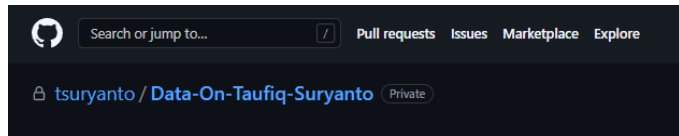


## 1. Buat Sebuah Repository Github



## 2. Implementasi Branching

```
tsury@LAPTOP-9908E096 MINGW64 /d/DEV/GO/Data-On-Taufiq-Suryanto (main)
$ git branch -d dev
Deleted branch dev (was 4e9e1eb).

tsury@LAPTOP-9908E096 MINGW64 /d/DEV/GO/Data-On-Taufiq-Suryanto (main)
$ git branch dev

tsury@LAPTOP-9908E096 MINGW64 /d/DEV/GO/Data-On-Taufiq-Suryanto (main)
$ git checkout dev
Switched to branch 'dev'

tsury@LAPTOP-9908E096 MINGW64 /d/DEV/GO/Data-On-Taufiq-Suryanto (dev)
$ git push -u origin dev
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0
remote:
remote: Create a pull request for 'dev' on GitHub by visiting:
remote:   https://github.com/tsuryanto/Data-On-Taufiq-Suryanto/pull/new/dev
remote:
To https://github.com/tsuryanto/Data-On-Taufiq-Suryanto.git
 * [new branch]      dev -> dev
branch 'dev' set up to track 'origin/dev'.
```

Create branch dev from main and push to remote

```
tsury@LAPTOP-9908E096 MINGW64 /d/DEV/GO/Data-On-Taufiq-Suryanto (dev)
$ git branch featureA

tsury@LAPTOP-9908E096 MINGW64 /d/DEV/GO/Data-On-Taufiq-Suryanto (dev)
$ git branch featureB

tsury@LAPTOP-9908E096 MINGW64 /d/DEV/GO/Data-On-Taufiq-Suryanto (dev)
$ git branch
* dev
  featureA
  featureB
  main

tsury@LAPTOP-9908E096 MINGW64 /d/DEV/GO/Data-On-Taufiq-Suryanto (dev)
$ |
```

Create local branch featureA and featureB from dev

## 3. Implementasikan intruksi git untuk push, pull, stash dan merge

### a. Stash

Stash from main to featureA (Kasus : Salah branch dan ingin melanjutkan pekerjaan yang belum selesai di branch featureA)

```
tsury@LAPTOP-9908E096 MINGW64 /d/DEV/GO/Data-On-Taufiq-Suryanto (dev)
$ git status
On branch dev
Your branch is up to date with 'origin/dev'.

Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   02 - CLI and Version Control/hello.txt

tsury@LAPTOP-9908E096 MINGW64 /d/DEV/GO/Data-On-Taufiq-Suryanto (dev)
$ git stash
Saved working directory and index state WIP on dev: 4e9e1eb remove .docx hidden file

tsury@LAPTOP-9908E096 MINGW64 /d/DEV/GO/Data-On-Taufiq-Suryanto (dev)
$ git checkout featureA
Switched to branch 'featureA'

tsury@LAPTOP-9908E096 MINGW64 /d/DEV/GO/Data-On-Taufiq-Suryanto (featureA)
$ git stash pop
On branch featureA
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   02 - CLI and Version Control/hello.txt

Dropped refs/stash@{0} (014f0daa84101957076438a79363046cae656ae6)

tsury@LAPTOP-9908E096 MINGW64 /d/DEV/GO/Data-On-Taufiq-Suryanto (featureA)
$ |
```

## b. Merge

Merge featureA ke dev

```
tsury@LAPTOP-9908E096 MINGW64 /d/DEV/GO/Data-On-Taufiq-Suryanto/02 - CLI and Version Control (featureA)
$ vim hello.txt

tsury@LAPTOP-9908E096 MINGW64 /d/DEV/GO/Data-On-Taufiq-Suryanto/02 - CLI and Version Control (featureA)
$ git status
On branch featureA
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   hello.txt

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:   hello.txt

tsury@LAPTOP-9908E096 MINGW64 /d/DEV/GO/Data-On-Taufiq-Suryanto/02 - CLI and Version Control (featureA)
$ git status
On branch featureA
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   hello.txt

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:   hello.txt

tsury@LAPTOP-9908E096 MINGW64 /d/DEV/GO/Data-On-Taufiq-Suryanto/02 - CLI and Version Control (featureA)
$ git add .
tsury@LAPTOP-9908E096 MINGW64 /d/DEV/GO/Data-On-Taufiq-Suryanto/02 - CLI and Version Control (featureA)
$ git commit -m "feat: add hello.txt to describe my study status"
[featureA d48fc20] feat: add hello.txt to describe my study status
1 file changed, 2 insertions(+)
create mode 100644 02 - CLI and Version Control/hello.txt

tsury@LAPTOP-9908E096 MINGW64 /d/DEV/GO/Data-On-Taufiq-Suryanto/02 - CLI and Version Control (featureA)
$ git checkout dev
Switched to branch 'dev'
Your branch is up to date with 'origin/dev'.

tsury@LAPTOP-9908E096 MINGW64 /d/DEV/GO/Data-On-Taufiq-Suryanto/02 - CLI and Version Control (dev)
$ git merge featureA
Updating 4e9e1eb..d48fc20
Fast-forward
 02 - CLI and Version Control/hello.txt | 2 ++
1 file changed, 2 insertions(+)
create mode 100644 02 - CLI and Version Control/hello.txt

tsury@LAPTOP-9908E096 MINGW64 /d/DEV/GO/Data-On-Taufiq-Suryanto/02 - CLI and Version Control (dev)
$
```

## c. Push

Push dev ke remote

```
tsury@LAPTOP-9908E096 MINGW64 /d/DEV/GO/Data-On-Taufiq-Suryanto/02 - CLI and Version Control (dev)
$ git push origin dev
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 12 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (4/4), 505 bytes | 505.00 KiB/s, done.
Total 4 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/tsuryanto/Data-On-Taufiq-Suryanto.git
4e9e1eb..d48fc20 dev -> dev
```

## d. Pull

Pull dev ke featureB

```
tsury@LAPTOP-9908E096 MINGW64 /d/DEV/GO/Data-On-Taufiq-Suryanto/02 - CLI and Version Control (dev)
$ git checkout featureB
Switched to branch 'featureB'

tsury@LAPTOP-9908E096 MINGW64 /d/DEV/GO/Data-On-Taufiq-Suryanto/02 - CLI and Version Control (featureB)
$ git pull origin dev
From https://github.com/tsuryanto/Data-On-Taufiq-Suryanto
* branch      dev      -> FETCH_HEAD
Updating 4e9e1eb..d48fc20
Fast-forward
 02 - CLI and Version Control/hello.txt | 2 ++
1 file changed, 2 insertions(+)
create mode 100644 02 - CLI and Version Control/hello.txt
```

#### 4. Implementasi penanganan Conflict

- Checkout featureB, ubah line di hello.txt, lalu commit

```
tsury@LAPTOP-9908E096 MINGW64 /d/DEV/GO/Data-On-Taufiq-Suryanto/02 - CLI and Version Control (featureB)
$ vim hello.txt

tsury@LAPTOP-9908E096 MINGW64 /d/DEV/GO/Data-On-Taufiq-Suryanto/02 - CLI and Version Control (featureB)
$ cat hello.txt
Hello my name is Taufiq
I'm learning Golang

tsury@LAPTOP-9908E096 MINGW64 /d/DEV/GO/Data-On-Taufiq-Suryanto/02 - CLI and Version Control (featureB)
$ git add hello.txt

tsury@LAPTOP-9908E096 MINGW64 /d/DEV/GO/Data-On-Taufiq-Suryanto/02 - CLI and Version Control (featureB)
$ git commit -m "feat(learning status): Update my learning status because now i am learning Golang"
[featureB 30e0d3b] feat(learning status): Update my learning status because now i am learning Golang
1 file changed, 1 insertion(+), 1 deletion(-)
```

- Merge featureB to dev

```
tsury@LAPTOP-9908E096 MINGW64 /d/DEV/GO/Data-On-Taufiq-Suryanto/02 - CLI and Version Control (featureA)
$ git checkout dev
Switched to branch 'dev'
Your branch is up to date with 'origin/dev'.

tsury@LAPTOP-9908E096 MINGW64 /d/DEV/GO/Data-On-Taufiq-Suryanto/02 - CLI and Version Control (dev)
$ git merge featureB
Updating d48fc20..30e0d3b
Fast-forward
 02 - CLI and Version Control/hello.txt | 2 +-
1 file changed, 1 insertion(+), 1 deletion(-)
```

- Checkout featureA, ubah line di hello.txt, lalu commit

```
tsury@LAPTOP-9908E096 MINGW64 /d/DEV/GO/Data-On-Taufiq-Suryanto/02 - CLI and Version Control (dev)
$ git checkout featureA
Switched to branch 'featureA'

tsury@LAPTOP-9908E096 MINGW64 /d/DEV/GO/Data-On-Taufiq-Suryanto/02 - CLI and Version Control (featureA)
$ vim hello.txt

tsury@LAPTOP-9908E096 MINGW64 /d/DEV/GO/Data-On-Taufiq-Suryanto/02 - CLI and Version Control (featureA)
$ cat hello.txt
Hello my name is Taufiq
I'm learning CLI and Version Control

tsury@LAPTOP-9908E096 MINGW64 /d/DEV/GO/Data-On-Taufiq-Suryanto/02 - CLI and Version Control (featureA)
$ git add hello.txt

tsury@LAPTOP-9908E096 MINGW64 /d/DEV/GO/Data-On-Taufiq-Suryanto/02 - CLI and Version Control (featureA)
$ git commit -m "feat(learning status): Update my learning status because now i am learning CLI and Version Control"
[featureA 1c51bbe] feat(learning status): Update my learning status because now i am learning CLI and Version Control
1 file changed, 1 insertion(+), 1 deletion(-)
```

- Merge featureA to dev, dan terjadi conflict

```
tsury@LAPTOP-9908E096 MINGW64 /d/DEV/GO/Data-On-Taufiq-Suryanto/02 - CLI and Version Control (featureA)
$ git checkout dev
Switched to branch 'dev'
Your branch is ahead of 'origin/dev' by 1 commit.
(use "git push" to publish your local commits)

tsury@LAPTOP-9908E096 MINGW64 /d/DEV/GO/Data-On-Taufiq-Suryanto/02 - CLI and Version Control (dev)
$ git merge featureA
Auto-merging 02 - CLI and Version Control/hello.txt
CONFLICT (content): Merge conflict in 02 - CLI and Version Control/hello.txt
Automatic merge failed; fix conflicts and then commit the result.
```

```
tsury@LAPTOP-9908E096 MINGW64 /d/DEV/GO/Data-On-Taufiq-Suryanto/02 - CLI and Version Control (dev|MERGING)
$ git log --oneline --graph --all
* 1c51bbe (featureA) feat(learning status): Update my learning status because now i am learning CLI and Version Control
| * 30e0d3b (HEAD -> dev, featureB) feat(learning status): Update my learning status because now i am learning Golang
|/
* d48fc20 (origin/dev) feat: add hello.txt to describe my study status
| * 5270c8f (origin/featureA) feat: add hello.txt to describe my learning status
|/
```

## 5. Gunakan merge no fast forward

```
tsury@LAPTOP-9908E096 MINGW64 /d/DEV/GO/Data-On-Taufiq-Suryanto/02 - CLI and Version Control (dev|MERGING)
$ git mergetool

This message is displayed because 'merge.tool' is not configured.
See 'git mergetool --tool-help' or 'git help config' for more details.
'git mergetool' will now attempt to use one of the following tools:
opendiff kdiff3 tkdiff xxdiff meld tortoisemerge gvimdiff diffmerge ecmerge p4merge araxis bc codecompare smerge emerge vimdiff nvimdiff
No files need merging
```

```
tsury@LAPTOP-9908E096 MINGW64 /d/DEV/GO/Data-On-Taufiq-Suryanto/02 - CLI and Version Control (dev|MERGING)
$ git status
On branch dev
Your branch is ahead of 'origin/dev' by 1 commit.
(use "git push" to publish your local commits)

All conflicts fixed but you are still merging.
(use "git commit" to conclude merge)

Changes to be committed:
  modified:   hello.txt

Untracked files:
  (use "git add <file>..." to include in what will be committed)
  hello.txt.orig
  hello_BACKUP_1374.txt
  hello_BACKUP_1486.txt
  hello_BACKUP_1556.txt
  hello_BASE_1374.txt
  hello_BASE_1486.txt
  hello_BASE_1556.txt
  hello_LOCAL_1374.txt
  hello_LOCAL_1486.txt
  hello_LOCAL_1556.txt
  hello_REMOTE_1374.txt
  hello_REMOTE_1486.txt
  hello_REMOTE_1556.txt
```

```
tsury@LAPTOP-9908E096 MINGW64 /d/DEV/GO/Data-On-Taufiq-Suryanto/02 - CLI and Version Control (dev|MERGING)
$ git status
On branch dev
Your branch is ahead of 'origin/dev' by 1 commit.
(use "git push" to publish your local commits)

All conflicts fixed but you are still merging.
(use "git commit" to conclude merge)

Changes to be committed:
  modified:   hello.txt
```

```
tsury@LAPTOP-9908E096 MINGW64 /d/DEV/GO/Data-On-Taufiq-Suryanto/02 - CLI and Version Control (dev|MERGING)
$ git commit -m "feat(learning status): Resolve Conflict" -m "BREAKING CHANGE: Combine learning status"
[dev eca0705] feat(learning status): Resolve Conflict

tsury@LAPTOP-9908E096 MINGW64 /d/DEV/GO/Data-On-Taufiq-Suryanto/02 - CLI and Version Control (dev)
$
```

```
tsury@LAPTOP-9908E096 MINGW64 /d/DEV/GO/Data-On-Taufiq-Suryanto/02 - CLI and Version Control (dev)
$ git log --oneline --graph --all
\
| * eca0705 (HEAD -> dev) feat(learning status): Resolve Conflict
|
| * 1c51bbe (featureA) feat(learning status): Update my learning status because now i am learning CLI and Version Control
| * 30e0d3b (featureB) feat(learning status): Update my learning status because now i am learning Golang
|/
* d48fc20 (origin/dev) feat: add hello.txt to describe my study status
| * 5270c8f (origin/featureA) feat: add hello.txt to describe my learning status
|/
```