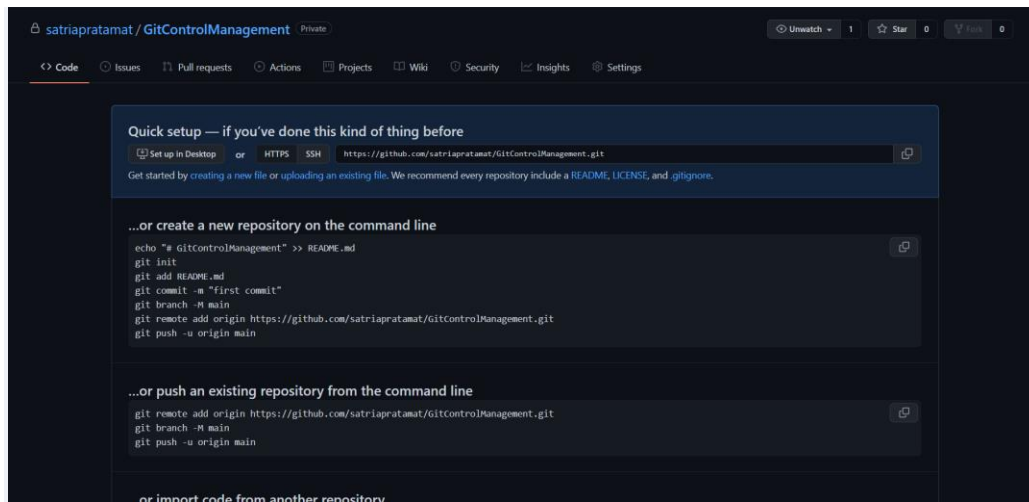# Task – Version Control and Branch Management (Git)

1. Buat sebuah repository di Github

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

```
$ git add script-alta.sh
warning: LF will be replaced by CRLF in script-alta.sh.
The file will have its original line endings in your working directory

satri@DESKTOP-KBQRR0U MINGW64 ~/Documents/Alterra/GitManagement (master)
$ git add script-alta2.sh
warning: LF will be replaced by CRLF in script-alta2.sh.
The file will have its original line endings in your working directory

satri@DESKTOP-KBQRR0U MINGW64 ~/Documents/Alterra/GitManagement (master)
$ git commit -m "first commit"
[master (root-commit) 77b7d70] first commit
 2 files changed, 11 insertions(+)
 create mode 100644 script-alta.sh
 create mode 100644 script-alta2.sh

satri@DESKTOP-KBQRR0U MINGW64 ~/Documents/Alterra/GitManagement (master)
$ git push -u origin master
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.

satri@DESKTOP-KBQRR0U MINGW64 ~/Documents/Alterra/GitManagement (master)
$ git push -u master
fatal: 'master' 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.

satri@DESKTOP-KBQRR0U MINGW64 ~/Documents/Alterra/GitManagement (master)
$ git push -u GitControlManagement master

Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 4 threads

Compressing objects: 100% (3/3), done.
```

```
satri@DESKTOP-KBQRR0U MINGW64 ~/Documents/Alterra/GitManagement (master)
$ git checkout -b develop master
Switched to a new branch 'develop'

satri@DESKTOP-KBQRR0U MINGW64 ~/Documents/Alterra/GitManagement (develop)
$ git checkout develop
Already on 'develop'

satri@DESKTOP-KBQRR0U MINGW64 ~/Documents/Alterra/GitManagement (develop)
$ cat script-alterra.sh
cat: script-alterra.sh: No such file or directory

satri@DESKTOP-KBQRR0U MINGW64 ~/Documents/Alterra/GitManagement (develop)
$ cat script-alta.sh
echo Git Management Control
echo Hello World

satri@DESKTOP-KBQRR0U MINGW64 ~/Documents/Alterra/GitManagement (develop)
$ nano script-alta.sh

satri@DESKTOP-KBQRR0U MINGW64 ~/Documents/Alterra/GitManagement (develop)
$ nano script-alta2.sh
```

```
satri@DESKTOP-KBQRR0U MINGW64 ~/Documents/Alterra/GitManagement (develop)
$ nano script-alta2.sh

satri@DESKTOP-KBQRR0U MINGW64 ~/Documents/Alterra/GitManagement (develop)
$ git checkout -b feature1 develop
Switched to a new branch 'feature1'
M       script-alta.sh
M       script-alta2.sh

satri@DESKTOP-KBQRR0U MINGW64 ~/Documents/Alterra/GitManagement (feature1)
$ git add script-alta.sh
warning: LF will be replaced by CRLF in script-alta.sh.
The file will have its original line endings in your working directory

satri@DESKTOP-KBQRR0U MINGW64 ~/Documents/Alterra/GitManagement (feature1)
$ nano script-alta2.sh

satri@DESKTOP-KBQRR0U MINGW64 ~/Documents/Alterra/GitManagement (feature1)
$ git add script-alta2.sh

warning: LF will be replaced by CRLF in script-alta2.sh.
The file will have its original line endings in your working directory

satri@DESKTOP-KBQRR0U MINGW64 ~/Documents/Alterra/GitManagement (feature1)
$ git commit -m "third commit"
[feature1 864373b] third commit

 2 files changed, 3 insertions(+), 3 deletions(-)

satri@DESKTOP-KBQRR0U MINGW64 ~/Documents/Alterra/GitManagement (feature1)
$ git push -u GitControlManagement feature1
Enumerating objects: 7, done.
Counting objects: 100% (7/7), done.
Delta compression using up to 4 threads
Compressing objects: 100% (4/4), done.
Writing objects: 100% (4/4), 448 bytes | 64.00 KiB/s, done.
Total 4 (delta 0), reused 0 (delta 0), pack-reused 0
remote:
```

```
satri@DESKTOP-KBQRR0U MINGW64 ~/Documents/Alterra/GitManagement (develop)
$ git checkout -b feature2 develop
Switched to a new branch 'feature2'

satri@DESKTOP-KBQRR0U MINGW64 ~/Documents/Alterra/GitManagement (feature2)
$ nano script-alta.sh

satri@DESKTOP-KBQRR0U MINGW64 ~/Documents/Alterra/GitManagement (feature2)
$ nano script-alta2.sh


satri@DESKTOP-KBQRR0U MINGW64 ~/Documents/Alterra/GitManagement (feature2)
$ git add script-alta.sh


satri@DESKTOP-KBQRR0U MINGW64 ~/Documents/Alterra/GitManagement (feature2)
$ git add script-alta2.sh

satri@DESKTOP-KBQRR0U MINGW64 ~/Documents/Alterra/GitManagement (feature2)
$ git commit -m "fifth commit"
[feature2 abc7838] fifth commit
 2 files changed, 5 insertions(+), 5 deletions(-)

satri@DESKTOP-KBQRR0U MINGW64 ~/Documents/Alterra/GitManagement (feature2)
$ git push -u GitControlManagement feature2
Enumerating objects: 7, done.
Counting objects: 100% (7/7), done.
Delta compression using up to 4 threads
Compressing objects: 100% (4/4), done.
Writing objects: 100% (4/4), 471 bytes | 157.00 KiB/s, done.
Total 4 (delta 0), reused 0 (delta 0), pack-reused 0
remote:
remote: Create a pull request for 'feature2' on GitHub by visiting:
remote:      https://github.com/satriapratamat/GitControlManagement/pull/new/feature2
remote:
To https://github.com/satriapratamat/GitControlManagement.git
 * [new branch]      feature2 -> feature2
Branch 'feature2' set up to track remote branch 'feature2' from 'GitControlManagement'.
```

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

Sudah ada pada screenshot nomor 2

4. Implementasikan sebuah penanganan **conflict** di branch developement 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)

```
satri@DESKTOP-KBQRR0U MINGW64 ~/Documents/Alterra/GitManagement (develop)
$ git merge --no-ff feature2
Merge made by the 'recursive' strategy.
 script-alta.sh  | 2 +-
 script-alta2.sh | 8 ++++----
 2 files changed, 5 insertions(+), 5 deletions(-)
```

5. Gunakan merge no fast forward

```
satri@DESKTOP-KBQRR0U MINGW64 ~/Documents/Alterra/GitManagement (develop)
$ git merge --no-ff feature2
Merge made by the 'recursive' strategy.
 script-alta.sh  | 2 +-
 script-alta2.sh | 8 ++++----
 2 files changed, 5 insertions(+), 5 deletions(-)

satri@DESKTOP-KBQRR0U MINGW64 ~/Documents/Alterra/GitManagement (develop)
$ git push -u GitControlManagement develop
Enumerating objects: 1, done.
Counting objects: 100% (1/1), done.
Writing objects: 100% (1/1), 244 bytes | 81.00 KiB/s, done.
Total 1 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/satriapratamat/GitControlManagement.git
   6d431c7..723613f  develop -> develop
Branch 'develop' set up to track remote branch 'develop' from 'GitControlManagement'.

satri@DESKTOP-KBQRR0U MINGW64 ~/Documents/Alterra/GitManagement (develop)
$ git checkout master
Switched to branch 'master'
Your branch is up to date with 'GitControlManagement/master'.

satri@DESKTOP-KBQRR0U MINGW64 ~/Documents/Alterra/GitManagement (master)
$ git merge develop
Updating 77b7d70..723613f
Fast-forward
 script-alta.sh  |  4 +++-
 script-alta2.sh | 12 ++++++------
 2 files changed, 9 insertions(+), 7 deletions(-)

satri@DESKTOP-KBQRR0U MINGW64 ~/Documents/Alterra/GitManagement (master)
$ git push -u GitControlManagement master
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/satriapratamat/GitControlManagement.git
   77b7d70..723613f  master -> master
Branch 'master' set up to track remote branch 'master' from 'GitControlManagement'.
```