

# GitHub: Features

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# 학습 내용

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- GitHub Features
  - SW 프로젝트 개발 과정에 필요한 작업은 다 GitHub 에서 해보자
- Projects
- Issues
- Wiki
- Releases

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# Project

GitHub Features

# 프로젝트 생성

<> Code ⓘ Issues 0 🔄 Pull requests 0 📅 Projects 0 📖 Wiki 🛡 Security 📊 Insights ⚙ Settings

## Organize your issues with project boards

[Learn More](#)

[Create a project](#)

Did you know you can manage projects in the same place you keep your code? Set up a project board on GitHub to streamline and automate your workflow.



### Sort tasks

Add issues and pull requests to your board and prioritize them alongside note cards containing ideas or task lists.



### Plan your project

Sort tasks into columns by status. You can label columns with status indicators like "To Do", "In Progress", and "Done".



### Automate your workflow

Set up triggering events to save time on project management—we'll move tasks into the right columns for you.



### Track progress

Keep track of everything happening in your project and see exactly what's changed since the last time you looked.



### Share status

Each card has a unique URL, making it easy to share and discuss individual tasks with your team.



### Wrap up

After you wrap up your work, close your project board to remove it from your active projects list. On to the next project!

# 프로젝트 생성: Kanban board

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## Create a new project

Coordinate, track, and update your work in one place, so projects stay transparent and on schedule.

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Project board name

Test Project

Description (optional)

Project template

Save yourself time with a pre-configured project board template.

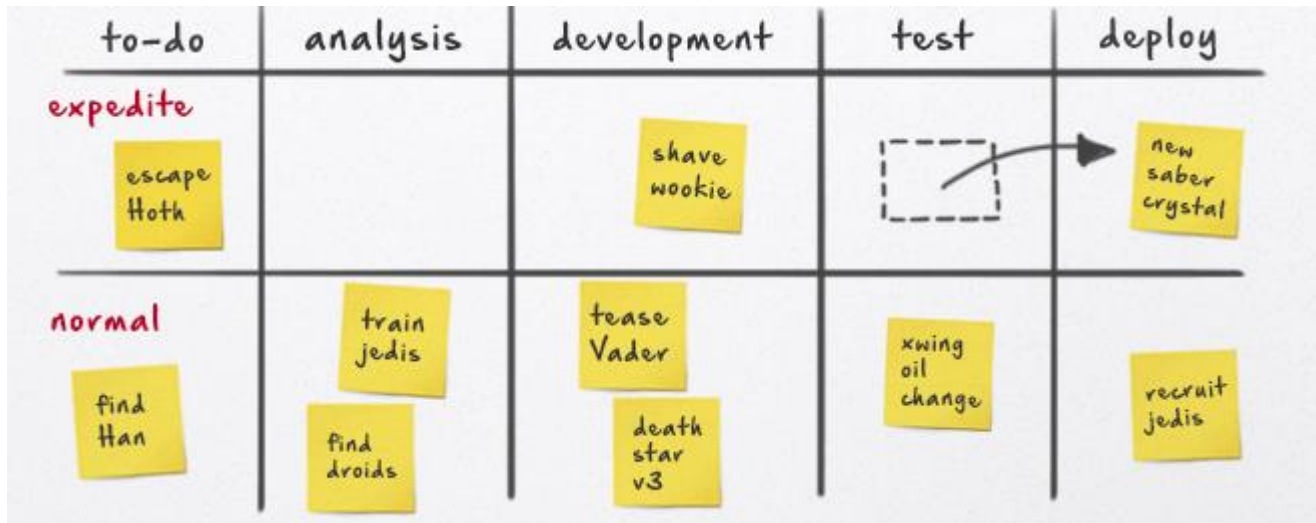
Template: Basic kanban ▾

Create project

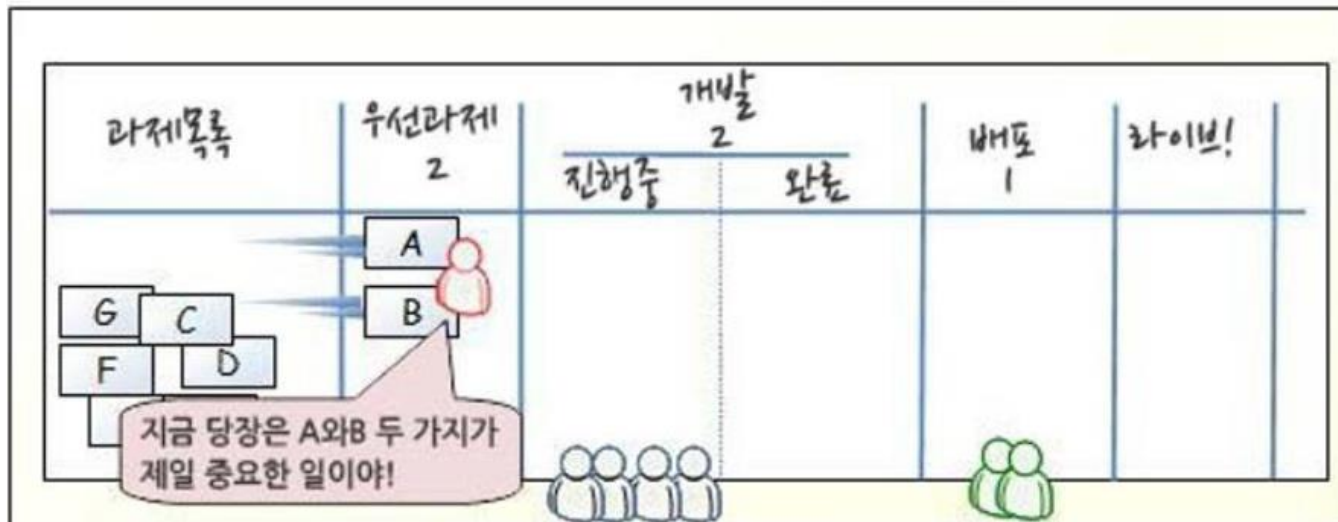
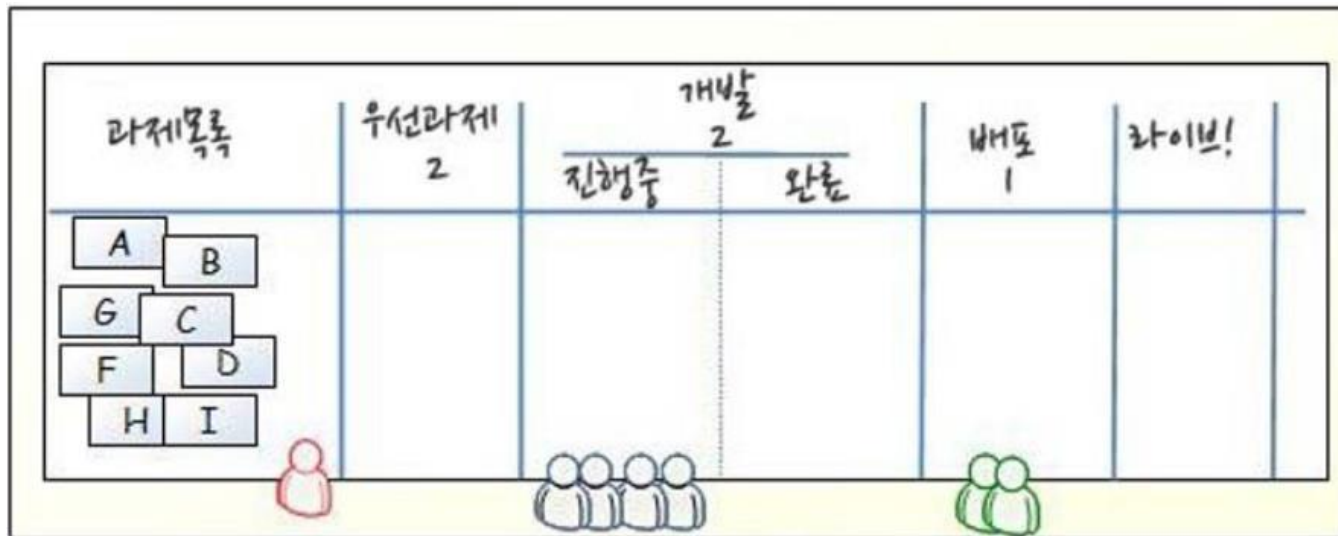
# Kanban

- Agile SW 개발 방법의 또다른 형태

- 연속적 흐름 처리 방식
- 특징 1: 개발 프로세스를 칸반 보드로 시각화
  - 단계별 섹션을 만들고 현재 진행 상황을 작업 카드를 이동하여 표시
- 특징 2: 단순성
  - 한 번에 진행하는 일의 수를 제한, 데드라인 없음, 별도 관리자 없음

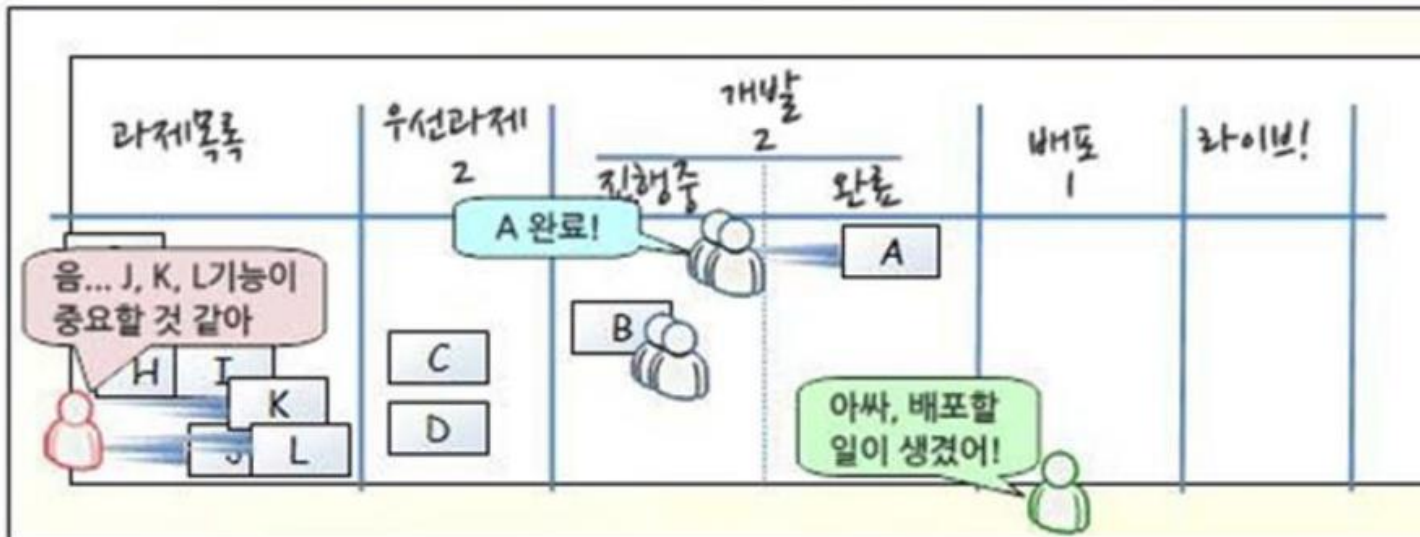
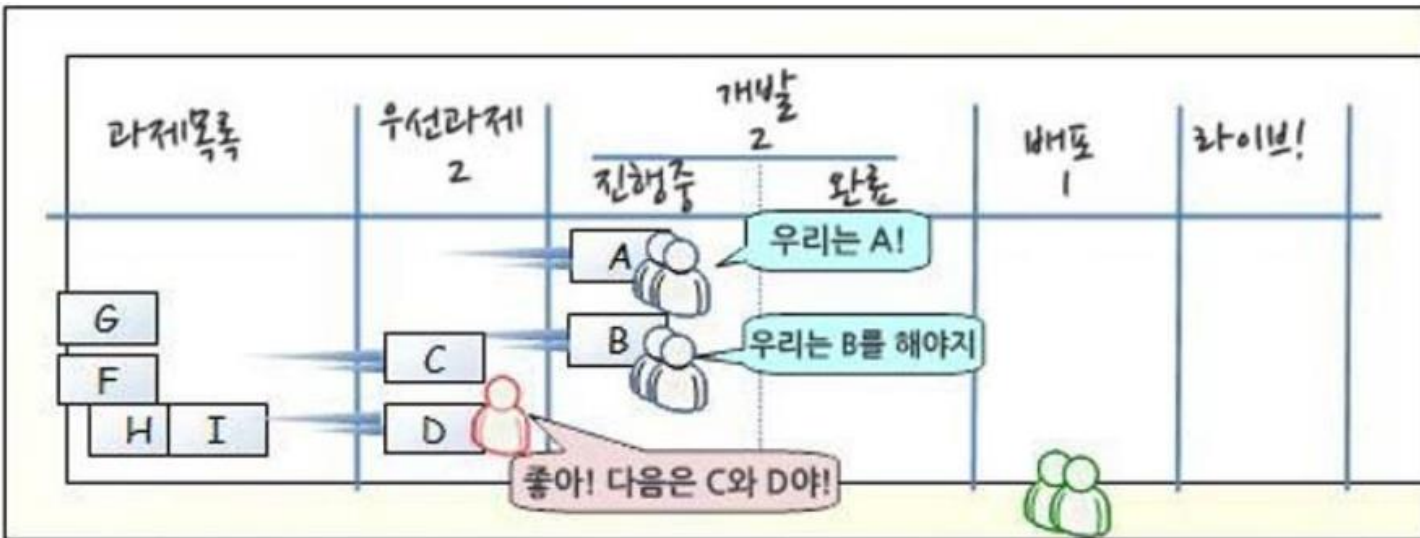


# Kanban 예제



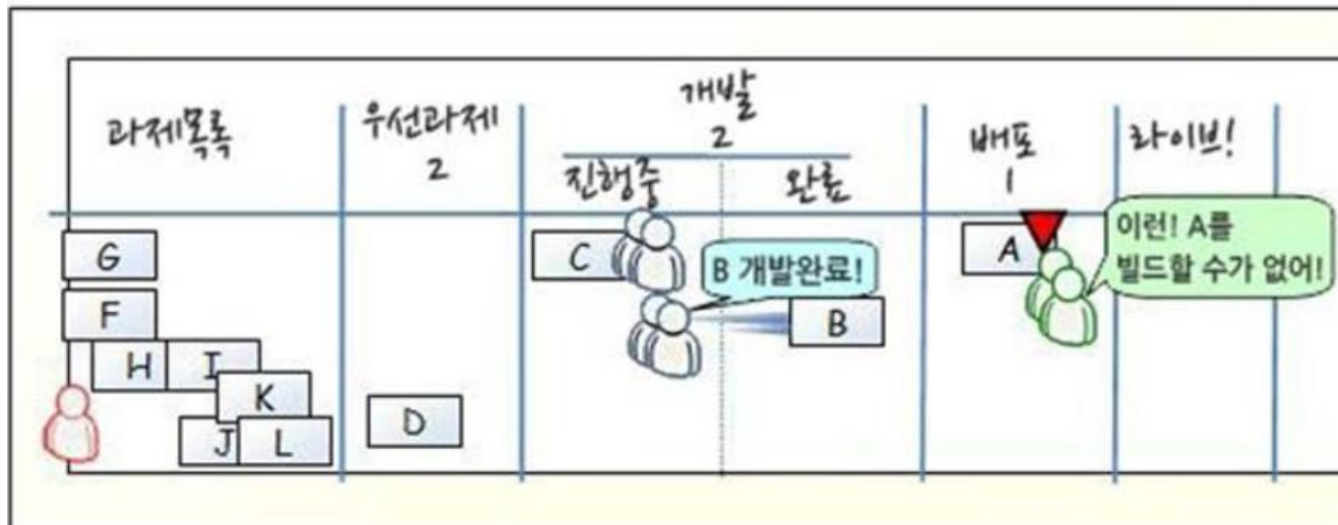
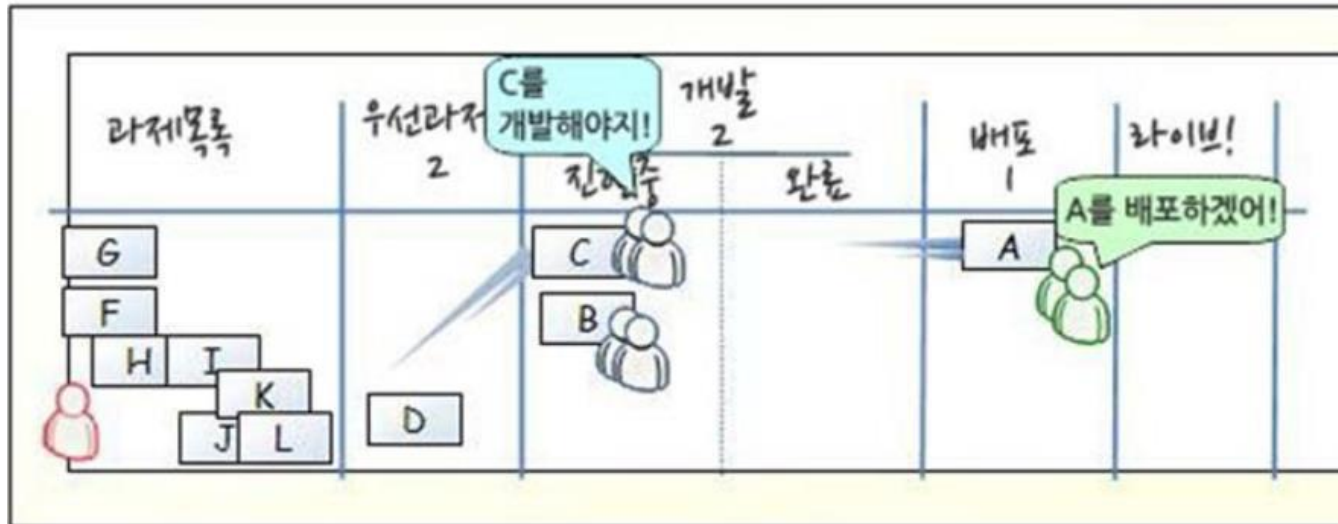
\* 참고자료: "칸반", 김영기 책임, SE Lab

# Kanban 예제

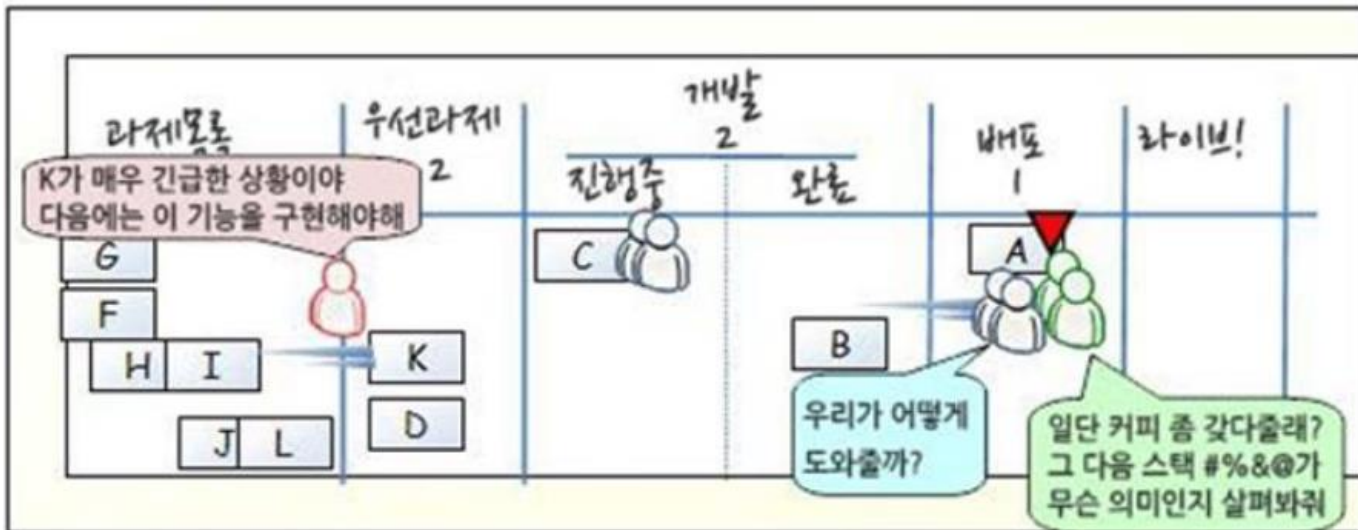
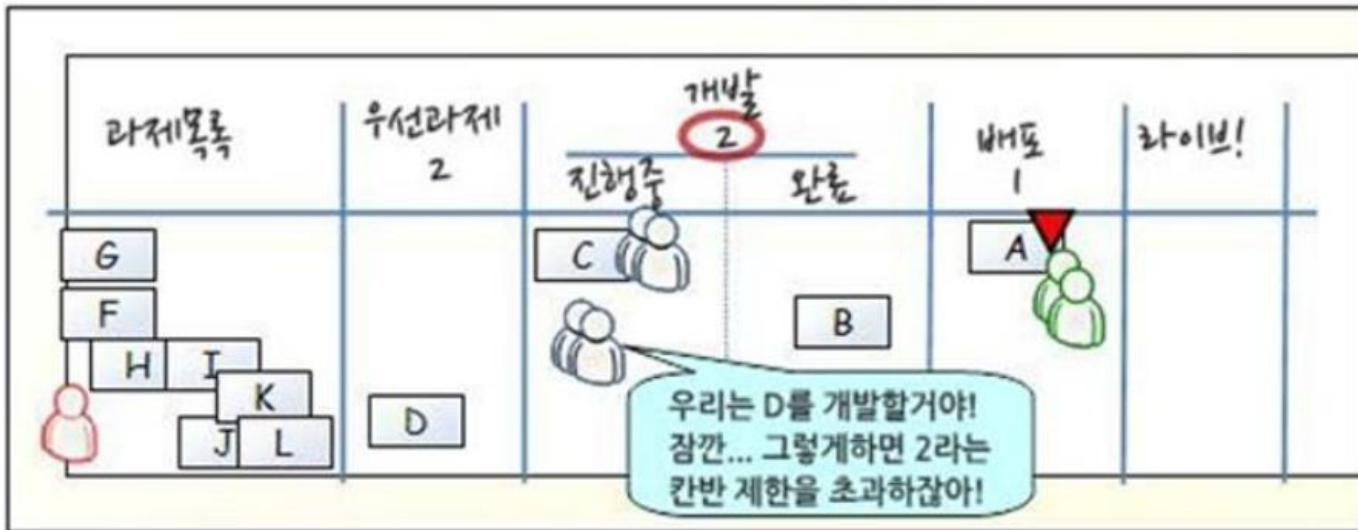




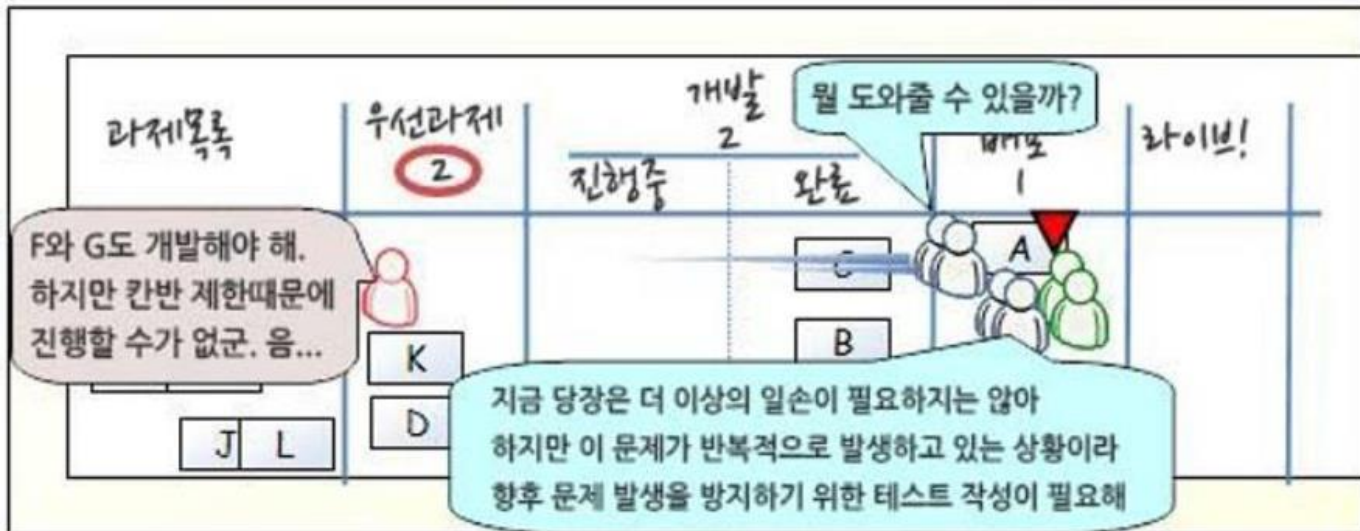
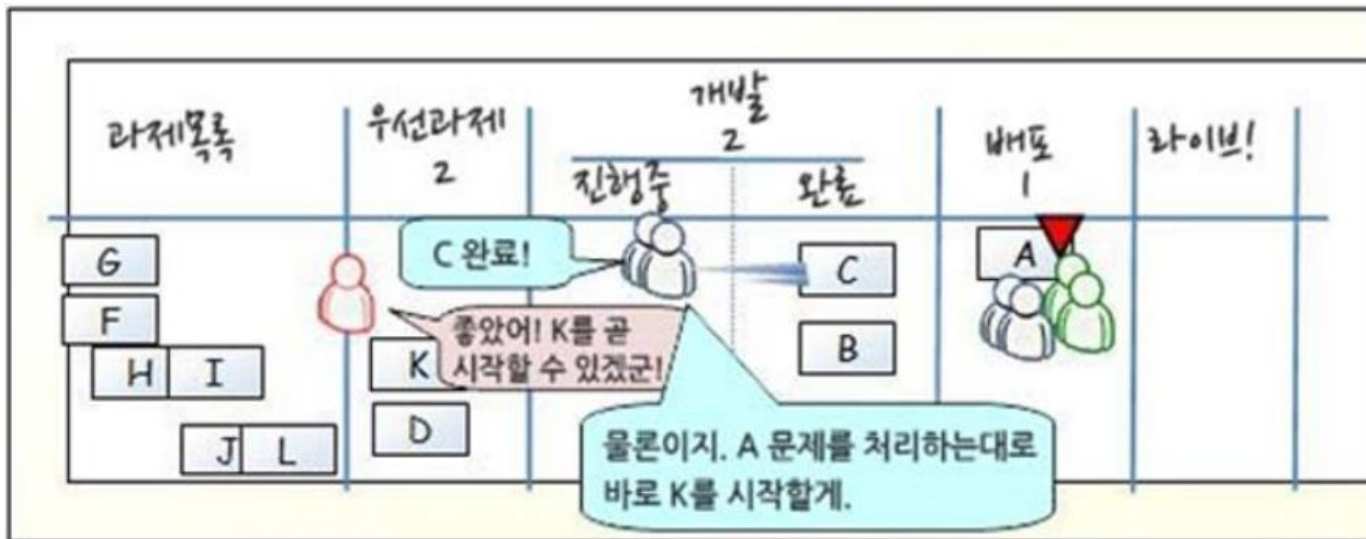
# Kanban 예제



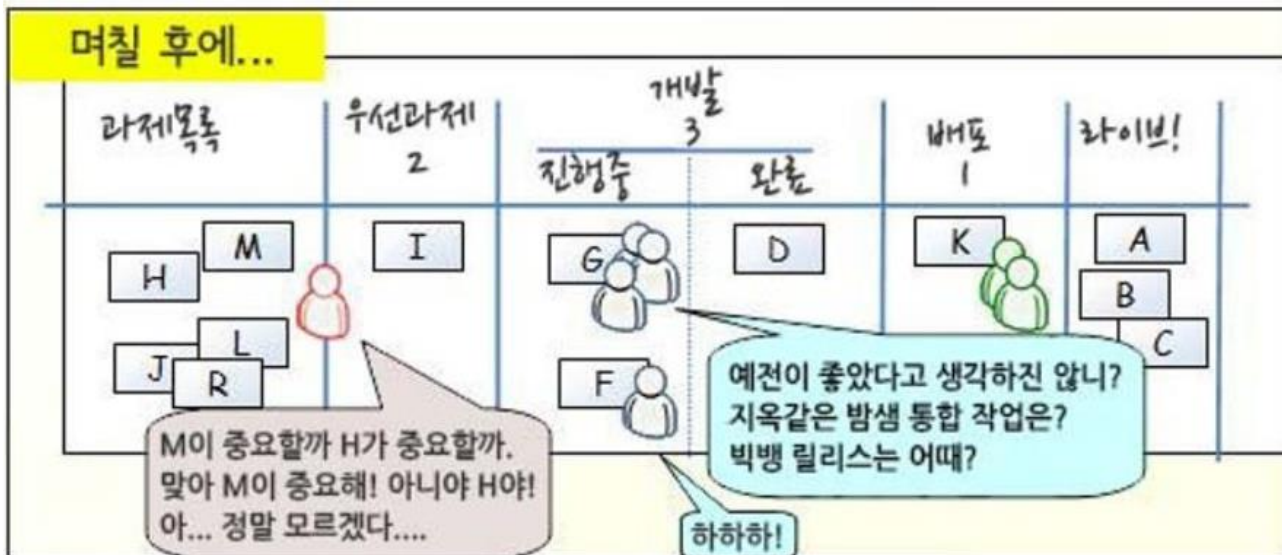
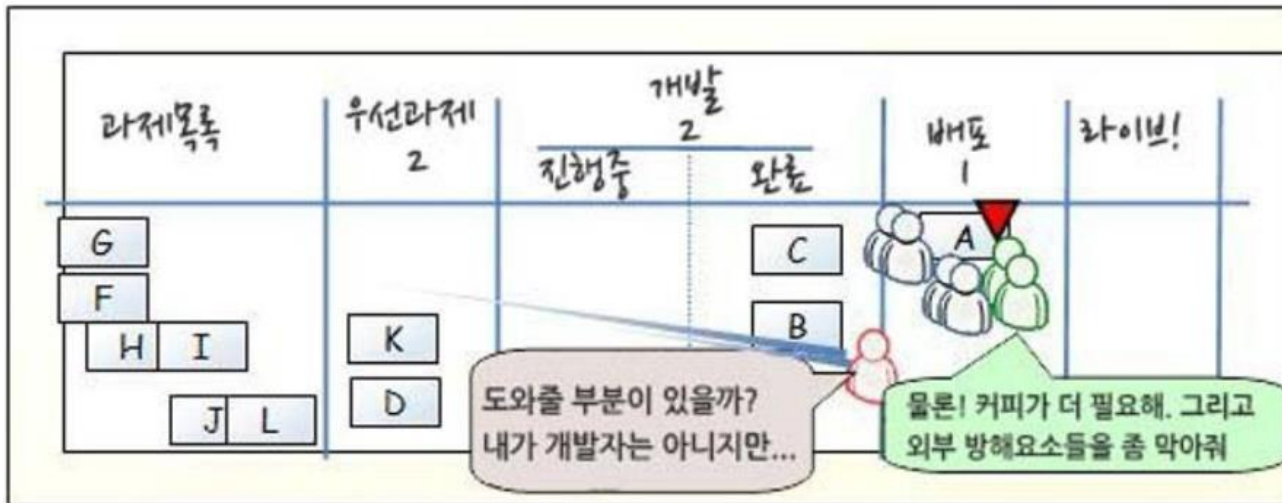
# Kanban 예제



# Kanban 예제



# Kanban 예제



# Kanban

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- Vs. 스크럼

- 스프린트 기반: 작업 시간을 추정하고, 할당된 작업시간으로 제한함
  - 아주 익숙하고 반복되는 작업이 아닌 경우, 작업 시간의 추정이 어려움
  - 각 개발자가 동시에 처리하는 작업에 대한 제어가 어려움
  - 스크럼 마스터, 스프린트 회의 등 부가적 요소가 많음
- 칸반: 동시에 처리할 수 있는 이슈의 수를 제한하여 생산성을 향상
  - Work-In-Process(WIP) 개수를 제한
    - 예) 개발자는 한 번에 하나의 일만 처리
  - 작업 데드라인이 없음
    - 데드라인을 지키기 위해 sw 품질을 떨어뜨리거나 단계를 건너뛰지 않음
  - 별도의 회의, 특별한 직책을 두지 않음
    - 오버헤드 감소

# Kanban

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- 칸반 방식의 단점

- 데드라인이 없다 → 생산성을 최대화하기 어려움
- 프로젝트의 시작/종료에 따른 회의 없음  
→ 새로운 아이디어에 대한 논의, 프로젝트 진행에 대한 피드백 등을 충분히 논의하기 어려움
- 완전한 솔루션은 없다. 각 팀의 상황에 맞게 보완해서 사용할 것.

- 칸반 사용 후기

- <https://brunch.co.kr/@bradlee/4>
- [\[번역\] 잘 가요 스크럼, 반가워요 칸반](#)



# Trello

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- Kanban 기반의 스케줄, 프로젝트 관리 도구
  - Kanban board 서비스로 출발, 그러나 Kanban 이라는 것을 더 이상 강조하지 않음
  - 단순한 카드 배열, 이동을 지원하는 플랫폼이므로 자유롭게 활용할 수 있음
    - 개인 스케줄 관리, 메모장, 여행 일정 관리, 강의 일정 관리 등등
- 특징
  - 매우 간단하여 사용이 쉬움
  - 직관적이라 전체 현황 파악에 편리함
  - 단점
    - 모바일 앱의 기능이 웹 서비스보다 약간 제한적
    - 한글 지원





# Trello

- <https://trello.com/>



**Trello lets you work more  
collaboratively and get more done.**

Trello's boards, lists, and cards enable you to organize and  
prioritize your projects in a fun, flexible and rewarding way.

**Get Started**

Already use Trello? [Log in.](#)



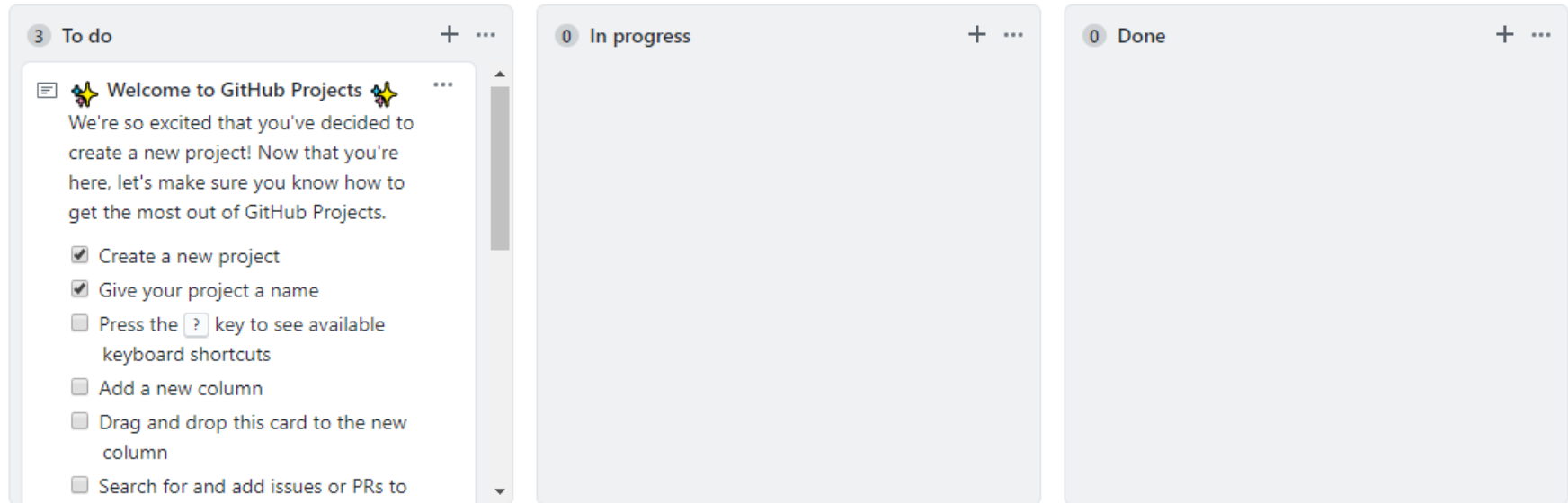


# GitHub Kanban board

- Drag & drop 으로 To do 의 카드를 하나 In progress 로, 다시 Done으로 옮겨보자.
- Welcome 카드는 너무 기니까 한 번 읽어보고 삭제. 오른쪽 위 ... 메뉴 클릭해서.

Test Project

Updated 2 minutes ago



# GitHub Kanban board

hyunchan-park / osscourse

<> Code ⓘ Issues 0 📄 Pull requests 0 📅 Projects 1 📖 Wiki 🛡 Security 📊 Insights ⚙ Settings

Test Project



Updated 5 minutes ago

0 To do



1 In progress



Automation

Automatically move your cards to the right place based on the status and activity of your issues and pull requests.

Added by hyunchan-park

1 Done



Cards

Cards can be added to your board to track the progress of issues and pull requests. You can also add note cards, like this one!

Added by hyunchan-park

# Automation 설정

Test Project



Updated 2 minutes ago

0 To do



Edit column

Manage automation

Archive all cards

Copy column link

Delete column

Manage automation for To do



Choose a preset to enable progress tracking, automation, and better context sharing across your project.

Preset: To do ▼

Move issues here when...



Newly added

Issues will automatically move here when added to this project.



Reopened

If a closed issue in this project reopens, it will automatically move here.

Move pull requests here when...



Newly added

Pull requests will automatically move here when added to this project.




Reopened

If a closed pull request in this project reopens, it will automatically move here.

Update automation

# 프로젝트에 할당된 이슈 생성

[Code](#) [Issues 0](#) [Pull requests 0](#) [Projects 1](#) [Wiki](#) [Security](#) [Insights](#) [Settings](#)



Test issue for the Test project

Related Issues [Beta](#). [Try it.](#)

Write

Preview

AA B i “ <> 🔗 ☰ ☷ ✓ @ 📎 ↶

Leave a comment

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

Styling with Markdown is supported

Submit new issue

Assignees

No one—assign yourself

Labels

None yet

Projects

Projects

Recent

Repository

User

Test Project

hyunchan-park/osscourse

20

# 프로젝트에 자동 추가된 이슈

Test Project   
Updated now

1 To do + ...

! Test issue for the Test project ...

#3 opened by hyunchan-park

1 In progress + ...

Automation ...

Automatically move your cards to the right place based on the status and activity of your issues and pull requests.

Added by hyunchan-park

1 Done + ...

Cards ...

Cards can be added to your board to track the progress of issues and pull requests. You can also add note cards, like this one!

Added by hyunchan-park

# Automations for other columns

Manage automation for In progress

Choose a preset to enable progress tracking, automation, and better context sharing across your project.

Preset: In progress

Move issues here when...

☐ Reopened  
If a closed issue in this project reopens, it will automatically move here.

Move pull requests here when...

☐ Newly added  
The To do column is already using this rule.

☐ Reopened  
If a closed pull request in this project reopens, it will automatically move here.

☐ Approved by reviewer  
Pull requests in this project will automatically move here when they meet the minimum number of required approving reviews. Recommended when another column has the Pending approval by reviewer automation enabled.

☐ Pending approval by reviewer  
Pull requests in this project will automatically move here when a reviewer requests changes, or it no longer meets the minimum number of required approving reviews. Recommended when another column has the Approved by reviewer automation enabled.

Update automation

Manage automation for Done

Choose a preset to enable progress tracking, automation, and better context sharing across your project.

Preset: Done

Move issues here when...

☐ Closed  
If an open issue in this project is closed, it will automatically move here.

Move pull requests here when...

☐ Merged  
If an open pull request in this project is merged, it will automatically move here.

☐ Closed with unmerged commits  
If an open pull request in this project is closed with unmerged commits, it will automatically move here.

Update automation

---

# Issue

GitHub Features



# 이슈 관리

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- 이슈

- 프로젝트 진행에서 발생하는 모든 이벤트, 진행 과정을 관리
- 모든 것은 이슈로 정리하고,
- 이슈를 적절한 인력에 할당하여,
- 이슈를 해결함으로써 프로젝트가 진행됨

- 이슈의 기본 관리

- Open -> Assign -> Review -> Merge -> Closed
  - Review는 필요한 경우
  - Merge는 코드에 변화가 있는 이슈인 경우

- 이슈 관리를 위한 추가 기능


- 레이블, 마일스톤





# Issue Open

[Code](#) [Issues 2](#) [Pull requests 0](#) [Projects 1](#) [Wiki](#) [Security](#) [Insights](#) [Settings](#)



Title


Related Issues [Beta](#). [Try it.](#)


Write

Preview


AA B i “ <> 🔗 ☰ ☷ ✓ @ ★ ↶

Leave a comment


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

 Styling with Markdown is supported


Submit new issue

Assignees 


No one—assign yourself

Labels 

None yet

Projects 

None yet

Milestone 

No milestone

25

# Issue Closing

## Test issue for the Test project #3

[Edit](#)[New issue](#)🔔 Open

hyunchan-park opened this issue 36 minutes ago · 0 comments



hyunchan-park commented 36 minutes ago

[Owner](#)[+😊...](#)

Haha



hyunchan-park added this to **To do** in **Test Project** via [automation](#) 36 minutes ago



Write

Preview

AA

B

i

“

<>

🔗

☰

☰

☑

@

🔖

↩

Solved!!



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



🔒 Close and comment

Comment

Assignees



No one—assign yourself

Labels



None yet

Projects



Test Project

To do ▾

Milestone



No milestone

Notifications


Customize


🔊 Unsubscribe


You're receiving notifications because you're watching this repository.




# Issue 와 관련된 commit 만들기

 18 commits

 1 branch

 0 releases

 1 contributor

Branch: master ▾


New pull request





Create new file

Upload files


Find file

Clone or download ▾

 hyunchan-park Including Code analysis v1 Latest commit cd1803b 18 days ago

 PDFs	Including Code analysis v1	18 days ago
 References	Still working on Git and GitHub slides	last month
 Slides	Including Code analysis v1	18 days ago
 README.md	Update README.md	2 months ago

README.md



## Open Source SW Development

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### CSE Undergraduate Course, JBNU

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Assistant Professor Hyunchan Park

<https://github.com/hyunchan-park/osscourse>

# Issue 와 관련된 commit 만들기



## Commit changes

Update for the issue #2

Add an optional extended description...

hyunchan.park@jbnu.ac.kr

Choose which email address to associate with this commit

☒ Commit directly to the `master` branch.

☐ Create a new branch for this commit and start a pull request. [Learn more about pull requests.](#)

**Commit changes** Cancel

# Commit 에서 이슈 링크 확인

\* 클릭하면 해당 이슈 번호로 바로 이동함

Branch: master ▼

[osscourse](#) / README.md



hyunchan-park Update for the issue #2

1 contributor

9 lines (5 sloc) | 163 Bytes

# 마일스톤 생성

\* 마일스톤 클릭하고, New milestone 클릭

[Code](#) [Issues 2](#) [Pull requests 0](#) [Projects 1](#) [Wiki](#) [Security](#) [Insights](#) [Settings](#)

Label issues and pull requests for new contributors [Dismiss](#)

Now, GitHub will help potential first-time contributors [discover issues](#) labeled with [good first issue](#)

Filters

[Labels 9](#) [Milestones 0](#)

New issue

<input type="checkbox"/>	2 Open ✓ 1 Closed	Author ▾	Labels ▾	Projects ▾	Milestones ▾	Assignee ▾	Sort ▾
<input type="checkbox"/>	Test issue for the Test project #3 opened 42 minutes ago by hyunchan-park						
<input type="checkbox"/>	Test issue for the Test project #2 opened 43 minutes ago by hyunchan-park						

# 마일스톤 생성

---

## New milestone

Create a new milestone to help organize your issues and pull requests. Learn more about [milestones and issues](#).

Title

v0.1 설계

Due date (optional)

2019-11-03

Description

설계 완료하기



Create milestone

# 마일스톤 생성

[Code](#) [Issues 2](#) [Pull requests 0](#) [Projects 1](#) [Wiki](#) [Security](#) [Insights](#) [Settings](#)

[Labels](#) [Milestones](#) [New milestone](#)

🚩 2 Open ✓ 0 Closed Sort ▼

### v0.1 구현

📅 Due by November 10, 2019

🕒 Last updated less than a minute ago

구현 완료

0% complete

0 open

0 closed

[Edit](#) [Close](#) [Delete](#)

### v0.1 설계

📅 Due by November 03, 2019

🕒 Last updated less than a minute ago

설계 완료하기

0% complete

0 open

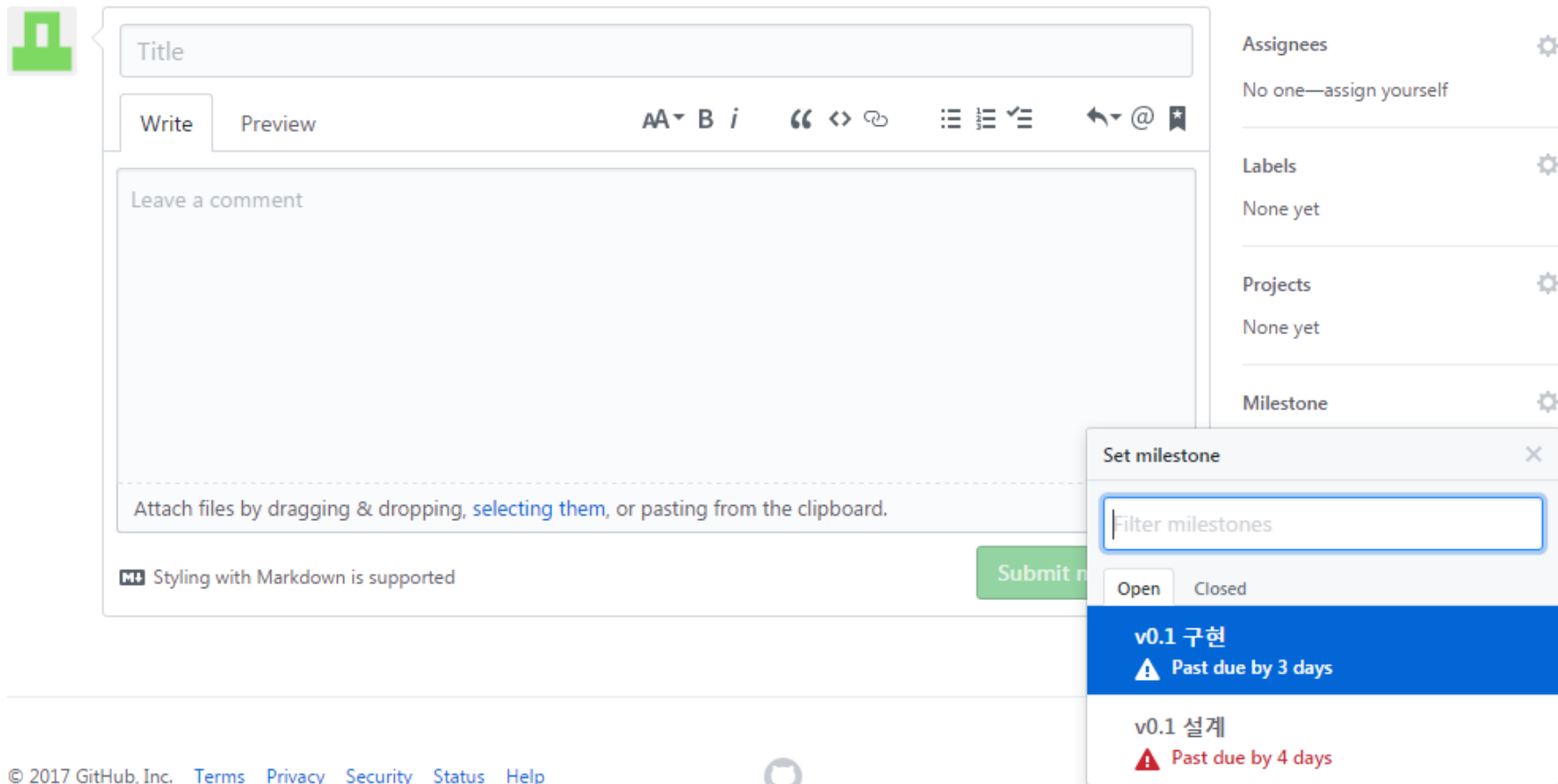
0 closed

[Edit](#) [Close](#) [Delete](#)

32



# 이슈에 마일스톤 붙이기



The screenshot shows a GitHub issue page with a 'Set milestone' modal open. The modal has a search bar labeled 'Filter milestones' and two tabs: 'Open' and 'Closed'. Under the 'Open' tab, two milestones are listed:

- v0.1 구현** (v0.1 구현)  
⚠ Past due by 3 days
- v0.1 설계** (v0.1 설계)  
⚠ Past due by 4 days

The background shows the issue editor with a title field, a rich text editor with 'Write' and 'Preview' tabs, and a right sidebar with sections for Assignees, Labels, Projects, and Milestone.



# 레이블 관리

[Code](#) [Issues 2](#) [Pull requests 0](#) [Projects 1](#) [Wiki](#) [Security](#) [Insights](#) [Settings](#)

[Labels](#) [Milestones](#)  [New label](#)

9 labels Sort ▾

bug	Something isn't working	<a href="#">Edit</a> <a href="#">Delete</a>
documentation	Improvements or additions to documentation	<a href="#">Edit</a> <a href="#">Delete</a>
duplicate	This issue or pull request already exists	<a href="#">Edit</a> <a href="#">Delete</a>
enhancement	New feature or request	<a href="#">Edit</a> <a href="#">Delete</a>
good first issue	Good for newcomers	<a href="#">Edit</a> <a href="#">Delete</a>
help wanted	Extra attention is needed	<a href="#">Edit</a> <a href="#">Delete</a>
invalid	This doesn't seem right	<a href="#">Edit</a> <a href="#">Delete</a>
question	Further information is requested	<a href="#">Edit</a> <a href="#">Delete</a>
wontfix	This will not be worked on	<a href="#">Edit</a> <a href="#">Delete</a>

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# Wiki

GitHub Features



# 위키 페이지

---

- 정의 및 활용

- 불특정 다수가 협업을 통해 내용과 구조를 수정하는 웹페이지
- 많은 공개 SW 프로젝트에서 Documentation 작성을 위해 사용

- 형식

- Mark-up language 이용 (e.g. html)
- Rich text editor 이용

- 《위키 방식: 웹 상의 빠른 협업(The Wiki Way: Quick Collaboration on the Web)》

- 사이트를 방문한 누구나 위키 웹사이트 내의 문서를 고치거나 새로 만들 수 있다. 이를 위해 기본적인 웹브라우저만 있으면 되며, 추가적인 확장 기능을 요구하지 않는다.
- 연결된 문서가 다른 문서 사이를 쉽고 직관적으로 링크할 수 있어, 관련된 주제의 연결을 돕는다.
- 위키는 가벼운 방문자를 위해 잘 만들어진 사이트가 아니다. 하지만, 지속적으로 웹사이트의 풍경을 변화시켜 방문자가 그 변화와 협력의 지속적인 과정에 참여하도록 한다.

# 위키 페이지

[juju-solutions / bundle-canonical-kubernetes](#)

[Watch](#) 9[Star](#) 29[Fork](#) 13

[Code](#)[Issues 78](#)[Pull requests 1](#)[Projects 0](#)[Wiki](#)[Pulse](#)[Graphs](#)

## 1.6 snaps release checklist

Matt Bruzek edited this page 3 hours ago · 35 revisions

- ☒ addons
  - ☒ create the addons snap ([PR](#))
  - ☒ use addons snap in charm
- ☒ publish snaps
  - ☐ ~~create kubernetes.io namespace in snap store~~
  - ☐ ~~define the snap channels we would like to use (1.5/stable, etc)~~
  - ☒ publish initial snaps in store
  - ☒ publish 1.6/stable snaps in store

▼ Pages 4

[Home](#)[1.6 snaps release checklist](#)[Cherry Picking for staging branches](#)[Release Process](#)

# 위키 페이지

juju-solutions / **bundle-canonical-kubernetes**

Watch 9 Star 29 Fork 13

<> Code ! Issues 78 Pull requests 1 Projects 0 Wiki Pulse Graphs

## Cherry Picking for staging branches

Marco Ceppi edited this page 10 days ago · 1 revision

```
git clone git@github.com:juju-solutions/kubernetes.git
git checkout -b 9.9-staging origin/9.9-staging
```

Add the repo which has commits to be cherry-pick'd

```
git remote add user https://github.com/user/kubernetes.git
git fetch user
```

You now have all `user` refs.

```
git log user/branch
```

This will present a log of commits, find the commit hashes you want

### ▼ Pages 4

[Home](#)

[1.6 snaps release checklist](#)

[Cherry Picking for staging branches](#)

[Release Process](#)

Clone this wiki locally

<https://github.com/juju-sol>

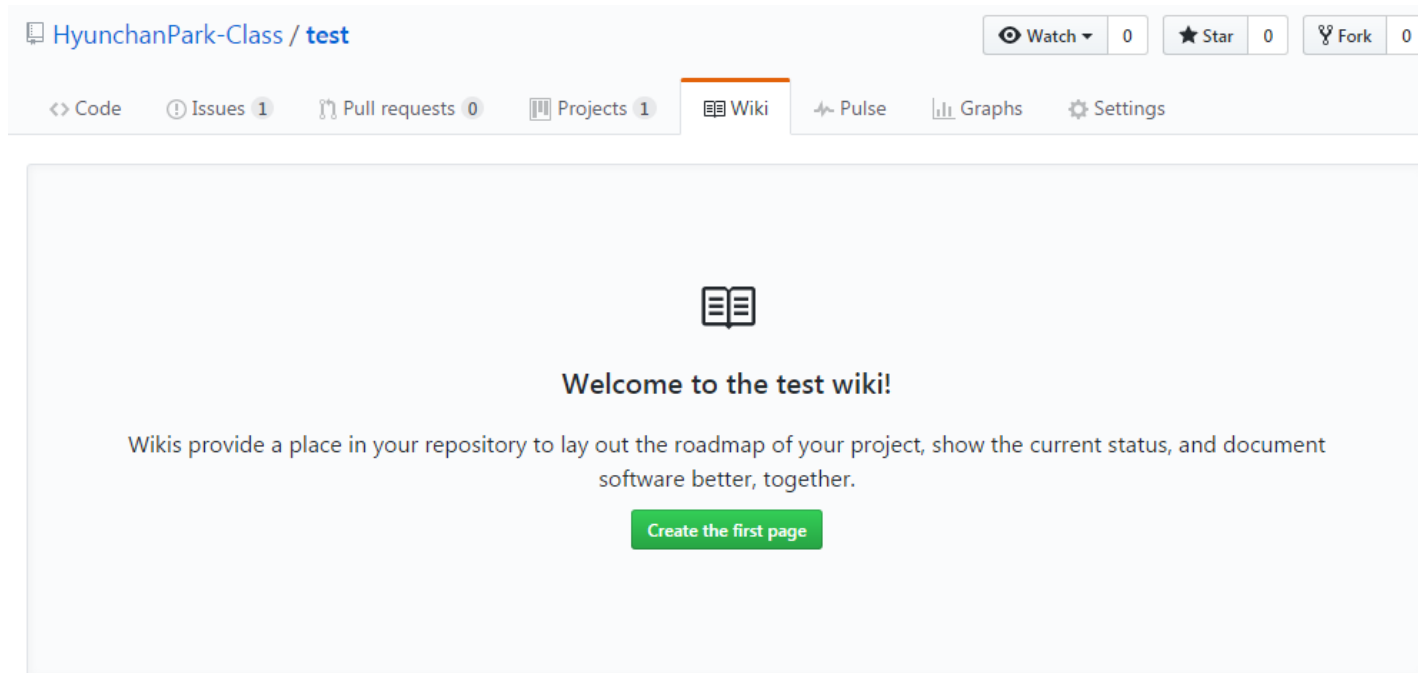
Clone in Desktop



# 위키 페이지

- GitHub 위키

- Markdown 마크업언어 사용: 간단한 문법, but 표준이 없음
- Readme.md : GitHub repo 에 처음 만들어지는 Markdown 파일.
  - 프로젝트 소개 용도로 활용





# 위키 페이지

## Create new page





Home


Write Preview

h1 h2 h3

**B** *i* `<>`



Edit mode: Markdown

Block Elements	Paragraphs & Breaks	Markdown wraps code blocks in pre-formatted tags to preserve indentation in your code blocks. To create a code block, indent the entire block by at least 4 spaces or one tab. Markdown will strip the extra indentation you've added to the code block.
Span Elements	Headers	
Miscellaneous	Blockquotes	
	Lists	
	Code Blocks	
	Horizontal Rules	

```
# Header 1: Welcome to the test wiki!
## Header 2:
### Header 3:
No header

`Code`

***

This is between horizontal rules
***
```



# 위키 페이지

---

---

Header 1: Welcome to the test wiki!

---

Header 2:

---

Header 3:

No header

Code

---

This is between horizontal rules

---



# 위키 페이지

---

## # V0.2

프로젝트 시작!!

1. 프로젝트 정말
2. 할 수
3. 있는걸까?

## # V0.1

주요 변경 사항

- \* 브랜치 구성 완료
- \* 파일 생성 완료
- \* 인터페이스 설계 완료 -> 구현 해야 함 [Issue #2](<https://github.com/HyunchanPark-Class/test/issues/2>)



# 위키 페이지

---

## Release note

HyunchanPark-Class edited this page just now · 2 revisions

---

### V0.2

---

프로젝트 시작!!

1. 프로젝트 정말
2. 할 수
3. 있는걸까?

### V0.1

---

주요 변경 사항

- 브랜치 구성 완료
  - 파일 생성 완료
  - 인터페이스 설계 완료 -> 구현 해야 함 [Issue #2](#)
-


# README.md 변경

Branch: master ▾

test / README.md

Find file

Copy path

 HyunchanPark-Class Update README.md

9f720ee just now


1 contributor


3 lines (2 sloc) | 53 Bytes


Raw

Blame

History







# Welcome!

---

## This is the front page of TEST project

---

Fork

0

<> Code

! Issues 1

🔗 Pull requests 0

📁 Projects 1

📖 Wiki


📊 Pulse

📊 Graphs

⚙ Settings

test /

README.md

 or cancel

<> Edit file

👁 Preview changes

Spaces ▾

2 ▾

Soft wrap ▾

```
1 # Welcome!
2 ## This is the front page of TEST project|
```

---

# Releases

GitHub Features



# Release

- 특정 커밋의 소스 코드를 버전을 붙여 배포

[Code](#) [Issues 0](#) [Pull requests 0](#) [Projects 0](#) [Wiki](#) [Security](#) [Insights](#) [Settings](#)

Open Source SW Development (CSE Undergraduate Course, JBNU) [Edit](#)

[Manage topics](#)

18 commits


1 branch

0 releases

1 contributor

Branch: master [New pull request](#)

[Create new file](#) [Upload files](#) [Find file](#) [Clone or download](#)

 hyunchan-park Including Code analysis v1 Latest commit cd1803b 18 days ago

<a href="#">PDFs</a>	Including Code analysis v1	18 days ago
<a href="#">References</a>	Still working on Git and GitHub slides	last month
<a href="#">Slides</a>	Including Code analysis v1	18 days ago
<a href="#">README.md</a>	Update for the issue #2	21 minutes ago

# Release 생성

[Code](#) [Issues 2](#) [Pull requests 0](#) [Projects 1](#) [Wiki](#) [Security](#) [Insights](#) [Settings](#)

[Releases](#) [Tags](#)



## There aren't any releases here

Releases are powered by [tagging specific points of history](#) in a repository.  
They're great for marking release points like `v1.0`.

Create a new release

# Tag를 붙이고, 관련 정보 입력

@  Target: master ▼

Choose an existing tag, or create a new tag on publish

Release title

Write

Preview

Describe this release

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



↓ Attach binaries by dropping them here or selecting them.

☐ This is a pre-release

We'll point out that this release is identified as non-production ready.

Publish release

Save draft

## Tagging suggestions

It's common practice to prefix your version names with the letter v. Some good tag names might be v1.0 or v2.3.4.

If the tag isn't meant for production use, add a pre-release version after the version name. Some good pre-release versions might be v0.2-alpha or v5.9-beta.3.

## Semantic versioning

If you're new to releasing software, we highly recommend reading about [semantic versioning](#).



# Tag를 붙이고, 관련 정보 입력

@

Excellent! This tag will be created from the target when you publish this release.

---

## Description of v0.1

- blah
- blahblah
- blahblahblah~~

⬇ Attach binaries by dropping them here or selecting them.

☐ **This is a pre-release**  
We'll point out that this release is identified as non-production ready.

# Release 완성!

Releases

Tags

Edit releaseDelete

Latest release

v0.1  
 13f289a  
Verified

## Release version 0.1

hyunchan-park released this now

### Description of v0.1

- blah
- blahblah
- blahblahblah~~

▼ Assets 2

Source code (zip)

Source code (tar.gz)

\* 자동으로 현재 소스 코드가 압축되어 포함됨



# 개인 과제 #8 : GitHub Features

- Projects: Kanban 보드 형식
  - 자동 설정: 이슈 생성 -> To do, 코멘트 -> In progress, close -> Done
- Issues: 1개 이슈 생성 후, 코멘트 달고, Close 까지 진행
  - 마일스톤 설정 및 레이블 설정 (임의로)
  - Kanban 보드에서 진행 확인
  - 캡처: 최종 이슈 상태와 프로젝트 보드 캡처 (issue.jpg, project.jpg)
- Wiki
  - Markdown 버튼으로 제공하는 모든 기능을 사용해 한 페이지 작성 후, 결과 화면 캡처 (wiki.jpg)
- Releases
  - 2개 release 임의 작성 후, 캡처(release.jpg)
- 제출 기한:
  - 11/17 (일) 23:59
  - 지각 감점: 5%p / day (3주 내 제출해야 함)

