

# 자료구조와실습

Week3\_실습

# 시작하기 전에

## 1. 과제 제출 시 보고서를 반드시 제출해주셔야 합니다.

· 스크린샷, 각 문제에 대한 내용등을 보고서로 안내고 따로 제출하시는 분들이 있습니다. 반드시 보고서를 작성해서 제출해주세요. 미제출시 0점입니다.

## 2. 실행화면 제출시에 옆에 코드가 나오게 찍어주셔야 됩니다. 코드 가리시면 안됩니다.

· 실행화면 + 자신의 코드가 한 화면에 나오게 해주셔야합니다.

## 3. 모든 보고서에는 표지를 만들어주셔야 합니다.

· 인터넷에 동국대학교 레포트표지 라고 치면 많은 표지들이 나옵니다. 그 중 마음에 드는 것을 골라 자신의 레포트 표지로 이용해보세요.

## 4. 보고서에 실행화면을 넣어주실 때 어떤 문제에 대한 실행화면인지 간단한 설명 혹은 캡션을 달아주세요.

## 5. 서술형 문제가 나갈 경우 자세히 답해주셔야 합니다.

· 자신의 이해를 바탕으로 서술을 해야 하며 가능한 경우 예제를 사용해 설명해주세요. 서술형 문제에서 1~3줄사이의 간단한 답변은 오답으로 처리할 예정입니다.

## 6. 코드를 보고서에 캡처 혹은 복사해 넣으셔도 코드 소스파일은 반드시 제출하셔야 합니다.

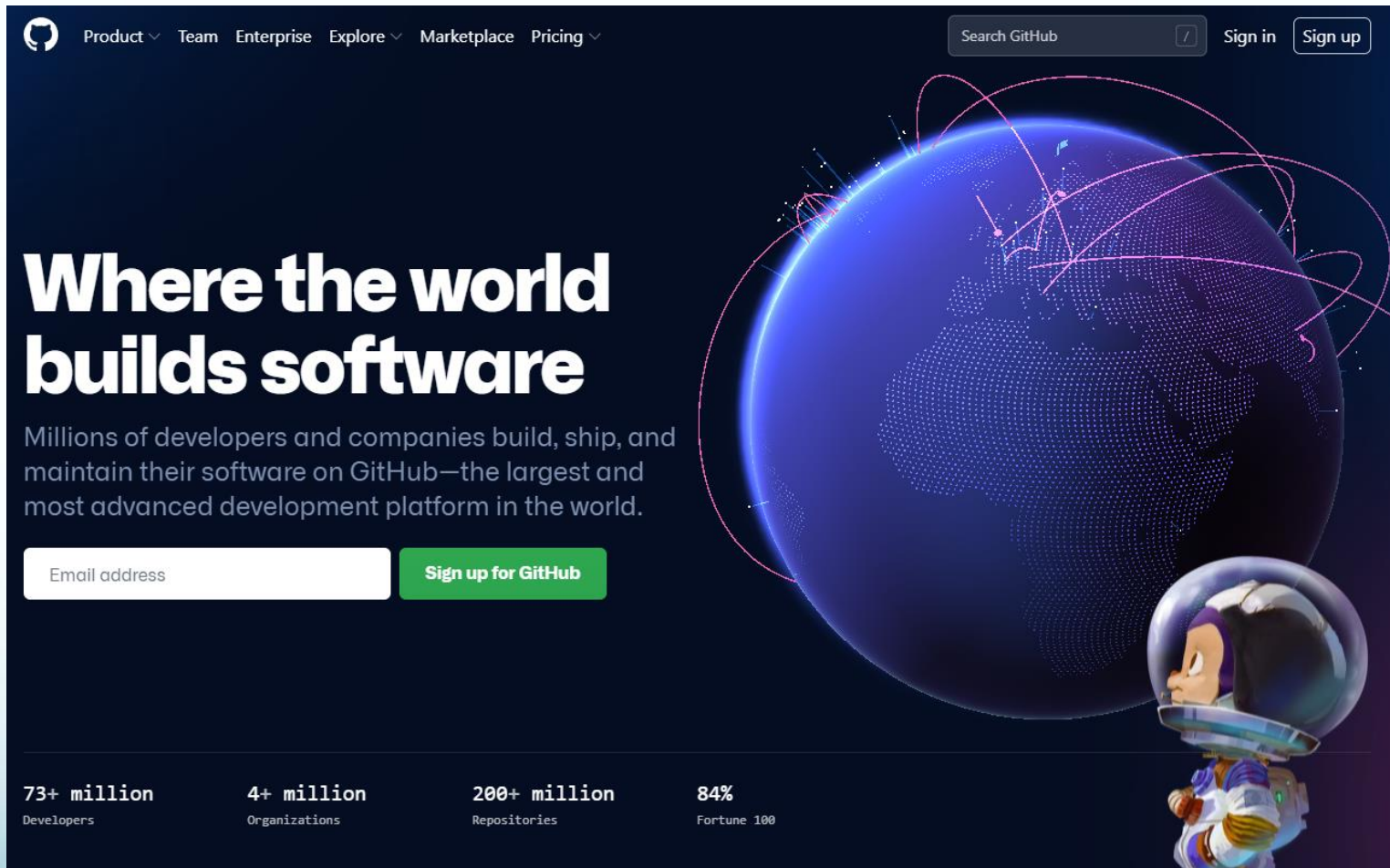
· **미제출시 0점입니다. (잘못된 파일 제출도 0점입니다.)** 제출후에 반드시 자신의 제출파일을 열어보시는걸 추천드립니다.

## 7. 보고서 + 소스코드를 반드시 압축해서 제출해주세요.

## 8. 보고서에는 자신이 작성한 코드 설명이 들어가야 합니다.

· 주석으로 설명을 대체한 경우에는 주석을 캡처해서 보고서에 첨부해주세요.

# Github

The image shows the GitHub homepage banner. At the top, there is a navigation bar with the GitHub logo, links for Product, Team, Enterprise, Explore, Marketplace, and Pricing, a search bar labeled "Search GitHub", and "Sign in" and "Sign up" buttons. The main headline reads "Where the world builds software". Below this, a sub-headline states: "Millions of developers and companies build, ship, and maintain their software on GitHub—the largest and most advanced development platform in the world." There is a sign-up form with an "Email address" input field and a green "Sign up for GitHub" button. The background features a stylized blue globe with glowing red orbital lines and a small astronaut character in the bottom right corner. At the bottom, four statistics are listed: "73+ million Developers", "4+ million Organizations", "200+ million Repositories", and "84% Fortune 100".

Product ▾ Team Enterprise Explore ▾ Marketplace Pricing ▾

Search GitHub / Sign in Sign up

## Where the world builds software

Millions of developers and companies build, ship, and maintain their software on GitHub—the largest and most advanced development platform in the world.

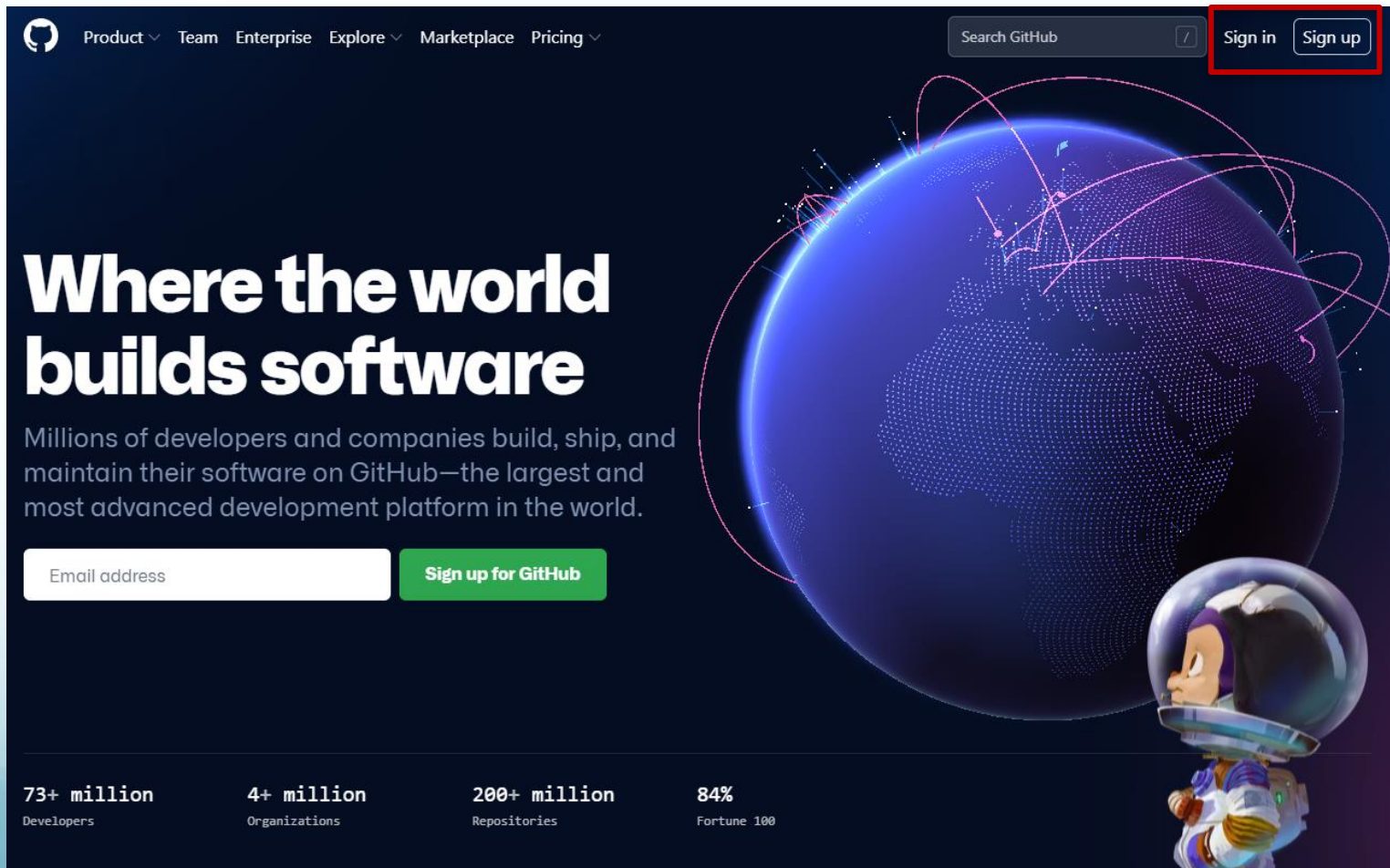
Email address Sign up for GitHub

73+ million Developers 4+ million Organizations 200+ million Repositories 84% Fortune 100

<https://github.com/> 으로 접속

# Github

회원가입 후 로그인



# Github

The screenshot shows the GitHub user profile page for 'skokrslokr'. The top navigation bar includes the GitHub logo, a search bar, and links for 'Pull requests', 'Issues', 'Marketplace', and 'Explore'. The left sidebar displays the user's profile, a 'New' repository button, a search bar for repositories, a list of recent repositories, and a 'Recent activity' section. The main content area, titled 'All activity', features a 'Introduce yourself' card with a template for a README file and a 'Discover interesting projects and people to populate your personal news feed.' card with an 'Explore GitHub' button. At the bottom, there is a 'ProTip!' and a link to subscribe to the news feed.

Search or jump to... / Pull requests Issues Marketplace Explore

skokrslokr

Recent Repositories [New](#)

Find a repository...

- skokrslokr/Mars\_p
- skokrslokr/coding\_study
- skokrslokr/basic\_programmings
- skokrslokr/skokrslokr
- skokrslokr/Gamma\_cpp
- skokrslokr/vegan
- skokrslokr/NICE\_cpp

Show more

Recent activity

When you take actions across GitHub, we'll provide links to that activity here.

All activity

Introduce yourself

The easiest way to introduce yourself on GitHub is by creating a README in a repository about you! You can start here:

```
skokrslokr / README.md
```

```
1 - 🙋 Hi, I'm @skokrslokr
2 - 👀 I'm interested in ...
3 - 📖 I'm currently learning ...
4 - 💬 I'm looking to collaborate on ...
5 - 📧 How to reach me ...
6
```

[Dismiss this](#) [Continue](#)

Discover interesting projects and people to populate your personal news feed.

Your news feed helps you keep up with recent activity on repositories you [watch](#) or [star](#) and people you [follow](#).

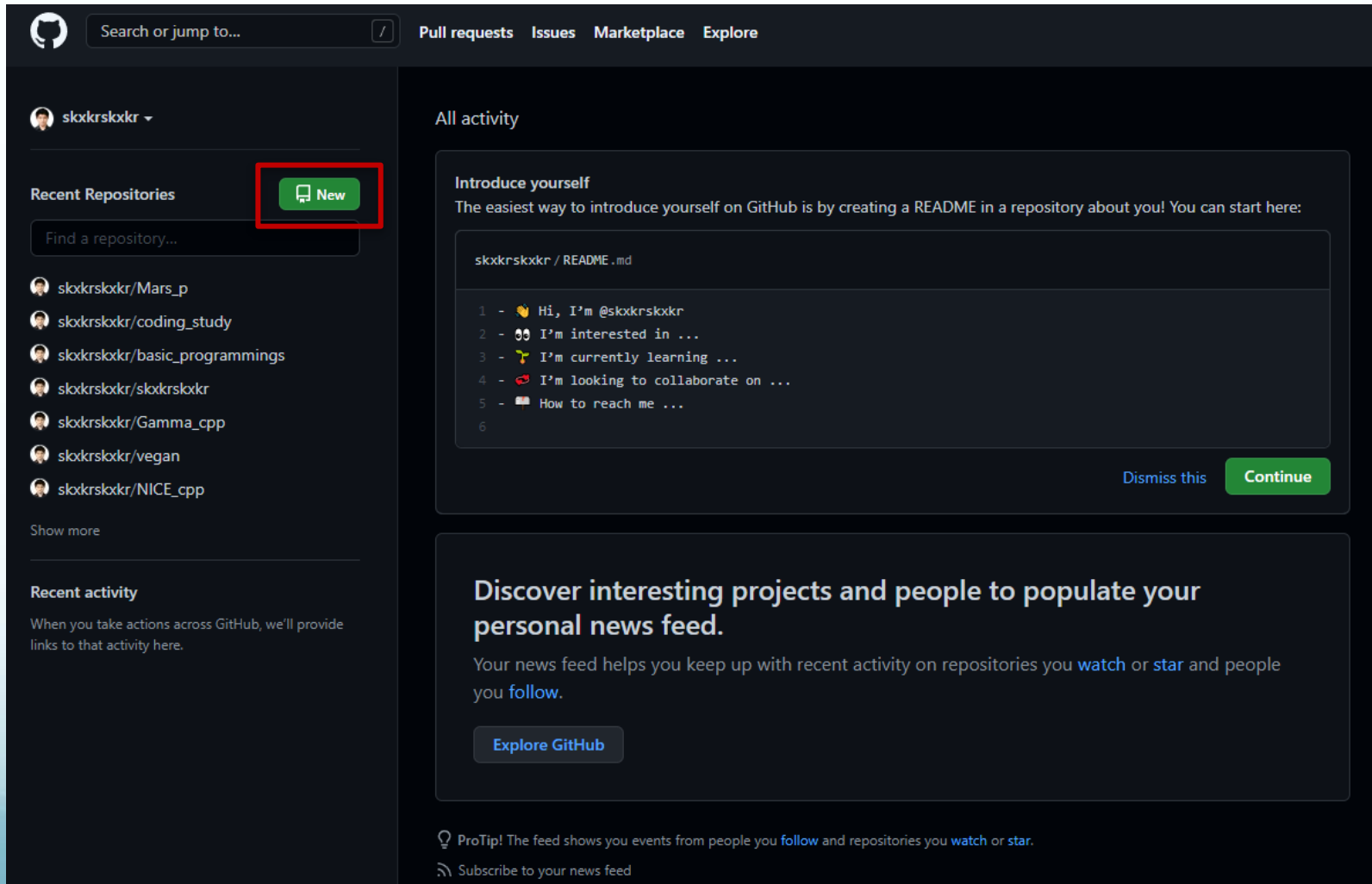
[Explore GitHub](#)

💡 ProTip! The feed shows you events from people you [follow](#) and repositories you [watch](#) or [star](#).

🔔 [Subscribe to your news feed](#)

Login 에 성공한 화면

# Github 프로젝트 만들기



The screenshot shows the GitHub homepage with a dark theme. In the top navigation bar, there is a search bar and links for 'Pull requests', 'Issues', 'Marketplace', and 'Explore'. The left sidebar displays the user profile 'skokrsokxkr' and a list of 'Recent Repositories'. A red box highlights the 'New' button, which is used to create a new repository. Below the repositories list, there is a 'Recent activity' section. The main content area, titled 'All activity', features a 'Introduce yourself' prompt with a template for a README file. The template includes a list of five items: a heart, a person, a book, a hand, and a mail icon, each followed by a description. At the bottom of the main content area, there is a 'Discover interesting projects and people to populate your personal news feed.' section with an 'Explore GitHub' button. A 'ProTip!' message at the very bottom explains that the news feed shows events from people you follow and repositories you watch or star.

Search or jump to... / Pull requests Issues Marketplace Explore

skokrsokxkr ▾

**Recent Repositories**

Find a repository...

skokrsokxkr/Mars\_p

skokrsokxkr/coding\_study

skokrsokxkr/basic\_programmings

skokrsokxkr/skokrsokxkr

skokrsokxkr/Gamma\_cpp

skokrsokxkr/vegan

skokrsokxkr/NICE\_cpp

Show more

**Recent activity**

When you take actions across GitHub, we'll provide links to that activity here.

**All activity**

**Introduce yourself**

The easiest way to introduce yourself on GitHub is by creating a README in a repository about you! You can start here:

skokrsokxkr / README.md

```
1 - 🍷 Hi, I'm @skokrsokxkr
2 - 👤 I'm interested in ...
3 - 📖 I'm currently learning ...
4 - 🤝 I'm looking to collaborate on ...
5 - ✉️ How to reach me ...
6
```

Dismiss this Continue

**Discover interesting projects and people to populate your personal news feed.**

Your news feed helps you keep up with recent activity on repositories you [watch](#) or [star](#) and people you [follow](#).

Explore GitHub

💡 **ProTip!** The feed shows you events from people you [follow](#) and repositories you [watch](#) or [star](#).

📧 Subscribe to your news feed

# Github 프로젝트 만들기


Create a new repository

A repository contains all project files, including the revision history. Already have a project repository elsewhere? [Import a repository.](#)

Repository template

Start your repository with a template repository's contents.

No template ▾

Owner \*  skxkrskxkr ▾

Repository name \*

Great repository names are short and memorable. Need inspiration? How about [vigilant-meme](#)?

Description (optional)

☐ Public  
Anyone on the internet can see this repository. You choose who can commit.

☒ Private  
You choose who can see and commit to this repository.

Initialize this repository with:

Skip this step if you're importing an existing repository.

☒ Add a README file  
This is where you can write a long description for your project. [Learn more.](#)

☐ Add .gitignore  
Choose which files not to track from a list of templates. [Learn more.](#)

☐ Choose a license  
A license tells others what they can and can't do with your code. [Learn more.](#)

This will set `main` as the default branch. Change the default name in your [settings](#).

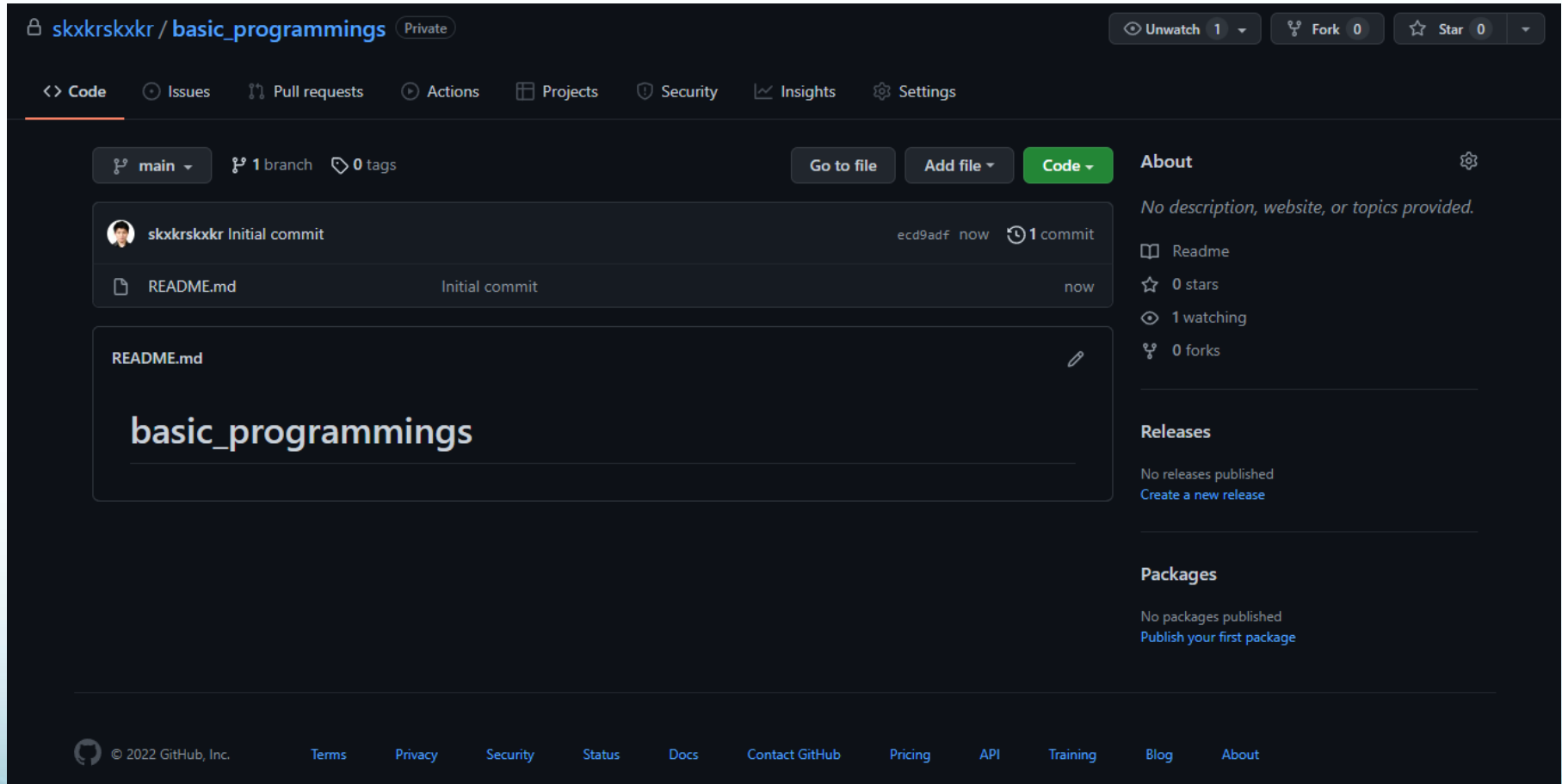
Create repository

- 원하는 프로젝트 이름 입력

- Check 반드시 비공개로

- check

# Github 프로젝트 만들기



해당 화면이 나오면 성공



# Github 코드업로드

The screenshot shows the GitHub interface for a repository named 'basic\_programmings' by user 'skxkrskxkr'. The repository is private and has 1 branch (main) and 0 tags. The 'Code' button is highlighted in green. Below the repository name, there is a section for the 'Initial commit' which includes a file named 'README.md'. A red box highlights the 'Upload files' button in the 'Add file' dropdown menu. The 'README.md' file content is visible, showing the text 'basic\_programmings'. On the right side, there is an 'About' section with a description, a 'Releases' section with no published releases, and a 'Packages' section with no published packages. The footer contains the GitHub logo, copyright information, and various links like Terms, Privacy, Security, Status, Docs, Contact GitHub, Pricing, API, Training, Blog, and About.

skxkrskxkr / basic\_programmings Private

Unwatch 1 Fork 0 Star 0

<> Code Issues Pull requests Actions Projects Security Insights Settings

main 1 branch 0 tags

Go to file Add file Code

Create new file

Upload files 1 commit

2 minutes ago

Initial commit

README.md

basic\_programmings

About

No description, website, or topics provided.

Readme

0 stars

1 watching

0 forks

Releases

No releases published

Create a new release

Packages

No packages published

Publish your first package

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# Github 코드업로드

The screenshot shows the GitHub interface for a repository named 'basic\_programmings' by user 'skxkrskxkr'. The repository is private and has 1 branch (main) and 0 tags. The 'Code' button is highlighted in green. Below the repository name, there is a section for the 'Initial commit' which includes a file named 'README.md'. A red box highlights the 'Upload files' button in the 'Add file' dropdown menu. The 'README.md' file content is visible, showing the text 'basic\_programmings'. On the right side, there is an 'About' section with a description, a 'Releases' section with no published releases, and a 'Packages' section with no published packages. The footer contains the GitHub logo, copyright information, and various links like Terms, Privacy, Security, Status, Docs, Contact GitHub, Pricing, API, Training, Blog, and About.

skxkrskxkr / basic\_programmings Private

Unwatch 1 Fork 0 Star 0

<> Code Issues Pull requests Actions Projects Security Insights Settings

main 1 branch 0 tags

Go to file Add file Code

Create new file

Upload files 1 commit

2 minutes ago

README.md Initial commit

README.md

basic\_programmings

About

No description, website, or topics provided.

Readme

0 stars

1 watching

0 forks

Releases

No releases published

Create a new release

Packages


No packages published

Publish your first package


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# Github 코드 업로드

basic\_programmings /



Drag files here to add them to your repository  
Or [choose your files](#)



**Commit changes**

0317 upload test

basic programming git upload test

☒ Commit directly to the `main` branch.

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

**Commit changes** **Cancel**

Upload 하고자 하는 코드를 화면으로 끌어오거나 choose your files를 눌러 선택하고 Commit changes를 클릭

# Github 코드업로드

The screenshot shows a GitHub repository interface. At the top, the repository name 'skxkrskxkr / basic\_programmings' is displayed with a 'Private' label. To the right are buttons for 'Unwatch 1', 'Fork 0', and 'Star 0'. Below this is a navigation bar with links for 'Code', 'Issues', 'Pull requests', 'Actions', 'Projects', 'Security', 'Insights', and 'Settings'. The 'Code' tab is selected. Below the navigation bar, there are buttons for 'Go to file', 'Add file', and 'Code'. The repository details section shows the user 'skxkrskxkr' with a commit message '0317 upload test' and a commit hash '6b8154f'. Below this, a table lists files: '1002.cpp' (committed '0317 upload test' 'now') and 'README.md' (committed 'Initial commit' '6 minutes ago'). The 'README.md' file content is displayed below the table, showing the text 'basic\_programmings'. On the right side, the 'About' section states 'No description, website, or topics provided.' and lists 'Readme', '0 stars', '1 watching', and '0 forks'. The 'Releases' section states 'No releases published' with a link to 'Create a new release'. The 'Packages' section states 'No packages published' with a link to 'Publish your first package'.

skxkrskxkr / basic\_programmings Private

Unwatch 1 Fork 0 Star 0

<> Code Issues Pull requests Actions Projects Security Insights Settings

main 1 branch 0 tags

Go to file Add file Code

skxkrskxkr 0317 upload test 6b8154f now 2 commits

1002.cpp	0317 upload test	now
README.md	Initial commit	6 minutes ago

README.md

## basic\_programmings

About

No description, website, or topics provided.

Readme

0 stars

1 watching

0 forks

Releases

No releases published

Create a new release

Packages

No packages published

Publish your first package

Code Upload 성공

# 문제 1

정수 a, b를 파라미터로 받는 함수 void func(int a, int b)가 존재합니다.  
 $1 < a < 10000$ ,  $1 < b < 10000$  이며 다음과 같은 결과를 같도록 함수 func를 완성하세요.

```
int main() {  
    func(120, 5);  
    return 0;  
}
```

Microsoft Visual Studio 디버그 콘솔

600  
600

C:\Users\User\source\repos\...  
이 창을 닫으려면 아무 키나 누르십시오.

```
int main() {  
    func(4984, 215);  
    return 0;  
}
```

Microsoft Visual Studio 디버그 콘솔

24920  
4984  
9968  
1071560

C:\Users\User\source\repos\...  
이 창을 닫으려면 아무 키나 누르십시오.

```
int main() {  
    func(215, 4984);  
    return 0;  
}
```

Microsoft Visual Studio 디버그 콘솔

860  
1720  
1935  
860  
1071560

# 문제2

정수  $a$ ,  $b$ 를 파라미터로 받는 함수 `com_mul(int a, int b)`와 `com_fac(int a, int b)`이 존재합니다.

$1 < a < 10000$ ,  $1 < b < 10000$  이며 `com_mul` 함수는  $a$ 와  $b$ 의 공배수의 개수를, `com_fac`함수는 공약수의 개수를 구해주는 함수입니다. 함수를 작성하고 각 함수당 3개 이상의 서로 다른 예제를 사용한 결과를 보이세요.

# 제출 시 유의사항

1. 과제 제출시 이클래스에 코드+보고서(실행화면, 코드설명, Git업로드화면)을 압축해서 학번\_이름\_주차.zip으로 올려주시기 바랍니다.
2. 코드 설명은 주석을 캡처해도 좋고, 중요 부분만을 따로 보고서에 작성하여 상세한 설명을 넣어주셔도 괜찮습니다.
3. 실행화면은 다양한 경우를 커버할 수 있도록 여러 경우를 실행한 화면을 올려주세요. Ex) (문제 1 번의 경우 2자리수 x 3자리수, 3자리수 x 1자리수, 4자리수 x 4자리수 ..)
4. 보고서 마지막에는 반드시 해당 과제를 Git에 업로드한 캡처화면을 넣어주셔야 합니다.