

tp git

zineb el ansari

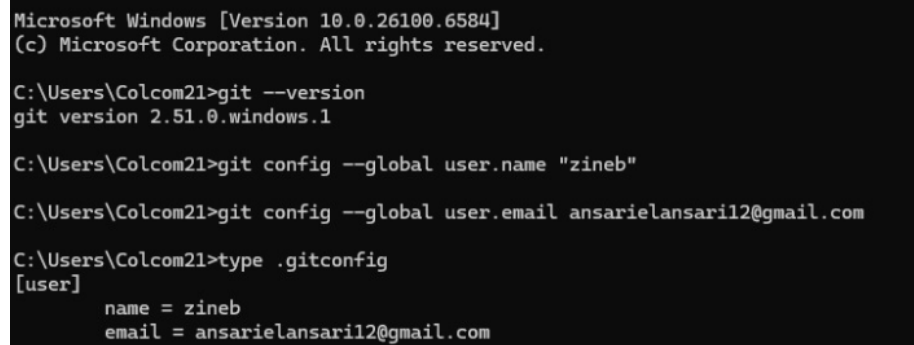
September 2025

1 Introduction

The objective of this lab is to familiarize you with Git, a widely used distributed version control system in software development. With Git, it is possible to track the history of changes, collaborate on the same project, and manage different versions of the source code.

During this lab, you will learn to use essential Git commands such as creating branches, committing, pushing, pulling, and handling conflicts. You will also discover how to configure a remote repository and synchronize your work with that of other team members.

By the end of this lab, you will be able to manage a versioned project efficiently, which is a key skill for any developer.



```
Microsoft Windows [Version 10.0.26100.6584]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Colcom21>git --version
git version 2.51.0.windows.1

C:\Users\Colcom21>git config --global user.name "zineb"

C:\Users\Colcom21>git config --global user.email ansarielansari12@gmail.com

C:\Users\Colcom21>type .gitconfig
[user]
    name = zineb
    email = ansarielansari12@gmail.com
```

Figure 1: This step ensures that all your commits are properly attributed to you by setting your name and email in Git

```

C:\Users\Colcom21>mkdir my_repo

C:\Users\Colcom21>cd my_repo

C:\Users\Colcom21\my_repo>git init
Initialized empty Git repository in C:/Users/Colcom21/my_repo/.git/

C:\Users\Colcom21\my_repo>mkdir tpgit

C:\Users\Colcom21\my_repo>cd tpgit

C:\Users\Colcom21\my_repo\tpgit>git init
Initialized empty Git repository in C:/Users/Colcom21/my_repo/tpgit/.git/

```

Figure 2: 2

```

C:\Users\Colcom21\my_repo\tpgit>ls -a
'ls' is not recognized as an internal or external command,
operable program or batch file.

C:\Users\Colcom21\my_repo\tpgit>ls -a
'ls' is not recognized as an internal or external command,
operable program or batch file.

C:\Users\Colcom21\my_repo\tpgit>touch fruits.txt
'touch' is not recognized as an internal or external command,
operable program or batch file.

C:\Users\Colcom21\my_repo\tpgit>echo apple >> fruits.txt

C:\Users\Colcom21\my_repo\tpgit>echo banana >> fruits.txt

C:\Users\Colcom21\my_repo\tpgit>git add fruits.txt

C:\Users\Colcom21\my_repo\tpgit>git commit -m "Added apple to fruit list"
[master (root-commit) 9cb3c13] Added apple to fruit list
1 file changed, 2 insertions(+)
create mode 100644 fruits.txt

C:\Users\Colcom21\my_repo\tpgit>git commit -m "Added banana to fruit list"
On branch master
nothing to commit, working tree clean

```

Figure 3: 3

```

C:\Users\Colcom21\my_repo\tpgit>git add fruits.txt

C:\Users\Colcom21\my_repo\tpgit>git commit -m "Added pear to fruit list"
[master c8157a9] Added pear to fruit list
1 file changed, 1 insertion(+)

C:\Users\Colcom21\my_repo\tpgit>echo tomato >> fruits.txt

C:\Users\Colcom21\my_repo\tpgit>git add fruits.txt

C:\Users\Colcom21\my_repo\tpgit>git commit -m "Added tomato to fruit list"
[master 8fe07b0] Added tomato to fruit list
1 file changed, 1 insertion(+)

C:\Users\Colcom21\my_repo\tpgit>echo coco >> fruits.txt

C:\Users\Colcom21\my_repo\tpgit>git add fruits.txt

C:\Users\Colcom21\my_repo\tpgit>git commit -m "Added coco to fruit list"
[master 4c39b6e] Added coco to fruit list
1 file changed, 1 insertion(+)

```

Figure 4: For fig 2 and 3 and 4 This step initializes a new Git repository named fruits. You will create a project folder under version control, enabling you to track changes, commit updates, and manage the project efficiently from the start.

```

C:\Users\Colcom21\my_repo\tpgit>echo eggplant >> vegetables.txt

C:\Users\Colcom21\my_repo\tpgit>git add vegetables.txt

C:\Users\Colcom21\my_repo\tpgit> git commit -m "Add eggplant to vegetables"
[vegetables 2428533] Add eggplant to vegetables
1 file changed, 1 insertion(+)
create mode 100644 vegetables.txt

C:\Users\Colcom21\my_repo\tpgit>echo potato >> vegetables.txt

C:\Users\Colcom21\my_repo\tpgit>git add vegetables.txt

C:\Users\Colcom21\my_repo\tpgit>git commit -m "Add potato to vegetables"
[vegetables a3e0ce1] Add potato to vegetables
1 file changed, 1 insertion(+)

C:\Users\Colcom21\my_repo\tpgit>echo carrot >> vegetables.txt

C:\Users\Colcom21\my_repo\tpgit>git add vegetables.txt

C:\Users\Colcom21\my_repo\tpgit>git commit -m "Add carrot to vegetables"
[vegetables 3504e68] Add carrot to vegetables
1 file changed, 1 insertion(+)

```

Figure 5: 5

```

C:\Users\Colcom21\my_repo\tpgit> git branch sauces

C:\Users\Colcom21\my_repo\tpgit> git checkout sauces
Switched to branch 'sauces'

C:\Users\Colcom21\my_repo\tpgit>
C:\Users\Colcom21\my_repo\tpgit>
C:\Users\Colcom21\my_repo\tpgit>echo ketchup >> sauces.txt

C:\Users\Colcom21\my_repo\tpgit>git add sauces.txt

C:\Users\Colcom21\my_repo\tpgit>git commit -m "Add ketchup to sauces"
[sauces a043fb5] Add ketchup to sauces
1 file changed, 1 insertion(+)
create mode 100644 sauces.txt

```

Figure 6: 6

```

C:\Users\Colcom21\my_repo\tpgit>echo mayo >> sauces.txt

C:\Users\Colcom21\my_repo\tpgit>

C:\Users\Colcom21\my_repo\tpgit>git add sauces.txt

C:\Users\Colcom21\my_repo\tpgit>git commit -m "Add mayo to sauces"
[sauces 20cc053] Add mayo to sauces
1 file changed, 1 insertion(+)

C:\Users\Colcom21\my_repo\tpgit>git branch
  master
* sauces
  vegetables

```

Figure 7: For Fig 5 and 6 and 7 This step demonstrates creating Git branches named sauces and vegetables. Branches allow you to work on different features or parts of the project independently, enabling parallel development and safe experimentation without affecting the main codebase.

```
C:\Users\Colcom21\my_repo\tpgit>git checkout vegetables
Switched to branch 'vegetables'

C:\Users\Colcom21\my_repo\tpgit>git diff master
diff --git a/vegetables.txt b/vegetables.txt
new file mode 100644
index 00000000..9383a77
--- /dev/null
+++ b/vegetables.txt
@@ -0,0 +1,3 @@
+eggplant
+potato
+carrot

C:\Users\Colcom21\my_repo\tpgit>git checkout master
Switched to branch 'master'

C:\Users\Colcom21\my_repo\tpgit>git diff master

C:\Users\Colcom21\my_repo\tpgit>git diff vegetables
diff --git a/vegetables.txt b/vegetables.txt
deleted file mode 100644
index 9383a77..0000000
--- a/vegetables.txt
+++ /dev/null
@@ -1,3 +0,0 @@
-eggplant
-potato
-carrot
```

Figure 8: 8

```
C:\Users\Colcom21\my_repo\tpgit>git log
commit 4c39b6e493fcd6cc0fe52bac2b89887187d05079 (HEAD -> master)
Author: zineb <ansarielansari12@gmail.com>
Date:   Wed Sep 24 11:34:54 2025 +0100

    Added coco to fruit list

commit 8fe07b0b7145e38473101349975f159ab65667e4
Author: zineb <ansarielansari12@gmail.com>
Date:   Wed Sep 24 11:33:27 2025 +0100

    Added tomato to fruit list

commit c8157a9961b53060d27225c021c302725aed63df
Author: zineb <ansarielansari12@gmail.com>
Date:   Wed Sep 24 11:32:21 2025 +0100

    Added pear to fruit list

commit 9cb3c135f6dfcbf1d7b081c2857e4ea626645356
Author: zineb <ansarielansari12@gmail.com>
Date:   Wed Sep 24 11:29:18 2025 +0100

    Added apple to fruit list

C:\Users\Colcom21\my_repo\tpgit>git checkout vegetables
Switched to branch 'vegetables'

C:\Users\Colcom21\my_repo\tpgit>git diff master
```

Figure 9: 9

```

Switched to branch 'vegetables'

C:\Users\Colcom21\my_repo\tpgit>git diff master
diff --git a/vegetables.txt b/vegetables.txt
new file mode 100644
index 0000000..9383a77
--- /dev/null
+++ b/vegetables.txt
@@ -0,0 +1,3 @@
+eggplant
+potato
+carrot

C:\Users\Colcom21\my_repo\tpgit>git merge master
Already up to date.

C:\Users\Colcom21\my_repo\tpgit>

C:\Users\Colcom21\my_repo\tpgit>git checkout master
Switched to branch 'master'

C:\Users\Colcom21\my_repo\tpgit>git diff vegetables
diff --git a/vegetables.txt b/vegetables.txt
deleted file mode 100644
index 9383a77..0000000
--- a/vegetables.txt
+++ /dev/null
@@ -1,3 +0,0 @@
-eggplant
-potato

```

Figure 10: 10

```

@@ -1,3 +0,0 @@
-eggplant
-potato
-carrot

C:\Users\Colcom21\my_repo\tpgit>git merge vegetables
Updating 4c39b6e..3504e68
Fast-forward
 vegetables.txt | 3 +++
 1 file changed, 3 insertions(+)
 create mode 100644 vegetables.txt

C:\Users\Colcom21\my_repo\tpgit>git checkout sauces
Switched to branch 'sauces'

C:\Users\Colcom21\my_repo\tpgit>git diff master
diff --git a/sauces.txt b/sauces.txt
new file mode 100644
index 0000000..9c1730c
--- /dev/null
+++ b/sauces.txt
@@ -0,0 +1,2 @@
+ketchup
+mayo

C:\Users\Colcom21\my_repo\tpgit>git merge master
Already up to date.

C:\Users\Colcom21\my_repo\tpgit>git checkout master
Switched to branch 'master'

```

Figure 11: 11


```

C:\Users\Colcom21\my_repo\tpgit>git checkout master
Switched to branch 'master'

C:\Users\Colcom21\my_repo\tpgit>git diff sauces
diff --git a/sauces.txt b/sauces.txt
deleted file mode 100644
index 9c1730c..0000000
--- a/sauces.txt
+++ /dev/null
@@ -1,2 +0,0 @@
-ketchup
-mayo

C:\Users\Colcom21\my_repo\tpgit>git merge sauces
Updating 3504e68..20cc053
Fast-forward
sauces.txt | 2 ++
1 file changed, 2 insertions(+)
create mode 100644 sauces.txt

C:\Users\Colcom21\my_repo\tpgit>git branch
* master
sauces
vegetables

C:\Users\Colcom21\my_repo\tpgit>git log --graph --oneline --decorate --all
* 20cc053 (HEAD -> master, sauces) Add mayo to sauces
* a043fb5 Add ketchup to sauces
* 3504e68 (vegetables) Add carrot to vegetables

```

Figure 12: For Fig 8,9,10 and 11 that show The step of merging the vegetables and sauces branches, combining changes from both while maintaining a consistent project history.

```

C:\Users\Colcom21\my_repo\tpgit>git remote add origin https://github.com/meftahaya630-bit/tpgit.git
C:\Users\Colcom21\my_repo\tpgit>git branch -M main

C:\Users\Colcom21\my_repo\tpgit>git push -u origin main
info: please complete authentication in your browser...
Enumerating objects: 27, done.
Counting objects: 100% (27/27), done.
Delta compression using up to 28 threads
Compressing objects: 100% (14/14), done.
Writing objects: 100% (27/27), 2.25 KiB | 768.00 KiB/s, done.
Total 27 (delta 1), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (1/1), done.
To https://github.com/meftahaya630-bit/tpgit.git
 * [new branch]      main -> main
branch 'main' set up to track 'origin/main'.

```

Figure 13: 13





| Name | Date modified | Type | Size |
|--|--------------------|---------------|------|
|  fruits | 9/24/2025 11:33 AM | Text Document | 1 KB |
|  sauces | 9/24/2025 12:03 PM | Text Document | 1 KB |
|  vegetables | 9/24/2025 12:00 PM | Text Document | 1 KB |

Figure 14: that show what i found in my gitHub

Collaborators and teams

 **Public repository**
This repository is public and visible to anyone

Manage visibility

Direct access

1 entity has access to this repository. [1 collaborator](#).


Manage access

Add people

☐ Select all

Type ▾

☐

 **razane316**
Collaborator




Figure 15: For Fig 12,13 and 14 This step demonstrates configuring a remote repository and adding a collaborator, Fatima Zahra. Connecting to a remote repository allows you to synchronize your work with others, while adding a collaborator enables team members to contribute to the project efficiently.

```
C:\Users\pc>git clone <https://github.com/razane316/tpgit-.git> tp-git-binome
La syntaxe du nom de fichier, de répertoire ou de volume est incorrecte.

C:\Users\pc>git clone https://github.com/razane316/tpgit-.git tp-git-binome
Cloning into 'tp-git-binome'...
remote: Enumerating objects: 21, done.
remote: Counting objects: 100% (21/21), done.
remote: Compressing objects: 100% (10/10), done.
remote: Total 21 (delta 1), reused 21 (delta 1), pack-reused 0 (from 0)
Receiving objects: 100% (21/21), done.
Resolving deltas: 100% (1/1), done.
```

Figure 16: 16

Repositories



meftahaya630-bit/tpgit



razane316/tpgit-

Figure 17: For Fig 16 and 17 This step demonstrates collaborative work by executing Git commands to pull updates and view the remote repository without making any changes.

```
C:\Users\pc\tp-git-binome>echo pepper >> spices.txt
C:\Users\pc\tp-git-binome>git add spices.txt
C:\Users\pc\tp-git-binome>git commit -m
error: switch `m' requires a value
C:\Users\pc\tp-git-binome>git commit -m "added pepper to spices"
[main af901ab] added pepper to spices
1 file changed, 1 insertion(+)
create mode 100644 spices.txt
C:\Users\pc\tp-git-binome>echo paprika >> spices.txt
C:\Users\pc\tp-git-binome>git add spices.txt
C:\Users\pc\tp-git-binome>git commit -m "added paprika to spices"
[main 1707683] added paprika to spices
1 file changed, 1 insertion(+)
```

Figure 18: 18

```

C:\Users\pc\tp-git-binome>git checkout spices
Already on 'spices'

C:\Users\pc\tp-git-binome>git diff main
diff --git a/spices.txt b/spices.txt
index be23e43..308cee6 100644
--- a/spices.txt
+++ b/spices.txt
@@ -1,2 +1,4 @@
 pepper
 paprika
+pepper
+paprika

C:\Users\pc\tp-git-binome>git merge main
Already up to date.

```

Figure 19: 19

```

C:\Users\pc\tp-git-binome>git pull
Already up to date.

C:\Users\pc\tp-git-binome>git push
Enumerating objects: 13, done.
Counting objects: 100% (13/13), done.
Delta compression using up to 8 threads
Compressing objects: 100% (8/8), done.
Writing objects: 100% (12/12), 1.04 KiB | 76.00 KiB/s, done.
Total 12 (delta 4), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (4/4), completed with 1 local object.
To https://github.com/razane316/tpgit-.git
 d7f51ac..955be0b main -> main

```

Figure 20: 20

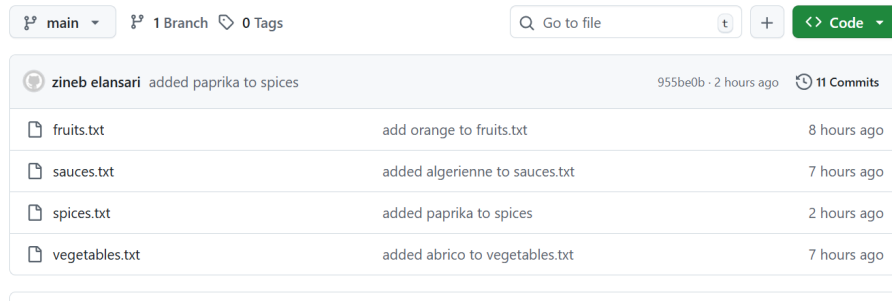


Figure 21: This step demonstrates a successful merge of the spices branch into Fatima Zahra's repository without conflicts. It shows how changes from one branch can be integrated smoothly into another, maintaining a consistent project history.

```
C:\Users\pc\tp-git-binome>echo berry >>fruits.txt
C:\Users\pc\tp-git-binome>git add fruits.txt
C:\Users\pc\tp-git-binome>git commit -m "added berry to fruits"
[main 9f6099d] added berry to fruits
 1 file changed, 1 insertion(+)
C:\Users\pc\tp-git-binome>git pull
Already up to date.
C:\Users\pc\tp-git-binome>git push
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 381 bytes | 63.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/razane316/tpgit-.git
 955be0b..9f6099d  main -> main
```

Figure 22: 22

```

C:\Users\pc\tp-git-binome>echo carrot >>vegetables.txt

C:\Users\pc\tp-git-binome>git add vegetabless.txt
fatal: pathspec 'vegetabless.txt' did not match any files

C:\Users\pc\tp-git-binome>git add vegetables.txt

C:\Users\pc\tp-git-binome>git commit -m "added carrot to vegetables"
[main 3550ccf] added carrot to vegetables
1 file changed, 1 insertion(+)

C:\Users\pc\tp-git-binome>git pull
Already up to date.

C:\Users\pc\tp-git-binome>git push
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 297 bytes | 42.00 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/razane316/tpgit-.git
9f6099d..3550ccf main -> main

```

Figure 23: for both figures 22 and 23 i did not have any conflit as it was mentioned in the document

```

1  # Project Introduction
2
3  This project was developed as a collaborative exercise to learn and practice Git and GitHub.
4  Our main goal was to understand how version control works in real development workflows-creating repositories, branching, merging, and documenting our work using Markdown.
5
6  By working directly with GitHub, we explored essential concepts such as pull requests, commit history, and collaborative editing.
7  This experience gave us hands-on knowledge of how professional teams manage code, track changes, and work together efficiently.
8
9  ## Authors
10 - Zineb Elansari
11 - Fatima Ezzahra Safar
12
13 ## Objectives
14 - Gain practical experience with Git commands and GitHub features
15 - Learn to collaborate on a shared codebase using branches and pull requests
16 - Understand how version control improves teamwork and project organization
17

```

Figure 24: 24

🔗 Project Introduction

This project was developed as a collaborative exercise to learn and practice Git and GitHub. Our main goal was to understand how version control works in real development workflows—creating repositories, branching, merging, and documenting our work using Markdown.

By working directly with GitHub, we explored essential concepts such as pull requests, commit history, and collaborative editing. This experience gave us hands-on knowledge of how professional teams manage code, track changes, and work together efficiently.

Authors

- Zineb Elansari
- Fatima Ezzahra Safar

Objectives

- Gain practical experience with Git commands and GitHub features
- Learn to collaborate on a shared codebase using branches and pull requests
- Understand how version control improves teamwork and project organization

Figure 25: For fig 24 and this one I documented my project using markdown