

## ACTIVITY PERTEMUAN 7

NAMA : MARSILLO DITO SAPUTRA

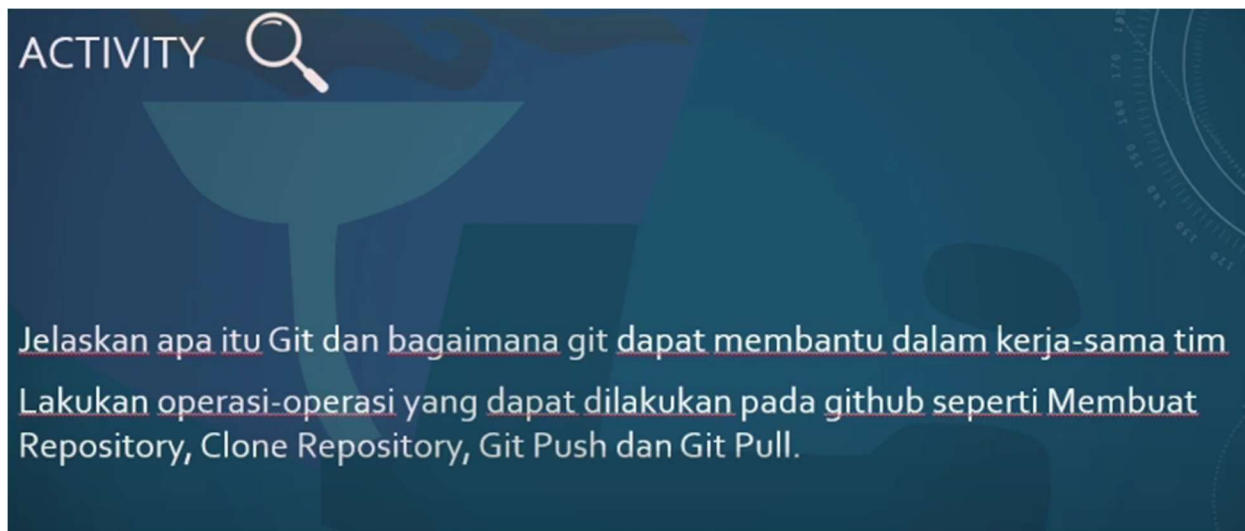
NPM : 50421786

KELAS : 4IA11

MATERI : Version Control System, GIT, dan GITHUB

MATA PRAKTIKUM : REKAYASA PERANGKAT LUNAK 2

(Screenshoot langkah-langkah sesuai video pembelajaran dan jelaskan dengan ringkas)



Git adalah sistem kontrol versi (Version Control System) yang digunakan untuk melacak perubahan dalam kode sumber atau file selama pengembangan. Git memungkinkan banyak pengembang bekerja secara bersamaan pada satu proyek tanpa saling menimpa pekerjaan satu sama lain.

### Beberapa fitur utama Git yang membantu kerja sama tim:

#### 1. Penyimpanan Versi (Version Control)

- Git mencatat semua perubahan pada proyek, memungkinkan anggota tim untuk kembali ke versi sebelumnya jika terjadi kesalahan atau konflik.
- Setiap perubahan disimpan sebagai *commit*, yang memberikan log sejarah perkembangan proyek.

#### 2. Kolaborasi dan Sinkronisasi

- Dengan Git, tim dapat bekerja pada salinan proyek lokal mereka (*local*

*repository*) sambil tetap menyinkronkan pekerjaan dengan tim melalui *remote repository* seperti GitHub, GitLab, atau Bitbucket.

- Git memungkinkan banyak pengembang bekerja pada berbagai bagian proyek secara paralel.

### 3. Pengelolaan Branch (Cabang)

- Branch memungkinkan tim membuat versi paralel dari proyek untuk fitur baru, perbaikan bug, atau eksperimen tanpa mengganggu cabang utama (*main branch*).
- Setelah selesai, branch dapat digabungkan kembali ke *main branch* menggunakan fitur *merge*.

### 4. Resolusi Konflik

- Git menyediakan alat untuk mengelola konflik ketika dua atau lebih anggota tim membuat perubahan pada bagian yang sama dari kode.

### 5. Kolaborasi Terpusat

- Menggunakan platform seperti GitHub, tim dapat berbagi kode, memberikan ulasan (*code review*), membuat permintaan perubahan (*pull request*), dan mendiskusikan pekerjaan dalam satu tempat.

### Contoh Penerapan Git dalam Tim:

#### 1. Inisialisasi Proyek:

- Seorang anggota tim membuat repositori Git dan mengunggah proyek awal ke platform seperti GitHub.

#### 2. Pengembangan Paralel:

- Setiap anggota tim membuat *branch* untuk mengerjakan fitur tertentu.

#### 3. Penggabungan Kode:

- Setelah selesai, kode diuji dan digabungkan ke *main branch* melalui proses *pull request*.

### Manfaat dalam Kerja Sama Tim:

- Transparansi: Semua perubahan dapat dilacak, sehingga mempermudah audit dan pemantauan.

- Fleksibilitas: Tim dapat bekerja secara paralel tanpa harus menunggu anggota lain menyelesaikan tugas mereka.
- Efisiensi: Mengurangi risiko kehilangan kode dan meningkatkan kecepatan pengembangan.

## MEMBUAT RESPOSITORY

```

MINGW64:/c/Users/Marsillo Dito S

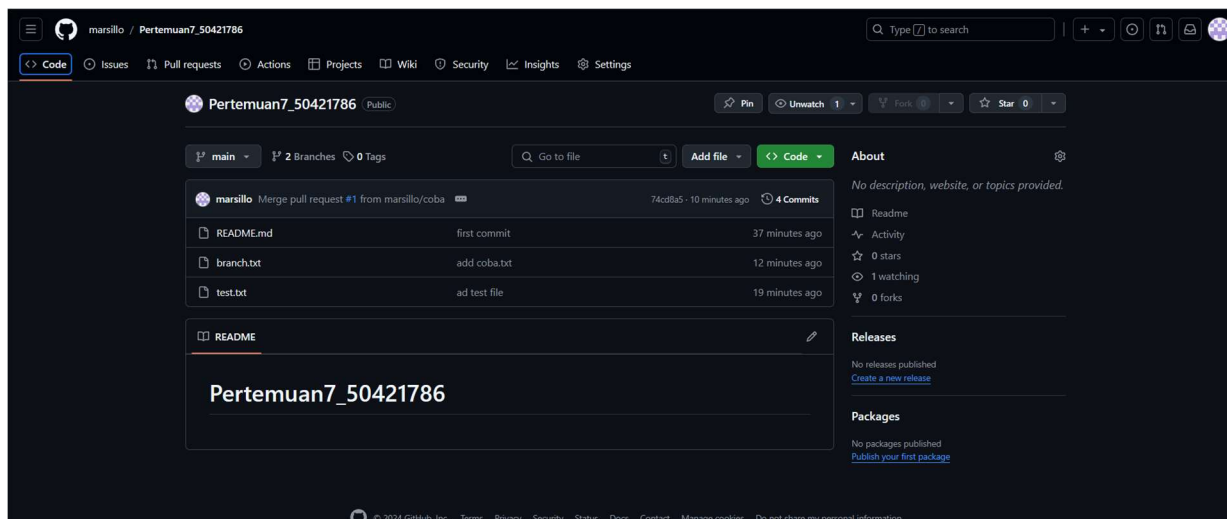
Marsillo Dito S@LAPTOP-E15KQEK3 MINGW64 ~
$ git config --global user.name marsillo

Marsillo Dito S@LAPTOP-E15KQEK3 MINGW64 ~
$ git config --global user.email marsilloditos@gmail.com

Marsillo Dito S@LAPTOP-E15KQEK3 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=openssl
http.sslcainfo=C:/Program Files/Git/mingw64/etc/ssl/certs/ca-bundle.crt
core.autocrlf=true
core.fscache=true
core.symlinks=false
pull.rebase=false
credential.helper=manager
credential.https://dev.azure.com.usehttppath=true
init.defaultbranch=master
user.name=marsillo
user.email=marsilloditos@gmail.com

Marsillo Dito S@LAPTOP-E15KQEK3 MINGW64 ~
$

```



```
MINGW64:/c:/Users/Marsillo Dito S/OneDrive/Documents/Semester 7/RPL 2 PRAKTIKUM/Pertemuan7_50421786
Marsillo Dito S@LAPTOP-E15KQEK3 MINGW64 ~/OneDrive/Documents/Semester 7/RPL 2 PRAKTIKUM/Pertemuan7_50421786
$ echo # Pertemuan7_50421786 >> README.md

Marsillo Dito S@LAPTOP-E15KQEK3 MINGW64 ~/OneDrive/Documents/Semester 7/RPL 2 PRAKTIKUM/Pertemuan7_50421786
$ echo "# Pertemuan7_50421786" >> README.md

Marsillo Dito S@LAPTOP-E15KQEK3 MINGW64 ~/OneDrive/Documents/Semester 7/RPL 2 PRAKTIKUM/Pertemuan7_50421786
$ git init
Initialized empty Git repository in C:/Users/Marsillo Dito S/OneDrive/Documents/Semester 7/RPL 2 PRAKTIKUM/Pertemuan7_50421786/.git/

Marsillo Dito S@LAPTOP-E15KQEK3 MINGW64 ~/OneDrive/Documents/Semester 7/RPL 2 PRAKTIKUM/Pertemuan7_50421786 (master)
$ git status
On branch master

No commits yet

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

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

Marsillo Dito S@LAPTOP-E15KQEK3 MINGW64 ~/OneDrive/Documents/Semester 7/RPL 2 PRAKTIKUM/Pertemuan7_50421786 (master)
$ git add README.md
warning: in the working copy of 'README.md', LF will be replaced by CRLF the next time Git touches it

Marsillo Dito S@LAPTOP-E15KQEK3 MINGW64 ~/OneDrive/Documents/Semester 7/RPL 2 PRAKTIKUM/Pertemuan7_50421786 (master)
$ git status
On branch master

No commits yet

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

Marsillo Dito S@LAPTOP-E15KQEK3 MINGW64 ~/OneDrive/Documents/Semester 7/RPL 2 PRAKTIKUM/Pertemuan7_50421786 (master)
$ git commit -m "first commit"
[master (root-commit) 065a5da] first commit
1 file changed, 1 insertion(+)
create mode 100644 README.md

Marsillo Dito S@LAPTOP-E15KQEK3 MINGW64 ~/OneDrive/Documents/Semester 7/RPL 2 PRAKTIKUM/Pertemuan7_50421786 (master)
$ git branch -M main
```

```
MINGW64:/c/Users/Marsillo Dito S/OneDrive/Documents/Semester 7/RPL 2 PRAKTIKUM/Pertemuan7_50421786
Marsillo Dito S@LAPTOP-E15KQEK3 MINGW64 ~/OneDrive/Documents/Semester 7/RPL 2 PR
AKTIKUM/Pertemuan7_50421786 (master)
$ git commit -m "first commit"
[master (root-commit) 065a5da] first commit
1 file changed, 1 insertion(+)
create mode 100644 README.md

Marsillo Dito S@LAPTOP-E15KQEK3 MINGW64 ~/OneDrive/Documents/Semester 7/RPL 2 PR
AKTIKUM/Pertemuan7_50421786 (master)
$ git branch -M main

Marsillo Dito S@LAPTOP-E15KQEK3 MINGW64 ~/OneDrive/Documents/Semester 7/RPL 2 PR
AKTIKUM/Pertemuan7_50421786 (main)
$ git remote add https://github.com/marsillo/Pertemuan7_50421786.git
usage: git remote add [<options>] <name> <url>

    -f, --[no-]fetch          fetch the remote branches
    --[no-]tags              import all tags and associated objects when fetching
                             or do not fetch any tag at all (--no-tags)
    -t, --[no-]track <branch> branch(es) to track
    -m, --[no-]master <branch> master branch
    --[no-]mirror[=(push|fetch)] set up remote as a mirror to push to or fetch from

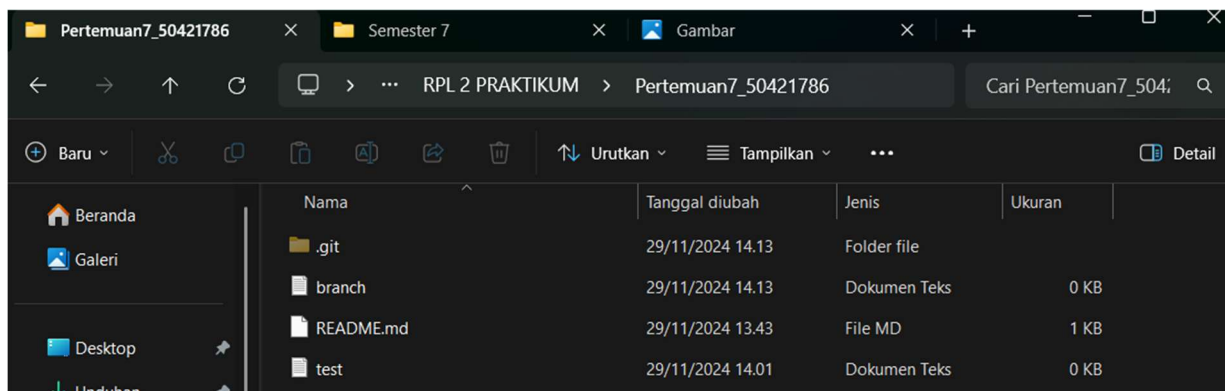
Marsillo Dito S@LAPTOP-E15KQEK3 MINGW64 ~/OneDrive/Documents/Semester 7/RPL 2 PR
AKTIKUM/Pertemuan7_50421786 (main)
$ git push -u origin main
fatal: 'origin' does not appear to be a git repository
fatal: Could not read from remote repository.

Please make sure you have the correct access rights
and the repository exists.

Marsillo Dito S@LAPTOP-E15KQEK3 MINGW64 ~/OneDrive/Documents/Semester 7/RPL 2 PR
AKTIKUM/Pertemuan7_50421786 (main)
$ git remote add origin https://github.com/marsillo/Pertemuan7_50421786.git

Marsillo Dito S@LAPTOP-E15KQEK3 MINGW64 ~/OneDrive/Documents/Semester 7/RPL 2 PR
AKTIKUM/Pertemuan7_50421786 (main)
$ git push -u origin main
info: please complete authentication in your browser...
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Writing objects: 100% (3/3), 230 bytes | 230.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/marsillo/Pertemuan7_50421786.git
 * [new branch]      main -> main
branch 'main' set up to track 'origin/main'.

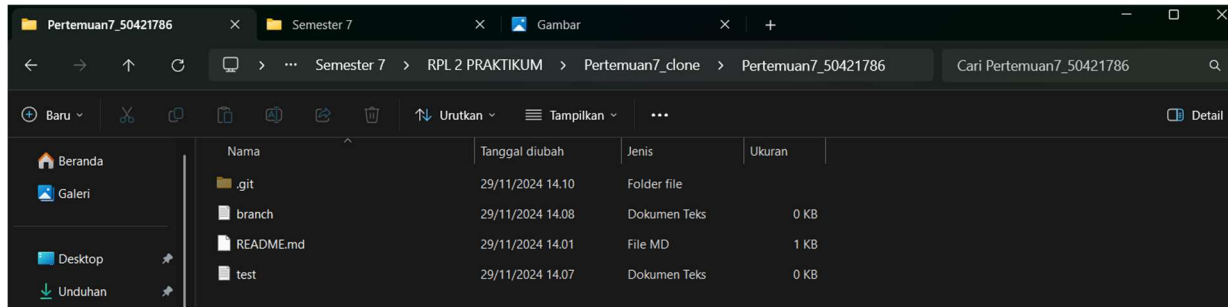
Marsillo Dito S@LAPTOP-E15KQEK3 MINGW64 ~/OneDrive/Documents/Semester 7/RPL 2 PR
AKTIKUM/Pertemuan7_50421786 (main)
$
```



Nama	Tanggal diubah	Jenis	Ukuran
.git	29/11/2024 14:13	Folder file	
branch	29/11/2024 14:13	Dokumen Teks	0 KB
README.md	29/11/2024 13:43	File MD	1 KB
test	29/11/2024 14:01	Dokumen Teks	0 KB



## CLONE RESPOSITORY



```
Marsillo Dito S@LAPTOP-E15KQEK3 MINGW64 ~/OneDrive/Documents/Semester 7/RPL 2 PR
AKTIKUM/Pertemuan7_clone
$ git clone https://github.com/marsillo/Pertemuan7_50421786.git
Cloning into 'Pertemuan7_50421786'...
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Total 3 (delta 0), reused 3 (delta 0), pack-reused 0 (from 0)
Receiving objects: 100% (3/3), done.

Marsillo Dito S@LAPTOP-E15KQEK3 MINGW64 ~/OneDrive/Documents/Semester 7/RPL 2 PR
AKTIKUM/Pertemuan7_clone
$ cd Pertemuan7_50421786

Marsillo Dito S@LAPTOP-E15KQEK3 MINGW64 ~/OneDrive/Documents/Semester 7/RPL 2 PR
AKTIKUM/Pertemuan7_clone/Pertemuan7_50421786 (main)
$ git pull
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 3 (delta 0), pack-reused 0 (from 0)
Unpacking objects: 100% (3/3), 252 bytes | 15.00 KiB/s, done.
From https://github.com/marsillo/Pertemuan7_50421786
   065a5da..37c8070  main       -> origin/main
Updating 065a5da..37c8070
Fast-forward
 test.txt | 0
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 test.txt

Marsillo Dito S@LAPTOP-E15KQEK3 MINGW64 ~/OneDrive/Documents/Semester 7/RPL 2 PR
AKTIKUM/Pertemuan7_clone/Pertemuan7_50421786 (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)
    branch.txt

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

Marsillo Dito S@LAPTOP-E15KQEK3 MINGW64 ~/OneDrive/Documents/Semester 7/RPL 2 PR
AKTIKUM/Pertemuan7_clone/Pertemuan7_50421786 (main)
$ git branch coba

Marsillo Dito S@LAPTOP-E15KQEK3 MINGW64 ~/OneDrive/Documents/Semester 7/RPL 2 PR
AKTIKUM/Pertemuan7_clone/Pertemuan7_50421786 (main)
$ git checkout coba
Switched to branch 'coba'

Marsillo Dito S@LAPTOP-E15KQEK3 MINGW64 ~/OneDrive/Documents/Semester 7/RPL 2 PR
AKTIKUM/Pertemuan7_clone/Pertemuan7_50421786 (coba)
$ git status
On branch coba
Untracked files:
  (use "git add <file>..." to include in what will be committed)
```

```
MINGW64:/c/Users/Marsillo Dito S/OneDrive/Documents/Semester 7/RPL 2 PRAKTIKUM/Pertemuan7_clone/Pertemuan...
Untracked files:
  (use "git add <file>..." to include in what will be committed)
  branch.txt

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

Marsillo Dito S@LAPTOP-E15KQEK3 MINGW64 ~/OneDrive/Documents/Semester 7/RPL 2 PR
AKTIKUM/Pertemuan7_clone/Pertemuan7_50421786 (main)
$ git branch coba

Marsillo Dito S@LAPTOP-E15KQEK3 MINGW64 ~/OneDrive/Documents/Semester 7/RPL 2 PR
AKTIKUM/Pertemuan7_clone/Pertemuan7_50421786 (main)
$ git checkout coba
Switched to branch 'coba'

Marsillo Dito S@LAPTOP-E15KQEK3 MINGW64 ~/OneDrive/Documents/Semester 7/RPL 2 PR
AKTIKUM/Pertemuan7_clone/Pertemuan7_50421786 (coba)
$ git status
On branch coba
Untracked files:
  (use "git add <file>..." to include in what will be committed)
  branch.txt

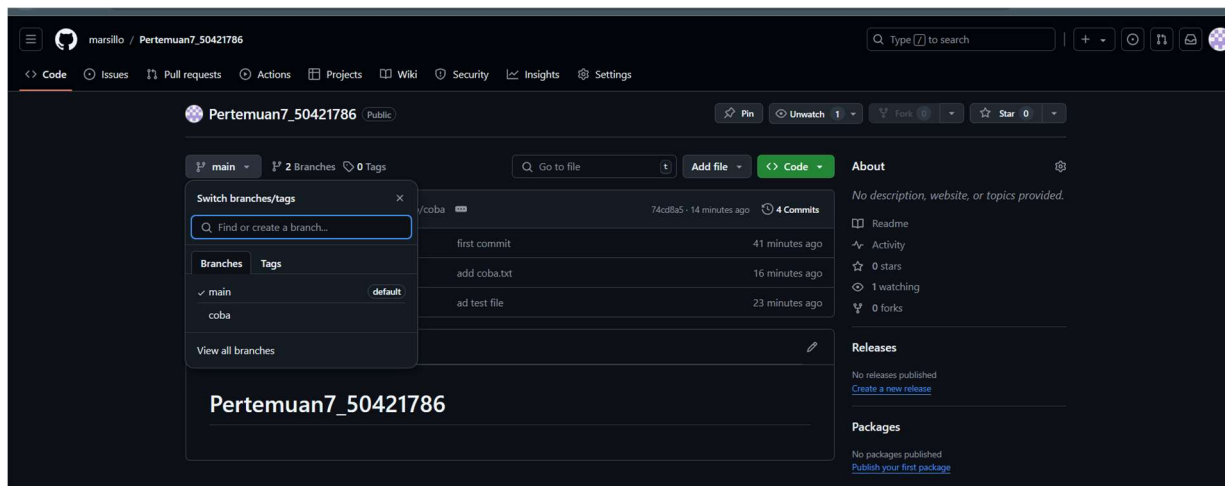
nothing added to commit but untracked files present (use "git add" to track)

Marsillo Dito S@LAPTOP-E15KQEK3 MINGW64 ~/OneDrive/Documents/Semester 7/RPL 2 PR
AKTIKUM/Pertemuan7_clone/Pertemuan7_50421786 (coba)
$ git add .

Marsillo Dito S@LAPTOP-E15KQEK3 MINGW64 ~/OneDrive/Documents/Semester 7/RPL 2 PR
AKTIKUM/Pertemuan7_clone/Pertemuan7_50421786 (coba)
$ git commit -m "add coba.txt"
[coba 5725009] add coba.txt
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 branch.txt

Marsillo Dito S@LAPTOP-E15KQEK3 MINGW64 ~/OneDrive/Documents/Semester 7/RPL 2 PR
AKTIKUM/Pertemuan7_clone/Pertemuan7_50421786 (coba)
$ git push -u origin coba
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Delta compression using up to 12 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (2/2), 276 bytes | 276.00 KiB/s, done.
Total 2 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: Create a pull request for 'coba' on GitHub by visiting:
remote:   https://github.com/marsillo/Pertemuan7_50421786/pull/new/coba
remote:
To https://github.com/marsillo/Pertemuan7_50421786.git
 * [new branch]      coba -> coba
branch 'coba' set up to track 'origin/coba'.

Marsillo Dito S@LAPTOP-E15KQEK3 MINGW64 ~/OneDrive/Documents/Semester 7/RPL 2 PR
AKTIKUM/Pertemuan7_clone/Pertemuan7_50421786 (coba)
$
```



## Git Push Dan Git Pull

```
MINGW64:/c:/Users/Marsillo Dito S/OneDrive/Documents/Semester 7/RPL 2 PRAKTIKUM/Pertemuan7_50421786
Untracked files:
(use "git add <file>..." to include in what will be committed)
test.txt

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

Marsillo Dito S@LAPTOP-E15KQEK3 MINGW64 ~/OneDrive/Documents/Semester 7/RPL 2 PR
AKTIKUM/Pertemuan7_50421786 (main)
$ git add .

Marsillo Dito S@LAPTOP-E15KQEK3 MINGW64 ~/OneDrive/Documents/Semester 7/RPL 2 PR
AKTIKUM/Pertemuan7_50421786 (main)
$ git status
On branch main
Your branch is up to date with 'origin/main'.

Changes to be committed:
(use "git restore --staged <file>..." to unstage)
new file:   test.txt

Marsillo Dito S@LAPTOP-E15KQEK3 MINGW64 ~/OneDrive/Documents/Semester 7/RPL 2 PR
AKTIKUM/Pertemuan7_50421786 (main)
$ git commit -m "ad test file"
[main 37c8070] ad test file
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 test.txt

Marsillo Dito S@LAPTOP-E15KQEK3 MINGW64 ~/OneDrive/Documents/Semester 7/RPL 2 PR
AKTIKUM/Pertemuan7_50421786 (main)
$ git push -u origin main
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 12 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 272 bytes | 272.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/marsillo/Pertemuan7_50421786.git
065a5da..37c8070  main -> main
branch 'main' set up to track 'origin/main'.

Marsillo Dito S@LAPTOP-E15KQEK3 MINGW64 ~/OneDrive/Documents/Semester 7/RPL 2 PR
AKTIKUM/Pertemuan7_50421786 (main)
$ git pull
remote: Enumerating objects: 4, done.
remote: Counting objects: 100% (4/4), done.
remote: Compressing objects: 100% (3/3), done.
remote: Total 3 (delta 0), reused 2 (delta 0), pack-reused 0 (from 0)
Unpacking objects: 100% (3/3), 1.12 KiB | 67.00 KiB/s, done.
From https://github.com/marsillo/Pertemuan7_50421786
37c8070..74cd8a5  main      -> origin/main
* [new branch]   coba      -> origin/coba
Updating 37c8070..74cd8a5
Fast-forward
 branch.txt | 0
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 branch.txt
```