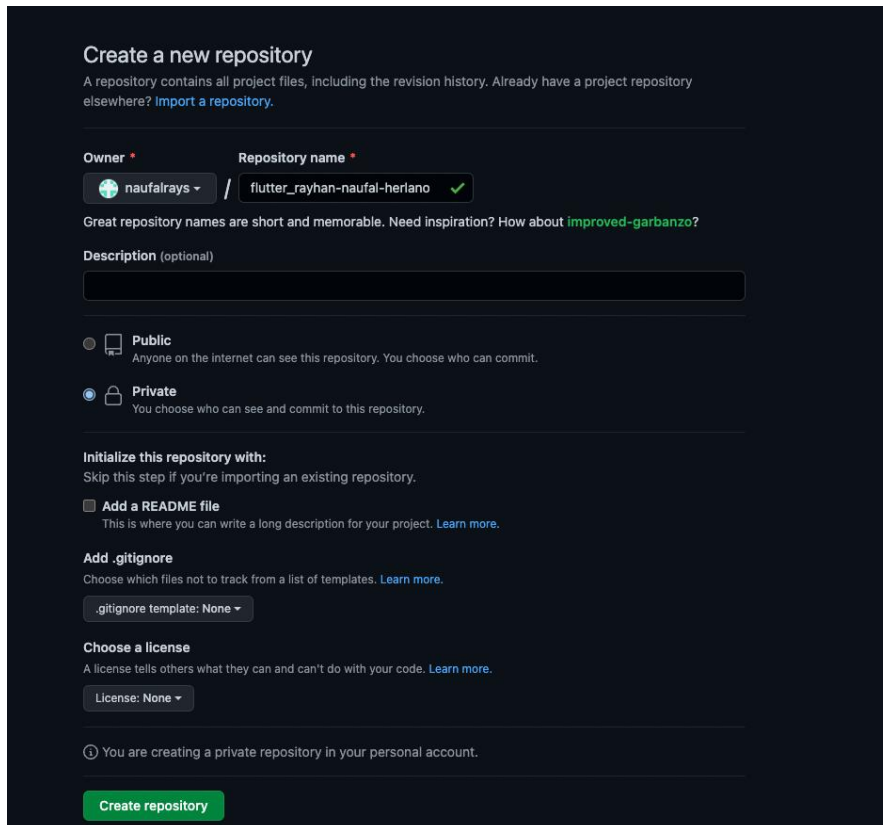


Rayhan Naufal Herlano  
1\_018FLC\_0

## Task 1

Saya membuat sebuah repository github dengan nama flutter\_rayhan-naufal-herlano. Berikut adalah ilustrasi halaman pembuatan repository Github tersebut.



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

**Owner** \* **Repository name** \*  
naufalrays / flutter\_rayhan-naufal-herlano ✓

Great repository names are short and memorable. Need inspiration? How about [improved-garbanzo?](#)

**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:**  
Skip this step if you're importing an existing repository.

☐ **Add a README file**  
This is where you can write a long description for your project. [Learn more.](#)

**Add .gitignore**  
Choose which files not to track from a list of templates. [Learn more.](#)  
.gitignore template: **None**

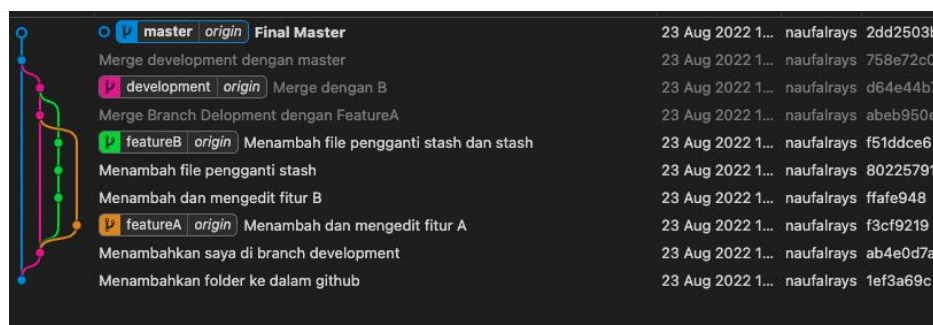
**Choose a license**  
A license tells others what they can and can't do with your code. [Learn more.](#)  
License: **None**

① You are creating a private repository in your personal account.

**Create repository**

## Task 2

Saya mengimplementasikan penggunaan branching yang terdiri dari master, development, featureA, dan featureB dengan cara hanya mengubah pada featureA dan featureB terlebih dahulu, jika sudah menambahkan fitur maka dapat kita merge ke branch developemnt, dan jika sudah final pada development maka kita akan merge ke branch master.



### Task 3

git push digunakan untuk mengirimkan perubahan file ke remote repository yang telah dilakukan setelah di commit

```
> git init
hint: Using 'master' as the name for the initial branch. This default branch name
hint: is subject to change. To configure the initial branch name to use in all
hint: of your new repositories, which will suppress this warning, call:
hint:
hint:   git config --global init.defaultBranch <name>
hint:
hint: Names commonly chosen instead of 'master' are 'main', 'trunk' and
hint: 'development'. The just-created branch can be renamed via this command:
hint:
hint:   git branch -m <name>
Initialized empty Git repository in /Users/naufalrays/Alterra/flutter_rayhan-naufal-herlano/.git/
> git remote add origin https://github.com/naufalrays/flutter_rayhan-naufal-herlano.git
> git add .
> git commit -m "Menambahkan folder ke dalam github"
[master (root-commit) 1ef3a69] Menambahkan folder ke dalam github
1 file changed, 3 insertions(+)
create mode 100644 3_Basic Version and Branch Management (Git)/Praktikum/main.dart
> git push origin master
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% (5/5), 399 bytes | 399.00 KiB/s, done.
Total 5 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/naufalrays/flutter_rayhan-naufal-herlano.git
 * [new branch]      master -> master
```

git pull digunakan untuk menggabungkan perubahan yang ada pada remote repository ke direktori lokal

```
> git pull --no-ff origin master
From https://github.com/naufalrays/flutter_rayhan-naufal-herlano
 * branch      master      -> FETCH_HEAD
hint: Waiting for your editor to close the file... error: There was a problem with the editor 'vi'.
Not committing merge; use 'git commit' to complete the merge.
> git status
On branch master
All conflicts fixed but you are still merging.
(use "git commit" to conclude merge)

Changes to be committed:
  new file:   3_Basic Version and Branch Management (Git)/Screenshot/Conflict S
tash.png
  new file:   3_Basic Version and Branch Management (Git)/Screenshot/Membuat re
pository baru.png
  new file:   3_Basic Version and Branch Management (Git)/Screenshot/Tampilan G
raph.png
  new file:   3_Basic Version and Branch Management (Git)/Screenshot/conflict m
erge.png
```

git stash digunakan untuk menyimpan perubahan yang terjadi ke dalam stash, jadi perubahan akan disimpan dan jika dilihat pada codingan perubahannya akan menghilang/disimpan

```
> git stash
Saved working directory and index state WIP on featureB: ffafe94 Menambah dan mengedit fitur B
> git commit -m "Menambah file pengganti stash"
On branch featureB
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:   3_Basic Version and Branch Management (Git)/Praktikum/main.dart

no changes added to commit (use "git add" and/or "git commit -a")
> git add .
> git commit -m "Menambah file pengganti stash"
[featureB 8022579] Menambah file pengganti stash
1 file changed, 1 insertion(+)
> git push origin featureB
Enumerating objects: 9, done.
Counting objects: 100% (9/9), done.
Delta compression using up to 8 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (5/5), 443 bytes | 443.00 KiB/s, done.
Total 5 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/naufalrays/flutter_rayhan-naufal-herlano.git
    ffafe94..8022579  featureB -> featureB

> git stash apply
Auto-merging 3_Basic Version and Branch Management (Git)/Praktikum/main.dart
CONFLICT (content): Merge conflict in 3_Basic Version and Branch Management (Git)/Praktikum/main.dart
On branch featureB
Unmerged paths:
  (use "git restore --staged <file>..." to unstage)
  (use "git add <file>..." to mark resolution)
        both modified:   3_Basic Version and Branch Management (Git)/Praktikum/main.dart

no changes added to commit (use "git add" and/or "git commit -a")
> git add .
> git commit -m "Menambah file pengganti stash dan stash"
[featureB f51ddce] Menambah file pengganti stash dan stash
1 file changed, 1 insertion(+)
> git push origin featureB
Enumerating objects: 9, done.
Counting objects: 100% (9/9), done.
Delta compression using up to 8 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (5/5), 438 bytes | 438.00 KiB/s, done.
Total 5 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/naufalrays/flutter_rayhan-naufal-herlano.git
    8022579..f51ddce  featureB -> featureB

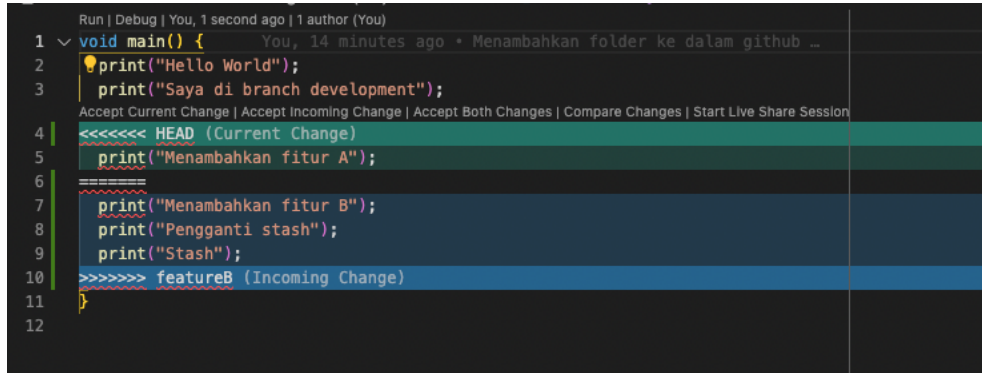
> git stash drop
Dropped refs/stash@{0} (8e3a50bccf97ce30799111f44272b9a57dfdf5e8)
```

git merge digunakan untuk menggabungkan sebuah branch dengan branch lain, dan no fast forward berfungsi untuk menunjukkan perubahan pada graph, perubahan yang terjadi terlihat bercabang jadi kita akan lebih mudah tracking perubahannya

```
> git checkout development
Switched to branch 'development'
> git merge --no-ff featureA
Merge made by the 'ort' strategy.
 3_Basic Version and Branch Management (Git)/Praktikum/main.dart | 1 +
1 file changed, 1 insertion(+)
```

## Task 4

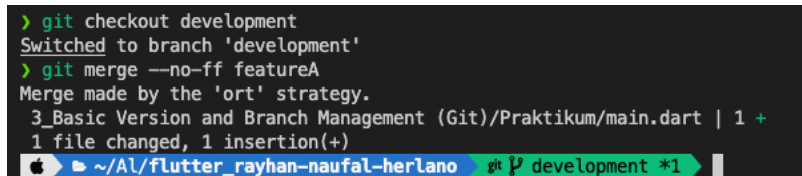
Ketika Merge development dengan branch B akan menimbulkan konflik dikarenakan sebelumnya branch A merge dengan development membawa perubahan yang mana line branch A dengan branch B sama.



```
Run | Debug | You, 1 second ago | 1 author (You)
1 void main() {
2   print("Hello World");
3   print("Saya di branch development");
4   <----- HEAD (Current Change)
5   print("Menambahkan fitur A");
6   =====
7   print("Menambahkan fitur B");
8   print("Pengganti stash");
9   print("Stash");
10  >----- featureB (Incoming Change)
11 }
12
```

## Task 5

git merge digunakan untuk menggabungkan sebuah branch dengan branch lain, dan no fast forward berfungsi untuk menunjukkan perubahan pada graph, perubahan yang terjadi terlihat bercabang jadi kita akan lebih mudah tracking perubahannya



```
> git checkout development
Switched to branch 'development'
> git merge --no-ff featureA
Merge made by the 'ort' strategy.
3_Basic Version and Branch Management (Git)/Praktikum/main.dart | 1 +
1 file changed, 1 insertion(+)
~/AI/flutter_rayhan-naufal-herlano git development *1
```

**Alur pembuatan :**

Buat repository baru :

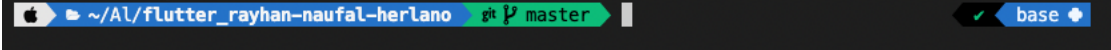
**git init** digunakan untuk membuat repository baru di lokal

**git remote** digunakan untuk menghubungkan repository lokal ke remote server

```
> git init
hint: Using 'master' as the name for the initial branch. This default branch name
hint: is subject to change. To configure the initial branch name to use in all
hint: of your new repositories, which will suppress this warning, call:
hint:
hint:   git config --global init.defaultBranch <name>
hint:
hint: Names commonly chosen instead of 'master' are 'main', 'trunk' and
hint: 'development'. The just-created branch can be renamed via this command:
hint:
hint:   git branch -m <name>
Initialized empty Git repository in /Users/naufalrays/Alterra/flutter_rayhan-naufal-herlano/.git/
> git remote add origin https://github.com/naufalrays/flutter_rayhan-naufal-herlano.git
~/Al/flutter_rayhan-naufal-herlano  master
```

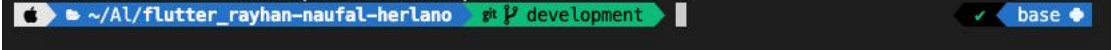
**git add** digunakan untuk menambahkan perubahan yang terjadi ke dalam staging area  
**git commit** digunakan untuk menyimpan perubahan untuk siap dikirimkan ke remote repository  
**git push** digunakan untuk mengirimkan perubahan file ke remote repository yang telah dilakukan setelah di commit

```
> git add .
> git commit -m "Menambahkan folder ke dalam github"
[master (root-commit) 1ef3a69] Menambahkan folder ke dalam github
1 file changed, 3 insertions(+)
create mode 100644 3_Basic Version and Branch Management (Git)/Praktikum/main.dart
> git push origin master
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% (5/5), 399 bytes | 399.00 KiB/s, done.
Total 5 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/naufalrays/flutter_rayhan-naufal-herlano.git
* [new branch] master -> master
```



**git branch development** digunakan untuk menambahkan branch development yang mana pada implementasi master, development, fiturA, dan fiturB maka development di sini akan menyimpan sebuah perubahan yang terjadi pada fiturA dan fitur B lalu mengirimkannya ke pada master branch

```
> git branch development
> git checkout development
Switched to branch 'development'
> git add .
> git commit -m "Menambahkan saya di branch development"
[development ab4e0d7] Menambahkan saya di branch development
1 file changed, 1 insertion(+)
> git push origin development
Enumerating objects: 9, done.
Counting objects: 100% (9/9), done.
Delta compression using up to 8 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (5/5), 462 bytes | 462.00 KiB/s, done.
Total 5 (delta 0), reused 0 (delta 0), pack-reused 0
remote:
remote: Create a pull request for 'development' on GitHub by visiting:
remote:   https://github.com/naufalrays/flutter_rayhan-naufal-herlano/pull/new/development
remote:
To https://github.com/naufalrays/flutter_rayhan-naufal-herlano.git
* [new branch] development -> development
```



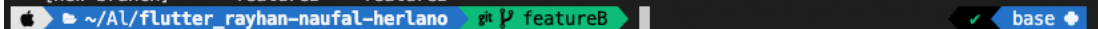


**git branch featureA/featureB** adalah membuat branch baru bernama featureA/B, yang mana dalam kasus ini featureA/B nantinya akan mengirimkan perubahan ke branch development lalu jika sudah final maka akan dikirimkan ke branch master

```
> git branch featureA
> git branch featureB
> git checkout featureA
Switched to branch 'featureA'
> git add .
> git commit -m "Menambah dan mengedit fitur A"
[featureA f3cf921] Menambah dan mengedit fitur A
 1 file changed, 1 insertion(+)
> git push origin featureA
Enumerating objects: 9, done.
Counting objects: 100% (9/9), done.
Delta compression using up to 8 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (5/5), 478 bytes | 478.00 KiB/s, done.
Total 5 (delta 0), reused 0 (delta 0), pack-reused 0
remote:
remote: Create a pull request for 'featureA' on GitHub by visiting:
remote:   https://github.com/naufalrays/flutter_rayhan-naufal-herlano/pull/new/featureA
remote:
To https://github.com/naufalrays/flutter_rayhan-naufal-herlano.git
 * [new branch]      featureA -> featureA
```

**git checkout featureB** digunakan untuk berpindah branch ke featureB

```
> git checkout featureB
Switched to branch 'featureB'
> git add .
> git commit -m "Menambah dan mengedit fitur B"
[featureB ffafe94] Menambah dan mengedit fitur B
 1 file changed, 1 insertion(+)
> git push origin featureB
Enumerating objects: 9, done.
Counting objects: 100% (9/9), done.
Delta compression using up to 8 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (5/5), 476 bytes | 476.00 KiB/s, done.
Total 5 (delta 0), reused 0 (delta 0), pack-reused 0
remote:
remote: Create a pull request for 'featureB' on GitHub by visiting:
remote:   https://github.com/naufalrays/flutter_rayhan-naufal-herlano/pull/new/featureB
remote:
To https://github.com/naufalrays/flutter_rayhan-naufal-herlano.git
 * [new branch]      featureB -> featureB
```



**git stash** digunakan untuk menyimpan perubahan yang terjadi ke dalam stash, jadi perubahan akan disimpan dan jika dilihat pada codingan perubahannya akan menghilang/disimpan

```
> git stash
Saved working directory and index state WIP on featureB: ffafe94 Menambah dan mengedit fitur B
> git commit -m "Menambah file pengganti stash"
On branch featureB
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:   3_Basic Version and Branch Management (Git)/Praktikum/main.dart

no changes added to commit (use "git add" and/or "git commit -a")
> git add .
> git commit -m "Menambah file pengganti stash"
[featureB 8022579] Menambah file pengganti stash
1 file changed, 1 insertion(+)
> git push origin featureB
Enumerating objects: 9, done.
Counting objects: 100% (9/9), done.
Delta compression using up to 8 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (5/5), 443 bytes | 443.00 KiB/s, done.
Total 5 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/naufalrays/flutter_rayhan-naufal-herlano.git
 ffafe94..8022579 featureB -> featureB
```

**git stash apply** digunakan untuk mengaplikasikan perubahan yang telah disimpan ke dalam stash lalu digunakan pada codingan perubahan yang sekarang

```
> git stash apply
Auto-merging 3_Basic Version and Branch Management (Git)/Praktikum/main.dart
CONFLICT (content): Merge conflict in 3_Basic Version and Branch Management (Git)/Praktikum/main.dart
On branch featureB
Unmerged paths:
  (use "git restore --staged <file>..." to unstage)
  (use "git add <file>..." to mark resolution)
    both modified:   3_Basic Version and Branch Management (Git)/Praktikum/main.dart

no changes added to commit (use "git add" and/or "git commit -a")
> git add .
> git commit -m "Menambah file pengganti stash dan stash"
[featureB f51ddce] Menambah file pengganti stash dan stash
1 file changed, 1 insertion(+)
> git push origin featureB
Enumerating objects: 9, done.
Counting objects: 100% (9/9), done.
Delta compression using up to 8 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (5/5), 438 bytes | 438.00 KiB/s, done.
Total 5 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/naufalrays/flutter_rayhan-naufal-herlano.git
 8022579..f51ddce featureB -> featureB
```

Error stash : terjadi karena adanya perbedaan line yang lama dengan line yang baru, ada opsi yang mana kita akan menerima line yang baru, line yang lama, dan line keduanya kita gabungkan

```
Run | Debug | You, now | 1 author (You)
1 void main() {
2   print("Hello World");
3   print("Saya di branch development");
4   print("Menambahkan fitur B");
5   <----- Updated upstream (Current Change)
6   print("Pengganti stash");
7   =====
8   print("Stash");
9   <----- Stashed changes (Incoming Change)
10 }
11
```



**Merge no fast-forward** digunakan untuk menggabungkan sebuah branch dengan branch lain, dan no fast forward berfungsi untuk menunjukkan perubahan pada graph, perubahan yang terjadi terlihat bercabang jadi kita akan lebih mudah tracking perubahannya

[illegible]

Merge development dengan branch B akan menimbulkan konflik dikarenakan sebelumnya branch A merge dengan development membawa perubahan yang mana line branch A dengan branch B sama.

```
Run | Debug | You, 1 second ago | 1 author (You)
1 void main() { You, 14 minutes ago • Menambahkan folder ke dalam github ...
2     print("Hello World");
3     print("Saya di branch development");
Accept Current Change | Accept Incoming Change | Accept Both Changes | Compare Changes | Start Live Share Session
4 <<<<<< HEAD (Current Change)
5     print("Menambahkan fitur A");
6     =====
7     print("Menambahkan fitur B");
8     print("Pengganti stash");
9     print("Stash");
10 >>>>>> featureB (Incoming Change)
11 }
12
```

Tampilan pada terminal :

```
> git merge --no-ff featureB
Auto-merging 3_Basic Version and Branch Management (Git)/Praktikum/main.dart
CONFLICT (content): Merge conflict in 3_Basic Version and Branch Management (Git)/Praktikum/main.dart
Automatic merge failed; fix conflicts and then commit the result.
~/AI/flutter_rayhan-naufal-herlano git P development *1 merge ~1 1 x base
```

```
> git add .
> git commit -m "Merge dengan B"
[development d64e44b] Merge dengan B
> git push origin development
Enumerating objects: 18, done.
Counting objects: 100% (18/18), done.
Delta compression using up to 8 threads
Compressing objects: 100% (4/4), done.
Writing objects: 100% (6/6), 677 bytes | 677.00 KiB/s, done.
Total 6 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/naufalrays/flutter_rayhan-naufal-herlano.git
ab4e0d7..d64e44b development -> development
~/AI/flutter_rayhan-naufal-herlano git P development *1 base
```

**git stash drop** digunakan untuk menghilangkan perubahan yang telah disimpan pada stash

```
> git stash drop
Dropped refs/stash@{0} (8e3a50bccf97ce30799111f44272b9a57dfdf5e8)
> git checkout master
Switched to branch 'master'
> git merge --no-ff development
Merge made by the 'ort' strategy.
 3_Basic Version and Branch Management (Git)/Praktikum/main.dart | 8 ++++++++
 1 file changed, 8 insertions(+)
> git push origin master
Enumerating objects: 1, done.
Counting objects: 100% (1/1), done.
Writing objects: 100% (1/1), 232 bytes | 232.00 KiB/s, done.
Total 1 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/naufalrays/flutter_rayhan-naufal-herlano.git
1ef3a69..758e72c master -> master
~/AI/flutter_rayhan-naufal-herlano git P master !1 base
```

**git pull** digunakan untuk menggabungkan perubahan yang ada pada remote repository ke direktori lokal

```
> git pull --no-ff origin master
From https://github.com/naufalrays/flutter_rayhan-naufal-herlano
 * branch      master      -> FETCH_HEAD
hint: Waiting for your editor to close the file... error: There was a problem with the editor 'vi'.
Not committing merge; use 'git commit' to complete the merge.
> git status
On branch master
All conflicts fixed but you are still merging.
(use "git commit" to conclude merge)

Changes to be committed:
  new file:   3_Basic Version and Branch Management (Git)/Screenshot/Conflict S
             tash.png
  new file:   3_Basic Version and Branch Management (Git)/Screenshot/Membuat re
             pository baru.png
  new file:   3_Basic Version and Branch Management (Git)/Screenshot/Tampilan G
             raph.png
  new file:   3_Basic Version and Branch Management (Git)/Screenshot/conflict m
             erge.png
```

Graph akhir dari implementasi branch master, development, featureA, dan featureB

