

CHIP 2학년 수업

2018년 1학기 1주차

목차

1. **GitHub**란?
2. **Repository** 관리
3. 다양한 기능들
4. 실습

GitHub란?



GitHub란?

- [깃\(Git\)](#)을 사용하는 프로젝트를 지원하는 웹호스팅 서비스
- 다른 사람들과의 협업을 매우 용이하게 해줌
- <https://github.com/>

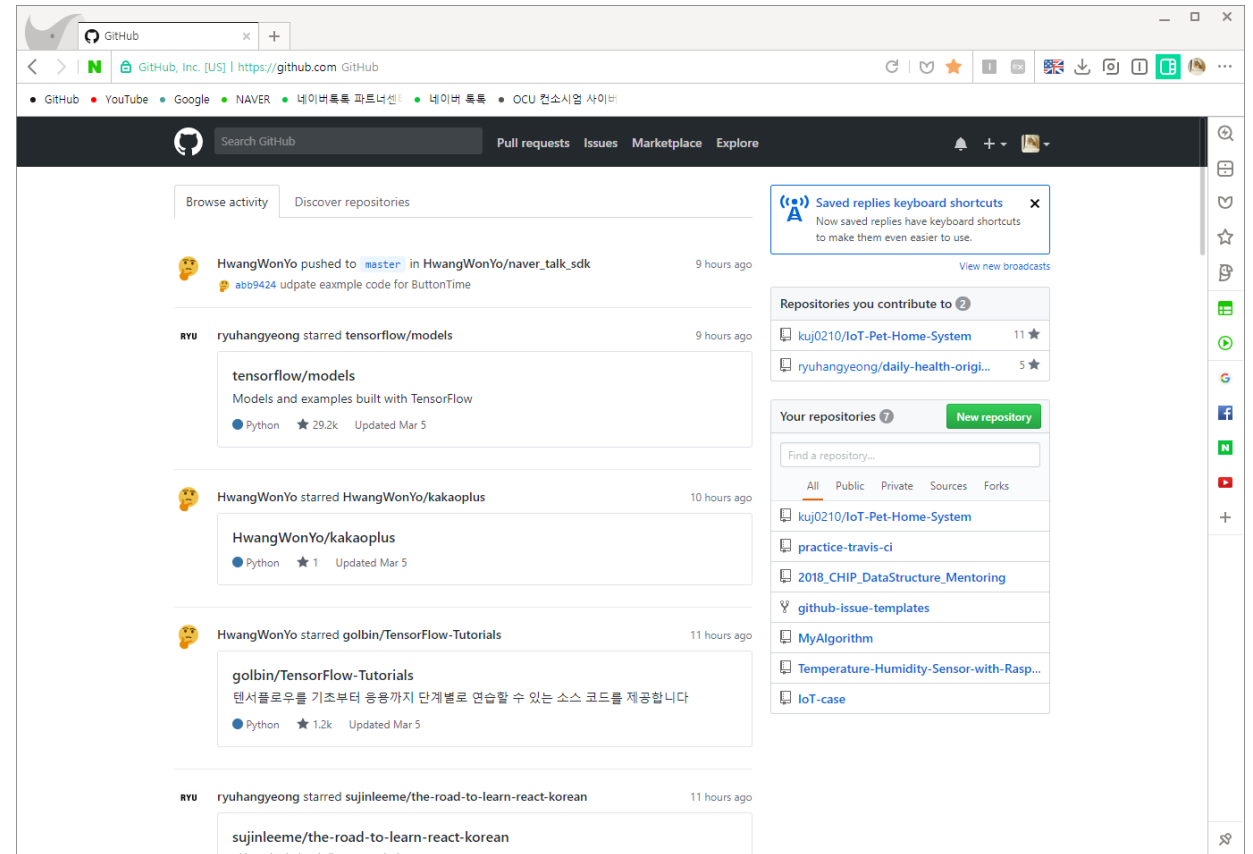
```
MINGW64:/c/Users/user/IoT-Pet-Home-System
user@j MINGW64 ~ (master)
$ cd IoT-Pet-Home-System/

user@j MINGW64 ~/IoT-Pet-Home-System (master)
$ ls
_config.yml      ISSUE_TEMPLATE.md  README.md  version/
CODE_OF_CONDUCT.md  LICENSE            src/
IoT-Pet-Home-System/  PULL_REQUEST_TEMPLATE.md  test/

user@j MINGW64 ~/IoT-Pet-Home-System (master)
$ git --version
git version 2.15.0.windows.1

user@j MINGW64 ~/IoT-Pet-Home-System (master)
$ |
```

Git Bash



GitHub

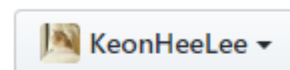
- Q: GitHub를 왜 가르치는가?
- Q: GitHub를 왜 벌써부터 가르치는가?
- Q: GitHub가 쓸모있는가?

Repository 관리

Create a new repository

A repository contains all the files for your project, including the revision history.

Owner



Repository name

Great repository names are short and memorable. Need inspiration? How about **furry-octo-broccoli**.

Description (optional)



Public

Anyone can see this repository. You choose who can commit.



Private

You choose who can see and commit to this repository.



Initialize this repository with a README

This will let you immediately clone the repository to your computer. Skip this step if you're importing an existing repository.

Add .gitignore: None ▾

Add a license: None ▾




Create repository



kuj0210/IoT-Pet-Home-Sys

GitHub, Inc. [US] | https://github.com kuj0210/IoT-Pet-Home-System: IoT Pet Home System

GitHub YouTube Google NAVER 네이버톡톡 파트너센E 네이버 톡톡 OCU 컨소시엄 사이버

 This repository Search

Pull requestsIssuesMarketplaceExplore

 + 

kuj0210 / IoT-Pet-Home-System

Unwatch 1Unstar 11Fork 1

<> CodeIssues 5Pull requests 0Projects 0WikiInsights

IoT Pet Home System

chatbotraspberrypi-3python3gpio


270 commits5 branches2 releases4 contributorsGPL-3.0

Branch: masterNew pull requestCreate new fileUpload filesFind fileClone or download

KeonHeeLee Merge pull request #69 from kuj0210/v1.0.2 Latest commit d4e0ad4 39 minutes ago

.README	renamed: README/Client&Server_Structure.png -> .README/Client&Server...	8 hours ago
main	v1.0.2 update	40 minutes ago
test	add test code	8 days ago
version	Delete v1.1.zip	8 days ago
.gitattributes	Initial commit	2 months ago
CODE_OF_CONDUCT.md	Create CODE_OF_CONDUCT.md	9 days ago
ISSUE_TEMPLATE.md	Create ISSUE_TEMPLATE.md	8 days ago
LICENSE	Merge branch 'master' into add-license-1	9 hours ago
PULL_REQUEST_TEMPLATE.md	Create PULL_REQUEST_TEMPLATE.md	8 days ago
README.md	Update README.md	8 hours ago
_config.yml	Set theme jekyll-theme-slate	5 days ago

README.md



Repository 관리

- **Repository** : 프로젝트 관리를 위한 원격 제어소
- **Organization** : 그룹, 회사 등의 조직의 경우 만듦
- **Master** : Repo(repository) 소유자
- **Collaborator** : Repo를 같이 관리하는 사람
- **Contributor** : Repo 관리에 기여한 사람
- **Fork** : Repo를 복사해서 붙여오는 것을 말함
- **Commit** : 프로젝트에 영향을 주는 행위

[Code](#)[Issues](#) 0[Pull requests](#) 0[Projects](#) 0[Wiki](#)[Insights](#)[Settings](#)[Options](#)[Collaborators](#)[Branches](#)[Webhooks](#)[Integrations & services](#)[Deploy keys](#)

Collaborators

[Push access to the repository](#)

This repository doesn't have any collaborators yet. Use the form below to add a collaborator.

Search by username, full name or email address

You'll only be able to find a GitHub user by their email address if they've chosen to list it publicly. Otherwise, use their username instead.

[Add collaborator](#)

다양한 기능들

Issue

- 버그를 기록하거나 요구사항을 전달 할려고 사용
- 요구사항을 요구하면 어떤 것이 기대되는지 적어주자.
- **What / Where / When / How / Why** 을 지켜주는 것이 매너.
 - 무슨(What) 버그가 발생하는가? / 요구를 하는 것인가?
 - 어느(Where) 환경에서 버그가 발생하는가?
 - 언제(When) 버그가 발생했는가?
 - 어떻게(How) 버그가 발생했는가? / 요구사항을 요청하게 되었는가?
 - 왜(Why) 버그가 발생하는가? / 이러한 요구를 하는가?

Issue 예시

<> Code

Issues 5

Pull requests 0

Projects 0

Wiki

Insights

Filters ▾

is:issue is:open

Labels

Milestones

New issue

☐ 5 Open ✓ 58 Closed

Author ▾


Labels ▾

Projects ▾

Milestones ▾


Assignee ▾


Sort ▾


☐  spanish translation



#70 opened 43 minutes ago by UlisesTJ


1


☐  Add travis-ci and set this label in our project. doing enhancement


#63 opened 4 days ago by KeonHeeLee  Document

☐  need to update "Read me" doing


#62 opened 5 days ago by kuj0210  0 of 4  Document


 3

☐  issue of camera function for analysing pet's action


#52 opened 12 days ago by kuj0210  Add analysis of p...

2

☐  Understanding the behavior of the pet [H/W issue] doing

#43 opened on 3 Feb by kuj0210  Add analysis of p...

2


 ProTip! Mix and match filters to narrow down what you're looking for.

Issue 예시

Add travis-ci and set this label in our project. #63

EditNew issue

Open KeonHeeLee opened this issue 4 days ago · 0 comments




KeonHeeLee commented 4 days ago

Collaborator + 🧑🎨


Expected Behavior

1. The reliability of our project will be enhanced.
2. The label "build passing" can be applied.


The two reasons are to use the travis-city system. Therefore, we will raise the issue.



KeonHeeLee added enhancement doing labels 4 days ago



KeonHeeLee added this to the **Document** milestone 4 days ago



Write Preview

AA ▾ B i “ < > 🔗 ☰ ☷ ✓ ↶ @ 📌

Leave a comment

Attach files by dragging & dropping, [selecting them](#), or pasting from the clipboard.

ML Styling with Markdown is supported

Close issueComment

Assignees

No one—assign yourself

Labels

doingenhancement

Projects

None yet

Milestone


Document

Notifications

🔊 Unsubscribe

You're receiving notifications because you authored the thread.

1 participant




Lock conversation

Pull requests

- 현재 진행중인 작업이 무엇인지 알게 해줌.
- 소스코드의 버그 픽스나 패치(수정)할 것을 씀.
- 해당 프로젝트에 참여하는 과정이 될 수 있음.(Contributor)
- **What / Why / How** 위주로 적어주면 좋음.
 - 무슨(What) 패치를 하는 것인가?
 - 왜(Why) 이 패치를 해야 하는 것인가?
 - 얼마나(How) 테스트를 했는가?


Pull requests 예시


[Code](#) [Issues 5](#) [Pull requests 0](#) [Projects 0](#) [Wiki](#) [Insights](#)

Filters  is:pr is:closed



Labels Milestones


New pull request



 Clear current search query, filters, and sorts


☐  0 Open ☒ 7 Closed



Author ▾ Labels ▾ Projects ▾ Milestones ▾ Reviews ▾ Assignee ▾ Sort ▾



☐  v1.0.2 update  DONE modify


#69 by KeonHeeLee was merged an hour ago 


☐  v1.0.2 update  DONE modify


#68 by KeonHeeLee was merged an hour ago 



☐  modify LICENSE  DONE enhancement modify


#67 by KeonHeeLee was merged 9 hours ago  Document 


☐  Add CODE_OF_CONDUCT.md to IoT-Pet-Home-System.


#60 by bbvch13531 was merged 9 days ago  1

☐  Server update :: 2018.02.24 DONE bug modify system


#58 by KeonHeeLee was merged 10 days ago  In progress of rel... 

☐  Update server DONE modify

#49 by KeonHeeLee was merged 21 days ago 

☐  Create LICENSE

#35 by KeonHeeLee was closed on 15 Jan

 ProTip! Adding `no:label` will show everything without a label.

Pull requests 예시


Add CODE_OF_CONDUCT.md to IoT-Pet-Home-System.

Edit

#60

Merged KeonHeeLee merged 1 commit into `kuj0210:master` from `bbvch13531:master` 9 days ago

Conversation 1 Commits 1 Files changed 1 +46 -0



bbvch13531 commented 9 days ago

Contributor

+ 😊 ✎ !



Type

- Doc


Description

- Add CODE_OF_CONDUCT to IoT-Pet-Home-System. Code of conduct clarifies an organization's mission, values and principles.

Fixes #56

  Create CODE_OF_CONDUCT.md

Verified 0a855fd




KeonHeeLee commented 9 days ago


Collaborator

+ 😊 ✎ ✕

I don't think that you add 'CODE_OF_CONDUCT'. Thank you to help us about management of project!!
I can add other 'community profile checklist' by your tip :)

 KeonHeeLee merged commit 65ca756 into `kuj0210:master` 9 days ago

Revert

 KeonHeeLee referenced this pull request 9 days ago

Document and Managing project issue. #59

Closed

4 of 5 tasks complete

Reviewers

No reviews—request one

Assignees

No one—assign yourself

Labels

None yet

Projects

None yet

Milestone



No milestone

Notifications

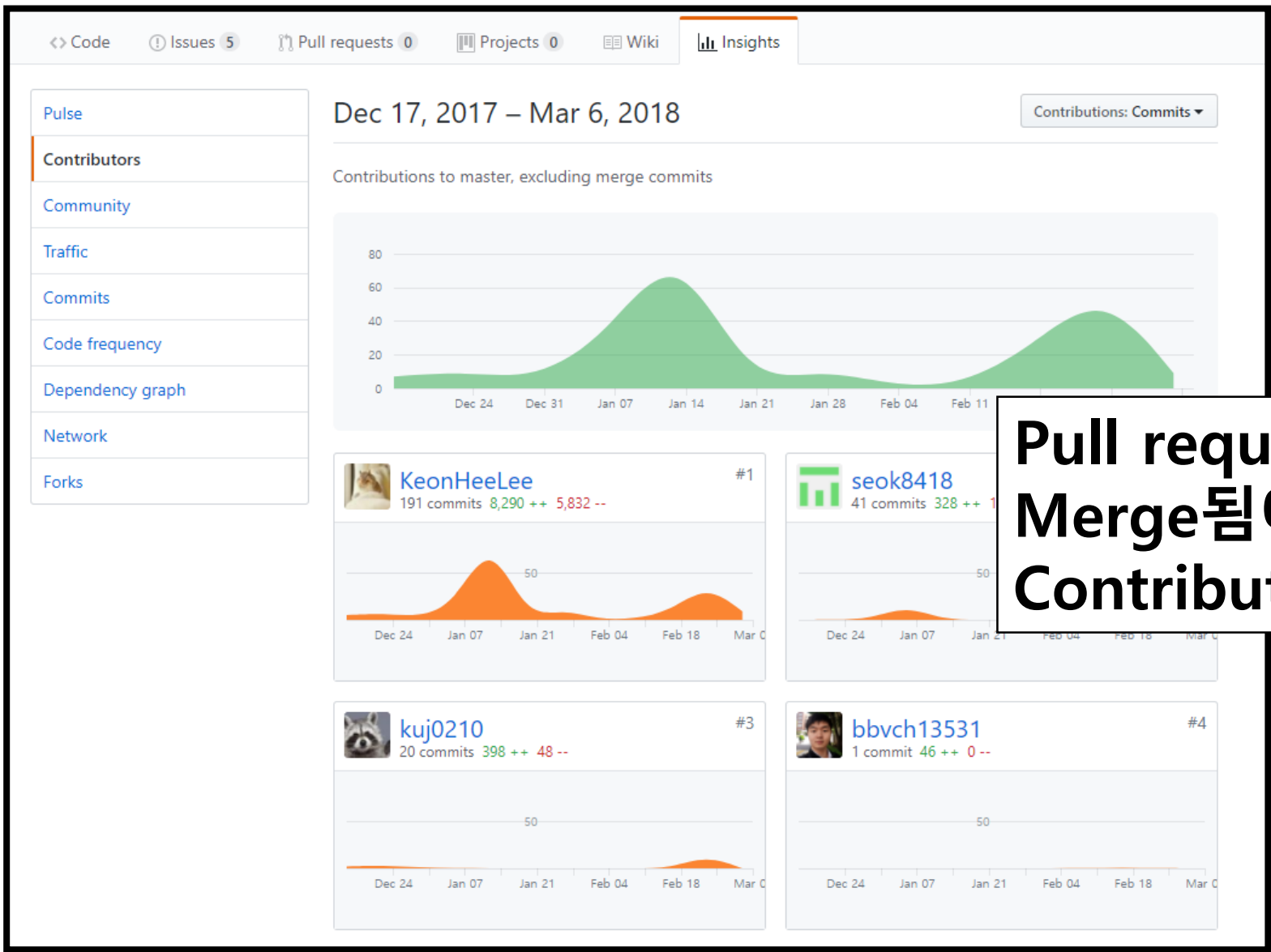
Unsubscribe

You're receiving notifications because you modified the open/close state.

2 participants

Lock conversation



Pull requests로 넣은 수정사항이
Merge됨에 따라
Contributor가 될 수 있습니다!

Milestone

- 일이 얼마나 진행 됐는지 시각적으로 보여주는 카테고리
- 여기에 주로 issue나 pull requests등의 내용을 넣고 관리함.

Milestone 예시

Labels

Milestones

New milestone

🚩 4 Open ✓ 1 Closed

Sort ▼

Relocate source code

No due date ⌚ Last updated about 1 hour ago

We must relocate our source code. Because our source code structure is not good at contributing. Therefore I want to relocate in more detail than current source code.

100% complete

0 open

1 closed

Edit Close Delete

Add natural language function

No due date ⌚ Last updated about 6 hours ago

100% complete

0 open

3 closed

Edit Close Delete

Document

No due date ⌚ Last updated about 10 hours ago

33% complete

2 open

1 closed

Edit Close Delete

Add analysis of pet's behavior patterns

No due date ⌚ Last updated 4 days ago

We have a pi-camera module on RaspberryPi, but its function is onl...(more)

0% complete

2 open

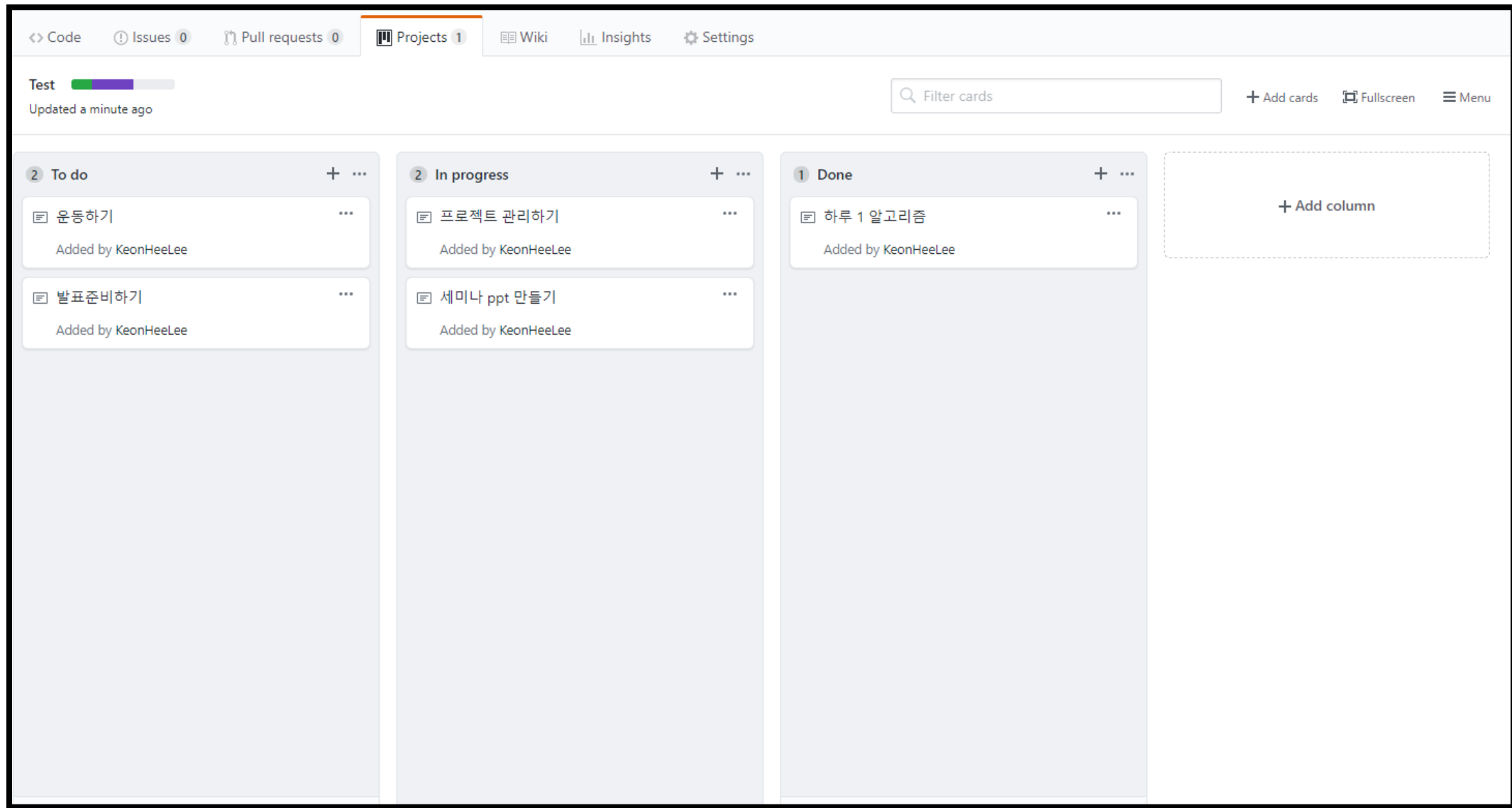
0 closed

Edit Close Delete

Project

- 일이 어떻게 진행되는지 전체적으로 잘 보여주는 카테고리
- 드래그 앤 드롭(Drag&Drop) 방식으로 끌어서 옮기는 방식으로 사용.
- Issue, Pull requests를 연결시켜놓으면 더욱 효과적으로 사용가능.

Project 예시



Wiki

- 소스코드, 주석으로 처리 못하는, 즉 문서를 관리하는데 사용되는 카테고리
- 기술 설명서, 소스코드 전체 설명서, 시스템 설계서 등의 문서들을 놓음
- 혹은 기타 설명들을 적기 위해 사용하는 카테고리

Wiki 예시

[Code](#) [Issues 5](#) [Pull requests 0](#) [Projects 0](#) [Wiki](#) [Insights](#)

naver d2 fest 결승 ppt 초안

woojin edited this page 9 days ago · 2 revisions

[ppt초안](#)

ppt초안입니다. 병원이랑 보험처리때문에 아마 바빠서 가능하면 발표할내용 최대한 채워서 보내주면 정정하겠음

- 서버쪽 담당했던 건희가 발표하기로 했었으니깐 기술관련 내용 적을 때 발표하기 편하게(서버쪽내용 위주로)
- 리드미 등 자료를 작성할 때 만드는 이미지 or 자료들은 재활용을 신경써서 작성

▼ Pages 2

[Home](#)

[naver d2 fest 결승 ppt 초안](#)

+ Add a custom sidebar

Clone this wiki locally

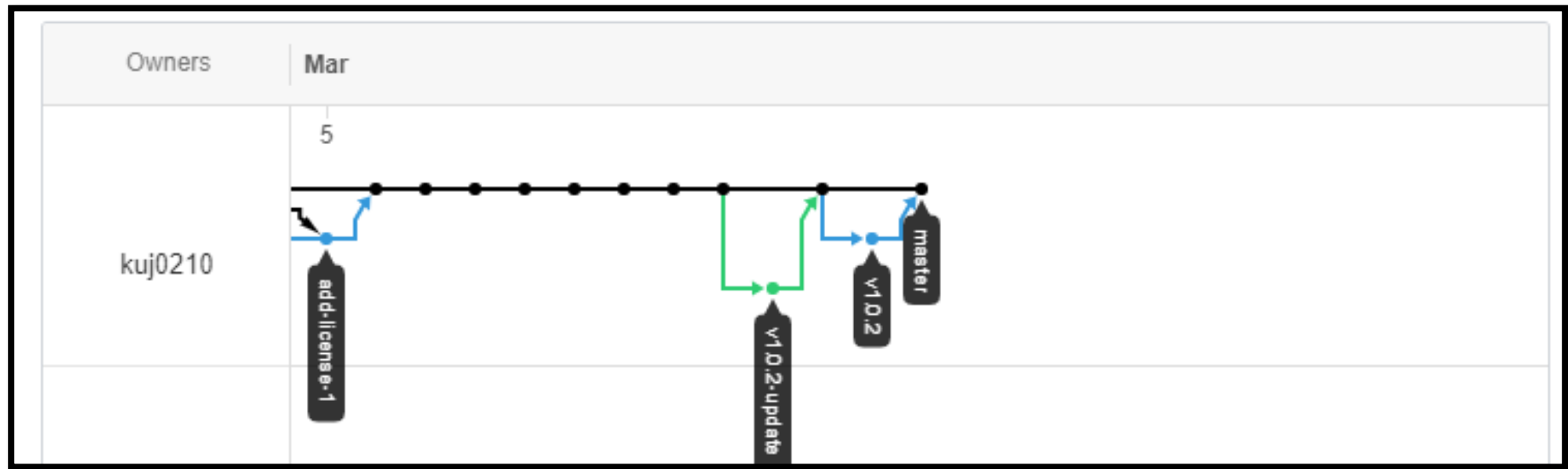
<https://github.com/kuj0210/>

Clone in Desktop

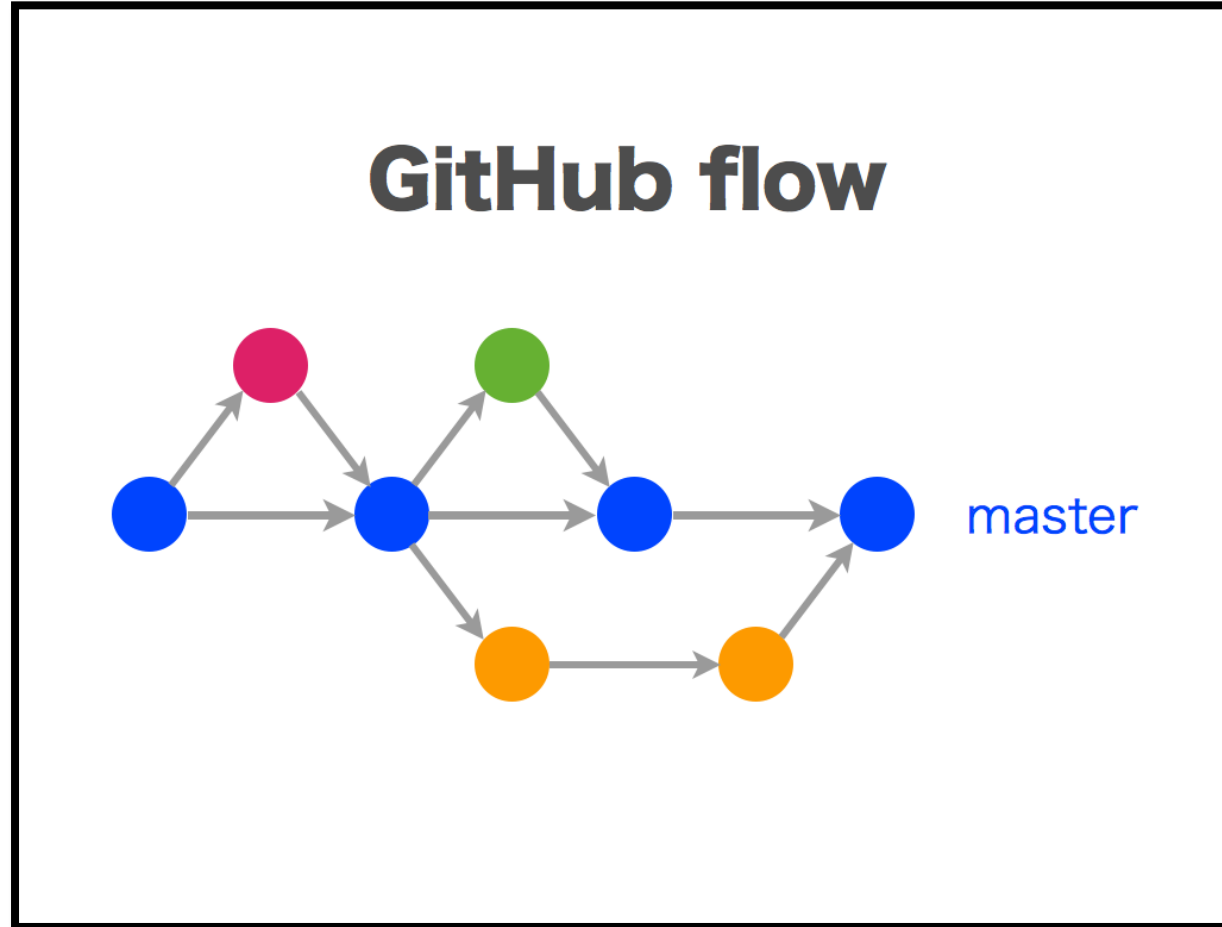
+ Add a custom footer

branches

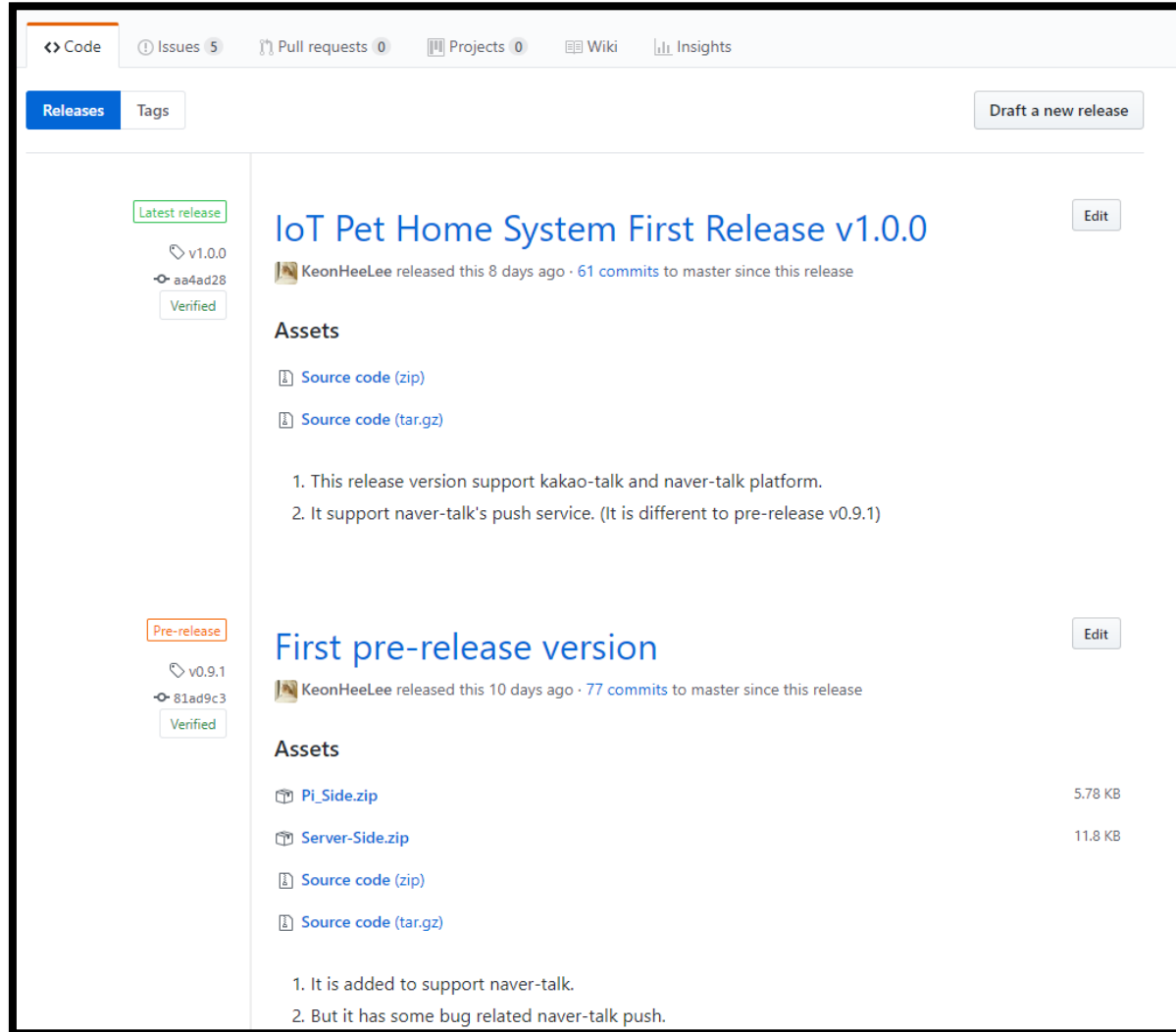
- 테스트 해보거나 새로운 기능을 개발하기 위해 사용하는 독립적인 commit
- Master branch : 기본 branch이자, 최종적으로 마무리 되는 branch



branches



releases



The screenshot shows the GitHub Releases page for the 'IoT Pet Home System'. The page is divided into two main sections: 'Latest release' and 'Pre-release'. The 'Latest release' section shows version v1.0.0, which is verified and was released 8 days ago. It includes assets for source code in zip and tar.gz formats, and a list of changes. The 'Pre-release' section shows version v0.9.1, which is also verified and was released 10 days ago. It includes assets for Pi_Side.zip, Server-Side.zip, and source code in zip and tar.gz formats, along with a list of changes. The page also features a sidebar with navigation links for Code, Issues, Pull requests, Projects, Wiki, and Insights, and a button to 'Draft a new release'.

Code Issues 5 Pull requests 0 Projects 0 Wiki Insights

Releases Tags Draft a new release

Latest release

v1.0.0
aa4ad28
Verified

IoT Pet Home System First Release v1.0.0 Edit

KeonHeeLee released this 8 days ago · 61 commits to master since this release

Assets

- Source code (zip)
- Source code (tar.gz)

- This release version support kakao-talk and naver-talk platform.
- It support naver-talk's push service. (It is different to pre-release v0.9.1)

Pre-release

v0.9.1
81ad9c3
Verified

First pre-release version Edit

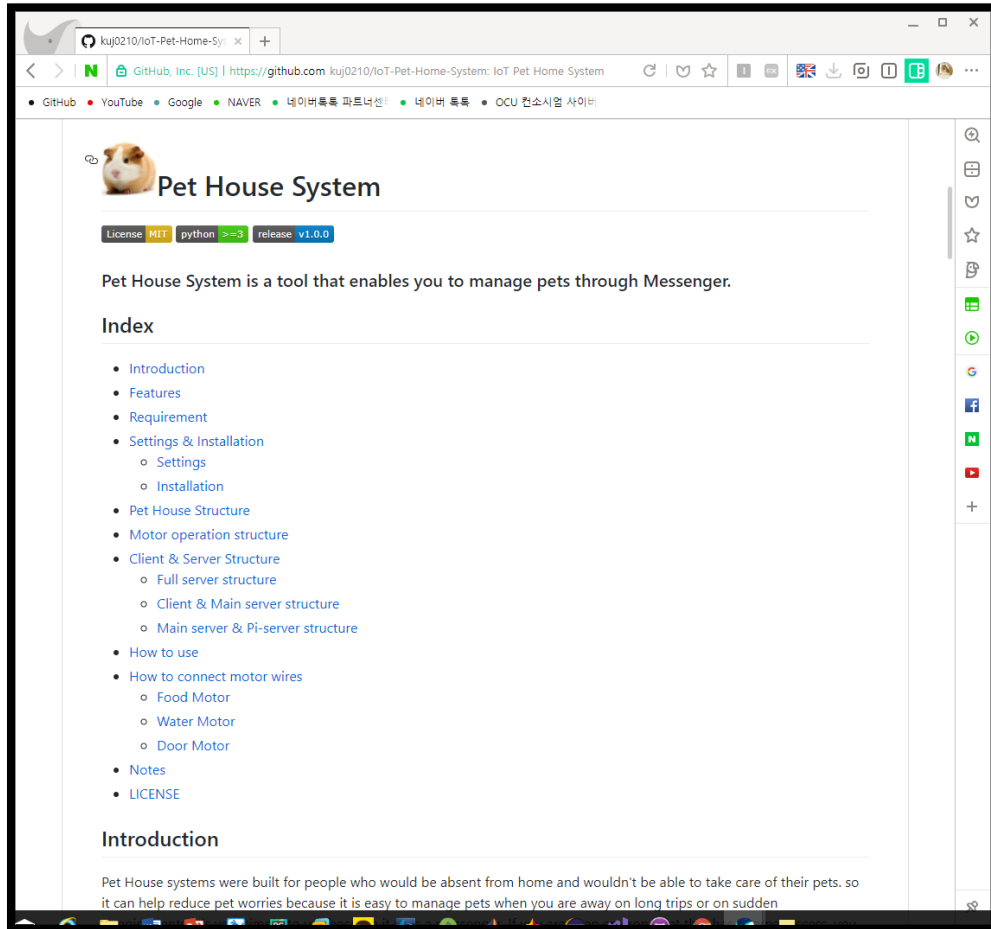
KeonHeeLee released this 10 days ago · 77 commits to master since this release

Assets

- Pi_Side.zip 5.78 KB
- Server-Side.zip 11.8 KB
- Source code (zip)
- Source code (tar.gz)

- It is added to support naver-talk.
- But it has some bug related naver-talk push.

README


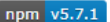

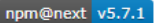




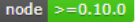


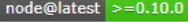
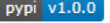
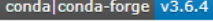
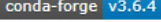
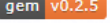
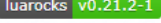

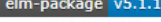
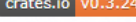
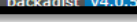


- 해당 프로젝트의 개요나 설명, 설치법에 대해서 설명
- 'README.md' 파일을 인식
- Jekyll 툴을 이용하면 더 깔끔한 Readme 작성가능.



README's Labels

- Badge images
- Custom badge

<https://shields.io/>

CDNJS:		https://img.shields.io/cdnjs/v/jquery.svg
npm:		https://img.shields.io/npm/v/npm.svg
npm (scoped):		https://img.shields.io/npm/v/@cycle/core.svg
npm (tag):		https://img.shields.io/npm/v/npm/next.svg
npm (custom registry):		https://img.shields.io/npm/v/npm.svg?registry_uri=https%3A%2F%2Fexample.com%2F
npm (scoped with tag):		https://img.shields.io/npm/v/@cycle/core/canary.svg
npm (scoped with tag, custom registry):		https://img.shields.io/npm/v/@cycle/core/canary.svg?registry_uri=https%3A%2F%2Fexample.com%2F
node:		https://img.shields.io/node/v/passport.svg
node (scoped):		https://img.shields.io/node/v/@stdlib/stdlib.svg
node (tag):		https://img.shields.io/node/v/passport/latest.svg
node (scoped with tag):		https://img.shields.io/node/v/@stdlib/stdlib/latest.svg
node (scoped with tag, custom registry):		https://img.shields.io/node/v/@stdlib/stdlib/latest.svg?registry_uri=https%3A%2F%2Fexample.com%2F
PyPI:		https://img.shields.io/pypi/v/nine.svg
Conda:		https://img.shields.io/conda/v/conda-forge/python.svg
Conda (channel only):		https://img.shields.io/conda/vn/conda-forge/python.svg
Gem:		https://img.shields.io/gem/v/formatador.svg
LuaRocks:		https://img.shields.io/luarocks/v/mpeterv/luacheck.svg
Hackage:		https://img.shields.io/hackage/v/lens.svg
Elm package:		https://img.shields.io/elm-package/v/elm-lang/core.svg
Crates.io:		https://img.shields.io/crates/v/rustc-serialize.svg
Packageist:		https://img.shields.io/packageist/v/symfony/symfony.svg

README's Labels

- Travis CI
 - Continuous Integration : 푸시할 때 자동화된 빌드 및 테스트가 실행되고 소프트웨어 품질을 향상시키는 개발 방식
 - <https://travis-ci.org/>
 - 성공 시 :  실패 시 : 

Search all repositories



kuj0210 / IoT-Pet-Home-System



build failing

My Repositories

+

! kuj0210/IoT-Pet-Home-System # 62

⌚ Duration: 19 sec

📅 Finished: about 2 hours ago

Current

Branches

Build History

Pull Requests

More options



! Pull Request #69 v1.0.2 update

🚫 #62 errored

🔄 Restart build

🔗 Commit ff0b467

🔗 #69: v1.0.2 update

🔗 Branch master

⌚ Ran for 19 sec

📅 about 2 hours ago

🔌 K.H Lee authored

🔌 GitHub committed

Job log

View config

✖ Remove log

📄 Raw log

▶ 1 Worker information

worker_info

6 Could not find .travis.yml, using standard configuration.

7 mode of '/usr/local/clang-5.0.0/bin' changed from 0777 (rwxrwxrwx) to 0775 (rwxrwxr-x)

▶ 8 Build system information

system_info

405

406 removed '/etc/apt/sources.list.d/basho_riak.list'

407 127.0.0.1 localhost

408 ::1 ip6-localhost ip6-loopback

409 fe00::0 ip6-localnet

410 ff00::0 ip6-mcastprefix

411 ff02::1 ip6-allnodes

412 ff02::2 ip6-allrouters

413 172.17.0.4 travis-job-kuj0210-iot-pet-home-s-349413636.travis-ci.net travis-job-kuj0210-iot-pet-home-s-349413636

414 W: http://ppa.launchpad.net/couchdb/stable/ubuntu/dists/trusty/Release.gpg: Signature by key 15866BAFD9BCC4F3C1E0DFC7D69548E1C17EAB57 uses weak digest algorithm (SHA1)

415 \$ git clone --depth=50 https://github.com/kuj0210/IoT-Pet-Home-System.git kuj0210/IoT-Pet-Home-System

0.53s

Issue & Pull requests Template

Expected Behavior

Actual Behavior

Steps to Reproduce the Problem

- 1.
- 2.
- 3.

Specifications


- Version:
- Platform:
- Subsystem:

- Maintainer에게 좀 더 정확하게 의견을 전달하기 위해 만듦
- Insights > Community 에서 추가 가능
- Jekyll 툴을 활용하면 더 깔끔

LICENSE




Branch: master IoT-Pet-Home-System / LICENSEFind fileCopy path

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 KeonHeeLee Merge branch 'master' into add-license-16cdd3d7 10 hours ago

1 contributor

675 lines (553 sloc) | 34.3 KBRawBlameHistory

```
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2          Version 3, 29 June 2007
3
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7
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9
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네이버 오픈소스 가이드

<https://naver.github.io/OpenSourceGuide/book/>

그 외의 Community profile

Community profile

Here's how this project compares to [recommended community standards](#).

Checklist

✓ Description

✓ README

✓ Code of conduct

● Contributing

Writing contributing guidelines [Add](#)

✓ License

✓ Issue template and pull request template

[What is the community profile?](#)

- **Code of conduct**
- **Contributing guidelines**

그 외에 프로젝트 관리에 도움되는 것



OpenHub 어플리케이션



Git Bash (Git bash 사용법 : <http://gbsb.tistory.com/10>)



GitHub Desktop

실습

C언어 문제 (1)

첫 번째 줄에는 문자열을 입력한다. 두 번째 줄은 지우고 싶은 문자열을 입력한다. 출력 값은 첫 번째 줄의 문자열에서 두 번째 문자열을 뺀 문자열을 출력한다.

입력

Hello world, Hello C language!!
Hell

결과

O world, o C language!!

C언어 문제 (2)

배열은 연속된 데이터를 다룰 수 있지만, 크기에 한계가 있다. 이러한 점을 해결하기 위해 실제로 **리스트(List)**라는 자료구조를 사용한다. 리스트는 아래와 같은 구조를 띄고 있다.

```
typedef struct List {  
    element data;  
    List *next;  
}List;
```

- element는 자료형(int,float와 같은)이다.
- next는 List형 포인터다.
- 이러한 리스트의 개별 단위를 노드(Node)라고 부른다.

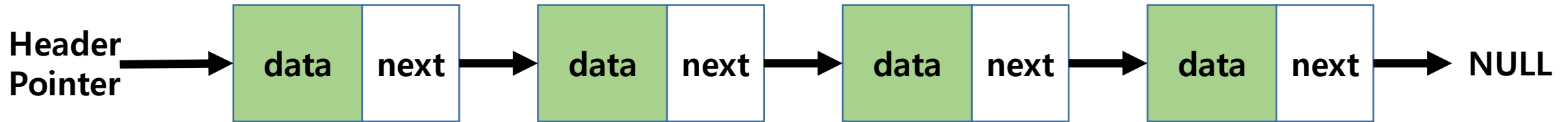
이러한 구조를 띄게 됨으로써, 아래와 같은 특징을 가진다.

1. 데이터를 이어 붙이는데 한계가 없어진다.
2. 데이터를 찾기 위해서 배열과 같이 인덱스 하나씩 탐색할 필요가 없어진다.

이러한 구조를 가지는 리스트는 실제로 삽입 연산 알고리즘을 사용함으로써, 위의 리스트를 계속 이어 붙일 수 있는데, 리스트의 삽입 연산을 하는 함수를 구현해보아라.

리스트 참고자료 및 힌트

- 리스트는 아래와 같은 구조를 띈다.



- 리스트의 삽입 알고리즘은 3가지 경우를 고려하자.
 1. 아무 노드가 없을 때 (리스트 자체가 없는 경우) /가장 앞에 삽입하는 경우
 2. 리스트의 끝 부분에 삽입하는 경우
 3. 리스트의 중간에 삽입하는 경우
- 리스트의 **헤더포인터**는 **리스트의 첫 노드를 가리키기 위해서** 쓰인다.

- **Time limit : 20 min (~practice 1)**
- 소스코드 컴파일이 완료되고 실행이 되었으면 확인 받길 바람.
- 완료된 소스코드는 칩 repo의 **"1. How to use GitHub/practice1"** 폴더에 업로드하고 가면 됨.
- 2번 문제는 선택사항. 단 금일 10시 이전까지 풀면 혜택 있음.
- 2번 문제는 repo의 **"1. How to use GitHub/practice2"** 폴더에 업로드.

참고자료 및 앞으로 사용할 Repo 주소

- 2학년 교육 관리할 Repository 주소

https://github.com/KeonHeeLee/2018_CHIP_DataStructure_Mentoring

- 네이버 오픈소스 가이드 <https://naver.github.io/OpenSourceGuide/book/>

- 실제로 사용한 프로젝트 <https://github.com/kuj0210/IoT-Pet-Home-System>