

TEAM 2

김진환  
배지현  
이민영  
이정우  
정미서

# CONTENTS.

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Overview

background

02

Goals & Method

03

Team & Plan

Team Info  
& Schedule

04

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01\_Overview



02\_Goal & Method



03\_Team & Plan



04\_Evaluation

A presentation slide with a white background and a blue header bar featuring standard window controls (minimize, maximize, close). The slide contains large black text: '01' on top, followed by 'Overview' in a larger font, and 'Background' at the bottom.

# Overview

## Background

Skku Students should learn web crawling using python!

### 01. Why university teach Programming?

Education

### 02. Why Python?

Python

### 03. Why Web Crawling?

Student

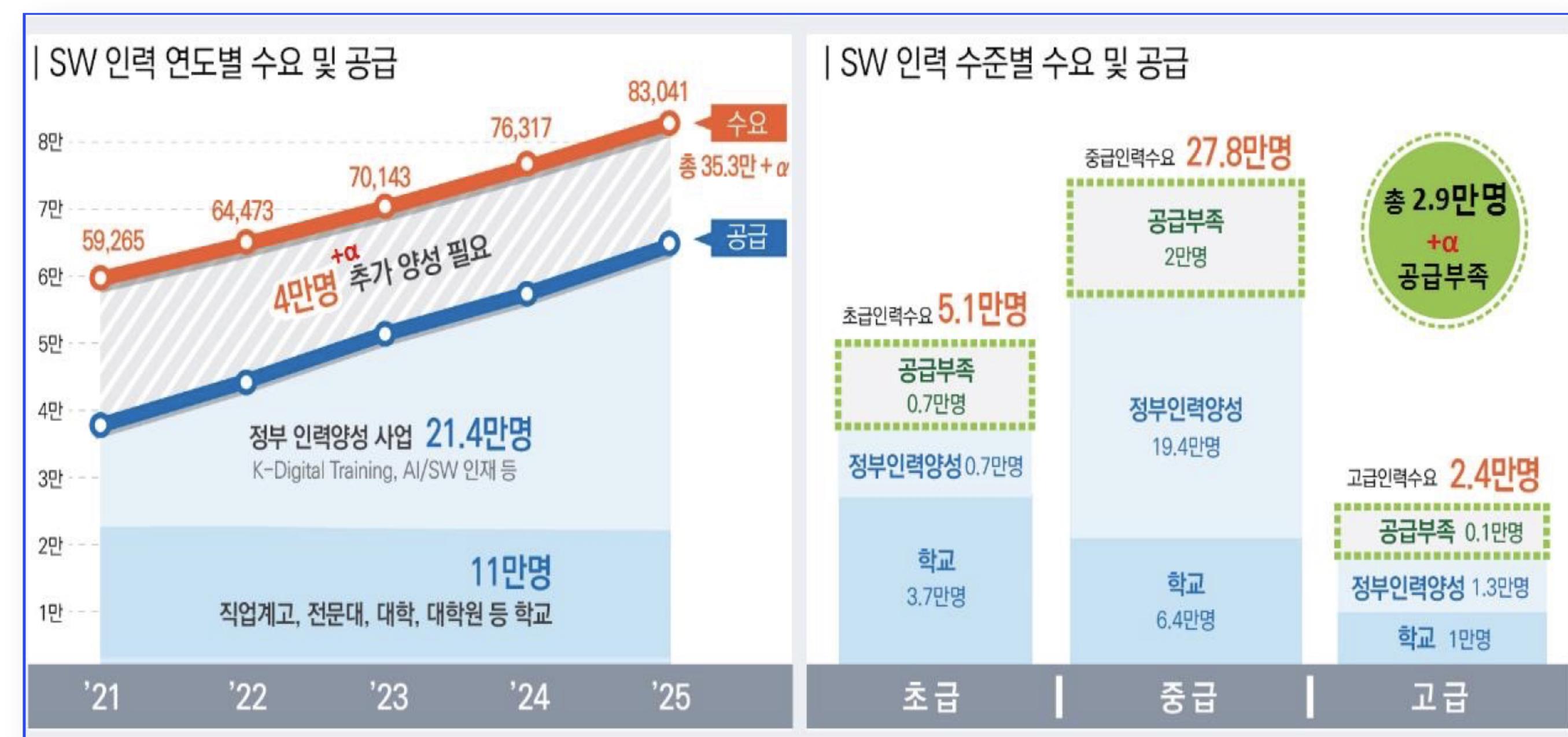
# 01 Why university teach programming?

Universities are aware of importance of SW education for logical thinking

There is increasing demand for SW labor

SKKU students should get used to programming

## Increasing demand for software labor!



# Increasing demand for Python!

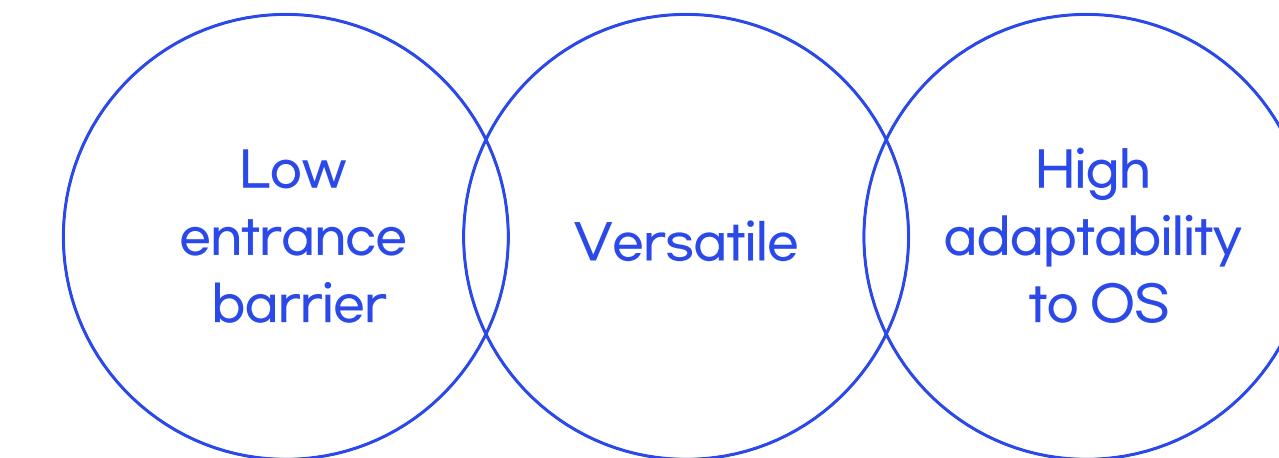
## 02 Why Python?

Python ranked 3rd place in TIOBE index

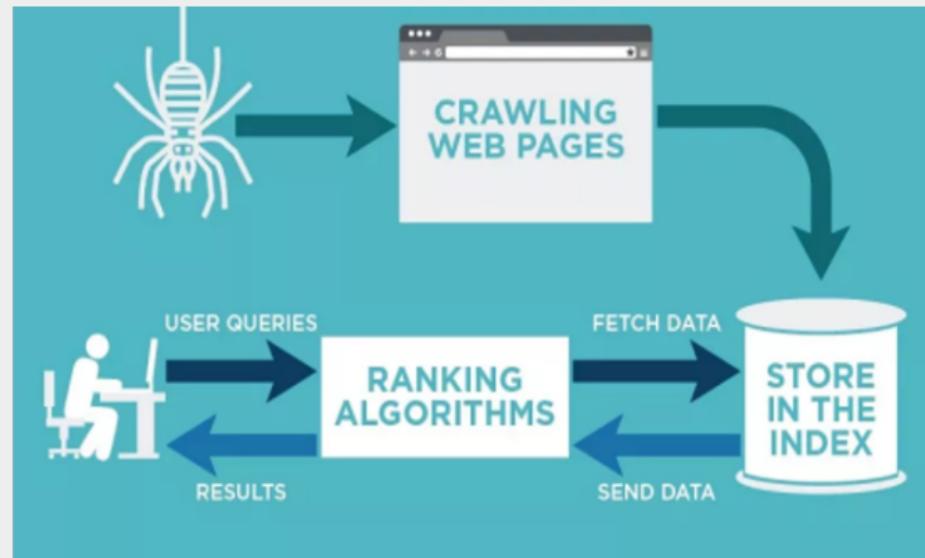
Rating of C and Java has fallen compared to last year

SKKU students should get used to programming with python

Jul 2021	Jul 2020	Change	Programming Language	Ratings	Change
1	1		C	11.62%	-4.83%
2	2		Java	11.17%	-3.93%
3	3		Python	10.95%	+1.86%
4	4		C++	8.01%	+1.80%
5	5		C#	4.83%	-0.42%
6	6		Visual Basic	4.50%	-0.73%
7	7		JavaScript	2.71%	+0.23%
8	9	▲	PHP	2.58%	+0.68%
9	13	▲	Assembly language	2.40%	+1.46%
10	11	▲	SQL	1.53%	+0.13%

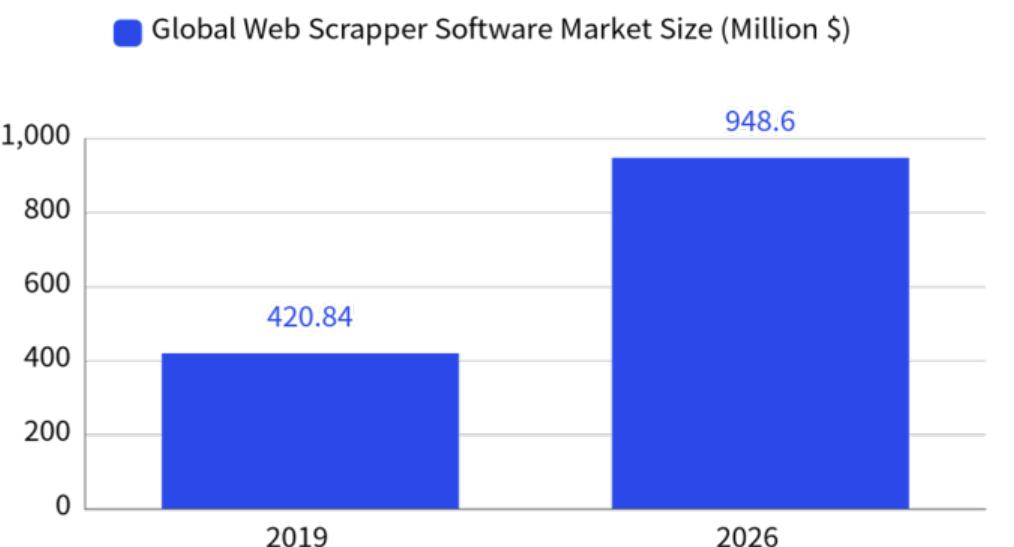


# 03 Why Web Crawling?



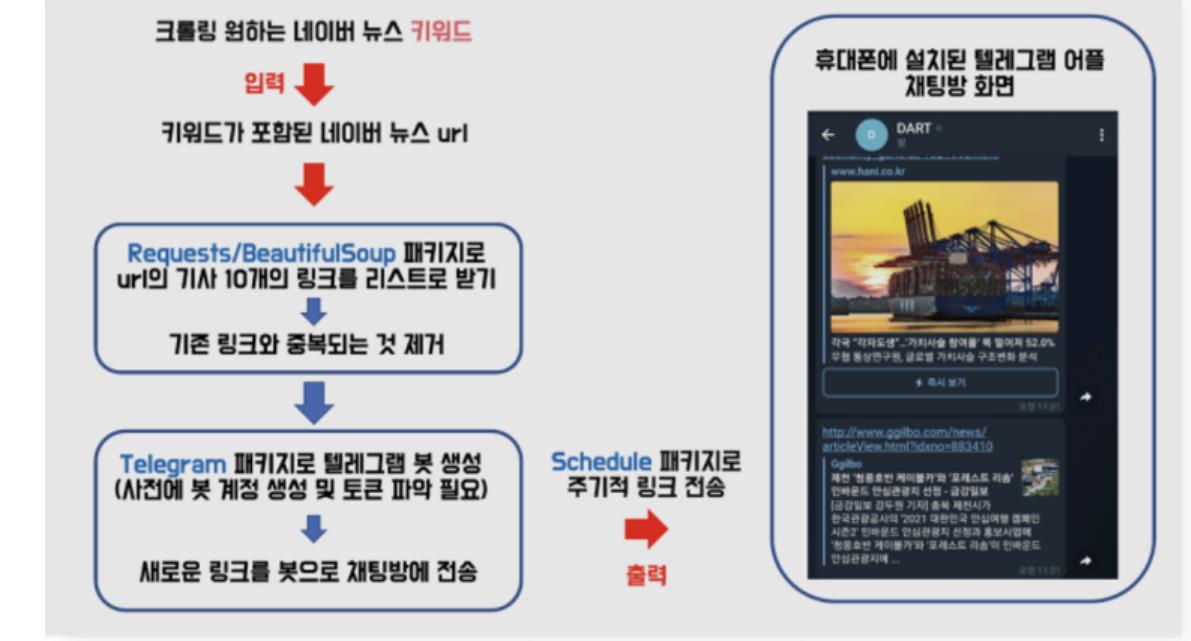
<https://neilpatel.com/blog/deindex-your-pages/>

Make a bot  
that searches and indexes  
content on the internet

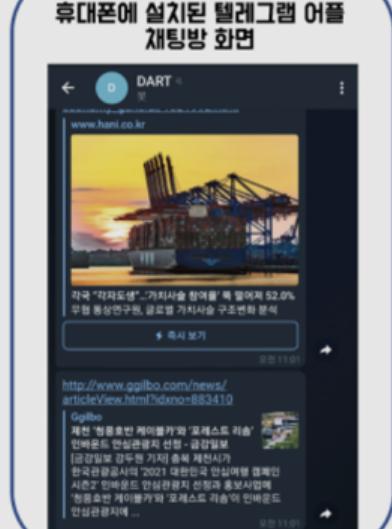


## 일주일 간의 12 기간 동안 코로나 이슈의 기사건수와 감성분류 추이

기간	시점	감성분류	건수 (비율)
1	2019-12-29 ~ 2020-01-04 (총 기사건수 = 167)	긍정	17 (10.2%)
		중립	122 (73.1%)
		부정	28 (16.8%)
2	2020-01-05 ~ 2020-01-11 (총 기사건수 = 962)	긍정	50 (5.2%)
		중립	709 (73.7%)
		부정	203 (21.2%)
3	2020-01-12 ~ 2020-01-18 (총 기사건 수 = 973)	긍정	83 (8.5%)
		중립	588 (60.4%)
		부정	302 (31%)
4	2020-01-19 ~ 2020-01-25 (총 기사건수 = 11,185)	긍정	715 (6.4%)
		중립	8,668 (77.5%)
		부정	1,802 (16.1%)
5	2020-01-26 ~ 2020-02-01 (총 기사건수 = 23,679)	긍정	1,479 (6.2%)
		중립	19,518 (82.4%)
		부정	2,682 (11.3%)
6	2020-02-02 ~ 2020-02-08 (총 기사건수 = 21,742)	긍정	692 (3.2%)
		중립	18,543 (85.3%)
		부정	2,507 (11.5%)
7	2020-02-09 ~ 2020-02-15 (총 기사건수 = 15,795)	긍정	1,222 (7.7%)
		중립	13,107 (83%)
		부정	1,466 (9.3%)
8	2020-02-16 ~ 2020-02-22 (총 기사건 수 = 17,954)	긍정	1,974 (11%)
		중립	14,574 (81.2%)
		부정	1,406 (7.8%)
9	2020-02-23 ~ 2020-02-29 (총 기사건수 = 18,867)	긍정	3,368 (17.9%)
		중립	14,241 (75.5%)
		부정	1,258 (6.7%)



<https://wikidocs.net/155715>

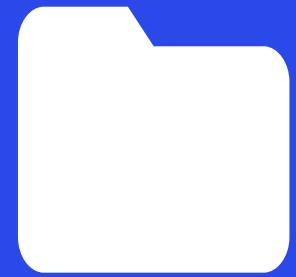


# Teacing Python, Crawling Program

**So What?**

We make a program

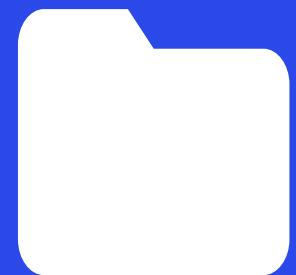




01\_Overview



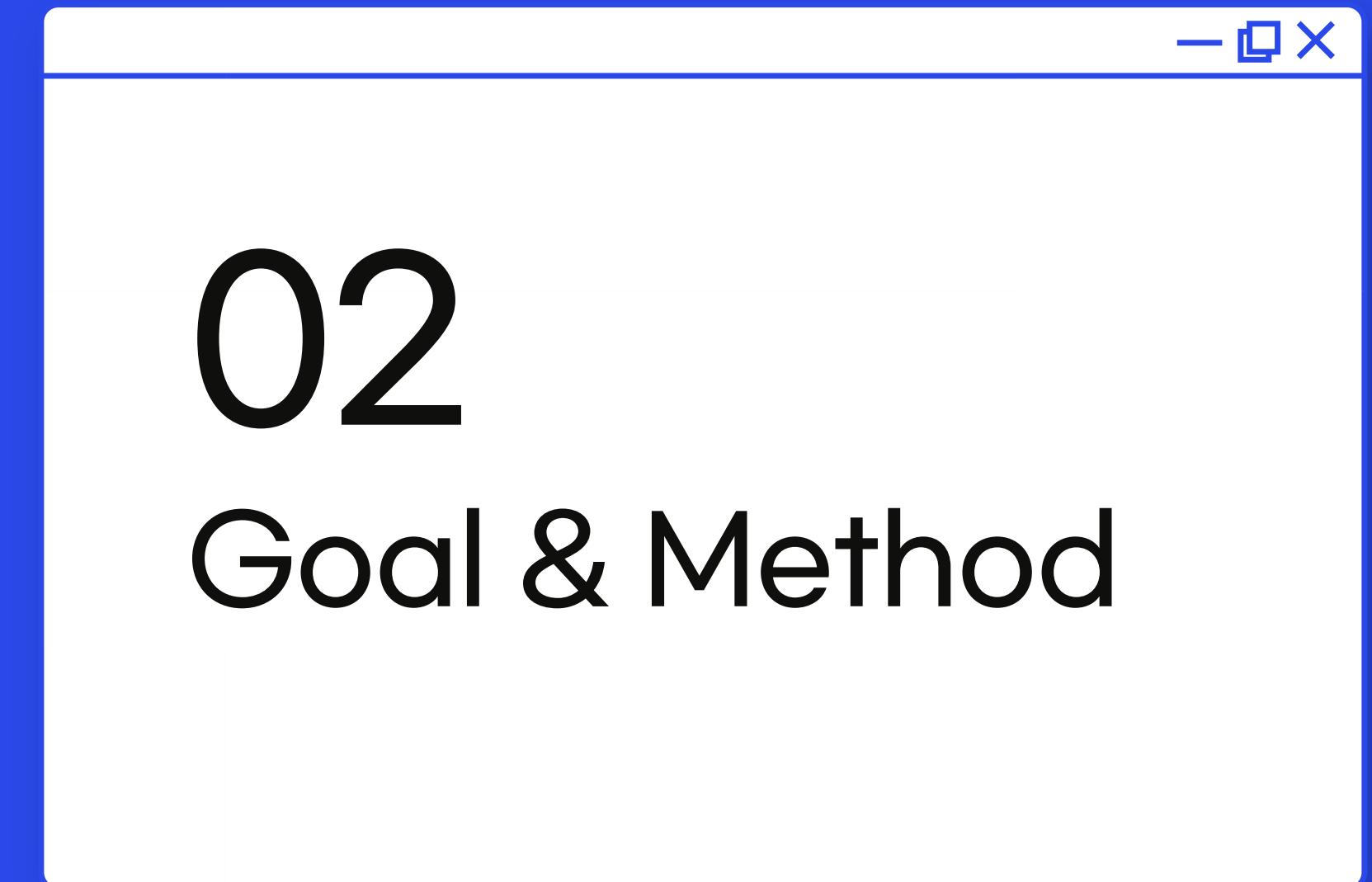
02\_Goal & Method



03\_Team & Plan



04\_Evaluation



# 02

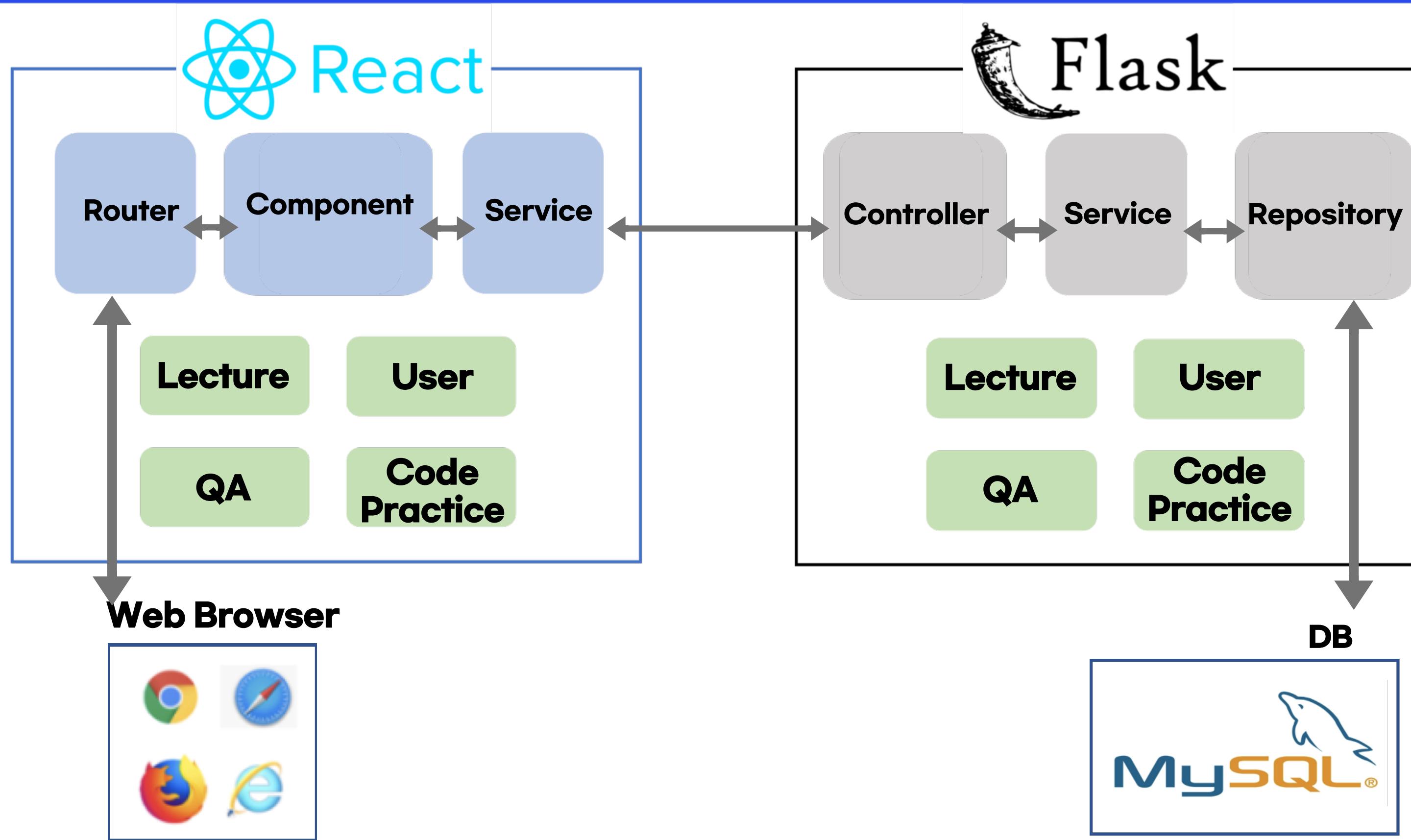
## Goal & Method

# Goal

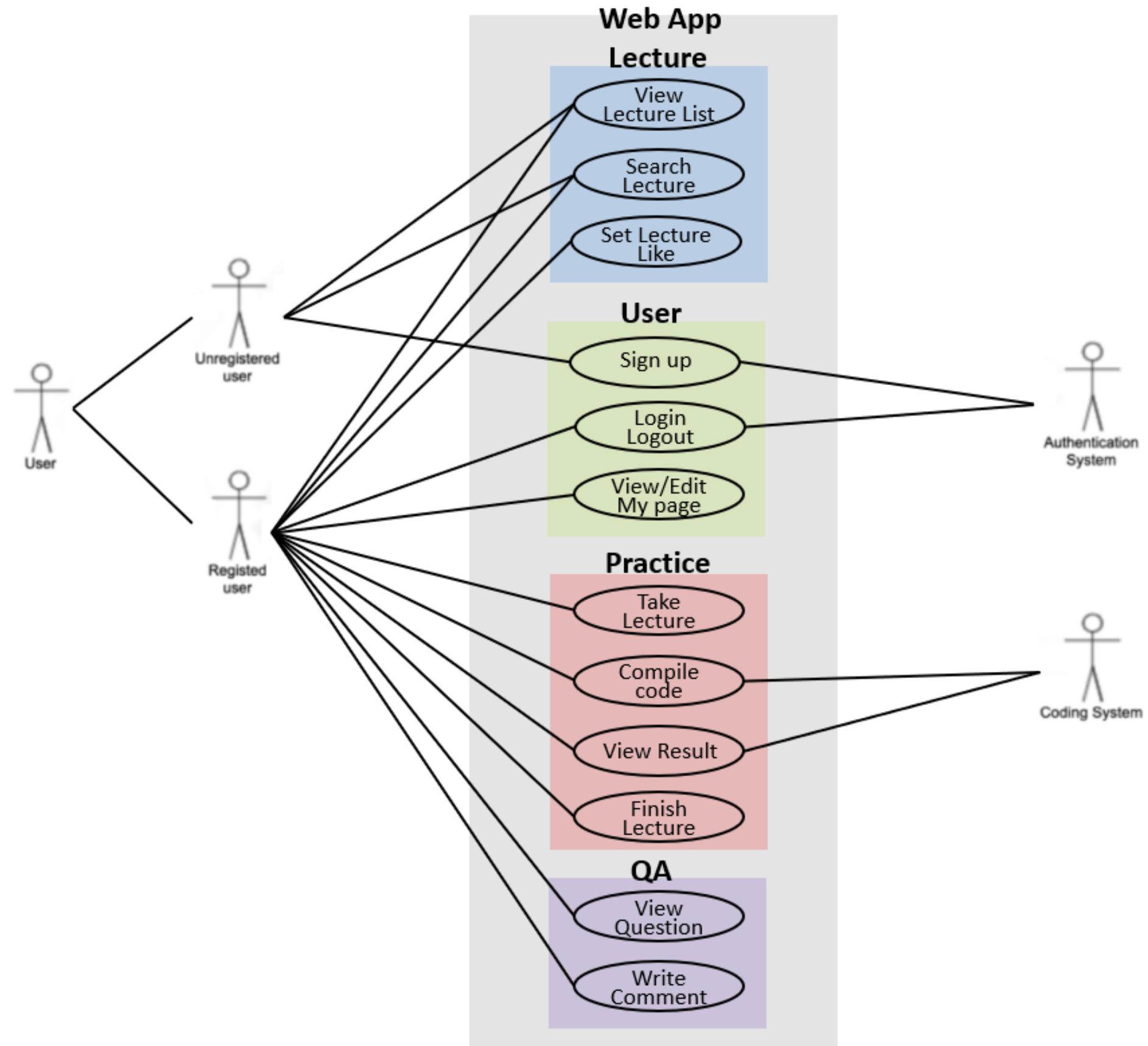
- 1 **Building an algorithm that teaches python education**
- 2 **Increasing the programming ability of university students**
- 3 **Enabling users to easily see what to do for study**
- 4 **Providing a programming education server as first**
- 5 **Debugging students' answer code**
- 6 **Providing a programming education for free**



# System



# Use Case Diagram



# Prototype

## - MainPage

### FUNCTION

Lecture Search

Lecture Sort

Press Like Button

### LINK

QA Page

My Page

Logout/Login

Lecture Intro Page

### USABILITY

Pagination

The screenshot shows the CrawlLearn prototype main page. At the top, there is a green header bar with the title "CrawlLearn" and a subtitle "파이썬 기초부터 크롤링 심화까지! 모든 강의와 실습을 한번에 즐겨보세요.". Below the header, there are two tabs: "Lecture" and "QA". On the right side, there are "MY" and "logout" buttons, a search bar "Search Lecture.", and a dropdown menu "order--".

The main content area displays a grid of nine lecture cards. Each card has a title, a brief description, a star rating, and a like count.

- [파이썬 기초] 출력으로 시작하기  
줄력 함수 print를 이해하고 실습을 진행합니다.  
★ 3  
Like 3
- [파이썬 기초] 숫자와 문자열  
intro3에 대한 내용  
★★  
Like 1
- [파이썬 기초] 조건문  
intro4에 대한 내용  
★★★  
Like 2
- [파이썬 기초] 함수  
intro5에 대한 내용  
★★★  
Like 1
- [파이썬 기초] 자료형  
intro6에 대한 내용  
★★★★  
Like 1
- [파이썬 기초] 리스트  
intro7에 대한 내용  
★★★★★  
Like 1
- [파이썬 기초] 반복문  
intro8에 대한 내용  
★★★★  
Like 0

At the bottom center of the page is a small green box containing the number "1", indicating the current page of the pagination.

# Prototype

- Login
- Profile

## FUNCTION

Login/Signin

Change Name

Check Account

Check Activity

## LINK

Redirect to Main



기본정보

이름 : 물리학과/배지현

물리학과/배지현

이메일 : thdvh5@g.skku.edu

변경하기

활동정보

Registered

QA

Like

# Prototype

- Lecture  
- Practice

## FUNCTION

Register Lecture

Compile Code

Show Result

## LINK

Practice Page

QA List Page

## USABILITY

Code Editor

CrawlLearn Basic Python

### [파이썬 기초] 출력으로 시작하기

lecture1.md

3 Fri, 20 May 2022 14:08:01 GMT

**1.print('Hello World')**

**print() 함수**

괄호 안에 있는 내용을 화면에 출력하는 명령  
화면에 표시하고 싶은 글은 따옴표(')로 묶어서 표현

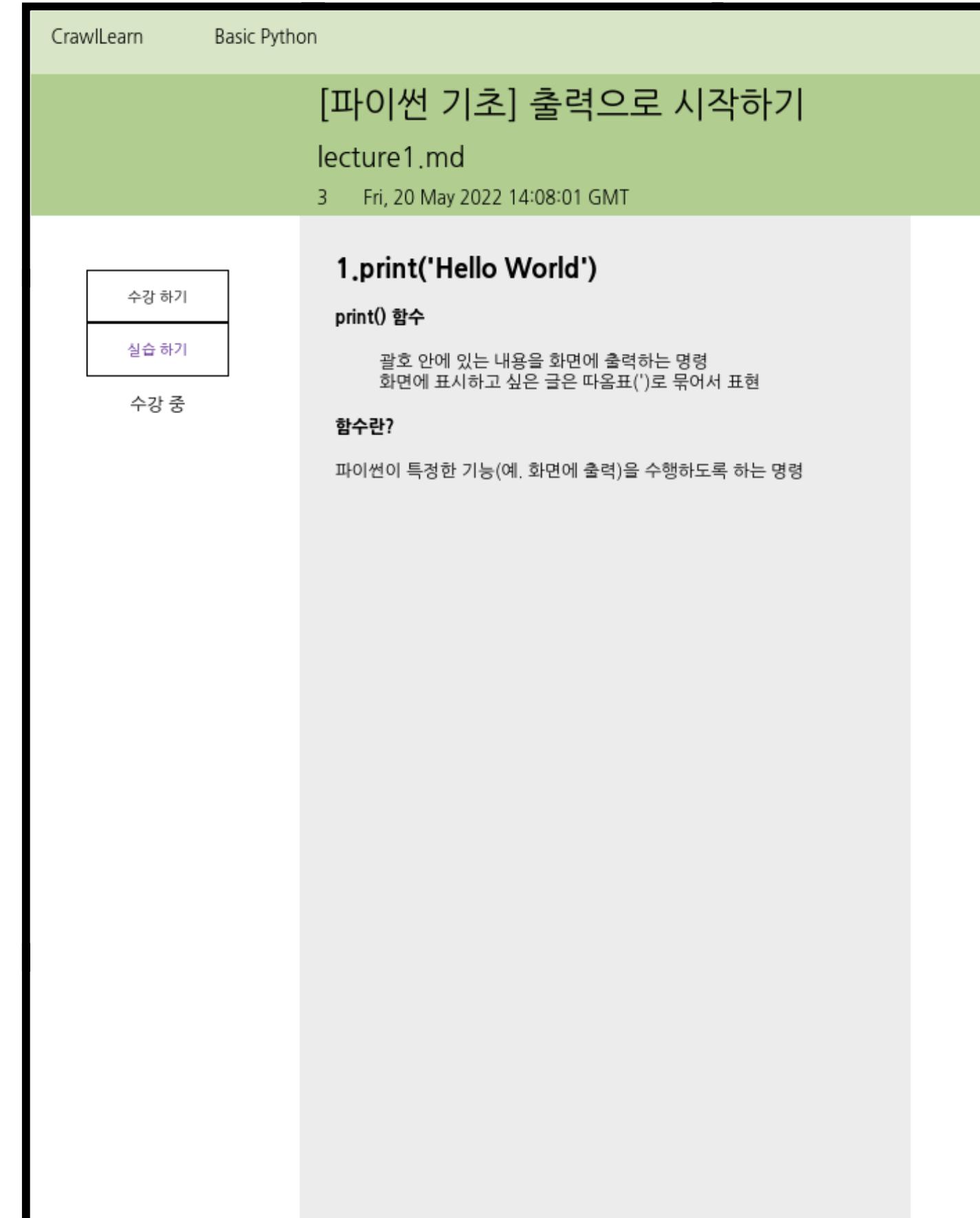
**함수란?**

파이썬이 특정한 기능(예. 화면에 출력)을 수행하도록 하는 명령

수강 하기

실습 하기

수강 중



CrawlLearn 강의 대분류 강의 소분류

강의 이름

실행

### 실습1

'Hello World 출력하기'

print('Hello World')라고 입력해보세요.  
Hello World가 출력되면 성공입니다.

1 print("Hello World")

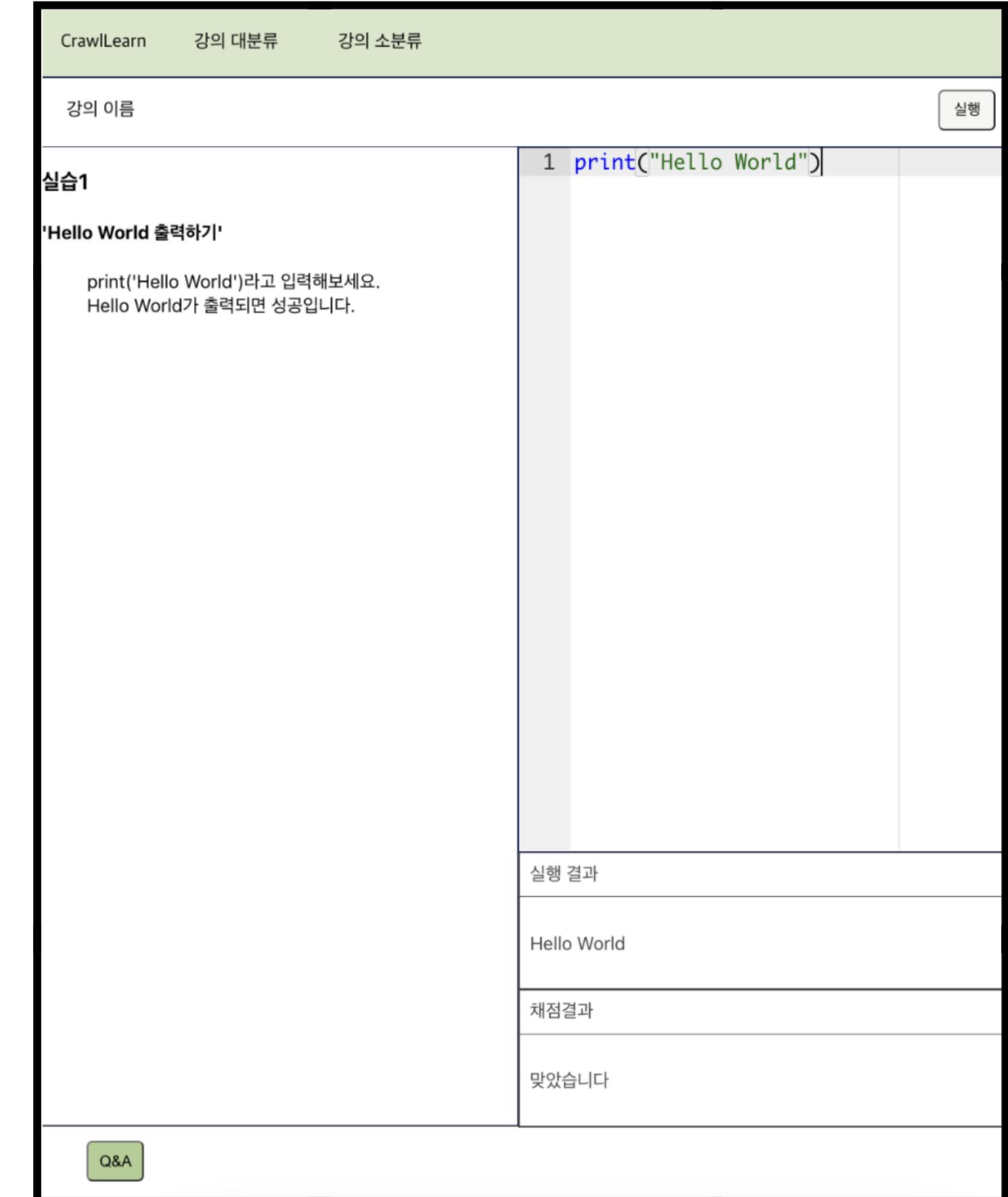
수강 결과

Hello World

채점 결과

맞았습니다

Q&A



# Prototype

- QA List
- QA Read
- QA Write

## FUNCTION

Show Question List

Write Question

Show Question

Write Comment

## LINK

Link to each other

## USABILITY

Pagination

### Q&A

<목록가기

질문 경로  
특별한 경로 없음

제목  
제목

Paragraph | B I Ⓜ := ½ | ≡ ≡ | “ ” ⌂ ↲ ↳

취소 등록

### Q&A

<목록가기

test2 qa  
new\_test1 Tue, 03 May 2022 09:34:29 GMT 질문 경로

이건 자유질문이에요. 제발 보여줬으면 좋겠어요

Comment  
Hello!

취소 등록

물리학과/배지현 방금 전

Me too.....

ABOUT US

### CrawlLearn

파이썬 기초부터 크롤링 심화까지! 모든 강의와 실습을 한번에 즐겨보세요.

Lecture QA MY 작성하기

test2 qa  
new\_test1 Tue, 03 May 2022 09:34:29 GMT

# Prototype

## - Code Editor

### FUNCTION

Auto Complete  
Python Code

Show Error

Show  
Execution Result

Show  
Marking Result

Show  
Progress

CrawlLearn 강의 대분류 강의 소분류

강의 이름

실습1

Hello World 출력하기!

print('Hello World')라고 입력해보세요.  
Hello World가 출력되면 성공입니다.

1 for i in ran

range keyword  
xrange keyword  
raw\_input keyword  
breakpoint keyword

```
1 import time
2 from selenium import webdriver
3
4 #Colab에선 웹브라우저 창이 뜨지 않으므로 별도 설정 한다.
5
6 driver = webdriver.Chrome('chromedriver')
7
8 #해당 url로 이동
9 url = "https://cs.skku.edu/ko/guide/schedule"
10 driver.get(url)
11
12
13
14 url = "https://www.skku.edu/skku/campus/support/scholarship.do"
15 driver.get(url)
16 update = driver.find_element_by_css_selector('#item_body > div ')
17 print(update.text)
18
19
```

실행 결과

실행 중입니다...

채점결과

채점 중입니다....

CrawlLearn 강의 대분류 강의 소분류

강의 이름

실습1

'Hello World' 출력하기!

print('Hello World')라고 입력해보세요.  
Hello World가 출력되면 성공입니다.

1 for i in ran

실행 결과

invalid syntax

채점결과

틀렸습니다

# Prototype

## - Web Crawling

CrawlLearn 강의 대분류 강의 소분류

강의 이름

https://cs.skku.edu/ko/guide/schedule 의 주소에서 학사일정을 크롤링하는 코드를 작성해보세요.

실행

```
1 import time
2 from selenium import webdriver
3
4
5 driver = webdriver.Chrome('chromedriver')
6
7 #해당 url로 이동
8 url = "https://cs.skku.edu/ko/guide/schedule"
9 driver.get(url)
10
11
12
13 url = "https://www.skku.edu/skku/campus/support/scholarship.do"
14 driver.get(url)
15 update = driver.find_element_by_css_selector('#item_body > div ')
16 print(update.text)
17
18 |
```

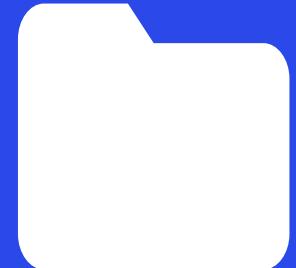
실행 결과

ENG 발전기금 킹고봇 킹고ID LOGIN 대학정보 입학 교육 연구 산학/창업 국제화 대학생활

채점결과

맞았습니다

Q&A



01\_Overview



02\_Goal & Method



03\_Team & Plan



04\_Evaluation



03

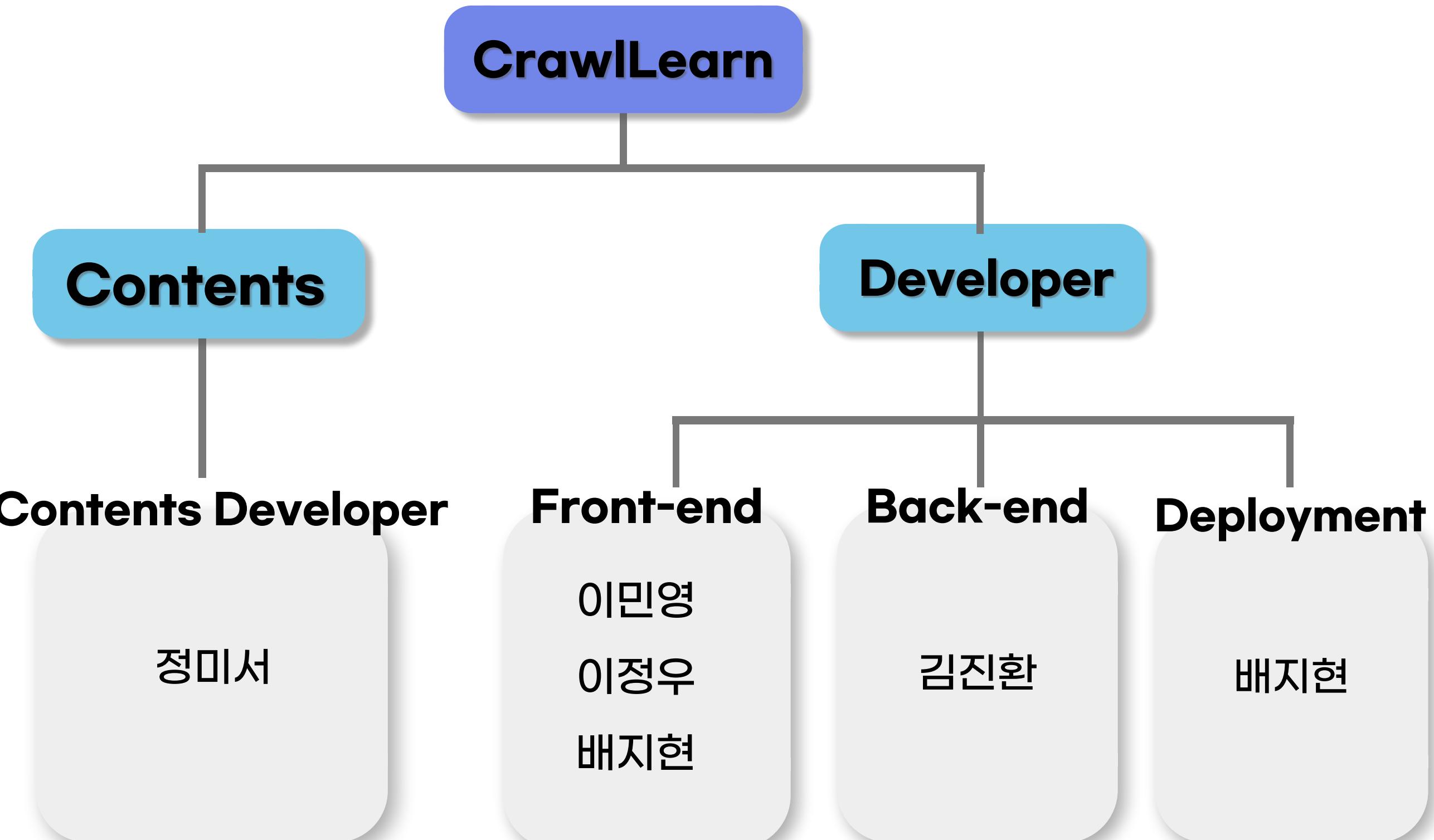
# Team&Plan

Team information  
Schedule

A window frame with a blue border and a white header bar containing standard window controls (minimize, maximize, close). The main area contains the number '03' in large bold black font, followed by the title 'Team&Plan' in a large serif font, and finally two lines of text: 'Team information' and 'Schedule'.

# Team Information

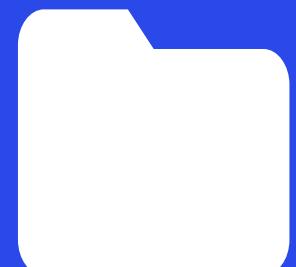
Team name	CrawlLearn(Team2)
Participants	5 이민영(leader) 김진환 배지현 이정우 정미서



# Schedule



01\_Overview



02\_Goal&Method



03\_Team&Plan



04\_Evaluation



# Evaluation of Goals

## Quantitative Evaluation

Quantitative Evaluation				
#	Evaluation Indicator	Quantitative	Importance	Result
1	Checking code result	70%	30%	40%
2	Encourage coding process	85%	30%	90%
3	Encourage crawling	90%	25%	50%
4	Easy User Interface	90%	15%	95%

## Detailed Goals

"Providing a python programming education for SKKU students"

**01. Building an algorithm that teaches python education**

**02. Increasing the programming ability of university students**

**03. Enabling users to easily see what to do for study**

 **04. Providing a programming education server as first**

 **05. Debugging students' answer code**

**06. Providing a programming education for free**

# Comments

## Comment

이민영



My part was on the QA side of the front end.  
Unlike jquery, React was composed of components,  
so it was difficult to get a sense of it at first.  
But I realized that React is more convenient framework  
for collaboration.  
In addition, I understand why developers prefer Agile  
method among the class contents.

김진환



I worked on backend.  
It was regrettable that we could have created a better  
server in terms of performance and stability if we had  
given divided server and respective roles.  
However, through the development of this project,  
I learned a lot of things from cooperation with teammate.

배지현



My areas were page design, main page side front  
end, and deployment. It was my first experience of  
web development, so I did not have ability to efficiently  
use open source, design pattern and so on. This  
project make me understand the importance of  
those.

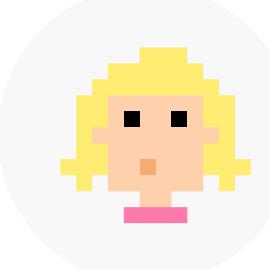
## Comment

이정우



I worked on frontend.  
It was my first time making homepage using React. If I was used to using it, better result would come out.  
So I feel sorry about this part but this project was really precious experience for me.

정미서



I composed the contents of the web page and wrote the code for crawling learning. It was my first time to do web crawling, so I could study together while making an education system. I hope this result will help the education of college students.



CONTACT

skkuse/2022\_spring\_41\_class\_Team2

