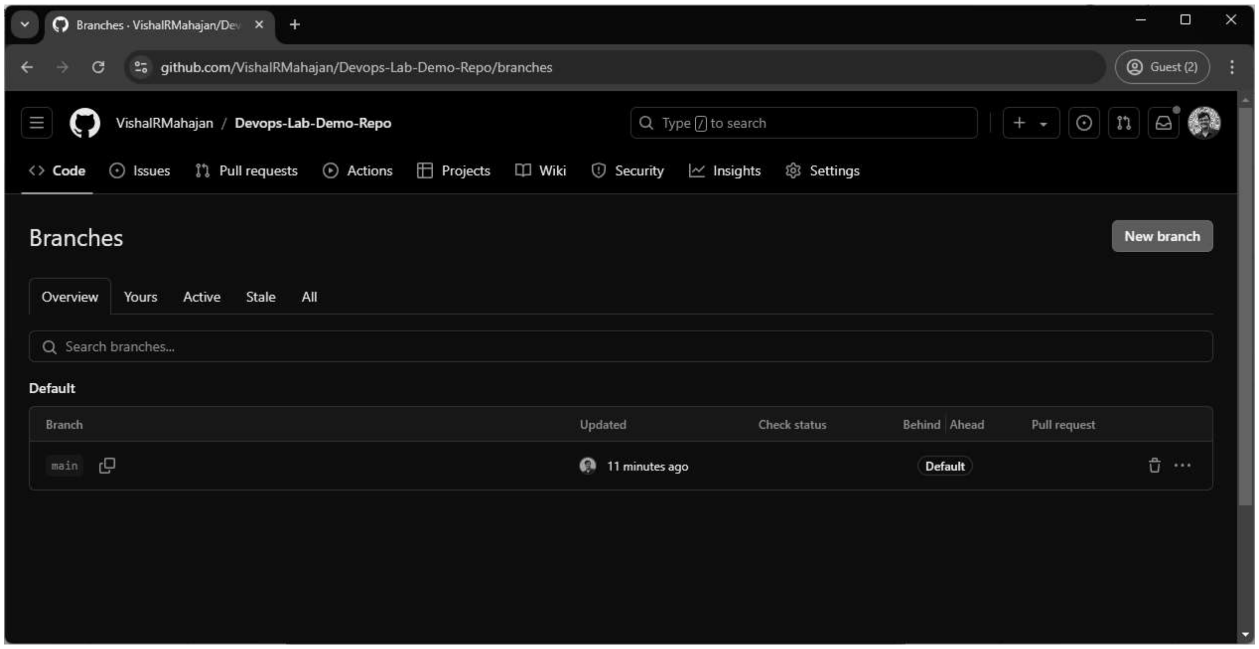
© 2024 GitHub, Inc.

## 2. On GitHub Repository:

### 2.1 New branch creation in own repository

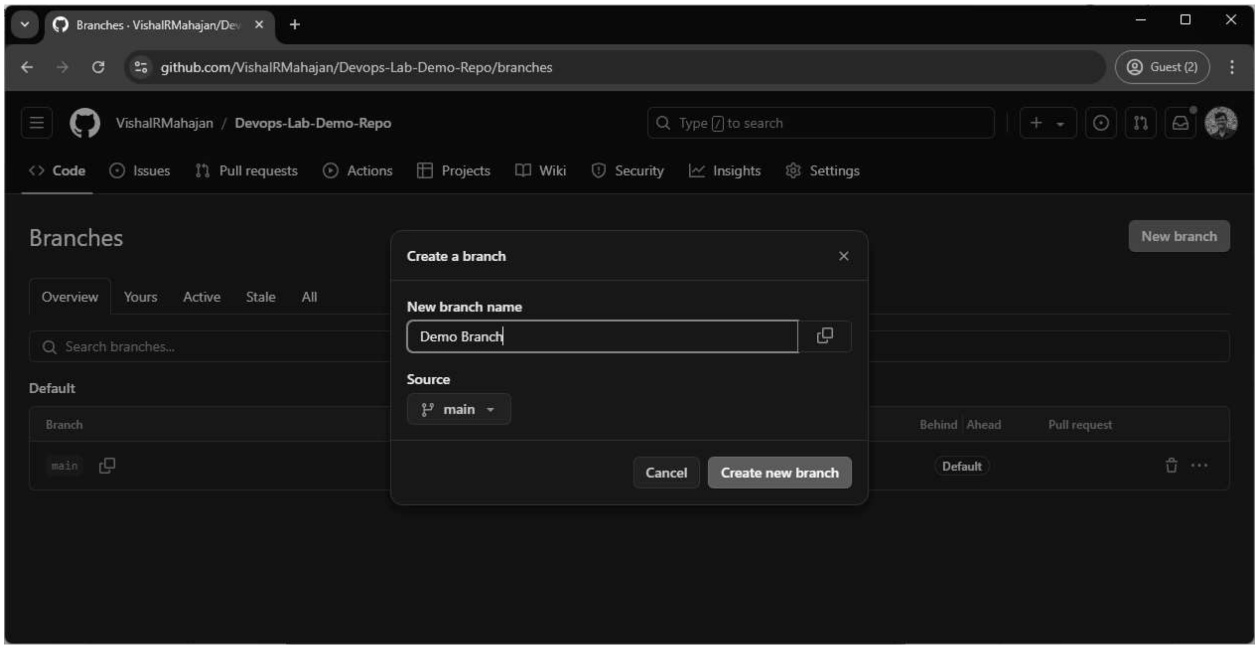


*Repository in which branch will be created*


github.com/VishalRMahajan/Devops-Lab-Demo-Repo/branches
VishalRMahajan / Devops-Lab-Demo-Repo
Branches
New branch
Overview
Yours
Active
Stale
All
Search branches...
Default

| Branch | Updated | Check status | Behind \| Ahead | Pull request |
|---|---|---|---|---|
| main | 11 minutes ago | | Default | |

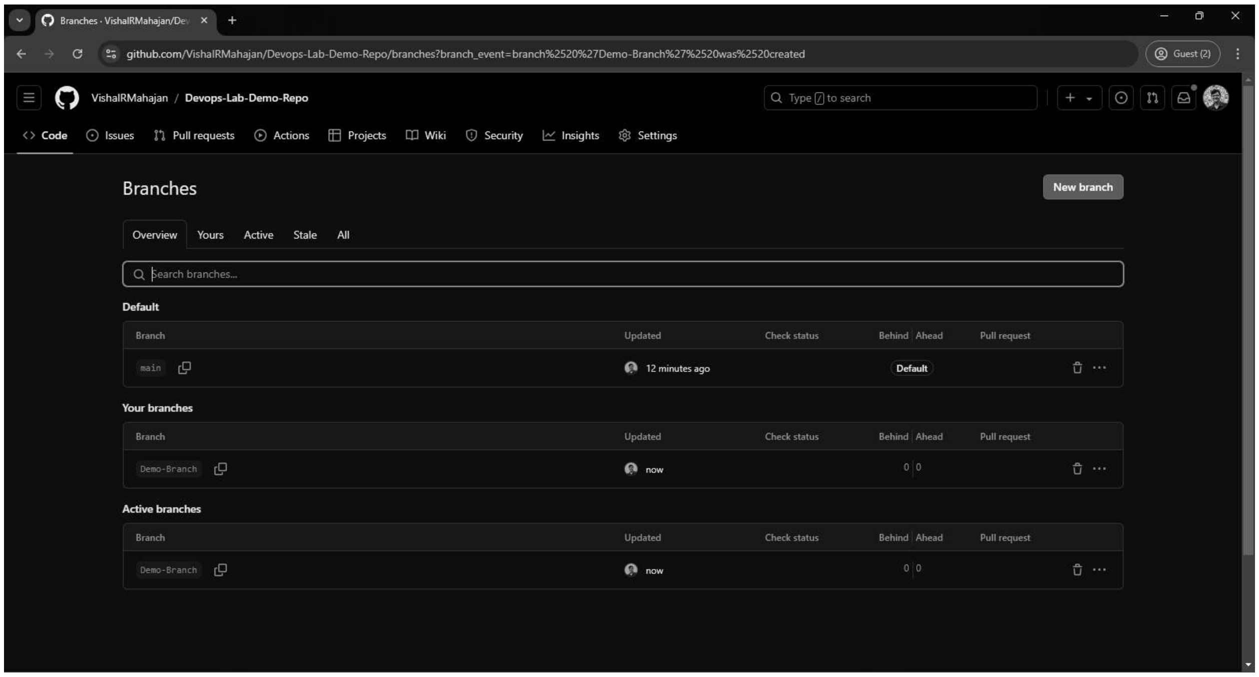
*Currently only one branch which is by default created (main)*



New branch name: Demo Branch

Source: main

*Creating a Branch with name "Demo Branch"*


Branches · VishalRMahajan/Dev
github.com/VishalRMahajan/Devops-Lab-Demo-Repo/branches?branch_event=branch%2520%27Demo-Branch%27%2520was%2520created
Guest (2)
VishalRMahajan / Devops-Lab-Demo-Repo
Type / to search
Code
Issues
Pull requests
Actions
Projects
Wiki
Security
Insights
Settings
Branches
New branch
Overview
Yours
Active
Stale
All
Search branches...

Default

| Branch | Updated | Check status | Behind | Ahead | Pull request |
|---|---|---|---|---|---|
| main | 12 minutes ago | | Default | | |

Your branches

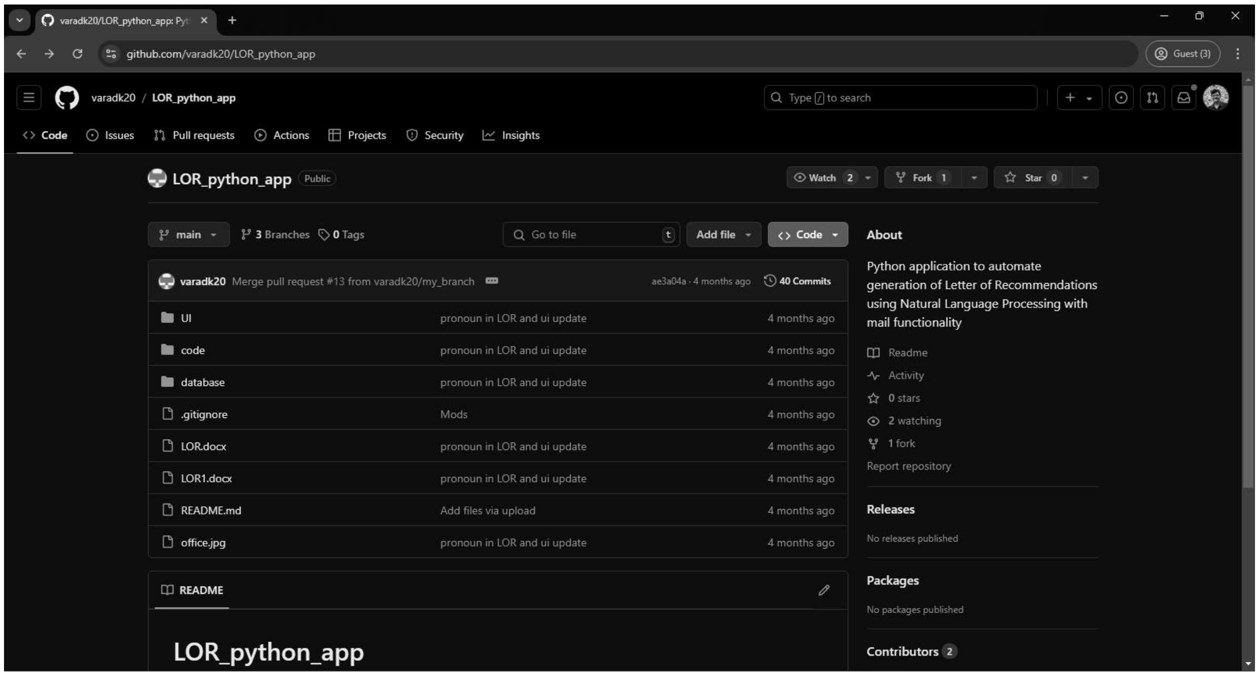
| Branch | Updated | Check status | Behind | Ahead | Pull request |
|---|---|---|---|---|---|
| Demo-Branch | now | | 0 | 0 | |

Active branches

| Branch | Updated | Check status | Behind | Ahead | Pull request |
|---|---|---|---|---|---|
| Demo-Branch | now | | 0 | 0 | |

*Demo Branch get created*

## 2.2 Fork a public repository


github.com/varadk20/LOR_python_app

varadk20 / LOR_python_app

Code · Issues · Pull requests · Actions · Projects · Security · Insights

LOR_python_app Public

Watch 2 · Fork 1 · Star 0

main · 3 Branches · 0 Tags · Go to file · Add file · Code

varadk20 Merge pull request #13 from varadk20/my_branch · ae3a04a · 4 months ago · 40 Commits

| | | |
|---|---|---|
| UI | pronoun in LOR and ui update | 4 months ago |
| code | pronoun in LOR and ui update | 4 months ago |
| database | pronoun in LOR and ui update | 4 months ago |
| .gitignore | Mods | 4 months ago |
| LOR.docx | pronoun in LOR and ui update | 4 months ago |
| LOR1.docx | pronoun in LOR and ui update | 4 months ago |
| README.md | Add files via upload | 4 months ago |
| office.jpg | pronoun in LOR and ui update | 4 months ago |

About

Python application to automate generation of Letter of Recommendations using Natural Language Processing with mail functionality

Readme · Activity · 0 stars · 2 watching · 1 fork · Report repository

Releases: No releases published

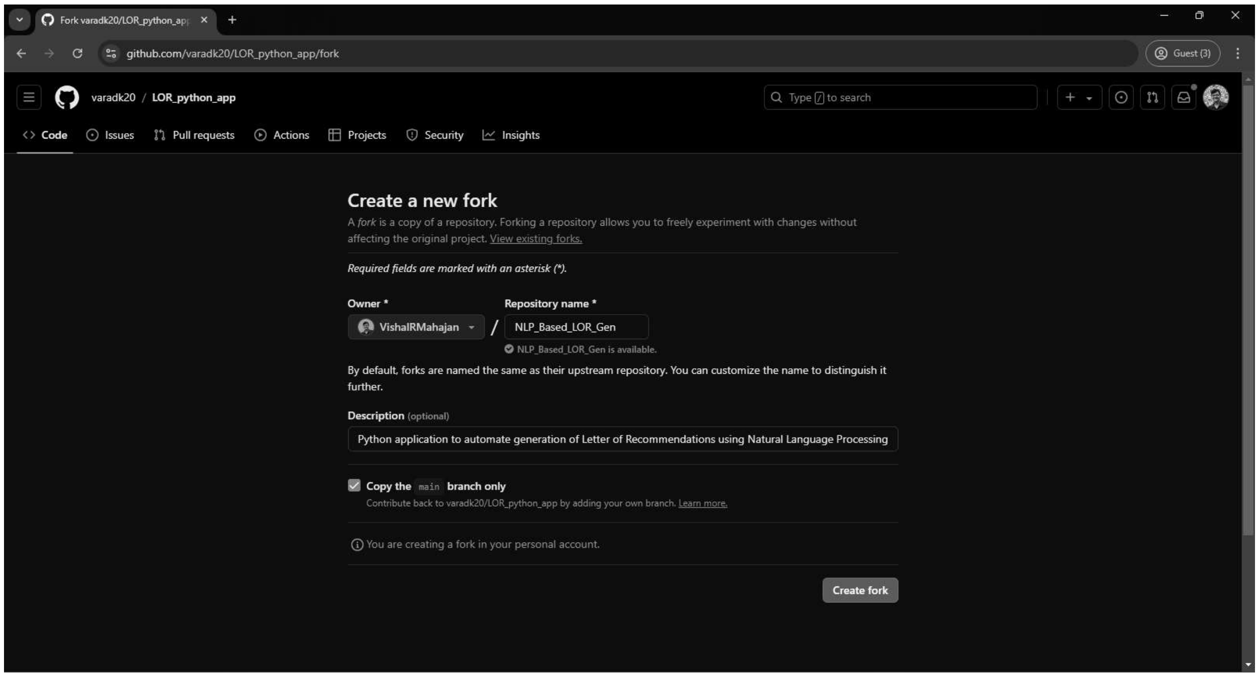
Packages: No packages published

Contributors 2

README

LOR_python_app

*Will be using my friends Public repo for Forking*


github.com/varadk20/LOR_python_app/fork

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. View existing forks.

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

Owner *: VishalRMahajan / Repository name *: NLP_Based_LOR_Gen

NLP_Based_LOR_Gen is available.

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

Description (optional): Python application to automate generation of Letter of Recommendations using Natural Language Processing

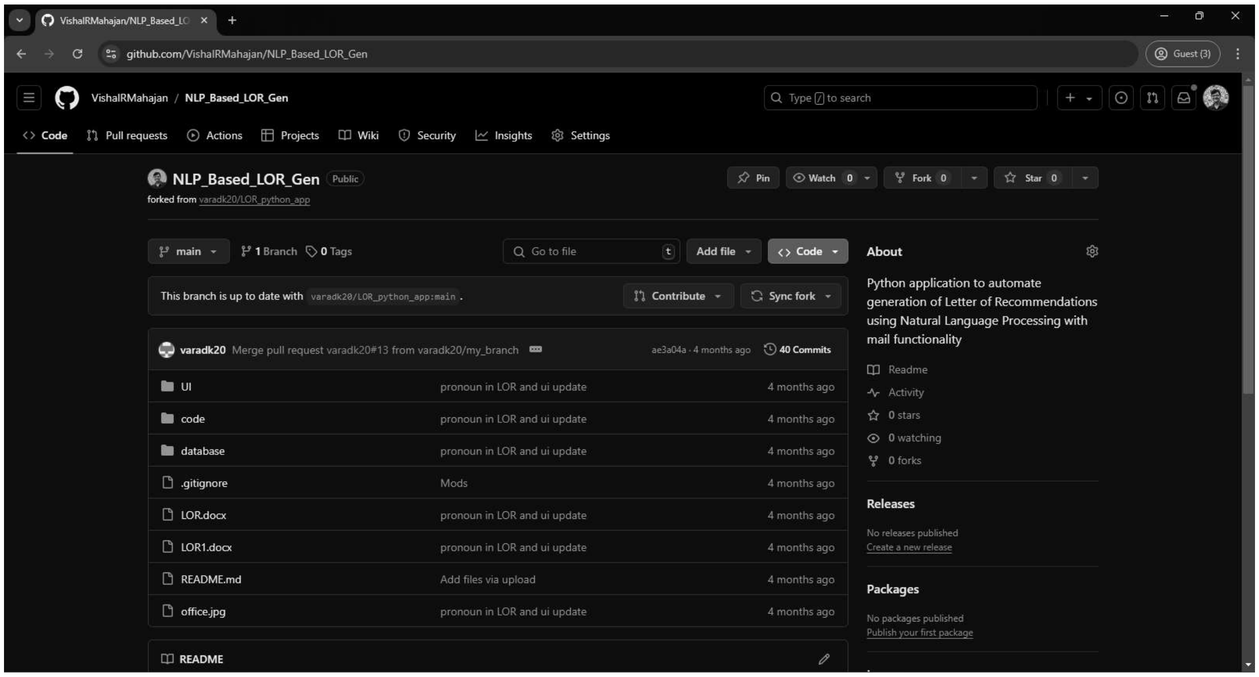
✓ Copy the `main` branch only

Contribute back to varadk20/LOR_python_app by adding your own branch. Learn more.

You are creating a fork in your personal account.

Create fork

*Naming the Repository as NLP_Based_LOR_Gen*



This branch is up to date with `varadk20/LOR_python_app:main`.

varadk20 Merge pull request varadk20#13 from varadk20/my_branch · ae3a04a · 4 months ago · 40 Commits

| | | |
|---|---|---|
| UI | pronoun in LOR and ui update | 4 months ago |
| code | pronoun in LOR and ui update | 4 months ago |
| database | pronoun in LOR and ui update | 4 months ago |
| .gitignore | Mods | 4 months ago |
| LOR.docx | pronoun in LOR and ui update | 4 months ago |
| LOR1.docx | pronoun in LOR and ui update | 4 months ago |
| README.md | Add files via upload | 4 months ago |
| office.jpg | pronoun in LOR and ui update | 4 months ago |

About

Python application to automate generation of Letter of Recommendations using Natural Language Processing with mail functionality

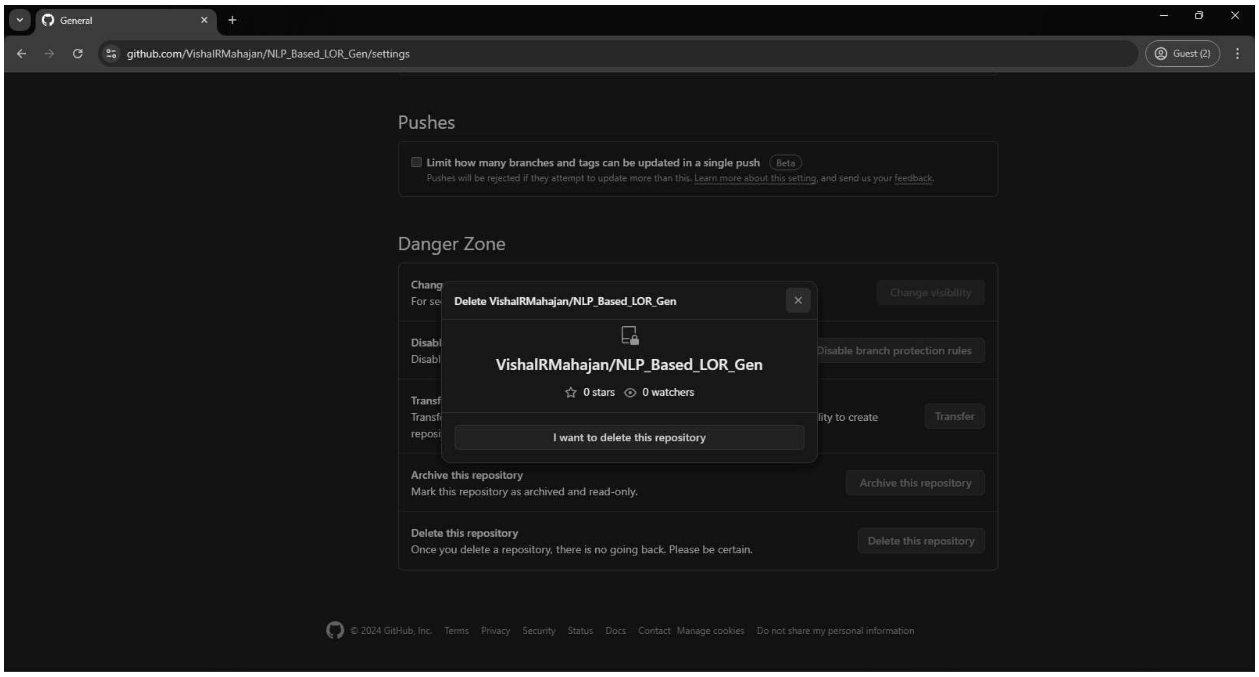
Readme · Activity · 0 stars · 0 watching · 0 forks

Releases: No releases published. Create a new release

Packages: No packages published. Publish your first package

*A new repo will be forked under your github profile*

## 2.3 Delete Repository on github


github.com/VishalRMahajan/NLP_Based_LOR_Gen/settings
Change visibility
Disable branch protection rules
Transfer
Archive this repository
Delete this repository
I want to delete this repository

Pushes

Limit how many branches and tags can be updated in a single push (Beta)
Pushes will be rejected if they attempt to update more than this. Learn more about this setting, and send us your feedback.

Danger Zone

Delete VishalRMahajan/NLP_Based_LOR_Gen

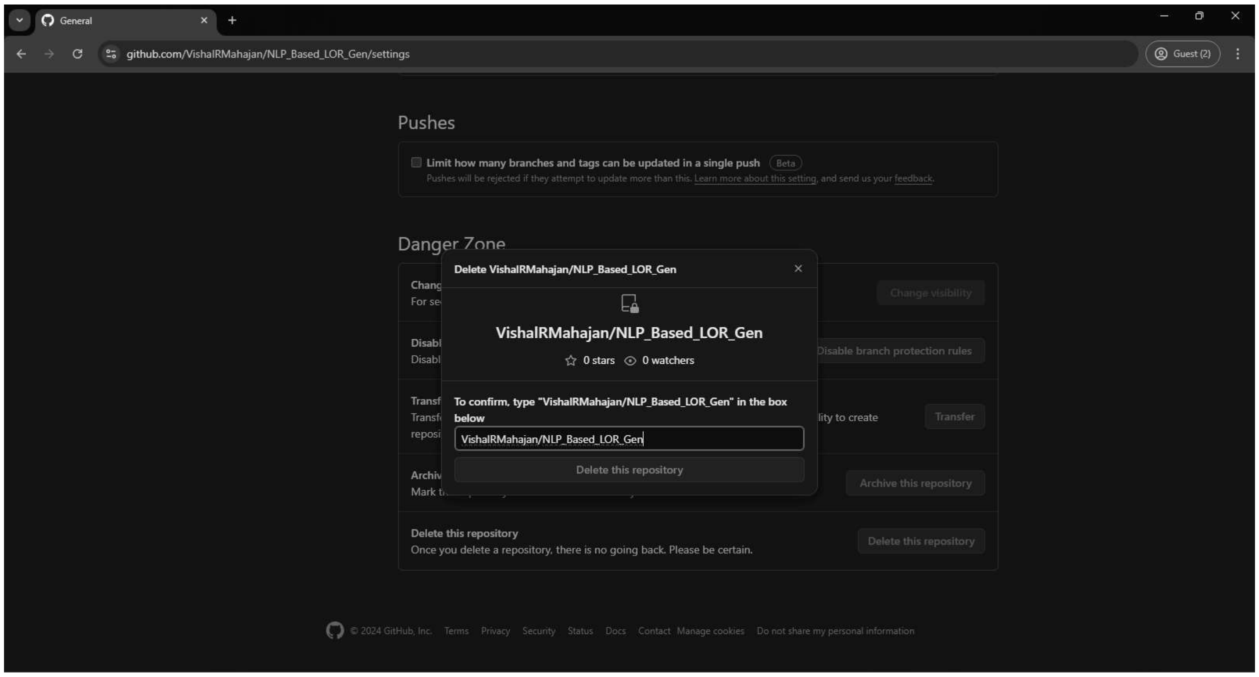
VishalRMahajan/NLP_Based_LOR_Gen

0 stars · 0 watchers

Archive this repository
Mark this repository as archived and read-only.

Delete this repository
Once you delete a repository, there is no going back. Please be certain.

*Deleting the forked repo, scrolled down in setting ,Clicked on Delete this repository*


github.com/VishalRMahajan/NLP_Based_LOR_Gen/settings

Pushes

Limit how many branches and tags can be updated in a single push (Beta)
Pushes will be rejected if they attempt to update more than this. Learn more about this setting, and send us your feedback.

Danger Zone

Delete VishalRMahajan/NLP_Based_LOR_Gen

VishalRMahajan/NLP_Based_LOR_Gen
0 stars 0 watchers

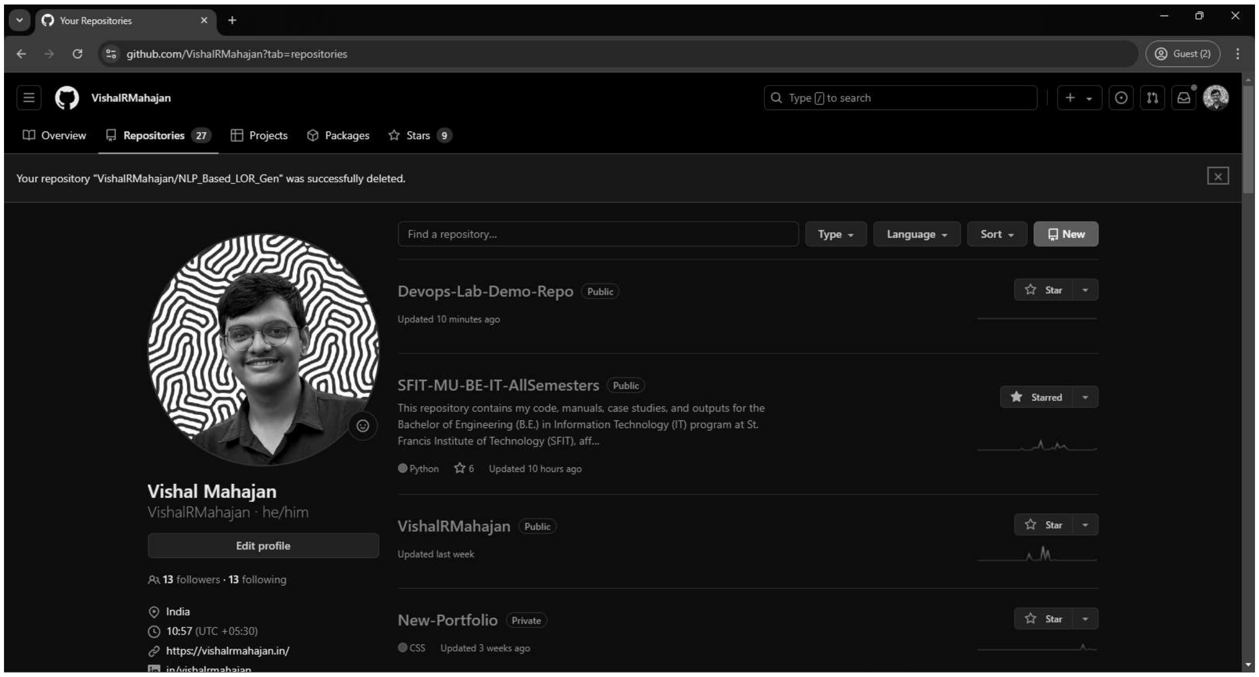
To confirm, type "VishalRMahajan/NLP_Based_LOR_Gen" in the box below

VishalRMahajan/NLP_Based_LOR_Gen

Delete this repository

Delete this repository
Once you delete a repository, there is no going back. Please be certain.

*Confirmed Deletion By entering the Repo Name*


github.com/VishalRMahajan?tab=repositories

Your repository "VishalRMahajan/NLP_Based_LOR_Gen" was successfully deleted.

Vishal Mahajan
VishalRMahajan · he/him
13 followers · 13 following
India
10:57 (UTC +05:30)
https://vishalrmahajan.in/

Devops-Lab-Demo-Repo (Public) — Updated 10 minutes ago

SFIT-MU-BE-IT-AllSemesters (Public) — This repository contains my code, manuals, case studies, and outputs for the Bachelor of Engineering (B.E.) in Information Technology (IT) program at St. Francis Institute of Technology (SFIT), aff... — Python ☆ 6 Updated 10 hours ago

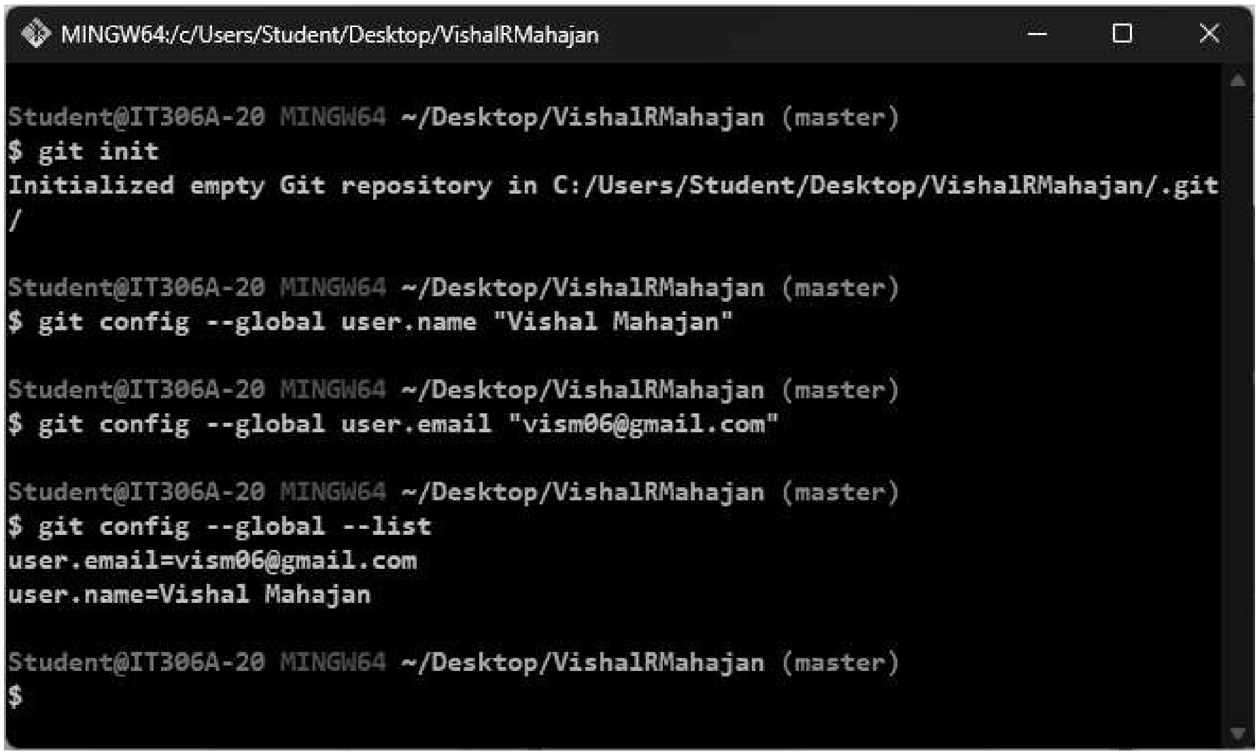
VishalRMahajan (Public) — Updated last week

New-Portfolio (Private) — CSS Updated 3 weeks ago

*Repo was successfully deleted message*

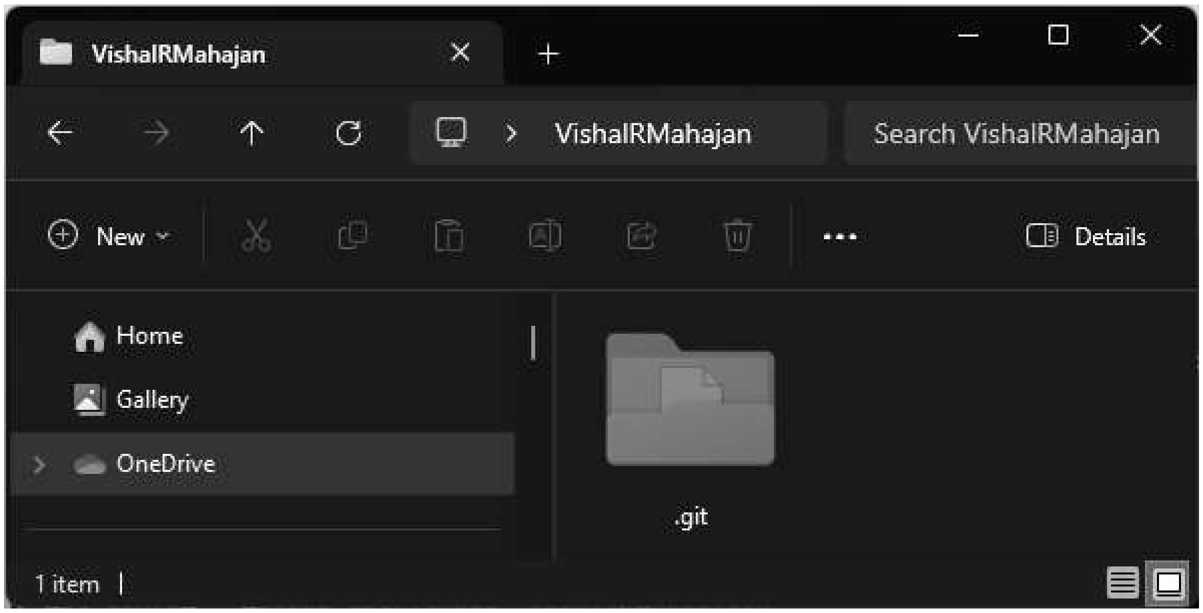
## 3. Execution of following Git commands along with screenshots of folder contents & corresponding GitHub repository contents

### 3.1 Git clone <url>

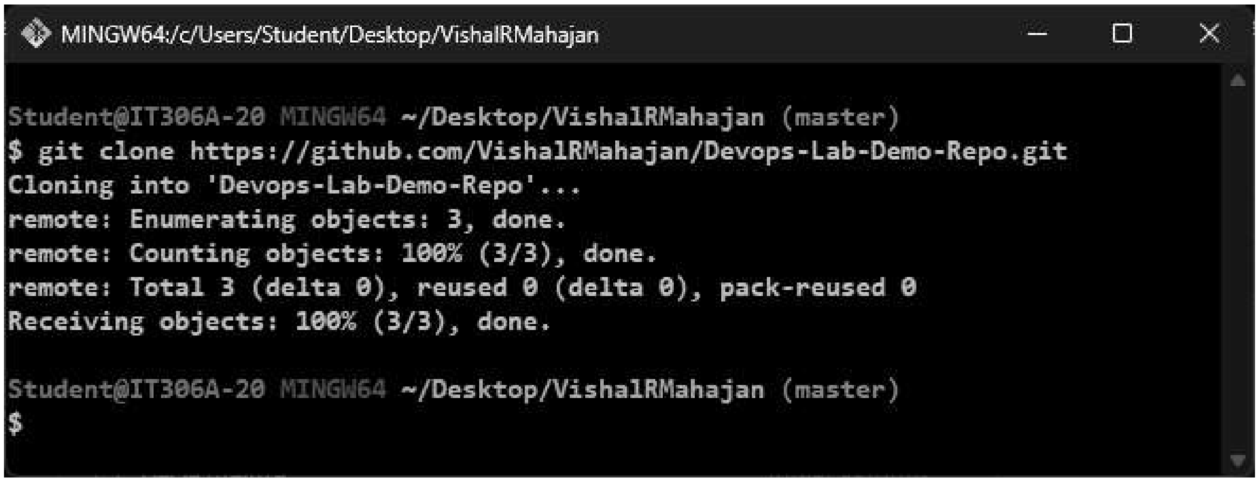


```
MINGW64:/c/Users/Student/Desktop/VishalRMahajan

Student@IT306A-20 MINGW64 ~/Desktop/VishalRMahajan (master)
$ git init
Initialized empty Git repository in C:/Users/Student/Desktop/VishalRMahajan/.git
/

Student@IT306A-20 MINGW64 ~/Desktop/VishalRMahajan (master)
$ git config --global user.name "Vishal Mahajan"

Student@IT306A-20 MINGW64 ~/Desktop/VishalRMahajan (master)
$ git config --global user.email "vism06@gmail.com"

Student@IT306A-20 MINGW64 ~/Desktop/VishalRMahajan (master)
$ git config --global --list
user.email=vism06@gmail.com
user.name=Vishal Mahajan

Student@IT306A-20 MINGW64 ~/Desktop/VishalRMahajan (master)
$
```

*Initializing a git repository and setting git config*

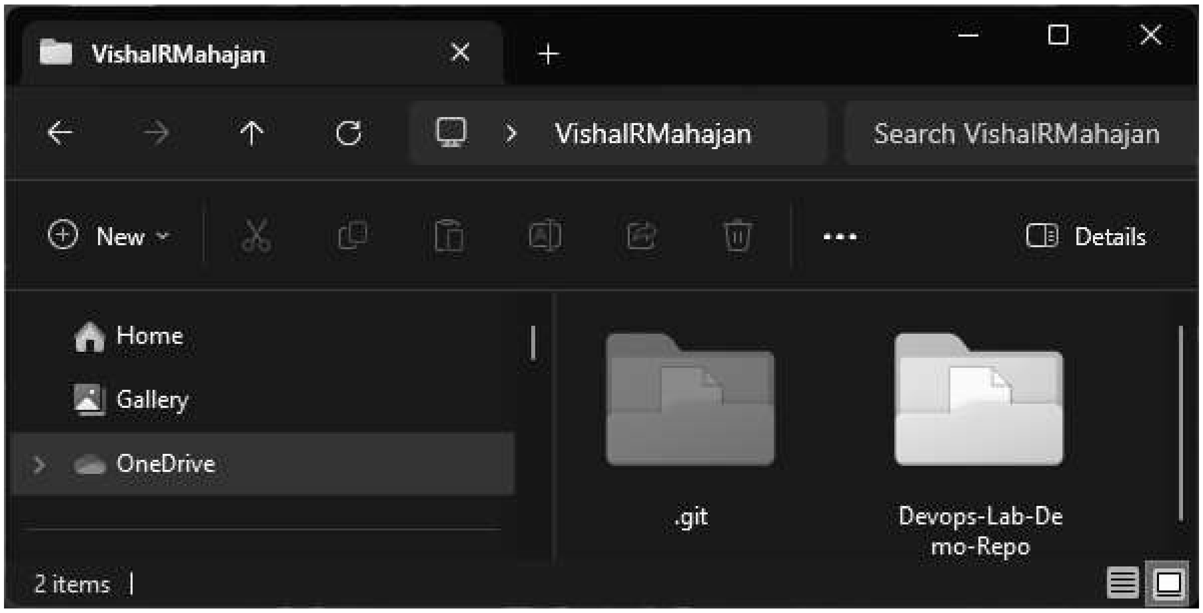


*.git folder got initialized in root folder (VishalRMahajan)*



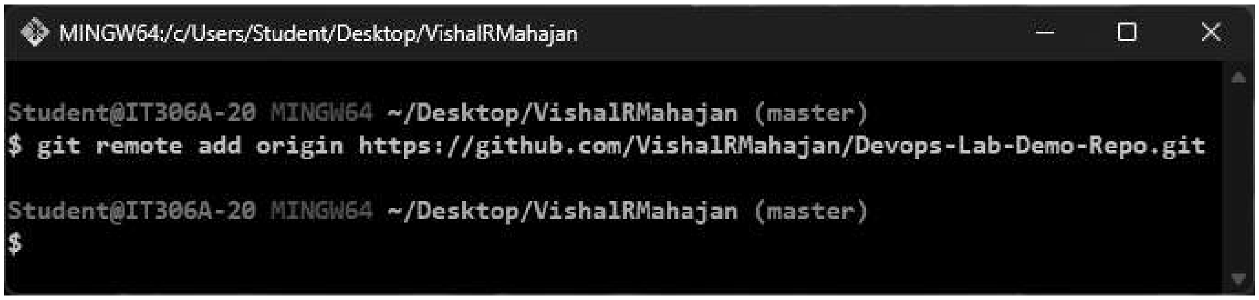
```
MINGW64:/c/Users/Student/Desktop/VishalRMahajan

Student@IT306A-20 MINGW64 ~/Desktop/VishalRMahajan (master)
$ git clone https://github.com/VishalRMahajan/Devops-Lab-Demo-Repo.git
Cloning into 'Devops-Lab-Demo-Repo'...
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
Receiving objects: 100% (3/3), done.

Student@IT306A-20 MINGW64 ~/Desktop/VishalRMahajan (master)
$
```

*Cloning the earlier created repository using git clone <url>*



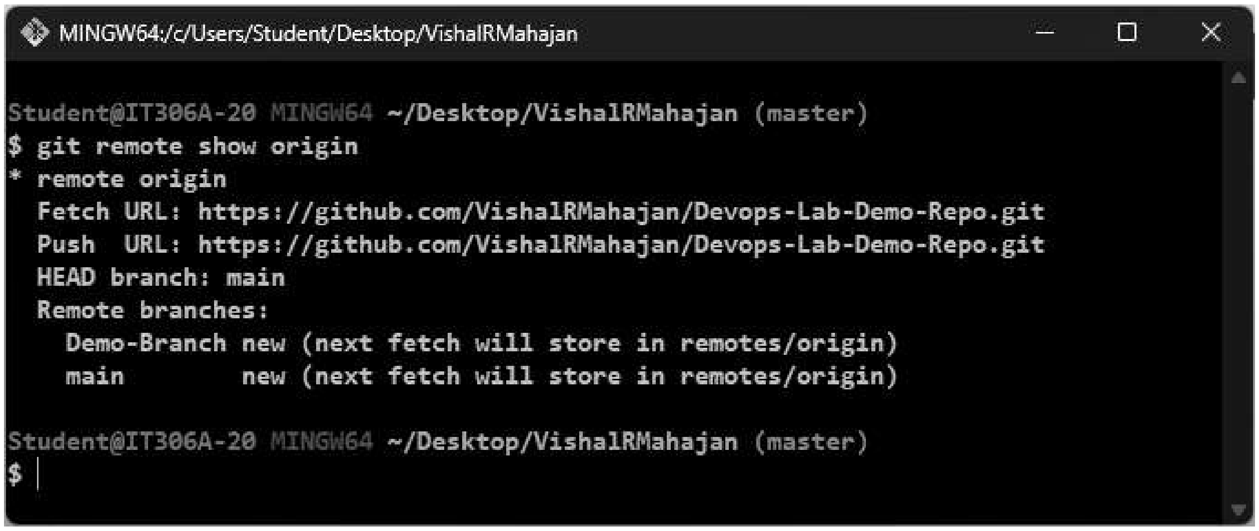
*Repo got cloned as a folder*

## 3.2. Git remote add origin



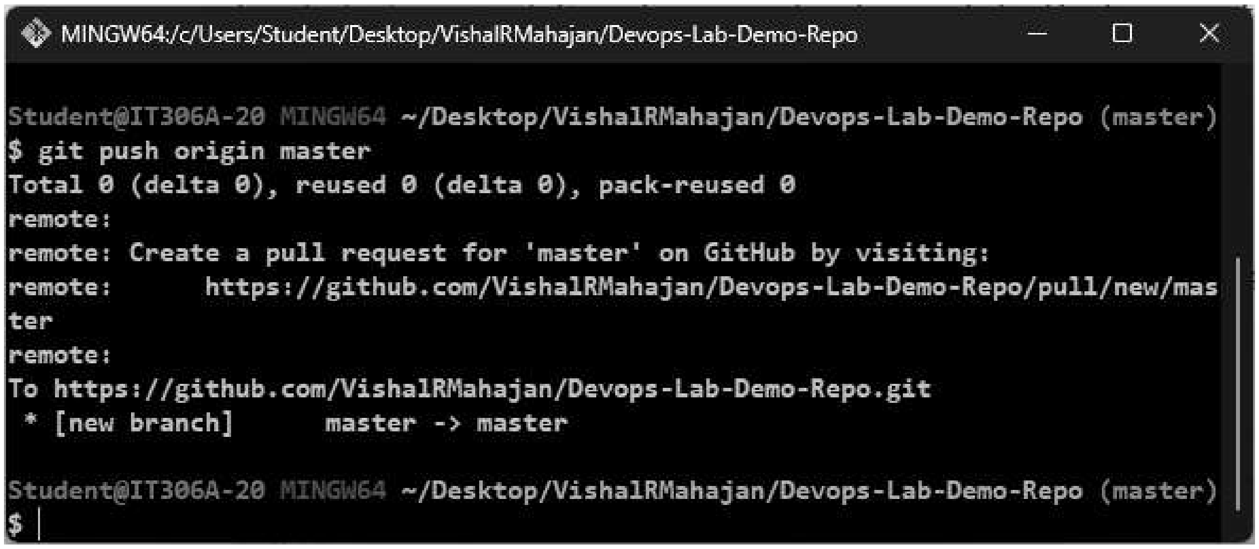
```
MINGW64:/c/Users/Student/Desktop/VishalRMahajan

Student@IT306A-20 MINGW64 ~/Desktop/VishalRMahajan (master)
$ git remote add origin https://github.com/VishalRMahajan/Devops-Lab-Demo-Repo.git

Student@IT306A-20 MINGW64 ~/Desktop/VishalRMahajan (master)
$
```

## 3.3. Git remote show origin

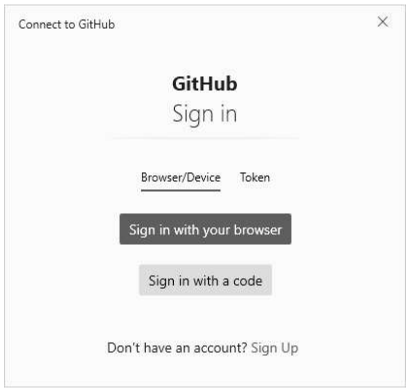


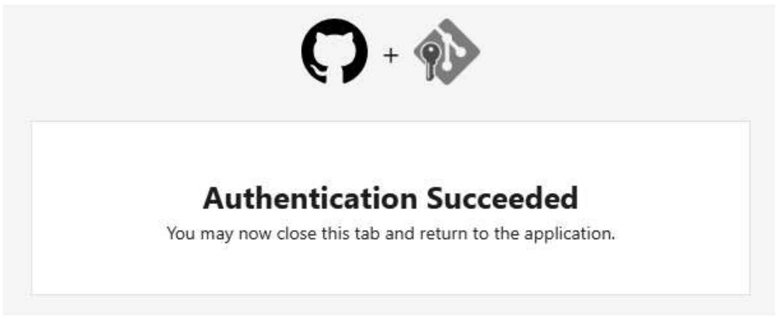
```
MINGW64:/c/Users/Student/Desktop/VishalRMahajan

Student@IT306A-20 MINGW64 ~/Desktop/VishalRMahajan (master)
$ git remote show origin
* remote origin
  Fetch URL: https://github.com/VishalRMahajan/Devops-Lab-Demo-Repo.git
  Push  URL: https://github.com/VishalRMahajan/Devops-Lab-Demo-Repo.git
  HEAD branch: main
  Remote branches:
    Demo-Branch new (next fetch will store in remotes/origin)
    main        new (next fetch will store in remotes/origin)

Student@IT306A-20 MINGW64 ~/Desktop/VishalRMahajan (master)
$ |
```

## 3.4. Git push origin master



```
MINGW64:/c/Users/Student/Desktop/VishalRMahajan/Devops-Lab-Demo-Repo

Student@IT306A-20 MINGW64 ~/Desktop/VishalRMahajan/Devops-Lab-Demo-Repo (master)
$ git push origin master
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0
remote:
remote: Create a pull request for 'master' on GitHub by visiting:
remote:      https://github.com/VishalRMahajan/Devops-Lab-Demo-Repo/pull/new/mas
ter
remote:
To https://github.com/VishalRMahajan/Devops-Lab-Demo-Repo.git
 * [new branch]      master -> master

Student@IT306A-20 MINGW64 ~/Desktop/VishalRMahajan/Devops-Lab-Demo-Repo (master)
$ |
```

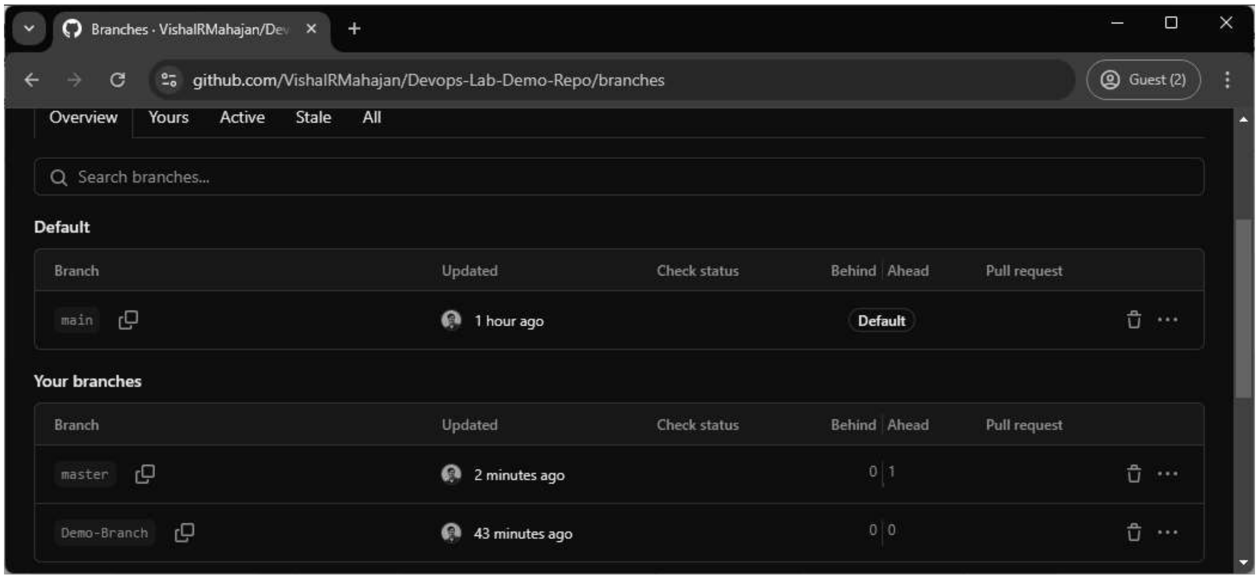




Authentication Succeeded

You may now close this tab and return to the application.

*During pushing we need to authenticate*


Branches · VishalRMahajan/Dev

github.com/VishalRMahajan/Devops-Lab-Demo-Repo/branches

Overview Yours Active Stale All

Default

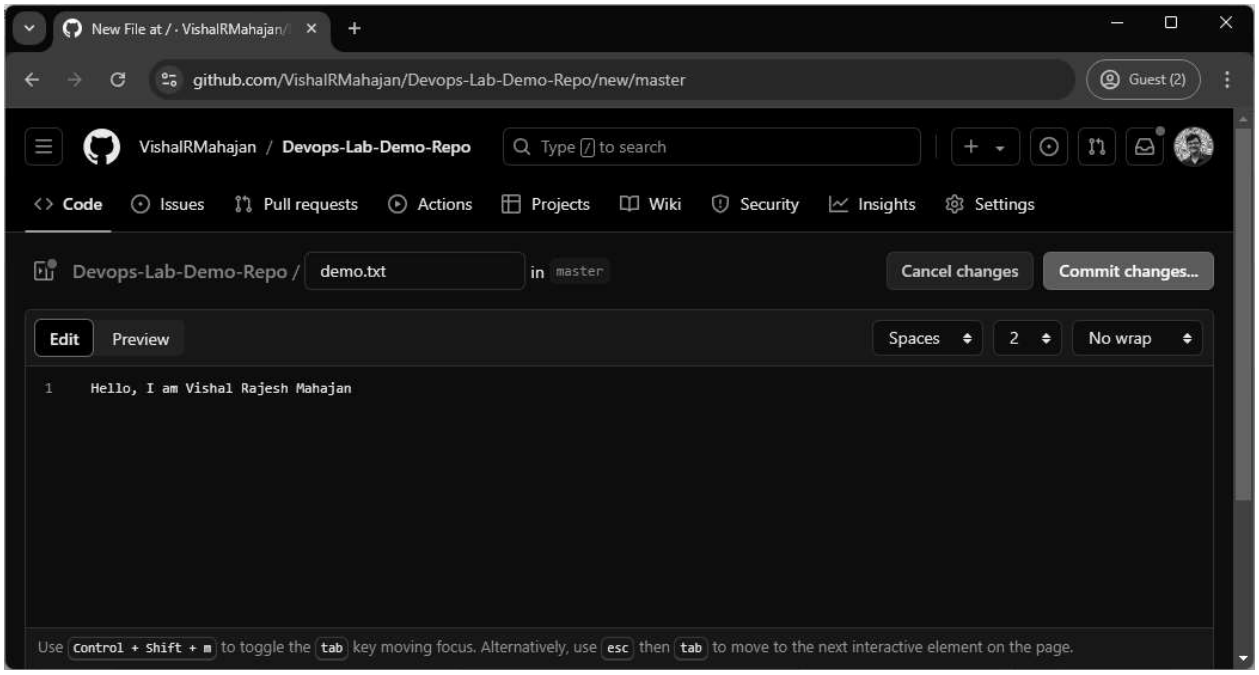
| Branch | Updated | Check status | Behind \| Ahead | Pull request |
|---|---|---|---|---|
| main | 1 hour ago | | Default | |

Your branches

| Branch | Updated | Check status | Behind \| Ahead | Pull request |
|---|---|---|---|---|
| master | 2 minutes ago | | 0 \| 1 | |
| Demo-Branch | 43 minutes ago | | 0 \| 0 | |

*Pushed the local content to git repo at master branch*

## 3.5. Git pull origin master


New File at / · VishalRMahajan/

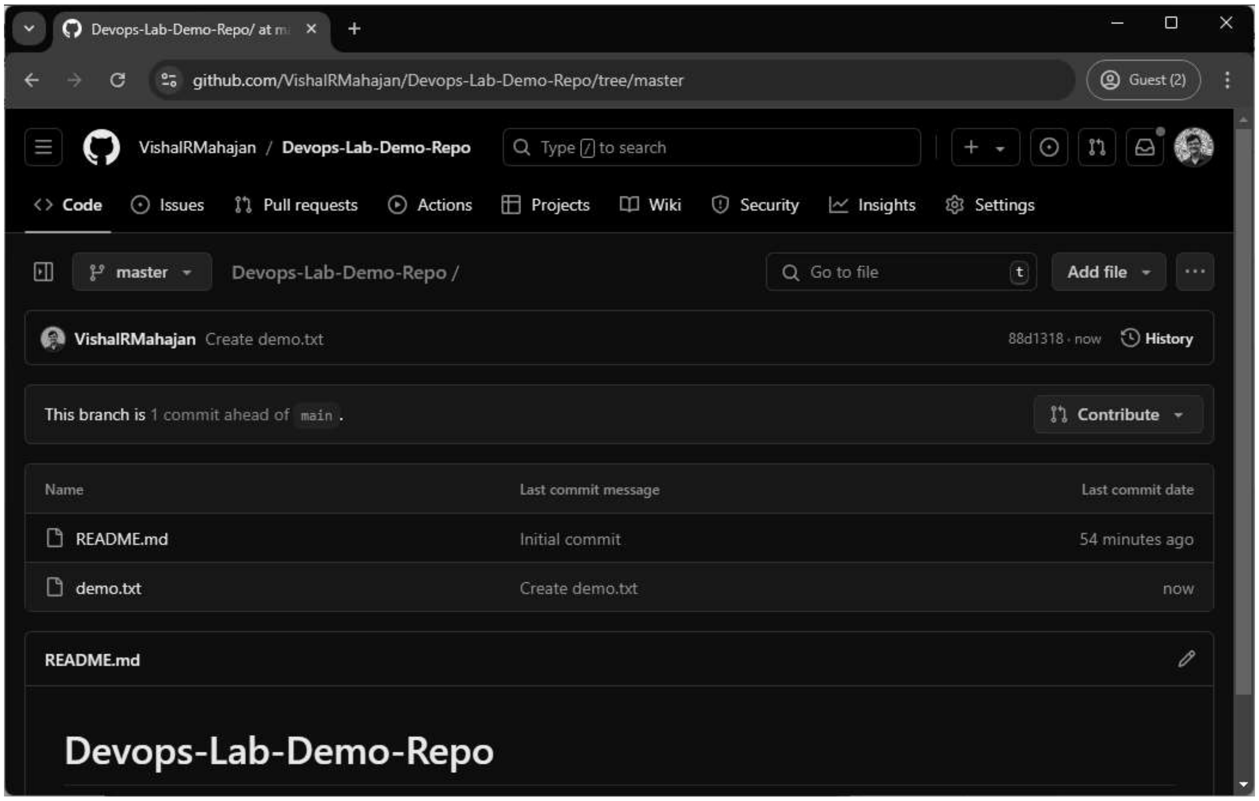
github.com/VishalRMahajan/Devops-Lab-Demo-Repo/new/master

VishalRMahajan / Devops-Lab-Demo-Repo

Devops-Lab-Demo-Repo / demo.txt in master

```
Hello, I am Vishal Rajesh Mahajan
```

*Creating a demo file in master branch*

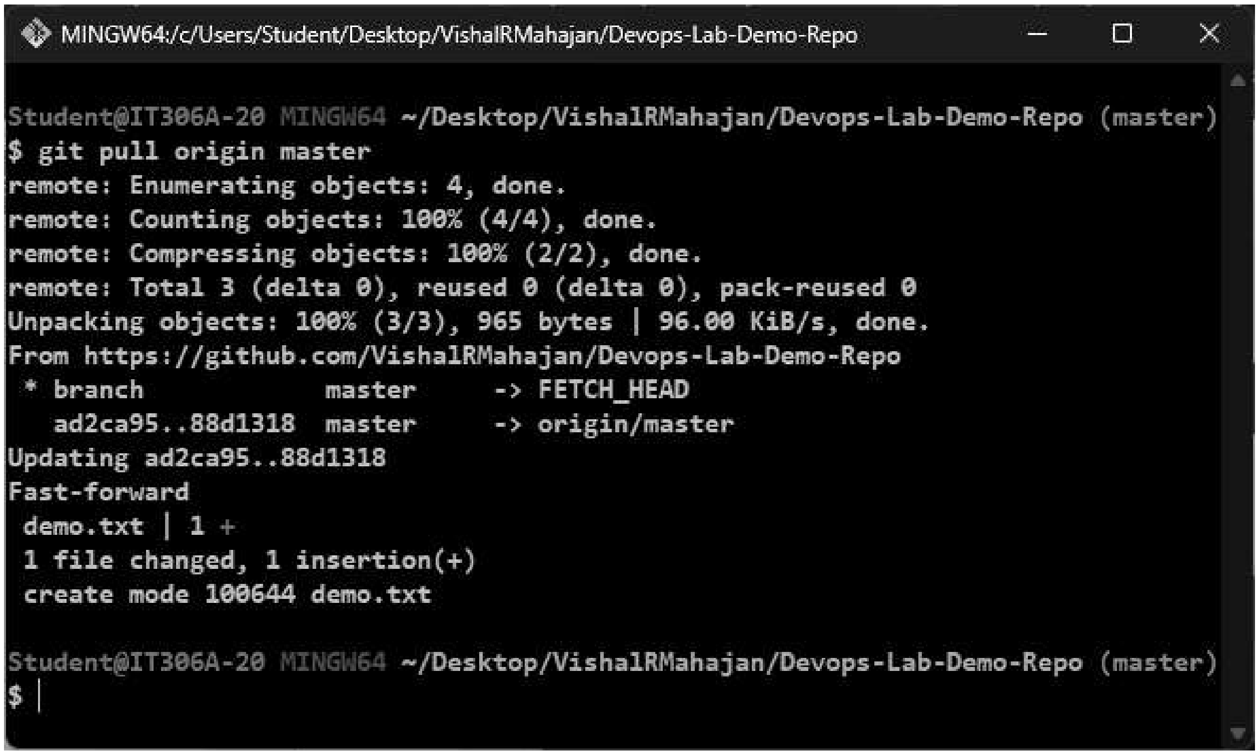

Devops-Lab-Demo-Repo/ at m
github.com/VishalRMahajan/Devops-Lab-Demo-Repo/tree/master
Guest (2)
VishalRMahajan / Devops-Lab-Demo-Repo
Type / to search
Code
Issues
Pull requests
Actions
Projects
Wiki
Security
Insights
Settings
master
Devops-Lab-Demo-Repo /
Go to file
Add file
VishalRMahajan Create demo.txt
88d1318 · now
History
This branch is 1 commit ahead of main .
Contribute

| Name | Last commit message | Last commit date |
|---|---|---|
| README.md | Initial commit | 54 minutes ago |
| demo.txt | Create demo.txt | now |

README.md

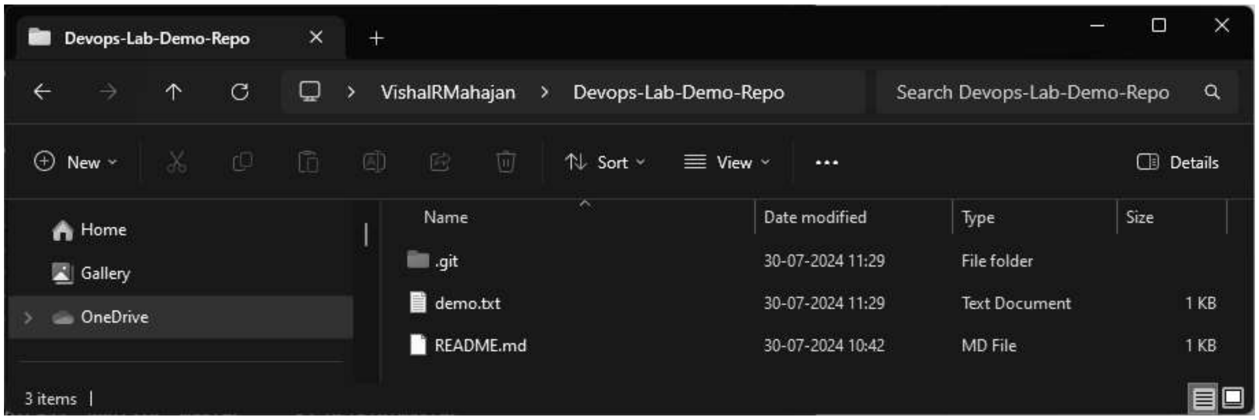
Devops-Lab-Demo-Repo

*Demo.txt get successfully created*


MINGW64:/c/Users/Student/Desktop/VishalRMahajan/Devops-Lab-Demo-Repo

```
Student@IT306A-20 MINGW64 ~/Desktop/VishalRMahajan/Devops-Lab-Demo-Repo (master)
$ git pull origin master
remote: Enumerating objects: 4, done.
remote: Counting objects: 100% (4/4), done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (3/3), 965 bytes | 96.00 KiB/s, done.
From https://github.com/VishalRMahajan/Devops-Lab-Demo-Repo
 * branch            master     -> FETCH_HEAD
   ad2ca95..88d1318  master     -> origin/master
Updating ad2ca95..88d1318
Fast-forward
 demo.txt | 1 +
 1 file changed, 1 insertion(+)
 create mode 100644 demo.txt

Student@IT306A-20 MINGW64 ~/Desktop/VishalRMahajan/Devops-Lab-Demo-Repo (master)
$ |
```

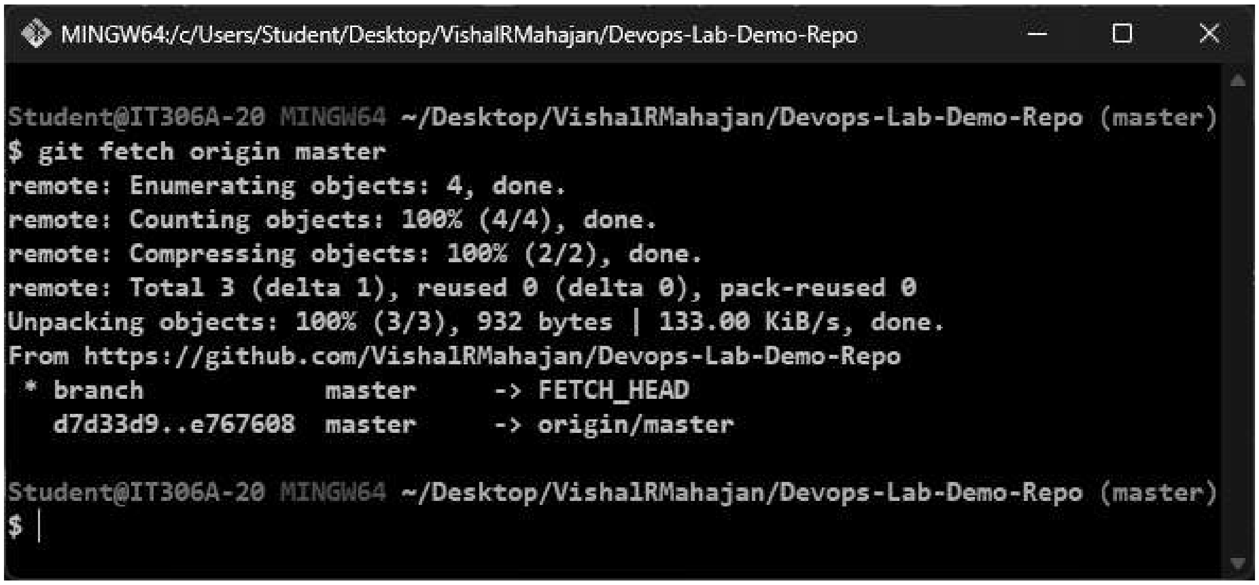
*Pull the content from master branch locally*


Devops-Lab-Demo-Repo
VishalRMahajan > Devops-Lab-Demo-Repo
Search Devops-Lab-Demo-Repo
New
Sort
View
Details
Home
Gallery
OneDrive
3 items

| Name | Date modified | Type | Size |
|---|---|---|---|
| .git | 30-07-2024 11:29 | File folder | |
| demo.txt | 30-07-2024 11:29 | Text Document | 1 KB |
| README.md | 30-07-2024 10:42 | MD File | 1 KB |

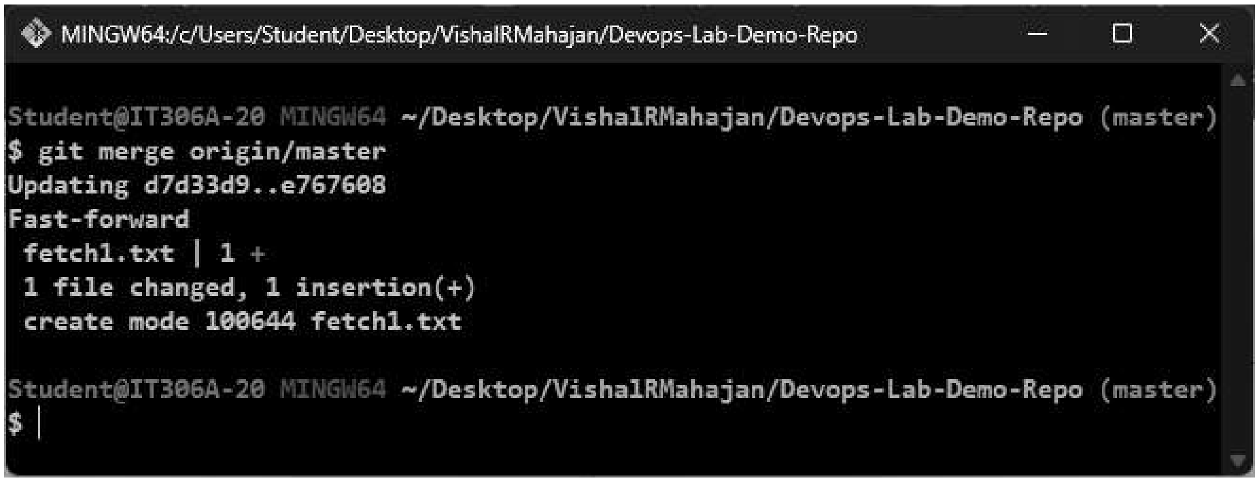
*Demo.txt gets pull*

## 3.6. Git fetch origin master


MINGW64:/c/Users/Student/Desktop/VishalRMahajan/Devops-Lab-Demo-Repo

```
Student@IT306A-20 MINGW64 ~/Desktop/VishalRMahajan/Devops-Lab-Demo-Repo (master)
$ git fetch origin master
remote: Enumerating objects: 4, done.
remote: Counting objects: 100% (4/4), done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 3 (delta 1), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (3/3), 932 bytes | 133.00 KiB/s, done.
From https://github.com/VishalRMahajan/Devops-Lab-Demo-Repo
 * branch            master     -> FETCH_HEAD
   d7d33d9..e767608  master     -> origin/master

Student@IT306A-20 MINGW64 ~/Desktop/VishalRMahajan/Devops-Lab-Demo-Repo (master)
$
```

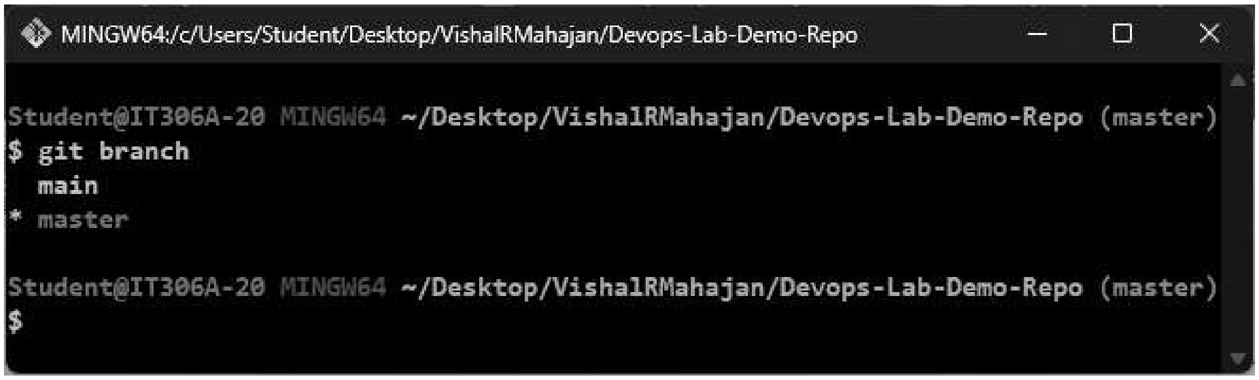
## 3.7. Git merge origin/master


MINGW64:/c/Users/Student/Desktop/VishalRMahajan/Devops-Lab-Demo-Repo

```
Student@IT306A-20 MINGW64 ~/Desktop/VishalRMahajan/Devops-Lab-Demo-Repo (master)
$ git merge origin/master
Updating d7d33d9..e767608
Fast-forward
 fetch1.txt | 1 +
 1 file changed, 1 insertion(+)
 create mode 100644 fetch1.txt

Student@IT306A-20 MINGW64 ~/Desktop/VishalRMahajan/Devops-Lab-Demo-Repo (master)
$
```

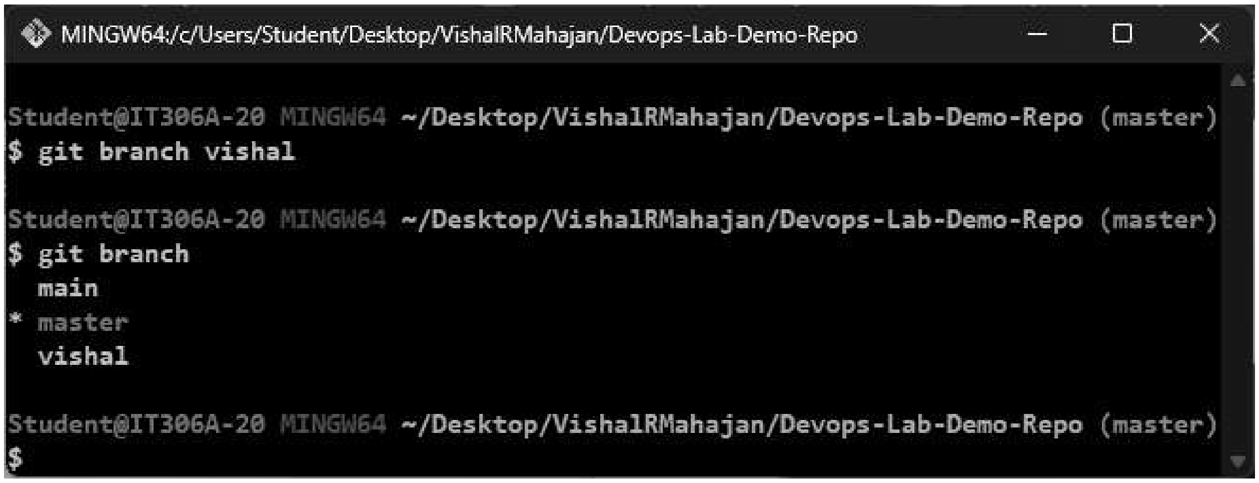
## 4. Git Cheat sheet commands:

### 4.1 git branch



MINGW64:/c/Users/Student/Desktop/VishalRMahajan/Devops-Lab-Demo-Repo

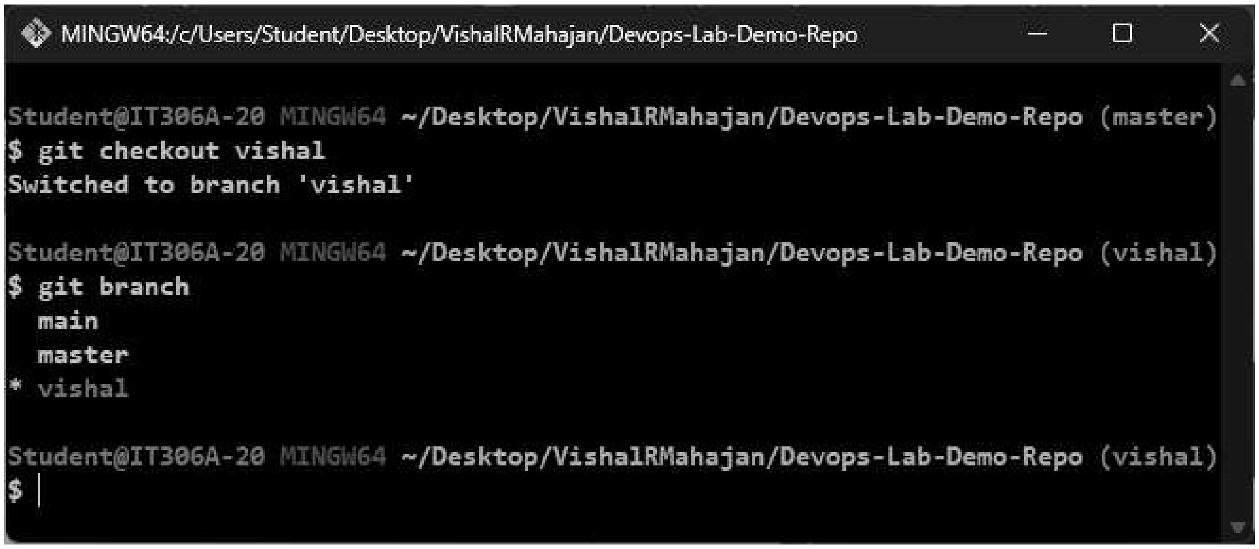
```
Student@IT306A-20 MINGW64 ~/Desktop/VishalRMahajan/Devops-Lab-Demo-Repo (master)
$ git branch
  main
* master

Student@IT306A-20 MINGW64 ~/Desktop/VishalRMahajan/Devops-Lab-Demo-Repo (master)
$
```



MINGW64:/c/Users/Student/Desktop/VishalRMahajan/Devops-Lab-Demo-Repo

```
Student@IT306A-20 MINGW64 ~/Desktop/VishalRMahajan/Devops-Lab-Demo-Repo (master)
$ git branch vishal

Student@IT306A-20 MINGW64 ~/Desktop/VishalRMahajan/Devops-Lab-Demo-Repo (master)
$ git branch
  main
* master
  vishal

Student@IT306A-20 MINGW64 ~/Desktop/VishalRMahajan/Devops-Lab-Demo-Repo (master)
$
```

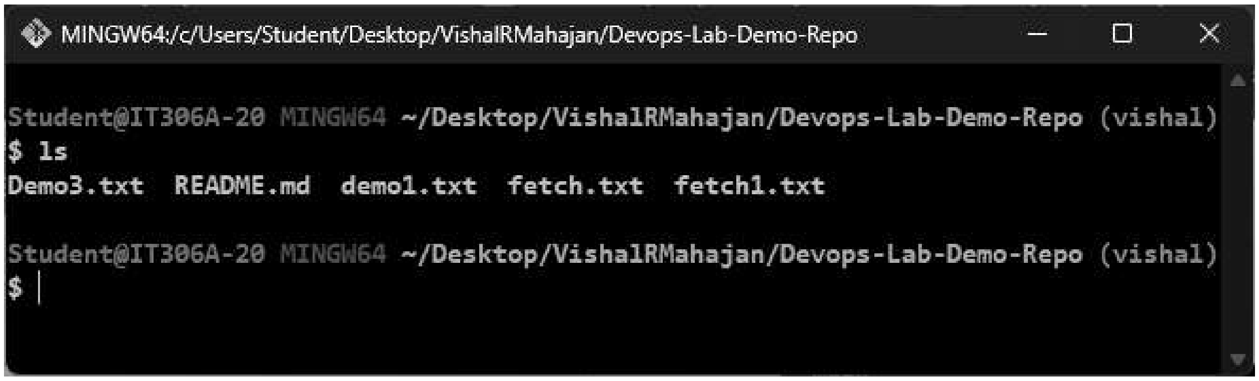
### 4.2 git checkout



MINGW64:/c/Users/Student/Desktop/VishalRMahajan/Devops-Lab-Demo-Repo

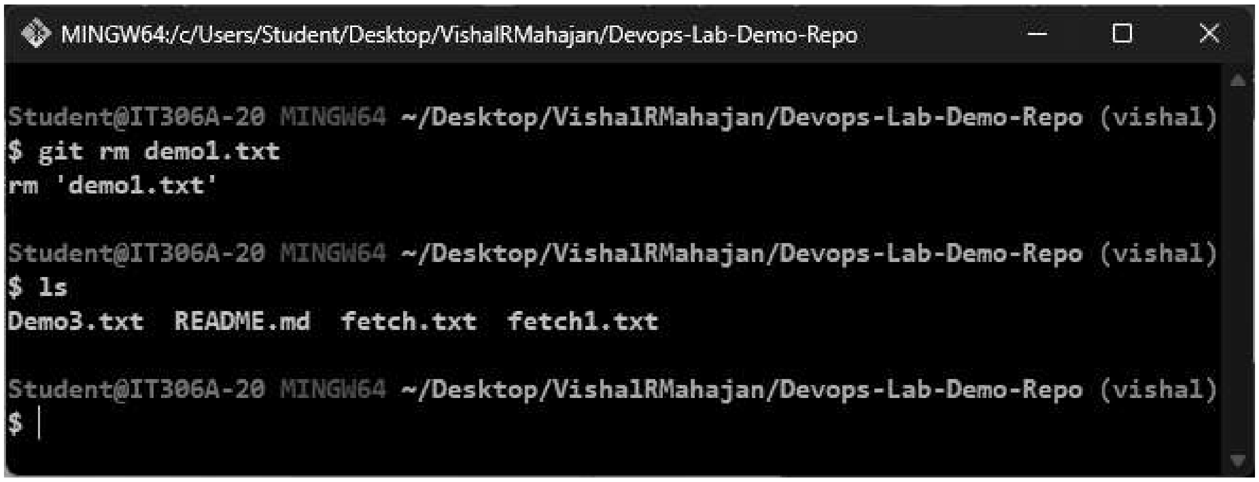
```
Student@IT306A-20 MINGW64 ~/Desktop/VishalRMahajan/Devops-Lab-Demo-Repo (master)
$ git checkout vishal
Switched to branch 'vishal'

Student@IT306A-20 MINGW64 ~/Desktop/VishalRMahajan/Devops-Lab-Demo-Repo (vishal)
$ git branch
  main
  master
* vishal

Student@IT306A-20 MINGW64 ~/Desktop/VishalRMahajan/Devops-Lab-Demo-Repo (vishal)
$
```

## 4.3 git rm filename



MINGW64:/c/Users/Student/Desktop/VishalRMahajan/Devops-Lab-Demo-Repo

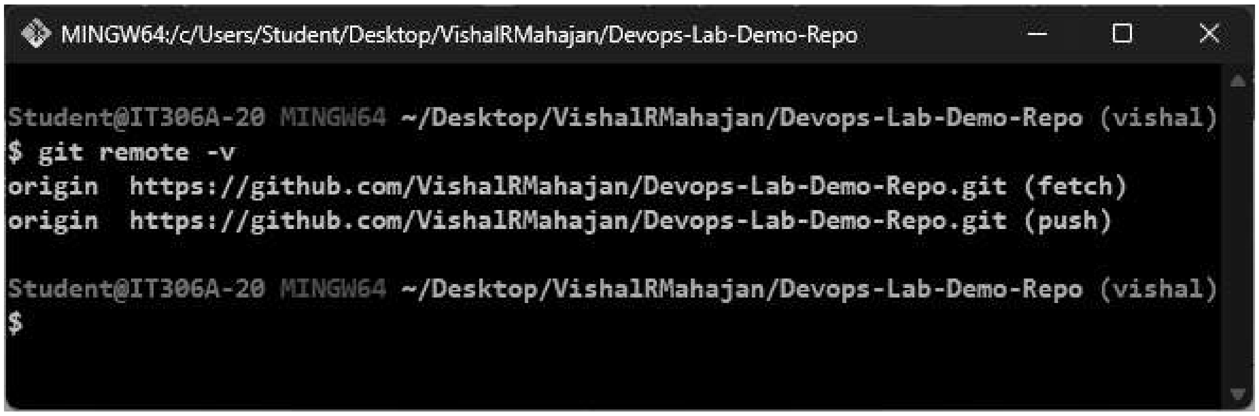
```
Student@IT306A-20 MINGW64 ~/Desktop/VishalRMahajan/Devops-Lab-Demo-Repo (vishal)
$ ls
Demo3.txt  README.md  demo1.txt  fetch.txt  fetch1.txt

Student@IT306A-20 MINGW64 ~/Desktop/VishalRMahajan/Devops-Lab-Demo-Repo (vishal)
$ |
```



MINGW64:/c/Users/Student/Desktop/VishalRMahajan/Devops-Lab-Demo-Repo

```
Student@IT306A-20 MINGW64 ~/Desktop/VishalRMahajan/Devops-Lab-Demo-Repo (vishal)
$ git rm demo1.txt
rm 'demo1.txt'

Student@IT306A-20 MINGW64 ~/Desktop/VishalRMahajan/Devops-Lab-Demo-Repo (vishal)
$ ls
Demo3.txt  README.md  fetch.txt  fetch1.txt

Student@IT306A-20 MINGW64 ~/Desktop/VishalRMahajan/Devops-Lab-Demo-Repo (vishal)
$ |
```

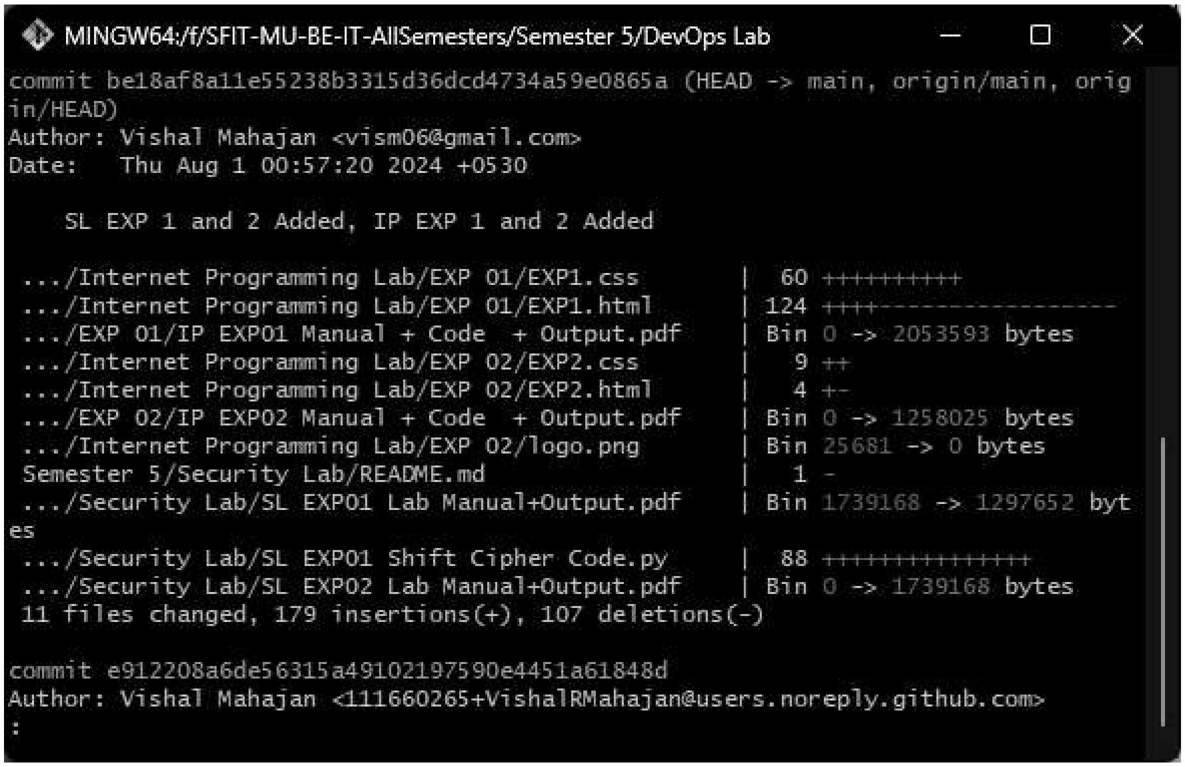
## 4.4 git remote -v



MINGW64:/c/Users/Student/Desktop/VishalRMahajan/Devops-Lab-Demo-Repo

```
Student@IT306A-20 MINGW64 ~/Desktop/VishalRMahajan/Devops-Lab-Demo-Repo (vishal)
$ git remote -v
origin  https://github.com/VishalRMahajan/Devops-Lab-Demo-Repo.git (fetch)
origin  https://github.com/VishalRMahajan/Devops-Lab-Demo-Repo.git (push)

Student@IT306A-20 MINGW64 ~/Desktop/VishalRMahajan/Devops-Lab-Demo-Repo (vishal)
$
```

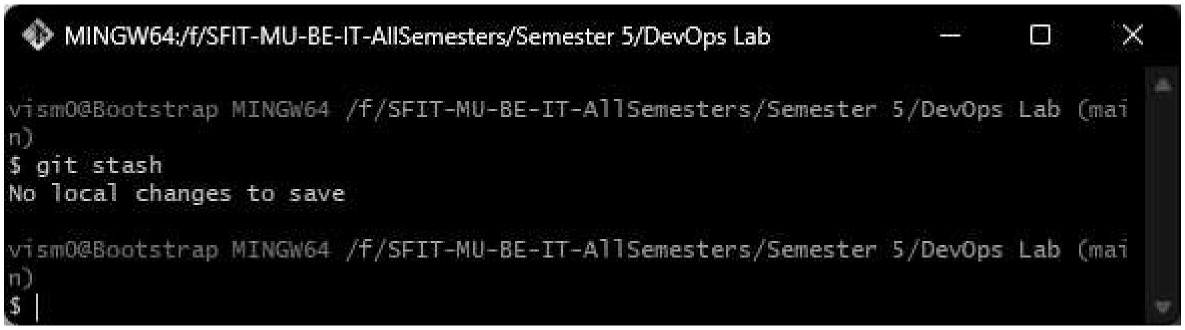
## 4.5. git log --stat -M



MINGW64:/f/SFIT-MU-BE-IT-AllSemesters/Semester 5/DevOps Lab

```
commit be18af8a11e55238b3315d36dcd4734a59e0865a (HEAD -> main, origin/main, orig
in/HEAD)
Author: Vishal Mahajan <vism06@gmail.com>
Date:   Thu Aug 1 00:57:20 2024 +0530

    SL EXP 1 and 2 Added, IP EXP 1 and 2 Added

 .../Internet Programming Lab/EXP 01/EXP1.css       |  60 ++++++++++
 .../Internet Programming Lab/EXP 01/EXP1.html      | 124 ++++-----------------
 .../EXP 01/IP EXP01 Manual + Code  + Output.pdf    | Bin 0 -> 2053593 bytes
 .../Internet Programming Lab/EXP 02/EXP2.css       |   9 ++
 .../Internet Programming Lab/EXP 02/EXP2.html      |   4 +-
 .../EXP 02/IP EXP02 Manual + Code  + Output.pdf    | Bin 0 -> 1258025 bytes
 .../Internet Programming Lab/EXP 02/logo.png       | Bin 25681 -> 0 bytes
 Semester 5/Security Lab/README.md                  |   1 -
 .../Security Lab/SL EXP01 Lab Manual+Output.pdf    | Bin 1739168 -> 1297652 byt
es
 .../Security Lab/SL EXP01 Shift Cipher Code.py     |  88 +++++++++++++++
 .../Security Lab/SL EXP02 Lab Manual+Output.pdf    | Bin 0 -> 1739168 bytes
 11 files changed, 179 insertions(+), 107 deletions(-)

commit e912208a6de56315a49102197590e4451a61848d
Author: Vishal Mahajan <111660265+VishalRMahajan@users.noreply.github.com>
:
```

## 4.6. Git stash



MINGW64:/f/SFIT-MU-BE-IT-AllSemesters/Semester 5/DevOps Lab

```
vism0@Bootstrap MINGW64 /f/SFIT-MU-BE-IT-AllSemesters/Semester 5/DevOps Lab (mai
n)
$ git stash
No local changes to save

vism0@Bootstrap MINGW64 /f/SFIT-MU-BE-IT-AllSemesters/Semester 5/DevOps Lab (mai
n)
$ |
```