# LAPORAN PRAKTIKUM

# **TEKNOLOGI CLOUD**

PERTEMUAN KE – 01



# Disusun Oleh:

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Kelas : Sistem Informasi-1

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# BAB I SCM-GIT DAN GITHUB PEMBAHASAN

### Latihan

### **Installasi Git**

```
Asus@DESKTOP-UQURKUI MINGW64 ~
$ git version
git version 2.33.0.windows.2
```

### **Konfigurasi Git**

```
Asus@DESKTOP-UQURKUI MINGW64 /c/Tgs5
$ git config --global user.name "Ara Widhi Astutik"

Asus@DESKTOP-UQURKUI MINGW64 /c/Tgs5
$ git config --global user.email "195610007@students.akakom.ac.id"
```

#### Uraian:

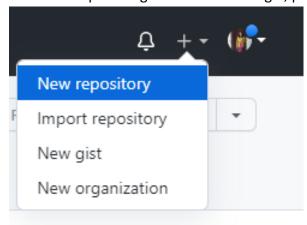
Pada source code diatas, kita menganalisasi user (diri kita) atau bisa disebut dengan mengatur kunci ID kita dengan menggunakan perintah git config –global.

### Mengelola Repo Sendiri

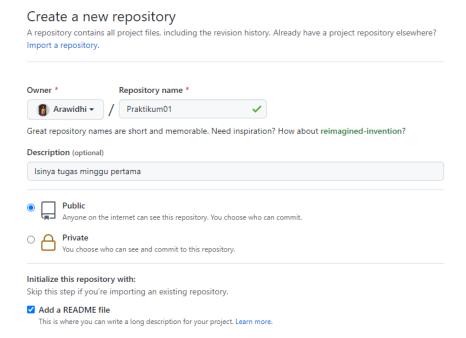
### Membuat Repo

Untuk membuat repo, gunakan langkah-langkah berikut:

1. Klik tanda + pada bagian atas setelah login, pilih New Repository

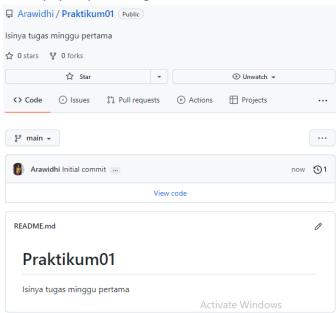


### 2. Isikan nama, keterangan, serta lisensi. Jika dikehendaki, bisa membuat repo Private



#### 3. Klik Create Repository

Setelah langkah-langkah tersebut, repo akan dibuat dan bisa diakses menggunakan pola https://github.com/username/reponame. Pada repo tersebut, hanya akan muncul 1 file, yaitu LICENSE. Jika memilih membuat README pada saat langkah ke 2, juga akan muncul README.md. Ada atau tidak ada README.md tidak mempunyai efek apapun pada langkah ini.



### **Clone Repo**

```
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01
$ git clone https://github.com/Arawidhi/Praktikum01
Cloning into 'Praktikum01'...
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
Receiving objects: 100% (3/3), done.
```

### Uraian:

Clone adalah proses untuk menduplikasikan remote repo di GitHub ke komputer lokal. Adapun langkah-langkahnya :

- Setelah berhasil membuat repository pada github, berikutnya mengcopy link tersebut (HTTPS) untuk nantinya akan digunakan pada saat proses clone.
- Sebelum proses clone, terlebih dahulu membuat folder yang nantinya akan digunakan sebagai tempat penyimpanan clone tersebut. Jika sudah, lalu mulai melanjutkannya dengan Git Bash dan mengetikkan source code seperti diatas.
- Apabila tidak terdapat kendala (berhasil), hasil clone akan tersimpan didalam folder yang telah dibuat sebelumnya.

Prak.TeknoClou

Setelah perintah ini, di direktori awesome-project akan disimpan isi repo yang sama dengan di GitHub. Perbedaannya, di komputer lokal terdapat direktori .git yang digunakan secara internal oleh Git.

### Mengelola Repo

Setelah clone ke komputer lokal, semua manipulasi konten dilakukan di komputer lokal dan hasilnya akan di-push ke remote repo di GitHub. Dengan demikian, jangan berganti-ganti remote lokal, sekali dibuat disitu, tetap berada disitu. Jika kehilangan repo lokal, clone ulang ke direktori yang bersih (kosong) setelah itu baru lakukan pengelolaan repo. Beberapa hal yang biasanya dilakukan akan diuraikan berikut ini.

### Mengubah Isi -Push Tanpa Branching dan Merging

```
$ vim README.md

MINGW64:/d/Prak.TeknoCloud.01/Praktikum01

# Praktikum01
Isinya tugas minggu pertama
~
~
```

```
Your branch is up to date with 'origin/main'.
Untracked files:
  (use "git add <file>..." to include in what will be committed)
nothing added to commit but untracked files present (use "git add" to track)
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ git add -A
Asus@DESKTOP-UQURKUI MINGW64 /d/P
$ git commit -m "Add : README.md"
                              64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
[main 8598c7d] Add : README.md
1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 .README.md.swp
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ git push origin
fatal: unable to access 'https://github.com/Arawidhi/Praktikum01/': Could not resolve host: gi
thub.com
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ git push origin
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 4 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 398 bytes | 99.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/Arawidhi/Praktikum01
   888f3e6..8598c7d main -> main
```

#### Uraian:

Pada source code diatas akan mengubah isi —push tanpa brancing dan merging, diawali dengan \$vim README.md . Fungsi \$ git commit adalah menyimpan perubahan yang dilakukan, tetapi tidak ada perubahan pada remote repository tersebut. Sedangkan \$ git push adalah untuk mengirimkan perubahan file setelah di commit ke remote repository.

### Mengubah Isi dengan Branching and Merging

```
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ git checkout -b edit-readme-1
Switched to a new branch 'edit-readme-1'
```

```
E325: ATTENTION
Found a swap file by the name ".README.md.swp"
         owned by: Asus dated: Wed Feb 16 21:50:15 2022
         file name: /d/Prak.TeknoCloud.01/Praktikum01/README.md
          modified: no
         user name: Asus host name: DESKTOP-UQURKUI
        process ID: 2267 (STILL RUNNING)
While opening file "README.md"
dated: Wed Feb 16 21:45:47 2022
(1) Another program may be editing the same file. If this is the case,
    be careful not to end up with two different instances of the same
    file when making changes. Quit, or continue with caution.
(2) An edit session for this file crashed.
   If this is the case, use ":recover" or "vim -r README.md"
    to recover the changes (see ":help recovery").
    If you did this already, delete the swap file ".README: tridy sytte" Wind
    to avoid this message.
                                                         Go to Settings to a
Swap file ".README.md.swp" already exists!
[0]pen Read-Only, (E)dit anyway, (R)ecover, (Q)uit, (A)bort:
```

```
W64 /d/Prak.TeknoCloud.01/Praktikum01 (edit-readme-1)
$ cat README.md
# Praktikum01
Isinya tugas minggu pertama
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (edit-readme-1)
$ git status
On branch edit-readme-1
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)
no changes added to commit (use "git add" and/or "git commit -a")
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (edit-readme-1)
$ git add -A
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (edit-readme-1)
$ git commit -m "Add : isi README.md"
[edit-readme-1 fd2aafa] Add : isi README.md
 1 file changed, 0 insertions(+), 0 deletions(-)
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (edit-readme-1)
$ git checkout origin
Note: switching to 'origin'.
You are in 'detached HEAD' state. You can look around, make experimental changes and commit them, and you can discard any commits you make in this
state without impacting any branches by switching back to a branch.
If you want to create a new branch to retain commits you create, you may
do so (now or later) by using -c with the switch command. Example:
  git switch -c <new-branch-name>
Or undo this operation with:
  ait switch -
Turn off this advice by setting config variable advice.detachedHead to false
HEAD is now at 8598c7d Add : README.md
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 ((8598c7d...))
$ git checkout main
                                                                  Activate Windows
Switched to branch 'main'
                                                                  Go to Settings to activate Wind
Your branch is up to date with 'origin/main'.
```

```
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ git status
On branch main
Your branch is up to date with 'origin/main'.
nothing to commit, working tree clean
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ git push origin edit-readme-1
fatal: unable to access 'https://github.com/Arawidhi/Praktikum01/': Could not resolve host: gi
thub.com
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ git push origin edit-readme-1
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 4 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 500 bytes | 125.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
remote: Create a pull request for 'edit-readme-1' on GitHub by visiting: remote: https://github.com/Arawidhi/Praktikum01/pull/new/edit-readme-1
remote:
To https://github.com/Arawidhi/Praktikum01
   [new branch]
                      edit-readme-1 -> edit-readme-1
```

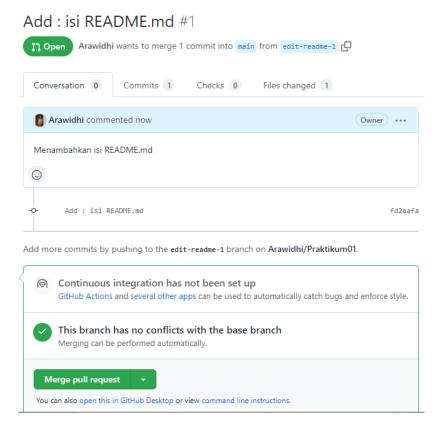
Pada source code diatas terdapat perubahan file pada README yang dikirimkan melalui git push. Setelah melakukan git push, selanjutnya adalah mengirimkannya pada pull request (PR). Adapun langkah-langkahnya yaitu:

- Pada laman Praktikum01 klik pull request, kemudian mulai mengisikan isi dari konten tersebut.
- Setelah selesai mengisikan, bisa langsung di-merge, dan menunggu untuk beberapa saat sebelum terselesaikan.

### Open a pull request

Create a new pull request by comparing changes across two branches. If you need to, you can also

### Setelah membuat PR, PR tersebut bisa di-merge:



#### Uraian:

Setelah itu, Confirm Merge, branch yang kita kirimkan tadi sudah dimasukkan ke branch master. Setelah itu, merge dikomputer lokal :

```
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ git push origin edit-readme-1
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 4 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 500 bytes | 125.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
remote:
remote: Create a pull request for 'edit-readme-1' on GitHub by visiting:
               https://github.com/Arawidhi/Praktikum01/pull/new/edit-readme-1
remote:
To https://github.com/Arawidhi/Praktikum01
                        edit-readme-1 -> edit-readme-1
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ git merge edit-readme-1
Updating 8598c7d..fd2aafa
Fast-forward
                               -> 12288 bytes
 .README.md.swp | Bin
 1 file changed, 0 insertions(+), 0 deletions(-)
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ git branch -D edit-readme-1
Deleted branch edit-readme-1 (was fd2aafa).
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ git branch
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
fatal: unable to access 'https://github.com/Arawidhi/Praktikum01/': Could not resolve host: gi
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ git pull
Already up to date.
```

- Git push berfungsi untuk memindahkan source file yang ada di repository kita ke remote repository yang ada di gitlab. Pada source code diatas memindahkan file README-1.
- Kemudian git branch, branch mempresentasikan tempat perubahan pada source file tersebut akan dipush. Pada source diatas, sebelumnya telah menghapus branch pada git push README-1.
- Dan yang terakhir adalah git pull, git pull berfungsi untuk memindahkan perubahan source file yang ada di remote repository ( perubahan, yang dimaksud relatif terhadap local repository kita yang sekarang).

#### Membatalkan Perubahan

```
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)

$ git checkout -b edit-readme-2
Switched to a new branch 'edit-readme-2'

Activate Winc
```

#### \$ vim README.md

```
URKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (edit-readme-2)
$ cat README.md
# Praktikum01
Isinya tugas minggu pertama
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (edit-readme-2)
$ git checkout origin
Note: switching to 'origin'.
You are in 'detached HEAD' state. You can look around, make experimental
changes and commit them, and you can discard any commits you make in this
state without impacting any branches by switching back to a branch.
If you want to create a new branch to retain commits you create, you may
do so (now or later) by using -c with the switch command. Example:
  git switch -c <new-branch-name>
Or undo this operation with:
 git switch -
Turn off this advice by setting config variable advice.detachedHead to false
HEAD is now at 8598c7d Add : README.md
```

```
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ cat README.md
# Praktikum01
Isinya tugas minggu pertama
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ git branch -D edit-readme-2
Deleted branch edit-readme-2 (was fd2aafa).
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ git branch
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ cat README.md
# Praktikum01
Isinya tugas minggu pertama
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ git reset --hard
HEAD is now at fd2aafa Add : isi README.md
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ cat README.md
# Praktikum01
                                                        Activate Windows
Isinya tugas minggu pertama
```

Pada source code diatas akan membatalkan perubahan yang ada pada file README sebelumnya. Perintah git checkout akan menghasilkan skema yang sama pada bagian before merging. Setelah itu mulai membuka git cat, git cat sendiri berfungsi untuk membuka repository apa saja yang telah kita buat. Kemudian mereset file README sebagai Head.

#### **Undo Commit Terakhir**

```
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ cat README.md
# Praktikum01
Isinya tugas minggu pertama

Go to Sottings to activate
```

```
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ cat README.md
# Praktikum01
Isinya tugas minggu pertama

Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ git log --oneline
fd2aafa (HEAD -> main, origin/edit-readme-1) Add : isi README.md
8598c7d (origin/main, origin/HEAD) Add : README.md
888f3e6 Initial commit
```

# Praktikum01

\$ git status On branch main

Isinya tugas minggu pertama

Your branch is up to date with 'origin/main'.

nothing to commit, working tree clean

```
$ vim README.md
E325: ATTENTION
Found a swap file by the name ".README.md.swp"
            owned by: Asus dated: Wed Feb 16 22:07:33 2022
           file name: /d/Prak.TeknoCloud.01/Praktikum01/README.md
            modified: no
                                  host name: DESKTOP-UQURKUI
           user name: Asus
          process ID: 2267 (STILL RUNNING)
While opening file "README.md"
                 dated: Wed Feb 16 21:45:47 2022
(1) Another program may be editing the same file. If this is the case,
     be careful not to end up with two different instances of the same
     file when making changes. Quit, or continue with caution.
(2) An edit session for this file crashed.

If this is the case, use ":recover" or "vim -r README.md" to recover the changes (see ":help recovery").
     If you did this already, delete the swap file ".README.md.swp"

ACTIVATE WINDO
     to avoid this message.
                                                                        Go to Settings to ac
 Swap file ".README.md.swp" already exists!
 [0]pen Read-Only, (E)dit anyway, (R)ecover, (Q)uit, (A)bort:
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ git add -A
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ git commit -m "Add : contents'
On branch main
Your branch is ahead of 'origin/main' by 1 commit.
  (use "git push" to publish your local commits)
nothing to commit, working tree clean
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ git commit -m "Add : contents - 2"
On branch main
Your branch is up to date with 'origin/main'.
nothing to commit, working tree clean
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ git push origin
To https://github.com/Arawidhi/Praktikum01
                        main -> main (fetch first)
hint: Updates were rejected because the remote contains work that you do hint: not have locally. This is usually caused by another repository pushing hint: to the same ref. You may want to first integrate the remote changes hint: (e.g., 'git pull ...') before pushing again. hint: See the 'Note about fast-forwards' in 'git push --help' for details.
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ cat README.md
```

Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)

Activate Windows

Contoh di atas adalah contoh untuk mengubah README.md dengan beberapa commit. Setelh itu, kita akan mengembalikan ke posisi terakhir sebelum commit terakhir.

### \$ git revert HEAD

Perintah di atas akan membuka editor. Pada editor tersebut kita bisa mengetikkan pesan revert ( = pesan commit untuk pembatalan). Setelah selesai, simpan:

```
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)

$ git revert HEAD
hint: Waiting for your editor to close the file...
[main 2022-02-16T15:31:52.431Z] update#setState idle
[main 2022-02-16T15:31:54.713Z] ExtensionHostStarterWorker created
[main 2022-02-16T15:32:16.907Z] Starting extension host with pid 18808 (fork() took 400 ms).
[main 2022-02-16T15:32:22.587Z] update#setState checking for updates
[main 2022-02-16T15:32:25.405Z] update#setState downloading
[14208:0216/223339.731:ERROR:gpu_init.cc(440)] Passthrough is not supported, GL is disabled
```

Dan mulai mengarahkan pada Teks Editor

```
© SCOMMIT_EDITMSG X
D:> PrakTeknoCloud.01 > Praktikum01 > .git > SCOMMIT_EDITMSG

1 Revert "Add: isi README.md"
2
3 This reverts commit fd2aafaa3f268fc853df63be475f4f175105d24d.

4
5 # Please enter the commit message for your changes. Lines starting
6 # with '#' will be ignored, and an empty message aborts the commit.
7 #
8 # On branch main
9 # Your branch is up to date with 'origin/main'.
10 #
11 # Changes to be committed:
12 # modified: .README.md.swp
13 #
14
```

#### Selanjutnya, tinggal di-push ke repo Github

```
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ git status
On branch main
Your branch is ahead of 'origin/main' by 4 commits.
(use "git push" to publish your local commits)
nothing to commit, working tree clean
 Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ git push origin
To https://github.com/Arawidhi/Praktikum01
                               main -> main (fetch first)
hint: Updates were rejected because the remote contains work that you do hint: not have locally. This is usually caused by another repository pushing hint: to the same ref. You may want to first integrate the remote changes hint: (e.g., 'git pull ...') before pushing again. hint: See the 'Note about fast-forwards' in 'git push --help' for details.
 Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ git push main
fatal: 'main' 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.
 Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ git push origin main
To https://github.com/Arawidhi/Praktikum01
                                main -> main (fetch first)
hint: Updates were rejected because the remote contains work that you do
hint: optiates were rejected because the remote contains work that you so
hint: not have locally. This is usually caused by another repository pushing
hint: to the same ref. You may want to first integrate the remote changes
hint: (e.g., 'git pull ...') before pushing again.
hint: See the 'Note about fast-forwards' in 'git push --help' for details.
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ cat README.md
i# Praktikum01
                                                                                      Activate Windows
Isinya tugas minggu pertama
```

Jika commit sudah dilakukan, tetapi belum di-push ke repo Github (masih berada di lokal), cara membatalkannya:

```
sus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ vim README.md
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ cat README.md
i# Praktikum01
Isinya tugas minggu pertama
Masih awal
Tambahan 1
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ git add -A
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ git commit -m "Add : Masih awal Tambahan 1"
[main ca2fd21] Add : Masih awal Tambahan 1
1 file changed, 4 insertions(+)
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ git status
On branch main
Your branch is ahead of 'origin/main' by 5 commits.
  (use "git push" to publish your local commits)
nothing to commit, working tree clean
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ git log --oneline
ca2fd21 (HEAD -> main) Add : Masih awal Tambahan 1
dd2bcc5 Revert "Add : contents - 2"
De203f2 Add : contents - 2
 2778de Add : contents - 2
L322f40 Add : contents
                     n, origin/edit-readme-1, origin/HEAD) Add : isi README.md
 d2aafa (or
8598c7d Add : README.md
                                                            Activate Windows
888f3e6 Initial commit
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ git reset --hard HEAD^
HEAD is now at dd2bcc5 Revert "Add : contents - 2"
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
```

```
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)

$ git reset --hard HEAD^
HEAD is now at dd2bcc5 Revert "Add : contents - 2"

Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)

$ git status
On branch main
Your branch is ahead of 'origin/main' by 4 commits.
  (use "git push" to publish your local commits)

nothing to commit, working tree clean

Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)

$ cat README.md
i# Praktikum01
Isinya tugas minggu pertama

Go to Settings to activate Windows
```

Pada source code diatas, mulai mencoba untuk menambahkan konten (isi) pada repository kita (Praktikum01). Penambahan isi tersebut dilakukan pada \$vim, setelah itu klik insert dan mulai menambahkan isi sesuai keinginan user. Untuk menyimpannya ketikkan ctrl+c dan dilanjutkan dengan shift z+Z.

Untuk kembali ke perubahan pada saar yang sudah lama, yang perlu dilakukan adalah melakukan git revert <posisi> kemudian mengedit secara manual kemudian push ke repo.

```
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ git revert
usage: git revert [<options>] <commit-ish>...
   or: git revert <subcommand>
                             end revert or cherry-pick sequence
    --auit
    --continue
                            resume revert or cherry-pick sequence
    --abort
                             cancel revert or cherry-pick sequence
                             skip current commit and continue
    --skip
    --cleanup <mode> how to strip spaces and #comments from message
-n, --no-commit don't automatically commit
-e, --edit edit the commit message
-signoff add a Signed-off-by trailer
    -s, --signoff
                             add a Signed-off-by trailer
    -m, --mainline <parent-number>
                             select mainline parent
    --rerere-autoupdate update the index with reused conflict resolution if possible
    --strategy <strategy>
                              merge strategy
```

```
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ cat README.md
i# Praktikum01
Isinya tugas minggu pertama
 Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ vim README.md
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ cat README.md
i# Praktikum01
Isinya tugas minggu pertama
no changes added to commit (use "git add" and/or "git commit -a")
 Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ cat README.md
# Praktikum01
Isinya tugas minggu pertama
Masih awal
Tambahan 1
Tambahan 2
 Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ git revert 1322f40
hint: Waiting for your editor to close the file..
hint: Waiting for your editor to close the file...

[main 2022-02-17T01:44:58.986Z] update#setState idle

[main 2022-02-17T01:44:59.759Z] ExtensionHostStarterWorker created

[main 2022-02-17T01:45:11.563Z] Starting extension host with pid 11356 (fork() took 33 ms).

[main 2022-02-17T01:45:11.567Z] ExtensionHostStarterWorker.start() took 39 ms.

[main 2022-02-17T01:45:28.992Z] update#setState checking for updates

[main 2022-02-17T01:45:29.241Z] update#setState idle

[main 2022-02-17T01:46:01.911Z] Waiting for extension host with pid 11356 to exit.

[main 2022-02-17T01:46:01.984Z] Extension host with pid 11356 exited with code: 0, signal: nul
 [main 980e54b] Revert "Add : contents"
 1 file changed, 0 insertions(+), 0 deletions(-) Activate Windows
```

#### Uraian:

Setelah itu, jika dilihat pada file, akan muncul tambahan untuk memudahkan meng-edit.file ini harus di resolve terlebih dahulu, setelah itu baru di add dan di commit :

```
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ cat README.md
i# Praktikum01
Isinya tugas minggu pertama
no changes added to commit (use "git add" and/or "git commit -a")
```

Edit file tersebut, setelah itu simpan.

```
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ vim README.md
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ cat README.md
# Praktikum01
Isinya tugas minggu pertama
Masih awal
Tambahan 1 setelah revert
Tambahan 2
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
On branch main
Your branch is ahead of 'origin/main' by 5 commits.
  (use "git push" to publish your local commits)
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)
no changes added to commit (use "git add" and/or "git commitivate Windows
Go to Settings to activate Wind
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ git add README.md
```

Setelah itu, lanjutkan proses revert. Saat git revert –continue isikan pesan revert.

```
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ vim README.md
```

```
TOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ git status
On branch main
Your branch is ahead of 'origin/main' by 5 commits.
  (use "git push" to publish your local commits)
Changes to be committed:
 (use "git restore --staged <file>..." to unstage)
    modified: README.md
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ git revert --continue
error: no cherry-pick or revert in progress
fatal: revert failed
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ git status
On branch main
Your branch is ahead of 'origin/main' by 5 commits.
  (use "git push" to publish your local commits)
Changes to be committed:
 (use "git restore --staged <file>..." to unstage)
          modified: README.md
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ git push origin main
To https://github.com/Arawidhi/Praktikum01
                           main -> main (fetch first)
hint: Updates were rejected because the remote contains work that you do hint: not have locally. This is usually caused by another repository pushing hint: to the same ref. You may want to first integrate the remote changes hint: (e.g., 'git pull ...') before pushing again. hint: See the 'Note about fast-forwards' in 'git push --help' for details.
```

### Membuat Rangkuman (Artikel Wikipedia)

https://id.wikipedia.org/wiki/Komputasi awan

### **Cloud Computing**

Komputasi awan (cloud computing) adalah gabungan pemanfaatan teknologi komputer (komputasi) dan pengembangan berbasis internet (awan). Komputasi awan ad ah suatu konsep umum yang mencakup SaaS, Web 2.0, dan tren teknologi terbaru lain yang dikenal luas, dengan tema umum berupa ketergantungan terhadap Internet untuk memberikan kebutuhan komputasi pengguna. Sebagai contoh, Google Apps menyediakan aplikasi bisnis umum secara daring yang diakses melalui suatu penjelajah web dengan perangkat lunak dan data yang tersimpan di server. Komputasi awan saat ini merupakan trend teknologi terbaru, dan contoh bentuk pengembangan dari teknologi Cloud Computing ini adalah iCloud.

### Sejarah Komputasi Awan

Komputasi awan mulai lahir pada tahun 1960 oleh ilmuwan komputer John McCarthy, seorang pakar komputasi MIT yang kesohor sebagai pioner intelejensia buatan. John berpendapat bahwa komputasi akan menjadi infrastruktur publik seperti telepon dan listrik yang berkembang suatu hari nanti.

### **Manfaat Komputasi Awan**

- a. Skalabilitas, yaitu dengan cloud computing kita bisa menambah kapasitas penyimpanan data tanpa harus membeli peralatan tambahan.
- b. Aksesibilitas, kita dapat mengakses data kapanpun dan dimanapun kita berada, asal terkoneksi dengan internet.
- c. Keamanan, data terjamin keamanannya oleh penyedia layanan cloud computing.
- d. Kreasi, para user bisa melakukan/mengembangkan kreasi atau project mereka tanpa harus mengirimkannya langsung ke perusahaan.
- e. Kecemasan, ketika terjadi bencana alam data milik kita tersimpan aman di cloud meskipun hardisk atau gadget kita rusak.

### Layanan Komputasi Awan

a. Infracstructure as a Service (laaS) , adalah layanan komputasi awan yang menyediakan infrastruktur IT berupa CPU, RAM, storage, bandwith dan konfigurasi lain. Semua komponen tersebut digunakan untuk membangun komputer virtual. Komputer virtual dapat diinstal sistem operasi dan aplikasi sesuai kebutuhan. Keuntungan layanan laaS ini adalah tidak perlu membeli komputer fisik sehingga lebih menghemat biaya.

- b. Platform as a Service (PaaS), adalah layanan yang menyediakan computing platform. Biasanya sudah terdapat sistem operasi, database, web server dan framework aplikasi agar dapat menjalankan aplikasi yang telah dibuat. Keuntungan layanan PaaS ini bagi pengembang adalah mereka bisa fokus pada aplikasi yang mereka buat tanpa memikirkan tentang pemeliharaan dari computing platform.
- c. Software as a Service (SaaS), adalah layanan komputasi awan dimana kita bisa langsung menggunakan aplikasi yang telah disediakan. Penyedia layanan mengelola infrastruktur dan platform yang menjalankan aplikasi tersebut.

### Implementasi Komputasi Awan

- a. Computer Front End, biasanya merupakan Komputer Dekstop biasa.
- b. Computer Back End, dalam skala besar biasanya berupa server komputer yang dilengkapi dengan data center dalam rak-rak besar.
- c. Penghubung antara keduannya, bisa berupa jaringan LAN atau Internet.
- d. Dalam pemerintahan (E-Goverment), dapat membantu para staf dibidang pemerintahan untuk memberikan pelayanan yang lebih baik ke masyarakat.

### **Contoh Komputasi Awan**

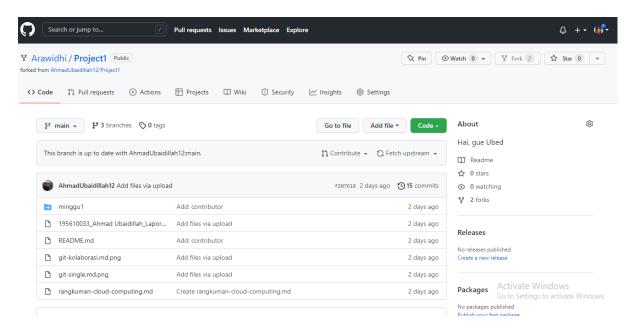
- a. Google Drive
- b. Windows Azure

### **Tugas**

#### Git Untuk Kolaborasi

#### **Fork**

Pada kesempatan kali ini, saya berkolaborasi dengan teman saya yang memiliki nama akun AhmadUbaidillah



#### Uraian:

Proses kolaborasi dilakukan dengan beberapa tahap, yakni :

- Membuka akun github teman kita pada browser (dalam hal ini konsepnya sama seperti ketika kita bermain sosial media (instagram) dan kita menelusuri akun teman kita.
- Setelah berhasil membukanya, mulai melakukan fork pada repository teman kita. Kemudian dilanjutkan dengan proses clone.

Proses clone akan dilakukan di komputer lokal :

```
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01
$ git clone https://github.com/Arawidhi/Project1
Cloning into 'Project1'...
remote: Enumerating objects: 37, done.
remote: Counting objects: 100% (37/37), done.
remote: Compressing objects: 100% (33/33), done.
remote: Total 37 (delta 9), reused 16 (delta 1), pack-reused 0
Receiving objects: 100% (37/37), 1.45 MiB | 230.00 KiB/s, done.
Resolving deltas: 100% (9/9), done.
```

Setelah berhasil melakukan proses clone repository teman kita, maka file tersebut akan tersimpan di folder yang sebelumnya telah kita buat. Clone sendiri merupakan tindakan untuk menyalin repo online ke repo lokal.

Setelah itu, konfigurasikan repo lokal kontributor. Pada kondisi saat ini, di komputer lokal sudah terdapat repo playground-1 yang berada pada direktori dengan nama yang sama. Untuk keperluan berkontribusi, ada 2 nama repo yang harus diatur:

- 1. origin: menunjuk ke repo milik kontributor di GitHub, hasil dari fork.
- 2. upstream: menunjuk ke repo milik upstream author (repo asli) di account oldstager.

Repo origin sudah dituliskan konfigurasinya pada saat melakukan proses clone dari repo kontributor. Konfigurasi repo upstream harus dibuat.

```
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Project1 (main)
$ git remote -v
origin https://github.com/Arawidhi/Project1 (fetch)
origin https://github.com/Arawidhi/Project1 (push)
```

#### Tambahkan remote upstream

```
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Project1 (main)
$ git remote add upstream https://github.com/AhmadUbaidillah12/Project1

Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Project1 (main)
$ git remote -v
origin https://github.com/Arawidhi/Project1 (fetch)
origin https://github.com/Arawidhi/Project1 (push)
upstream https://github.com/AhmadUbaidillah12/Project1 (fetch)
upstream https://github.com/AhmadUbaidillah12/Project1 (push)
```

### Uraian:

Remote yang disertai url github merupakan alamat yang merujuk pada lokasi repo online kita berada. Remote url inilah yang menghubungkan repo lokal kita dengan repo online, sehingga memungkinkan untuk mengirimkan perubahan yang sudah kita lakukan dilokal ke repo online atau dengan kata lain mengambil perubahan yang ada di repo onlie untuk memperbaharui repo lokal kita.

### Membuat Perubahan di Repo Lokal

```
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Project1/minggul (main)
$ git fetch upstream
From https://github.com/AhmadUbaidillah12/Project1

* [new branch] add-contributor -> upstream/add-contributor

* [new branch] edit-readme-1 -> upstream/edit-readme-1

* [new branch] main -> upstream/main
```

```
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
total 17
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ cat README.md
# Praktikum01
Isinya tugas minggu pertama
Masih awal
Tambahan 1 setelah revert
Tambahan 2
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ git checkout -b add-contributor
Switched to a new branch 'add-contributor'
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (add-contributor)
$ git branch
 add-contributor
 main
```

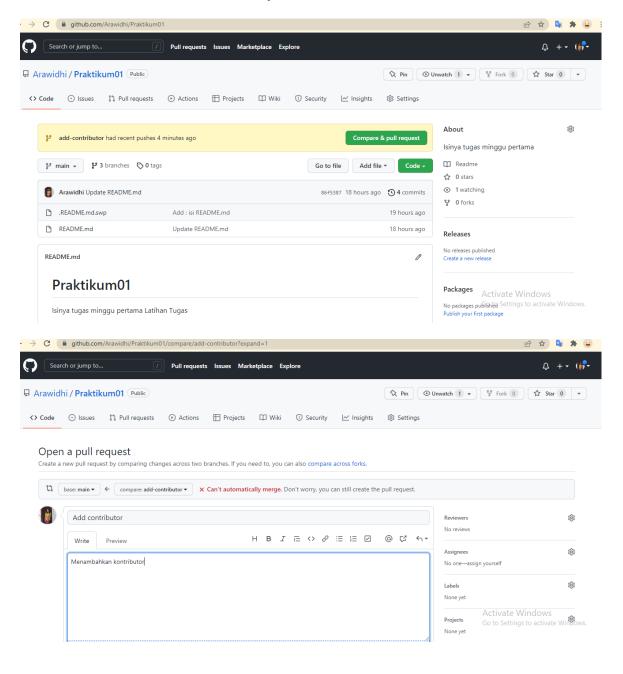
```
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (add-contributor)
$ vim README.md
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (add-contributor)
$ cat README.md
# Praktikum01
Isinya tugas minggu pertama
Masih awal
Tambahan 1 setelah revert
Tambahan 2
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (add-contributor)
$ git status
On branch add-contributor
Changes to be committed:

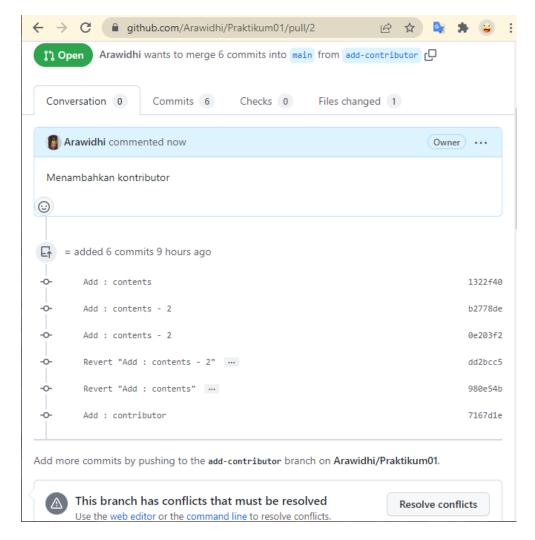
(use "git restore --staged <file>..." to unstage)
         modified: README.md
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (add-contributor)
$ git add -A
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (add-contributor)
$ git commit -m "Add : contributor"
[add-contributor 7167d1e] Add : contributor
1 file changed, 7 insertions(+), 1 deletion(-)
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (add-contributor)
$ git checkout origin
Note: switching to 'origin'.
```

```
sus@DESKTOP-UQURKUI MINGW64 /<mark>d/Prak.TeknoCloud.01/Praktikum01 ((fd2aafa...))</mark>
$ git checkout main
Previous HEAD position was fd2aafa Add : isi README.md
Switched to branch 'main'
Your branch is ahead of 'origin/main' by 5 commits.
        "git push" to publish your local commits)
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ git push origin add-contributor
Enumerating objects: 18, done.
Counting objects: 100% (18/18), done.
Delta compression using up to 4 threads
Compressing objects: 100% (14/14), done.
Writing objects: 100% (15/15), 1.55 KiB | 158.00 KiB/s, done.
Total 15 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
remote:
remote: Create a pull request for 'add-contributor' on GitHub by visiting:
              https://github.com/Arawidhi/Praktikum01/pull/new/add-contributor
remote:
To https://github.com/Arawidhi/Praktikum01
                                                              Activate Windows
   [new branch]
                       add-contributor -> add-contributor
```

Dari hasil remote url sebelumnya, selanjutnya membuat perubahan pada repo lokal. Perubahan tersebut dilakukan pada \$ vim seperti sebelumnya, dengan menambahkan isi konten "Tambahan 1 setelah revert ". Kemudian menyimpan perubahan yang dilakukan menggunakan git commit, tetapi tidak ada perubahan pada remote repository.

## Membuka halaman Web dari repo kontributor





Halaman web dari repo kontributor pada gambar diatas yaitu :

### https://github.com/Arawidhi/Praktikum01.git

Pada halaman tersebut akan menampilkan isi yang kita push. Setelah itu, memilih Compare and pull request dan mulai mengisikan deskripsi PR seperti gambar diatas,kemudian mengklik pada Create pull request. Upstream author bisa menyetujui setelah melakukan review ketika klik Pull Request, akan muncul PR dengan message seperi yang ditulis oleh kontributor (Add:contributor). Klik PR tersebut, review kemudian klik Merge pull request diikuti dengan Confirm merge. Maka status akan berubah menjadi Merged.

### Sinkronisasi semua repo (lokal maupun GitHub Kontributor)

```
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)

$ git checkout main
Already on 'main'
Your branch is ahead of 'origin/main' by 5 commits.
  (use "git push" to publish your local commits)

Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)

$ git branch
  add-contributor

* main
```

```
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ git fetch upstream
fatal: 'upstream' 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.
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ cat README.md
i# Praktikum01
Isinya tugas minggu pertama
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ git merge upstream/main
merge: upstream/main - not something we can merge
Asus@DESKTOP-UQURKUI MING
                           64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ git merge upstream/origin
merge: upstream/origin - not something we can merge
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ git push origin
fatal: unable to access 'https://github.com/Arawidhi/Praktikum01/': Could not resolve host: gi
thub.com
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ cat README.md
i# Praktikum01
Isinya tugas minggu pertama
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
$ git branch -D add-contributor
                                                        Activate Windows
Deleted branch add-contributor (was 7167dle).
Go to Settings to activate Windows.
Asus@DESKTOP-UQURKUI MINGW64 /d/Prak.TeknoCloud.01/Praktikum01 (main)
```

#### Uraian:

Pada langkah ini mengsinkronisasi semua repo (lokal maupun github kontributor) yang telah kita buat sebelumnya. Namun , pada saat mengsinkronisasi terdapat kendala pada git merge upstream dan git push. Sehingga proses tidak berjalan maksimal.

Arawidhi minggu01		1b4f2e5 3 minutes ago	<b>⊙</b> 6 commits
.README.md.swp	Add : isi README.md		23 hours ago
195610007_Ara Widhi Astutik_Lap.TC	minggu01		3 minutes ago
README.md	Update README.md		23 hours ago
rangkuman-cloud-computing.md	Create rangkuman-cloud-computing.md		25 minutes ago

## **BAB II**

# **DAFTAR PUSTAKA**

https://www.hostinger.co.id/tutorial/cara-menggunakan-github-perintah-dasar-github https://www.niagahoster.co.id/blog/git-tutorial-dasar/