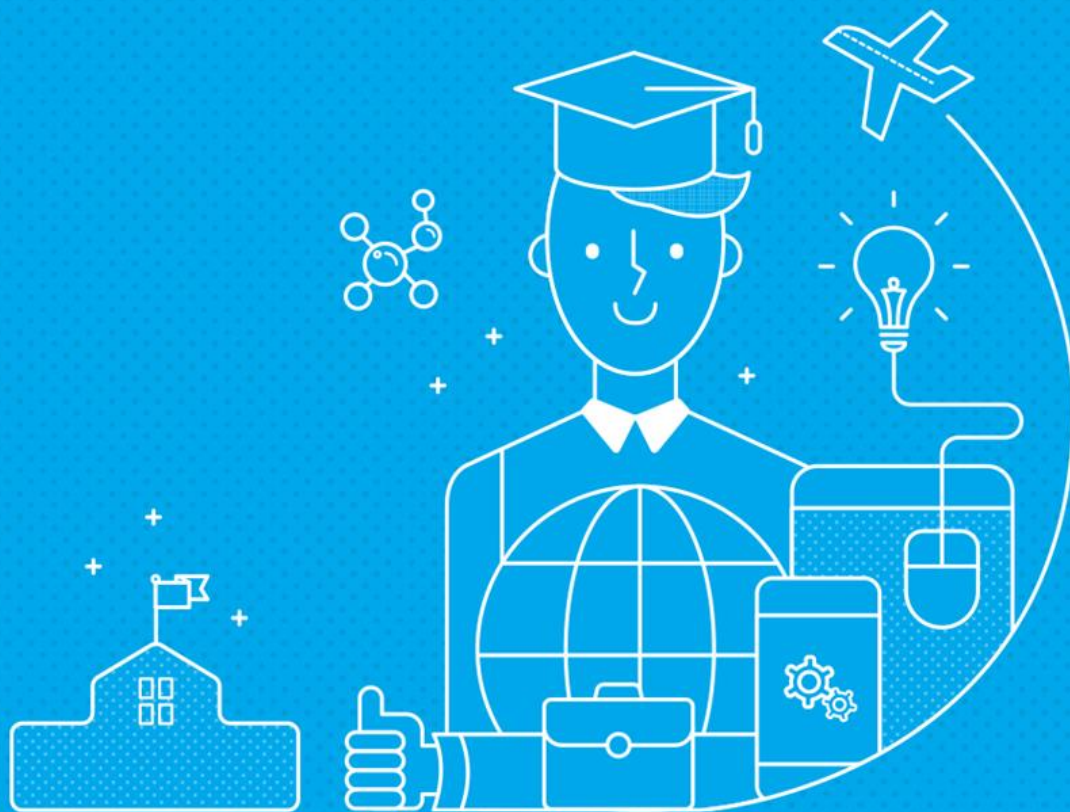


삼성 청년 SW 아카데미

대한민국 SW의 미래

— Git 설명 자료

2019. 06



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Samsung Software Academy For Youth



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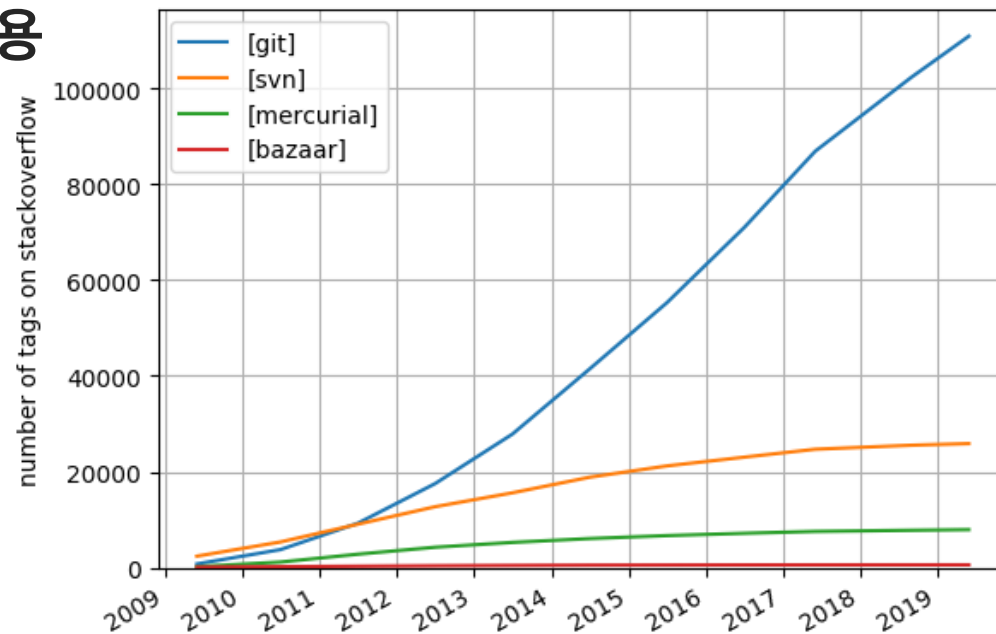
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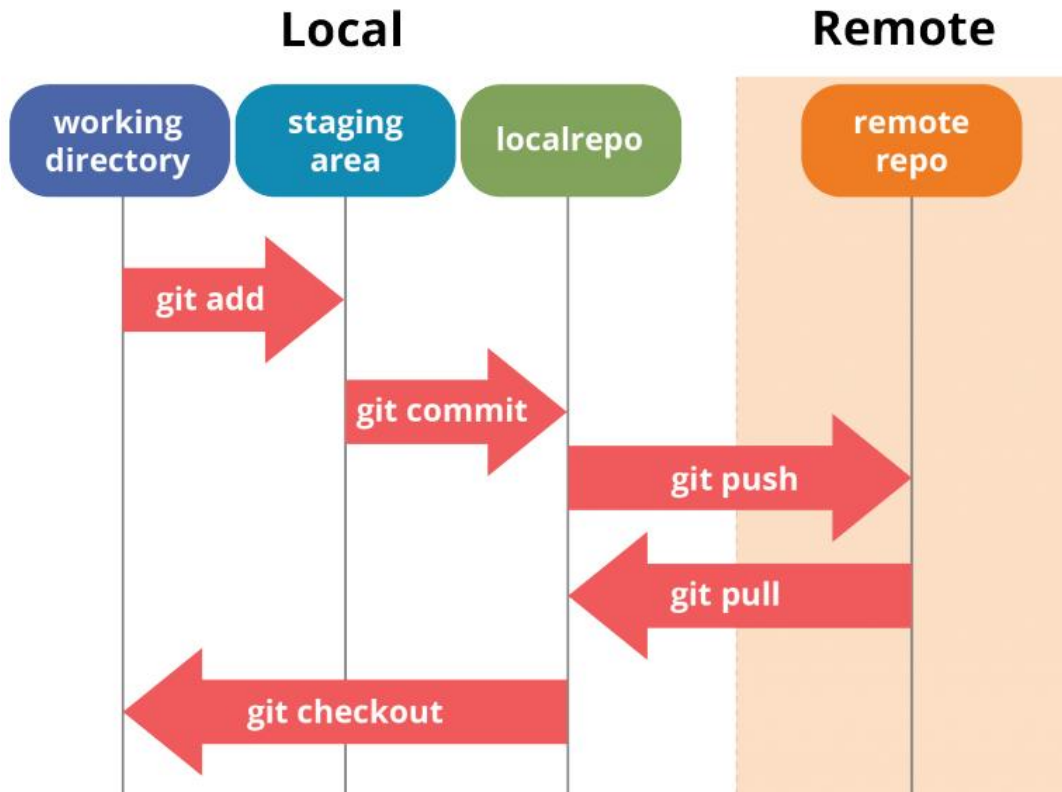
Git 이란?

對外秘

- ✓ 소스코드, 버전 관리 툴
- ✓ 리눅스 토발즈 개발
- ✓ 가장 많이 사용



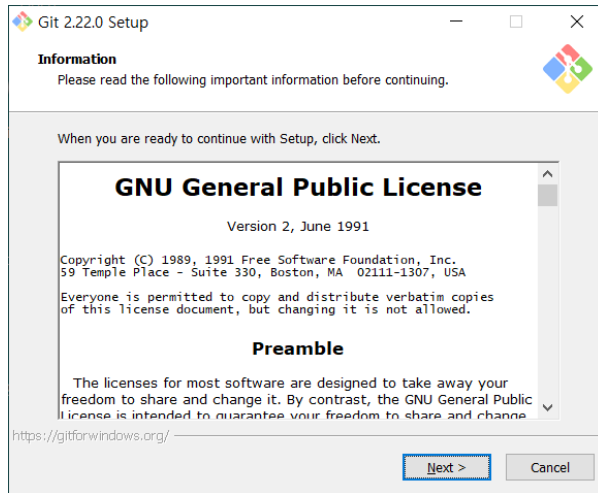
- ✓ GUI Client - <https://git-scm.com/download/gui/windows>



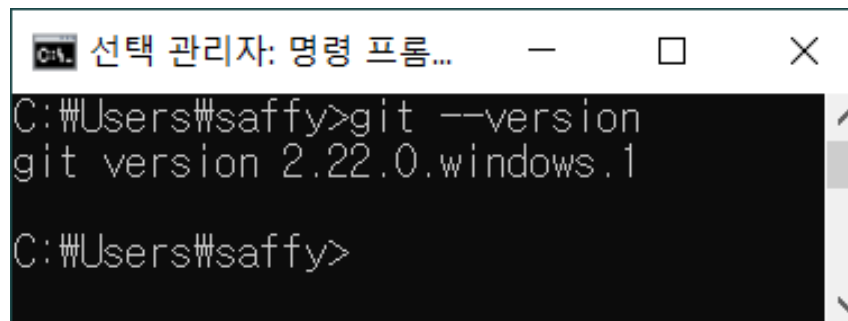
- ✓ Working directory – 작업 디렉토리
- ✓ Staging area – 파일 추가, 수정, 삭제 등 변경 사항 파악
- ✓ Local repository –소스 변경 상태 저장소(현재 컴퓨터)
- ✓ Remote repository –소스 변경 상태 원격 저장소(GitHub, GitLab)

✓ 다운로드 - <https://git-scm.com/download/win>

✓ 설치

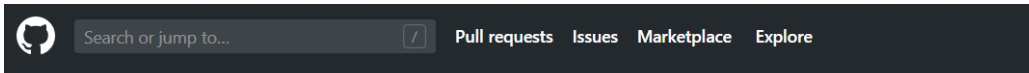


✓ 설치 확인

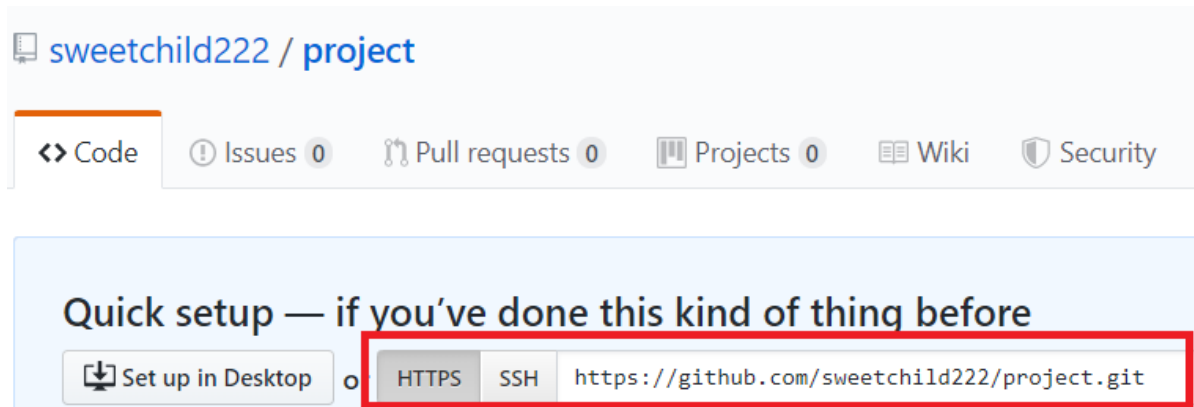


원격 저장소 생성 – 실습 #1

對外秘



✓ 원격 저장소 생성



✓ 생성된 저장소 주소 확인

```
D:\>git clone https://github.com/sweetchild222/project.git 1
Cloning into 'project'...
warning: You appear to have cloned an empty repository.

D:\>cd project 2-1

D:\project>echo "this is sample" >> sample.c 2-2

D:\project>git status 3
On branch master

No commits yet

Untracked files:
  (use "git add <file>..." to include in what will be committed)

        sample.c

nothing added to commit but untracked files present (use "git add" to track)
```

- ✓ 1 - 원격 저장소에서 로컬 저장소로 복사
- ✓ 2 - 임의 소스 파일 생성
- ✓ 3 - Untracked 상태로 Staging area 에 올라가기 전 상태 확인

```
D:\#project>git add sample.c 4

D:\#project>git status 5
On branch master

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)

    new file:   sample.c

D:\#project>git commit -m "add first file" 6
[master (root-commit) a004759] add first file
1 file changed, 1 insertion(+)
create mode 100644 sample.c

D:\#project>git log 7
commit a0047591d7f3bd5ef25e7fec904d13b5f9fcba9 (HEAD -> master)
Author: sweetchild222 <sweetchild22.ik@gmail.com>
Date: Thu Jun 13 10:44:58 2019 +0900

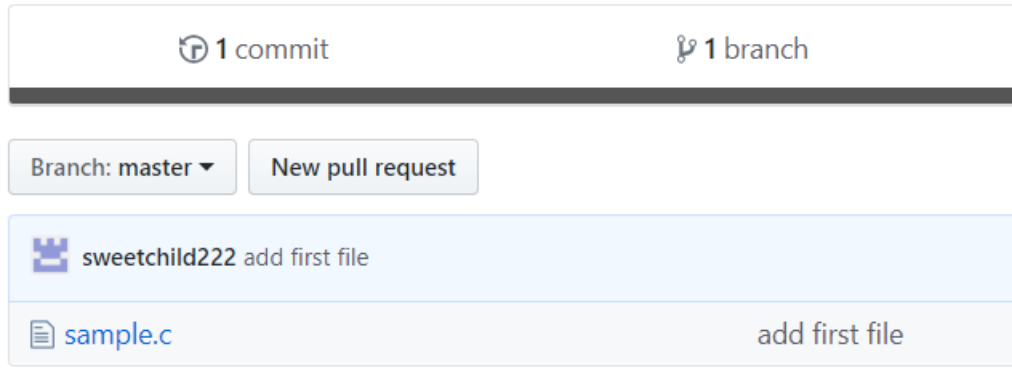
    add first file

D:\#project>git push 8
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Writing objects: 100% (3/3), 229 bytes | 229.00 KiB/s, done.
```

- ✓ 4 - Staging area 에 변경 상태 (파일 생성) 올림
- ✓ 5 - 변경 상태가 Staging area 올라가 있는 것 확인
- ✓ 6 - Staging area 의 변경된 상태를 로컬 저장소에 저장(commit)
- ✓ 7 - 로컬 저장소에 commit 된 상태 확인
- ✓ 8 - 로컬 저장소의 commit 들을 원격 저장소에 push

원격 저장소 상태 – 실습 #4

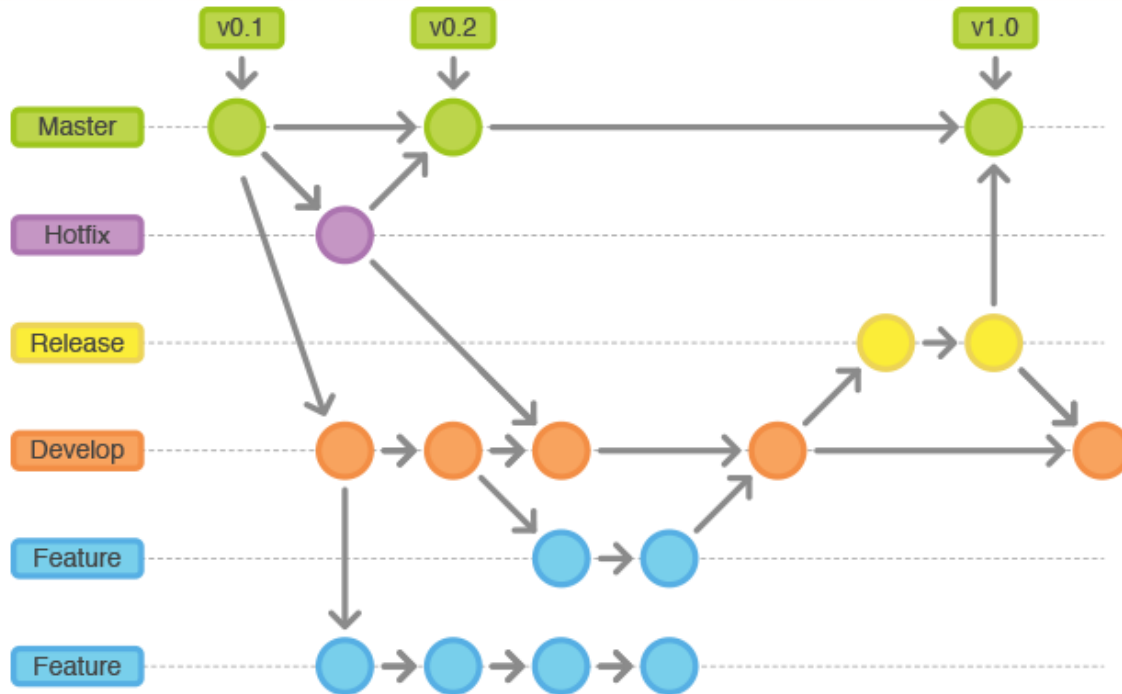
對外秘



✓ 원격 저장소에 상태 확인

Git Flow 개념

對外秘



- ✓ Master - 배포된 코드의 최종 Branch
- ✓ Hotfix - 배포된 코드에서 긴급하게 수정해야 할 경우
- ✓ Release - 배포 준비를 위한 Branch, 배포 후 Master 에 병합
- ✓ Develop - 개발 진행 중인 Branch
- ✓ Feature- 특정 기능을 추가하기 위한 Branch

Git flow - 실습 #1

對外秘

```
D:\project>git flow init -d 1
Using default branch names.

Which branch should be used for bringing forth production releases?
- master
Branch name for production releases: [master]
Branch name for "next release" development: [develop]

How to name your supporting branch prefixes?
Feature branches? []
Bugfix branches? []
Release branches? []
Hotfix branches? []
Support branches? []
Version tag prefix? []
Hooks and filters directory? [D:/project/.git/hooks]

D:\project>git push origin develop 2
Total 0 (delta 0), reused 0 (delta 0)
remote:
remote: Create a pull request for 'develop' on GitHub by visiting:
remote:   https://github.com/sweetchild222/project/pull/new/develop
remote:
To https://github.com/sweetchild222/project.git
 * [new branch]      develop -> develop

D:\project>git flow feature start new_feature 3
Switched to a new branch 'new_feature'

Summary of actions:
- A new branch 'new_feature' was created, based on 'develop'
- You are now on branch 'new_feature'

Now, start committing on your feature. When done, use:

    git flow feature finish new_feature

D:\project>git branch 4
  develop
  master
* new_feature

D:\project>echo "new feature" >> new_feature.c 5
```

- ✓ 1 - Default 설정
- ✓ 2 - 원격 저장소에 Develop branch 를 Push
- ✓ 3 - Feature branch 생성
- ✓ 4 - Branch 상태 확인
- ✓ 5 - 임의 소스 파일 생성

```
D:\project>git add new_feature.c 6
D:\project>git commit -m "implement new feature" 7
[new_feature 58f6274] implement new feature
1 file changed, 1 insertion(+)
create mode 100644 new_feature.c
D:\project>git flow feature publish new_feature 8
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 12 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 299 bytes | 299.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0)
remote:
remote: Create a pull request for 'new_feature' on GitHub by visiting:
remote:   https://github.com/sweetchild222/project/pull/new/new_feature
remote:
To https://github.com/sweetchild222/project.git
* [new branch]      new_feature -> new_feature
Branch 'new_feature' set up to track remote branch 'new_feature' from 'origin'.
Already on 'new_feature'
Your branch is up to date with 'origin/new_feature'.

Summary of actions:
- The remote branch 'new_feature' was created or updated
- The local branch 'new_feature' was configured to track the remote branch
- You are now on branch 'new_feature'
```

- ✓ 6 - Staging area 에 변경 상태 (파일 생성) 올림
- ✓ 7 - Staging area 의 변경된 상태를 로컬 저장소에 저장(commit)
- ✓ 8 - 로컬 저장소의 commit 들을 원격 저장소에 push

Pull request - 실습 #3

對外秘

1 commit

3 branches

0 releases

1 contributor

new_feature (1 minute ago) Compare & pull request

Branch: master ▾ New pull request

Create new file Upload files Find File Clone or download ▾

sweetchild222 add first file Latest commit a004759 26 minutes ago

sample.c add first file 26 minutes ago

Help people interested in this repository understand your project by adding a README.


- ✓ 원격 저장소에서 Develop 에 병합 요청,
Pull request


Pull request - 실습 #5

對外秘

Open a pull request

Create a new pull request by comparing changes across two branches. If you need to, you can also [compare across forks](#).

 base: develop ← compare: new_feature ✓ **Able to merge.** These branches can be automatically merged.




implement new feature

Write

Preview

AA B i “ < > ↻ ⋮ ≡ ☑ @ ★ ↶

please review it for new feature


Attach files by dragging & dropping, selecting or pasting them. 


Create pull request ▼


- ✓ 원격 저장소에서 Develop 에 병합 요청,
Pull request


Pull request - 실습 #4


對外秘


 Open


sweetchild222 wants to merge 1 commit into `master` from `new_feature` 

 Conversation 0

 Commits 1

 Checks 0



 Files changed 1




sweetchild222 commented 10 seconds ago


Owner +😊 ...

please review it for new feature


  implement new feature 58f6274

Add more commits by pushing to the `new_feature` branch on `sweetchild222/project`.



 Continuous integration has not been set up

Several apps are available to automatically catch bugs and enforce style.

 This branch has no conflicts with the base branch



Merging can be performed automatically.

Merge pull request ▼


You can also [open this in GitHub Desktop](#) or view [command line instructions](#).

Pull request - 실습 #5



對外秘

 **Open** sweetchild222 wants to merge 1 commit into `master` from `new_feature` 



Conversation 0 Commits 1 Checks 0 Files changed 1


 sweetchild222 commented 10 seconds ago Owner + 😊 ...


please review it for new feature

  implement new feature 58f6274

Add more commits by pushing to the `new_feature` branch on `sweetchild222/project`.

  Continuous integration has not been set up
Several apps are available to automatically catch bugs and enforce style.

 This branch has no conflicts with the base branch
Merging can be performed automatically.

Merge pull request  You can also [open this in GitHub Desktop](#) or view [command line instructions](#).

- ✓ 원격 저장소에서 Develop 에 병합 요청,
Pull request

Pull request - 실습 #5

對外秘

Branch: develop ▾

New pull request



Create new file


Upload files



Find File

Clone or download ▾

This branch is 2 commits ahead of master.

 Pull request  Compare

 sweetchild222 Merge pull request #1 from sweetchild222/new_feature ... Latest commit e5fe33a 41 seconds ago

 new_feature.c	implement new feature	3 minutes ago
 sample.c	add first file	6 minutes ago

```
D:\project>git checkout develop 1
Switched to branch 'develop'

D:\project>dir 2
D 드라이브의 볼륨: Project
볼륨 일련 번호: EE96-A08E

D:\project 디렉터리

2019-06-13 오전 11:32 <DIR> .
2019-06-13 오전 11:32 <DIR> ..
2019-06-13 오전 11:24          19 sample.c
                1개 파일              19 바이트
                2개 디렉터리  509,677,666,304 바이트 남음

D:\project>git pull origin develop 3
From https://github.com/sweetchild222/project
 * branch          develop    -> FETCH_HEAD
Updating 022847c..e5fe33a
Fast-forward
 new_feature.c | 1 +
 1 file changed, 1 insertion(+)
 create mode 100644 new_feature.c

D:\project>dir 4
D 드라이브의 볼륨: Project
볼륨 일련 번호: EE96-A08E

D:\project 디렉터리

2019-06-13 오전 11:33 <DIR> .
2019-06-13 오전 11:33 <DIR> ..
2019-06-13 오전 11:33          16 new_feature.c
2019-06-13 오전 11:24          19 sample.c
                2개 파일              35 바이트
                2개 디렉터리  509,677,666,304 바이트 남음
```

- ✓ 1 - develop branch 로 이동
- ✓ 2 - 로컬 저장소 상태 확인, 변경 상태(new_feature.c 파일 생성) 가 업데이트 안됨
- ✓ 3 - 원격 저장소의 상태를 로컬 저장소로 pull
- ✓ 4 - 로컬 저장소 상태 확인, 변경 상태가 업데이트 됨


```
D:\project>git flow feature finish new_feature 5
Switched to branch 'develop'
Already up to date.
To https://github.com/sweetchild222/project.git
- [deleted]          new_feature
Deleted branch new_feature (was 2cf91fd).

Summary of actions:
- The feature branch 'new_feature' was merged into 'develop'
- Feature branch 'new_feature' has been locally deleted; it
  from 'origin'
- You are now on branch 'develop'
```

✓ 5 - feature branch 종료