

Tugas 1: Soal Praktikum Git

1. Buat sebuah repository di Github

The image consists of two screenshots of the GitHub web interface. The top screenshot shows the 'Create a new repository' page. The 'Owner' is set to 'chrishhuo123' and the 'Repository name' is 'sebuahRepository', which is marked as available. The 'Description' is 'Soal Praktikum Git secara Mandiri'. The repository is set to be 'Public'. The bottom screenshot shows the repository page for 'sebuahRepository'. It includes options to 'Set up GitHub Copilot', 'Add collaborators to this repository', and 'Quick setup' instructions for cloning the repository via HTTPS or SSH. The repository is public and has 0 stars and 0 forks.

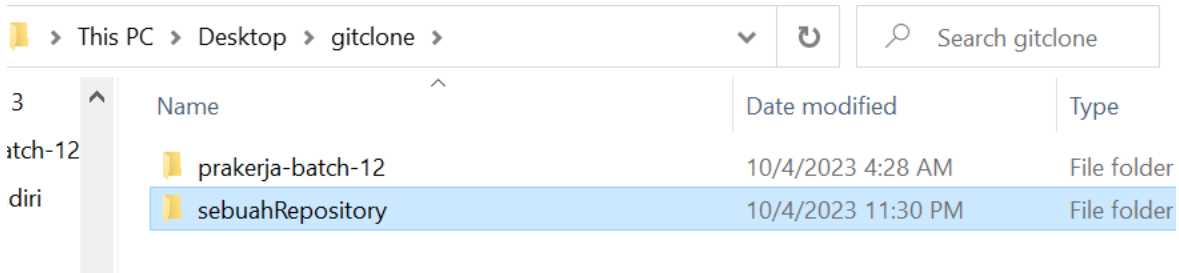
Seusai selesai membuat sebuah Repository pada github, saya melakukan Pull dengan cara Git Clone (**Sekalian menjawab pertanyaan No. 3 tentang Git Pull pada 3B**):

```
Command Prompt
Microsoft Windows [Version 10.0.19045.3448]
(c) Microsoft Corporation. All rights reserved.

C:\Users\lenovo>cd desktop/gitclone

C:\Users\lenovo\Desktop\gitclone>git clone https://github.com/chrisshuo123/sebuahRepository.git
Cloning into 'sebuahRepository'...
warning: You appear to have cloned an empty repository.

C:\Users\lenovo\Desktop\gitclone>
```



This PC > Desktop > gitclone			
	Name	Date modified	Type
3			
atch-12	prakerja-batch-12	10/4/2023 4:28 AM	File folder
diri	sebuahRepository	10/4/2023 11:30 PM	File folder

Oke, lanjut ke Nomor 2

2. Implementasikan penggunaan branching yang terdiri dari master, development, featureA, dan featureB

```
Command Prompt

C:\Users\lenovo\Desktop\gitclone\sebuahRepository>git status
On branch main
Your branch is up to date with 'origin/main'.

nothing to commit, working tree clean

C:\Users\lenovo\Desktop\gitclone\sebuahRepository>git branch
* main

C:\Users\lenovo\Desktop\gitclone\sebuahRepository>git branch master

C:\Users\lenovo\Desktop\gitclone\sebuahRepository>git branch
* main
  master

C:\Users\lenovo\Desktop\gitclone\sebuahRepository>git branch development

C:\Users\lenovo\Desktop\gitclone\sebuahRepository>git branch featureA

C:\Users\lenovo\Desktop\gitclone\sebuahRepository>git branch featureB

C:\Users\lenovo\Desktop\gitclone\sebuahRepository>git branch
  development
  featureA
  featureB
* main
  master

C:\Users\lenovo\Desktop\gitclone\sebuahRepository>
```

NOTE: Sampai disini masih belum di Push ke Github, alias masih Lokal

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

3a. Git Push

Git push branch master:

```
Command Prompt

C:\Users\lenovo\Desktop\gitclone\sebuahRepository>git branch
  development
  featureA
  featureB
* master

C:\Users\lenovo\Desktop\gitclone\sebuahRepository>git branch -M master

C:\Users\lenovo\Desktop\gitclone\sebuahRepository>git push -u origin master
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0
remote:
remote: Create a pull request for 'master' on GitHub by visiting:
remote:   https://github.com/chrisshuo123/sebuahRepository/pull/new/master
remote:
To https://github.com/chrisshuo123/sebuahRepository.git
 * [new branch]      master -> master
branch 'master' set up to track 'origin/master'.

C:\Users\lenovo\Desktop\gitclone\sebuahRepository>
```

Git push branch development:

```
Command Prompt

C:\Users\lenovo\Desktop\gitclone\sebuahRepository>git branch
  development
  featureA
  featureB
* master

C:\Users\lenovo\Desktop\gitclone\sebuahRepository>git branch -M development

C:\Users\lenovo\Desktop\gitclone\sebuahRepository>git push -u origin development
Total 0 (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/chrisshuo123/sebuahRepository/pull/new/development
remote:
To https://github.com/chrisshuo123/sebuahRepository.git
 * [new branch]      development -> development
branch 'development' set up to track 'origin/development'.

C:\Users\lenovo\Desktop\gitclone\sebuahRepository>
```

Git push branch featureA:

```
Command Prompt

C:\Users\lenovo\Desktop\gitclone\sebuahRepository>git branch
  development
  featureA
  featureB
* main

C:\Users\lenovo\Desktop\gitclone\sebuahRepository>git branch -M featureA

C:\Users\lenovo\Desktop\gitclone\sebuahRepository>git push -u origin featureA
Total 0 (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/chrisshuo123/sebuahRepository/pull/new/featureA
remote:
To https://github.com/chrisshuo123/sebuahRepository.git
 * [new branch]      featureA -> featureA
branch 'featureA' set up to track 'origin/featureA'.

C:\Users\lenovo\Desktop\gitclone\sebuahRepository>
```

Git push branch featureB:

```
Command Prompt

C:\Users\lenovo\Desktop\gitclone\sebuahRepository>git branch
  development
* featureA
  featureB

C:\Users\lenovo\Desktop\gitclone\sebuahRepository>git branch -M featureB

C:\Users\lenovo\Desktop\gitclone\sebuahRepository>git push -u origin featureB
Total 0 (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/chrisshuo123/sebuahRepository/pull/new/featureB
remote:
To https://github.com/chrisshuo123/sebuahRepository.git
 * [new branch]      featureB -> featureB
branch 'featureB' set up to track 'origin/featureB'.

C:\Users\lenovo\Desktop\gitclone\sebuahRepository>_
```

3b. Git Pull

Sudah dijawab pada Soal No. 1 ketika melakukan Git Clone sesuai membuat Repository baru.

3c. Git Stash

Skenario 1: terdapat sebuah file namanya test.txt dengan isi "just a testing"

```
Test.txt.txt X
Test.txt.txt
1 just a testing
```

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS COMMENTS

PS C:\Users\lenovo\Desktop\writers> 
```

Skenario 2: user melakukan git init & commit ke dalam file (contoh folder adalah writers git)

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS COMMENTS

PS C:\Users\lenovo\Desktop\writers> git init
Reinitialized existing Git repository in C:/Users/lenovo/Desktop/writers/.git/
PS C:\Users\lenovo\Desktop\writers> git commit -m "Insert file test.txt to git main"
On branch main
Your branch is up to date with 'origin/main'.

nothing to commit, working tree clean
PS C:\Users\lenovo\Desktop\writers> 
```

Skenario 3: user melakukan update pada file test.txt dengan tambahan kata “test testtt”, lalu melakukan commit ulang

```
Test.txt.txt M X
Test.txt.txt
1 just a testing test testtt
```

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS COMMENTS

nothing to commit, working tree clean
PS C:\Users\lenovo\Desktop\writers> git commit -m "Insert file test.txt to git main"
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:   Test.txt.txt

no changes added to commit (use "git add" and/or "git commit -a")
PS C:\Users\lenovo\Desktop\writers> 
```

Skenario 4: User melihat conflict oleh sebab tidak dapat dicommit, lalu ingin mengembalikan codingan sebelumnya, maka ia melakukan git stack untuk mengembalikan codingan sebelumnya

```
Test.txt.txt ●
Test.txt.txt
1 just a testing
```

```
PS C:\Users\lenovo\Desktop\writers> git stash
Saved working directory and index state WIP on main: 7fce17c descriptive comment for code changes
PS C:\Users\lenovo\Desktop\writers> 
```

Skenario 5: Pada akhirnya user dapat melakukan commit dengan lancar dan berhasil

```
PS C:\Users\lenovo\Desktop\writers> git init
Reinitialized existing Git repository in C:/Users/lenovo/Desktop/writers/.git/
PS C:\Users\lenovo\Desktop\writers> git commit -m "commit new file and ordinary information"
On branch main
Your branch is up to date with 'origin/main'.

nothing to commit, working tree clean
```

3d. Git Merge

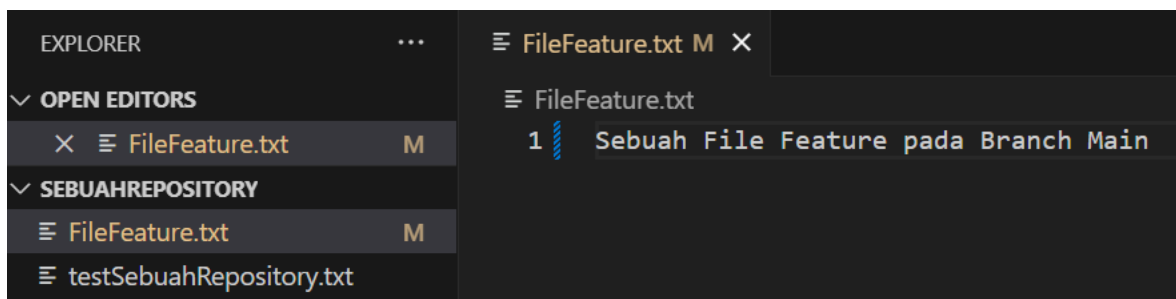
Contoh, memiliki sebuah file namanya FileFeatureA.txt pada Branch FeatureA, lalu ingin di merge file tersebut ke dalam Branch Master (dalam contoh saya adalah Branch Main):

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS  COMMENTS

PS C:\Users\lenovo\Desktop\writers> git branch
* featureA
  main
PS C:\Users\lenovo\Desktop\writers> git checkout main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.
PS C:\Users\lenovo\Desktop\writers> git merge featureA
Updating 7fce17c..fa23ecf
Fast-forward
 FileFeatureA.txt | 1 +
 1 file changed, 1 insertion(+)
 create mode 100644 FileFeatureA.txt
PS C:\Users\lenovo\Desktop\writers> |
```

4. Implementasikan sebuah penanganan conflict di branch development ketika setelah merge dari branch featureA lalu merge dari branch featureB (Conflict bisa terjadi jika kedua branch mengerjakan di file dan line code yang sama)

Contoh kita memiliki sebuah File namanya FileFeature.txt pada Branch Main sebagai berikut:



FileFeature.txt kita add ke dalam Branch Main sebelum membuat 2 prototype:

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS COMMENTS
PS C:\Users\lenovo\Desktop\gitclone\sebuahRepository> git init
Reinitialized existing Git repository in C:/Users/lenovo/Desktop/gitclone/sebuahRepository/.git/
PS C:\Users\lenovo\Desktop\gitclone\sebuahRepository> git add .
PS C:\Users\lenovo\Desktop\gitclone\sebuahRepository> git commit -m "Add FileFeature.txt to Branch Main"
[main c1c278a] Add FileFeature.txt to Branch Main
1 file changed, 1 insertion(+), 1 deletion(-)
PS C:\Users\lenovo\Desktop\gitclone\sebuahRepository>
```

Kita ingin melakukan 2 prototyping yakni melalui branch FeatureA dan FeatureB:

Pertama: menuju ke Branch FeatureA

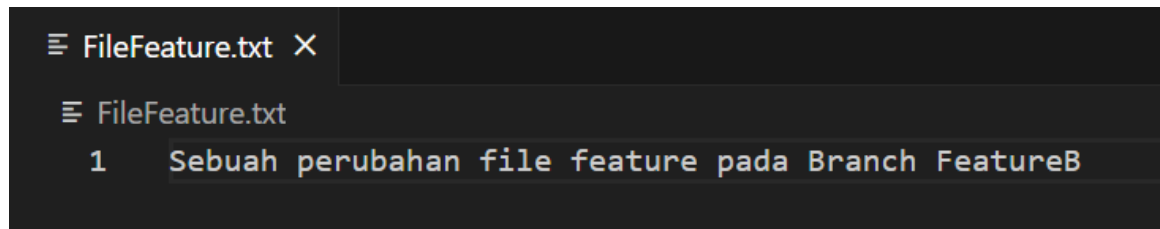
```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS COMMENTS
PS C:\Users\lenovo\Desktop\gitclone\sebuahRepository> git branch
development
featureA
featureB
* main
PS C:\Users\lenovo\Desktop\gitclone\sebuahRepository> git checkout featureA
Switched to branch 'featureA'
Your branch is ahead of 'origin/featureA' by 1 commit.
(use "git push" to publish your local commits)
PS C:\Users\lenovo\Desktop\gitclone\sebuahRepository>
```

Melakukan perubahan pada FileFeature.txt di branch FeatureA

```
FileFeature.txt X
FileFeature.txt
1 Sebuah perubahan file feature pada Branch FeatureA
```

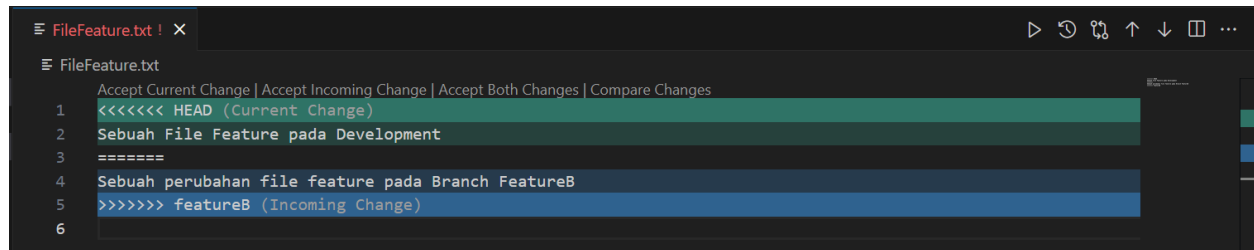
Kedua: menuju ke Branch FeatureB

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS COMMENTS
PS C:\Users\lenovo\Desktop\gitclone\sebuahRepository> git branch
development
* featureA
featureB
main
PS C:\Users\lenovo\Desktop\gitclone\sebuahRepository> git checkout featureB
Switched to branch 'featureB'
Your branch is ahead of 'origin/featureB' by 1 commit.
(use "git push" to publish your local commits)
PS C:\Users\lenovo\Desktop\gitclone\sebuahRepository>
```



```
FileFeature.txt X
FileFeature.txt
1  Sebuah perubahan file feature pada Branch FeatureB
```

Lalu semuanya dilakukan merge menuju branch Development (ambil contoh branch featureB ketika di merge menuju ke branch A):



```
FileFeature.txt ! X
FileFeature.txt
Accept Current Change | Accept Incoming Change | Accept Both Changes | Compare Changes
1 <<<<<< HEAD (Current Change)
2 Sebuah File Feature pada Development
3 =====
4 Sebuah perubahan file feature pada Branch FeatureB
5 >>>>>> featureB (Incoming Change)
6
```

Terdapat 4 pilihan solusi yakni accept current change, accept incoming change, accept both changes, dan compare changes, dimana kita bisa memilih salah satu sesuai dengan kenyamanan, sebelum lanjut melakukan commit.

5. Gunakan Merge no fast forward

6. Screenshot hasil network di github