

Assignment: Git Hands-on Practice

Task 1: Configure Git

1. Set your username and email in Git.
2. Verify the configuration.

```
Rohit Taksande@LAPTOP-GKO9CEV2 MINGW64 ~  
$ git config --global user.name "rohitT"  
  
Rohit Taksande@LAPTOP-GKO9CEV2 MINGW64 ~  
$ git config --global user.email "rohitT@gmail.com"  
  
Rohit Taksande@LAPTOP-GKO9CEV2 MINGW64 ~  
$ git config list  
diff.astextplain.textconv=astextplain  
filter.lfs.clean=git-lfs clean -- %f  
filter.lfs.smudge=git-lfs smudge -- %f  
filter.lfs.process=git-lfs filter-process  
filter.lfs.required=true  
http.sslbackend=schannel  
core.autocrlf=true  
core.fscache=true  
core.symlinks=true  
pull.rebase=false  
credential.helper=manager  
credential.https://dev.azure.com.usehttppath=true  
init.defaultbranch=master  
filter.lfs.clean=git-lfs clean -- %f  
filter.lfs.smudge=git-lfs smudge -- %f  
filter.lfs.process=git-lfs filter-process  
filter.lfs.required=true  
user.name=rohitT  
user.email=rohitT@gmail.com
```

Task 2: Initialize a Local Repository

1. Create a new folder named git-hands-on.
2. Initialize it as a Git repository.
3. Check the repository status.

```
Rohit Taksande@LAPTOP-GK09CEV2 MINGW64 ~/Desktop/git-hands-on
$ git init
Initialized empty Git repository in C:/Users/Rohit Taksande/Desktop/git-hands-on/.git/
```

```
Rohit Taksande@LAPTOP-GK09CEV2 MINGW64 ~/Desktop/git-hands-on (main)
$ git status
On branch main

No commits yet

nothing to commit (create/copy files and use "git add" to track)
```

Task 3: Create and Track Files

1. Create a file named documentation.txt.
2. Add a short project description inside it.
3. Check file status.
4. Stage the file.
5. Commit the changes with an appropriate message.

```
Rohit Taksande@LAPTOP-GK09CEV2 MINGW64 ~/Desktop/git-hands-on (main)
$ git status
On branch main

No commits yet

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

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

Rohit Taksande@LAPTOP-GK09CEV2 MINGW64 ~/Desktop/git-hands-on (main)
$ git add documentation.txt

Rohit Taksande@LAPTOP-GK09CEV2 MINGW64 ~/Desktop/git-hands-on (main)
$ git status
On branch main

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
    new file:   documentation.txt

Rohit Taksande@LAPTOP-GK09CEV2 MINGW64 ~/Desktop/git-hands-on (main)
$ git commit -m "Documetation_Committed"
[main (root-commit) e8933cb] Documetation_Committed
1 file changed, 7 insertions(+)
create mode 100644 documentation.txt
```

Task 4: Modify and Commit Changes

1. Edit documentation.txt and add one more line.

```
Rohit Taksande@LAPTOP-GK09CEV2 MINGW64 ~/Desktop/git-hands-on (main)
$ git status
On branch main
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
        modified:   documentation.txt

no changes added to commit (use "git add" and/or "git commit -a")
```

2. View the differences between working directory and staging area.

```
Rohit Taksande@LAPTOP-GK09CEV2 MINGW64 ~/Desktop/git-hands-on (main)
$ git diff --staged
Rohit Taksande@LAPTOP-GK09CEV2 MINGW64 ~/Desktop/git-hands-on (main)
$ git add documentation.txt
Rohit Taksande@LAPTOP-GK09CEV2 MINGW64 ~/Desktop/git-hands-on (main)
$ git diff --staged
diff --git a/documentation.txt b/documentation.txt
index bb7c21a..518f6e8 100644
--- a/documentation.txt
+++ b/documentation.txt
@@ -4,4 +4,8 @@ Developed a web-based platform to register and track user grievances efficiently

2. Smart Library Management System

-Built a system to manage books, members, and borrowing operations. Features include book search, issue/return tracking, fines
 calculation, and admin dashboard. Optimized database queries and automated notifications for due dates to enhance usability.
\ No newline at end of file
+Built a system to manage books, members, and borrowing operations. Features include book search, issue/return tracking, fines
 calculation, and admin dashboard. Optimized database queries and automated notifications for due dates to enhance usability.
+
+3. Sales Data Analytics Dashboard
+
+Created an interactive analytics dashboard to visualize sales trends and business insights. Processed large datasets, impleme
nted filtering, sorting, and KPI metrics. Helped in data-driven decision making through charts, reports, and trend forecasting
\ No newline at end of file
```

3. Stage and commit the changes.

```
Rohit Taksande@LAPTOP-GK09CEV2 MINGW64 ~/Desktop/git-hands-on (main)
$ git commit -m "New_commit"
[main a214917] New_commit
1 file changed, 5 insertions(+), 1 deletion(-)
```

Task 5: View Commit History

1. View the complete commit history

```
Rohit Taksande@LAPTOP-GK09CEV2 MINGW64 ~/Desktop/git-hands-on (main)
$ git log
commit a2149171b22ba7152c4d8dc1aebcd80f45709b04 (HEAD -> main)
Author: rohitT <rohitT@gmail.com>
Date:   Sun Dec 28 23:50:53 2025 +0530

    New_commit

commit e8933cb4bea70a2b1bb9812caf3efdbd7d7b6d98
Author: rohitT <rohitT@gmail.com>
Date:   Sun Dec 28 23:45:45 2025 +0530

    Documetation_Committed
```

2. View commit history in one-line format.

```
Rohit Taksande@LAPTOP-GK09CEV2 MINGW64 ~/Desktop/git-hands-on (main)
$ git log --pretty=oneline
a2149171b22ba7152c4d8dc1aebcd80f45709b04 (HEAD -> main) New_commit
e8933cb4bea70a2b1bb9812caf3efdbd7d7b6d98 Documentation_Committed
```

Task 6: Create and Work with Branches

1. Create a new branch named feature-1.
2. Switch to the new branch.

```
Rohit Taksande@LAPTOP-GK09CEV2 MINGW64 ~/Desktop/git-hands-on (main)
$ git branch feature-1

Rohit Taksande@LAPTOP-GK09CEV2 MINGW64 ~/Desktop/git-hands-on (main)
$ git branch
feature-1
* main

Rohit Taksande@LAPTOP-GK09CEV2 MINGW64 ~/Desktop/git-hands-on (main)
$ git checkout feature-1
Switched to branch 'feature-1'
```

3. Create a new file feature.txt.

Name	Date modified	Type	Size
.git	28-12-2025 23:53	File folder	
documentation.txt	28-12-2025 23:48	Text Document	1 KB
feature.txt	28-12-2025 23:54	Text Document	0 KB

4. Commit the changes.

```
Rohit Taksande@LAPTOP-GK09CEV2 MINGW64 ~/Desktop/git-hands-on (feature-1)
$ git add feature.txt

Rohit Taksande@LAPTOP-GK09CEV2 MINGW64 ~/Desktop/git-hands-on (feature-1)
$ git commit -m "feature.txt_commit"
[feature-1 965ff61] feature.txt_commit
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 feature.txt

Rohit Taksande@LAPTOP-GK09CEV2 MINGW64 ~/Desktop/git-hands-on (feature-1)
$ git status
On branch feature-1
nothing to commit, working tree clean
```

5. Switch back to the main branch.

```
Rohit Taksande@LAPTOP-GK09CEV2 MINGW64 ~/Desktop/git-hands-on (feature-1)
$ git checkout main
Switched to branch 'main'
```

Task 7: Merge Branches

1. Merge feature-1 branch into main.

```
Rohit Taksande@LAPTOP-GKO9CEV2 MINGW64 ~/Desktop/git-hands-on (main)
$ git merge feature-1
Updating a214917..965ff61
Fast-forward
 feature.txt | 0
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 feature.txt
```

2. Verify the merge using commit history.

```
Rohit Taksande@LAPTOP-GKO9CEV2 MINGW64 ~/Desktop/git-hands-on (main)
$ git log feature-1
commit 965ff61121af3ff8c48e0b7718de2c844ca05cc6 (HEAD -> main, feature-1)
Author: rohitT <rohitT@gmail.com>
Date: Sun Dec 28 23:55:09 2025 +0530

    feature.txt_commit

commit a2149171b22ba7152c4d8dc1aebcd80f45709b04
Author: rohitT <rohitT@gmail.com>
Date: Sun Dec 28 23:50:53 2025 +0530

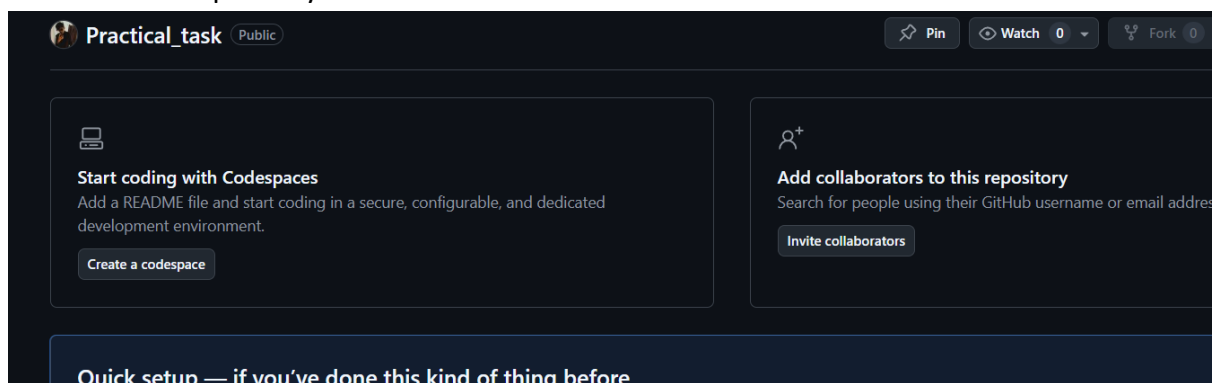
    New_commit

commit e8933cb4bea70a2b1bb9812caf3efdbd7d7b6d98
Author: rohitT <rohitT@gmail.com>
Date: Sun Dec 28 23:45:45 2025 +0530

    Documetation_Committed
```

Task 8: Connect to a Remote Repository

1. Create a new repository on GitHub.



2. Add the remote repository URL to your local repo.

```
Rohit Taksande@LAPTOP-GKO9CEV2 MINGW64 ~/Desktop/git-hands-on (main)
$ git remote add origin https://github.com/Rohit2612-dev/Practical_task.git
```

3. Verify the remote connection.

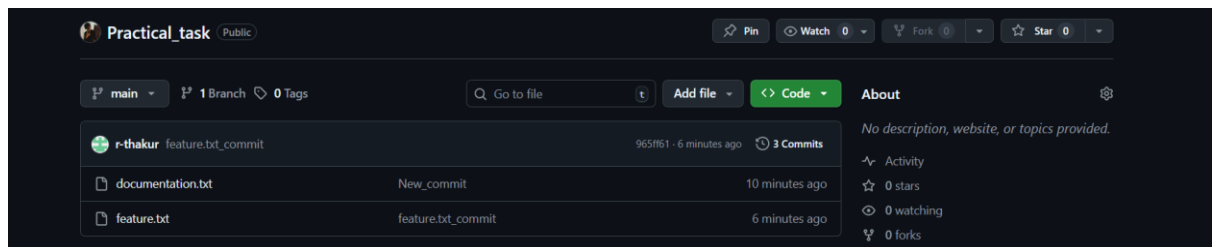
```
Rohit Taksande@LAPTOP-GK09CEV2 MINGW64 ~/Desktop/git-hands-on (main)
$ git remote -v
origin https://github.com/Rohit2612-dev/Practical_task.git (fetch)
origin https://github.com/Rohit2612-dev/Practical_task.git (push)
```

Task 9: Push Code to GitHub

1. Push the main branch to GitHub.

```
Rohit Taksande@LAPTOP-GK09CEV2 MINGW64 ~/Desktop/git-hands-on (main)
$ git push -u origin main
Enumerating objects: 9, done.
Counting objects: 100% (9/9), done.
Delta compression using up to 12 threads
Compressing objects: 100% (6/6), done.
Writing objects: 100% (9/9), 1.16 KiB | 397.00 KiB/s, done.
Total 9 (delta 1), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (1/1), done.
To https://github.com/Rohit2612-dev/Practical_task.git
* [new branch]      main -> main
branch 'main' set up to track 'origin/main'.
```

2. Verify files on GitHub.



Task 10: Clone a Repository

1. Clone the same GitHub repository into a different folder.

```
Rohit Taksande@LAPTOP-GK09CEV2 MINGW64 ~/Desktop/git-hands-on (main)
$ git clone https://github.com/Rohit2612-dev/Practical_task.git
New_folder
Cloning into 'Practical_task'...
remote: Enumerating objects: 9, done.
remote: Counting objects: 100% (9/9), done.
remote: Compressing objects: 100% (5/5), done.
remote: Total 9 (delta 1), reused 9 (delta 1), pack-reused 0 (from 0)
Receiving objects: 100% (9/9), done.
Resolving deltas: 100% (1/1), done.
bash: New_folder: command not found
```

2. Verify the cloned content.

Name	Date modified	Type	Size
.git	29-12-2025 00:01	File folder	
Practical_task	29-12-2025 00:03	File folder	

Task 11: Undo Changes

1. Make a change in documentation.txt but do not commit.

```
Rohit Taksande@LAPTOP-GK09CEV2 MINGW64 ~/Desktop/git-hands-on (main)
$ git add documentation.txt
Rohit Taksande@LAPTOP-GK09CEV2 MINGW64 ~/Desktop/git-hands-on (main)
$ git diff --staged
diff --git a/documentation.txt b/documentation.txt
index 518f6a8..9286f5c 100644
--- a/documentation.txt
+++ b/documentation.txt
@@ -8,4 +8,6 @@ Built a system to manage books, members, and borrowing operations. Features incl
3. Sales Data Analytics Dashboard
- Created an interactive analytics dashboard to visualize sales trends and business insights. Processed large datasets, implemented filtering, sorting, and KPI metrics. Helped in data-driven decision making through charts, reports, and trend forecasting.
\ No newline at end of file
+ Created an interactive analytics dashboard to visualize sales trends and business insights. Processed large datasets, implemented filtering, sorting, and KPI metrics. Helped in data-driven decision making through charts, reports, and trend forecasting.
+ Processed large datasets, implemented filtering, sorting, and KPI metrics. Helped in data-driven decision making through charts, reports, and trend forecasting.
\ No newline at end of file
```

2. Discard the changes.

```
Rohit Taksande@LAPTOP-GK09CEV2 MINGW64 ~/Desktop/git-hands-on (main)
$ git restore --staged documentation.txt
Rohit Taksande@LAPTOP-GK09CEV2 MINGW64 ~/Desktop/git-hands-on (main)
$ git diff --staged
```

3. Verify the file status.

```

Rohit Taksande@LAPTOP-GK09CEV2 MINGW64 ~/Desktop/git-hands-on (main)
$ git status
On branch main
Your branch is up to date with 'origin/main'.

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

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

no changes added to commit (use "git add" and/or "git commit -a")

```

Task 12: Remove Files

1. Delete feature.txt using Git.

```

Rohit Taksande@LAPTOP-GK09CEV2 MINGW64 ~/Desktop/git-hands-on (main)
$ git rm feature.txt
rm 'feature.txt'

```

2. Commit the deletion.

```

Rohit Taksande@LAPTOP-GK09CEV2 MINGW64 ~/Desktop/git-hands-on (main)
$ git commit -m "deleted_feature_file"
[main 04a2d82] deleted_feature_file
1 file changed, 0 insertions(+), 0 deletions(-)
delete mode 100644 feature.txt

Rohit Taksande@LAPTOP-GK09CEV2 MINGW64 ~/Desktop/git-hands-on (main)
$ git log
commit 04a2d82073647a96ba3d6139daeec2780b9d8123 (HEAD -> main)
Author: rohitT <rohitT@gmail.com>
Date:   Mon Dec 29 00:08:24 2025 +0530

    deleted_feature_file

commit 965ff61121af3ff8c48e0b7718de2c844ca05cc6 (origin/main, feature-1)
Author: rohitT <rohitT@gmail.com>
Date:   Sun Dec 28 23:55:09 2025 +0530

    feature.txt_commit

commit a2149171b22ba7152c4d8dc1aebcd80f45709b04
Author: rohitT <rohitT@gmail.com>
Date:   Sun Dec 28 23:50:53 2025 +0530

    New_commit

commit e8933cb4bea70a2b1bb9812caf3efdbd7d7b6d98
Author: rohitT <rohitT@gmail.com>
Date:   Sun Dec 28 23:45:45 2025 +0530

    Documetation_Committed

```