

# 웹 개발 스터디

특강: Java, Gradle, Spring Framework로 구현하는 간단한 게시판 API 예제

<https://github.com/Tianeia2160/spring-practice>



# 앞에 서있는 사람

## ▶ 이정훈

- COM's 52기, 4학년, 이것저것 다 해보는 중, django 하다가 다시 돌아옴

## ▶ 조현준

- K-NET, 4학년, Spring 초고수

## ▶ 어쩌다가...?

- 알고리즘 스터디를 구하다 보니... 그렇게 됐답니다

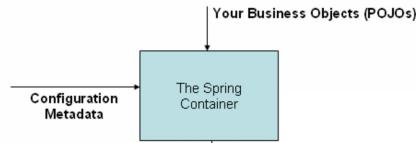
# 스터디 소개

- ▶ 3주간 간단한 코드예제를 통해 Spring Framework에 대한 큰 그림을 그려보자

- 이후 진행할 MVC, DI, IOC, AOP등... 개념을 배우기 앞서 동작하는 코드로!

In most application scenarios, explicit user code is not required to instantiate one or more instances of a Spring IoC container. For example, in a web application scenario, a simple eight (or so) lines of boilerplate web descriptor XML in the `web.xml` file of the application typically suffices (see [Convenient ApplicationContext Instantiation for Web Applications](#)). If you use the [Spring Tools for Eclipse](#) (an Eclipse-powered development environment), you can easily create this boilerplate configuration with a few mouse clicks or keystrokes.

The following diagram shows a high-level view of how Spring works. Your application classes are combined with configuration metadata so that, after the `ApplicationContext` is created and initialized, you have a fully configured and executable system or application.



- 개념만 먼저 떼어놓고 보면.. 어지럽다 그죠?



# Spring Framework: basic

- 자바 어플리케이션 개발을 위한 통합 프레임워크
  - 주로 웹 백엔드 개발에 널리 사용된다
- 여러 Spring Module로 구성
  - Spring MVC
  - Spring Security
- 객체지향 개발을 위한 여러 기능을 제공
  - IOC(Inversion Of Control)
  - DI(Dependency Injection)
  - AOP(Aspect Oriented Programming)

# 오늘 할 일

## ▶ 코드예제를 위한 환경설정

- 데이터베이스
- 자바환경 (JDK, JRE)
- IDE 환경설정 등...

## ▶ 프로젝트 디렉토리 구조 이해

- 프로젝트 디렉토리 어느 위치에 어떤 파일이 있는지
- 각 파일이 어떤 역할을 하는지, 어떤 정보를 기술하는지

# 필요한 것

## ▶ 도구

- IntelliJ IDEA 또는 VisualStudio Code
- Docker Desktop, MySQL DBMS
- Git bash / desktop / CLI

## ▶ 환경

- 당신의 노트북 (OS 무관)
- OpenJDK, JRE

# IntelliJ IDEA: 교육라이센스

무료 라이선스 프로그램

[교육 기관용 라이선스](#)   [오픈 소스](#)   [사용자 그룹](#)   [행사 파트너십](#)   [개발자 인정](#)

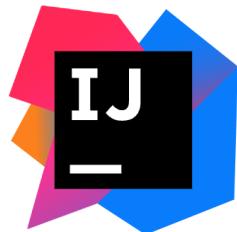
## 무료 교육용 라이선스

업계 최고의 JetBrains 개발 도구를 사용해 코딩을  
학습하고 교육하세요!



<https://www.jetbrains.com/ko-kr/community/education/#students>

# IntelliJ IDEA: 설치



버전: 2023.1.1

빌드: 231.8770.65

2023년 4월 28일

[릴리스 노트 ↗](#)

[시스템 요구 사항](#)

[설치 안내](#)

## 다운로드 IntelliJ IDEA

[Windows](#)

[macOS](#)

[Linux](#)

### Ultimate

Java 및 Kotlin용 최고의 IDE

[다운로드](#)

.dmg ▾

30일 무료 평가 이용 가능

### Community Edition

순수 Java 및 Kotlin 개발을 위한 IDE

[다운로드](#)

.dmg ▾

무료, 오픈 소스로 빌드됨

ⓘ Intel 또는 Apple Silicon용 설치 프로그램 선택

<https://www.jetbrains.com/ko-kr/idea/download>

# Docker desktop: 설치

## Docker Desktop

Install Docker Desktop – the fastest way to containerize applications.

[Download Docker Desktop](#)



Apple Chip



Windows



Linux

<https://www.docker.com/products/docker-desktop/>

# Git: 설치

## Downloads



macOS



Windows



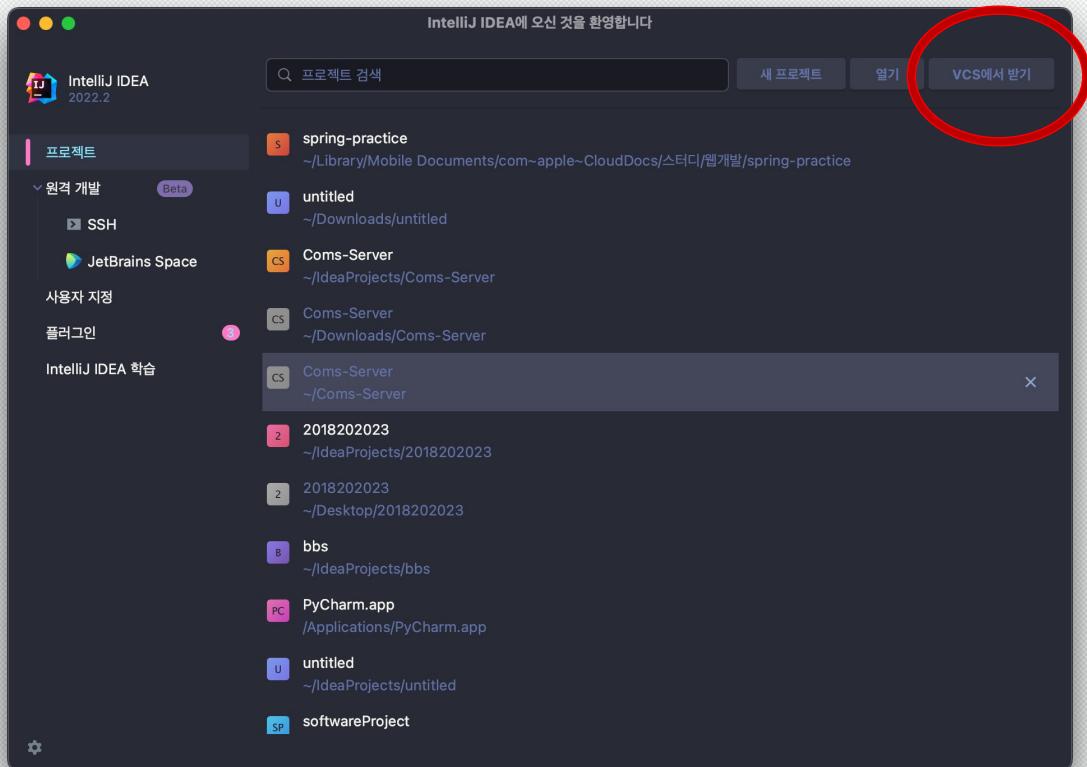
Linux/Unix

Older releases are available and the [Git source repository](#) is on GitHub.

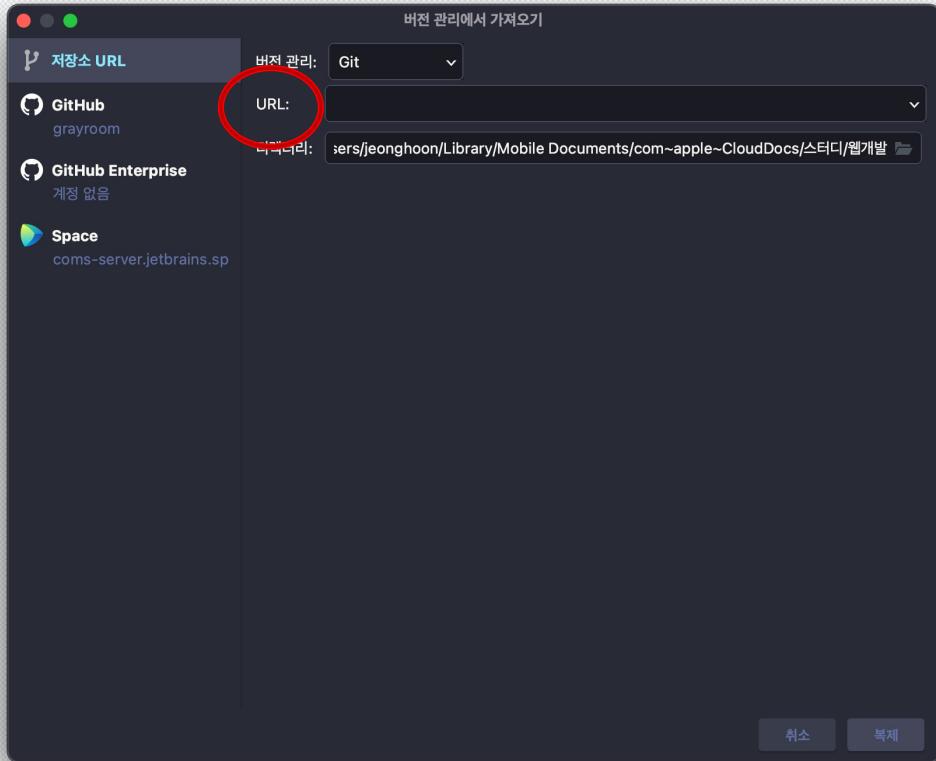
<https://git-scm.com/downloads>



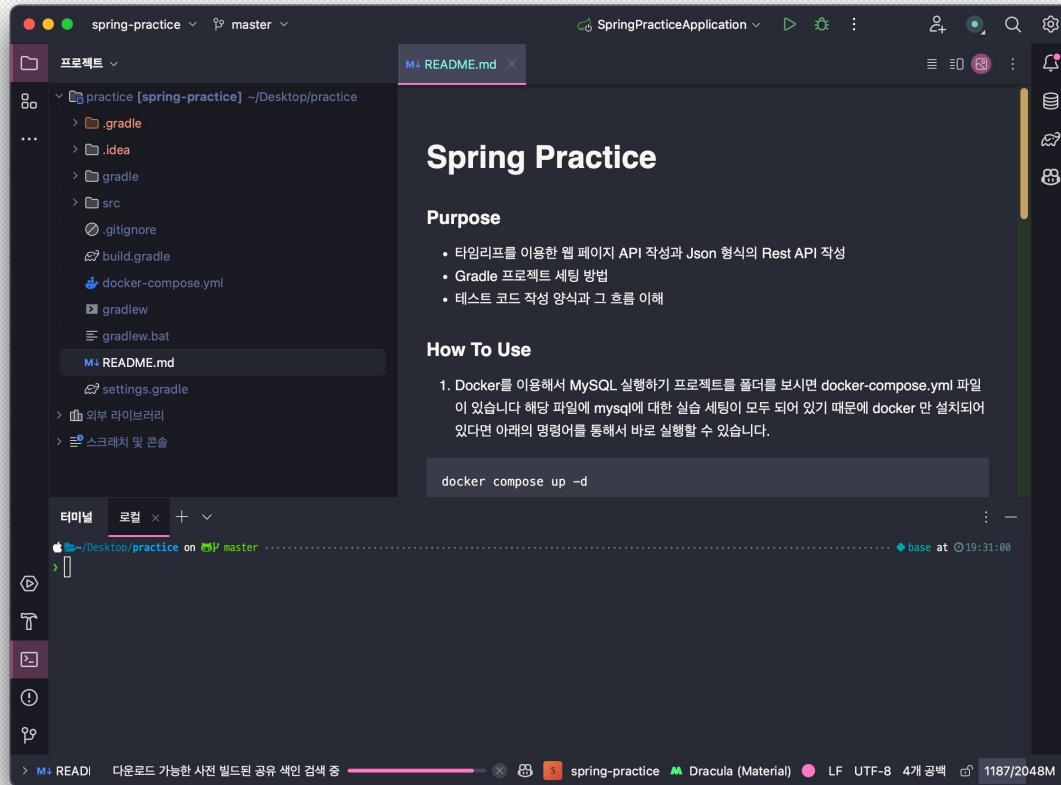
# 프로젝트 준비: clone, java 설치



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gradle 빌드 디렉토리①

IDE 임시파일

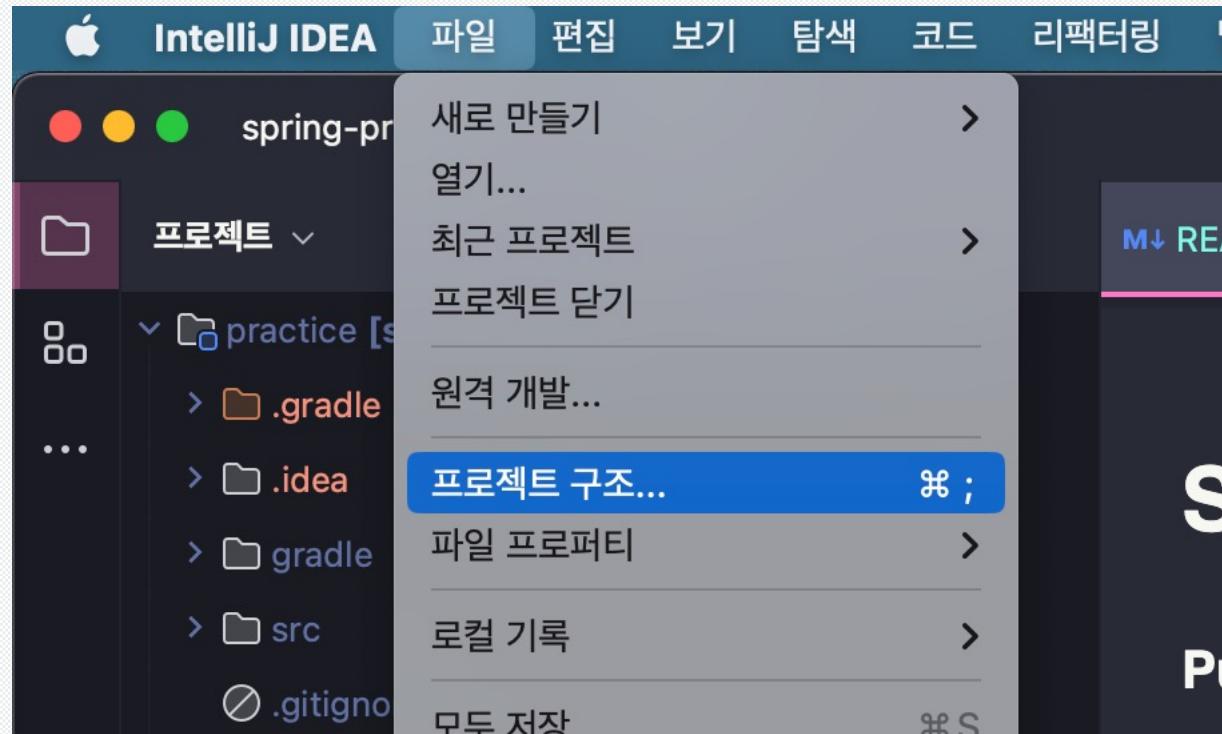
gradle 빌드 디렉토리②

★JAVA 소스코드, 리소스 등...

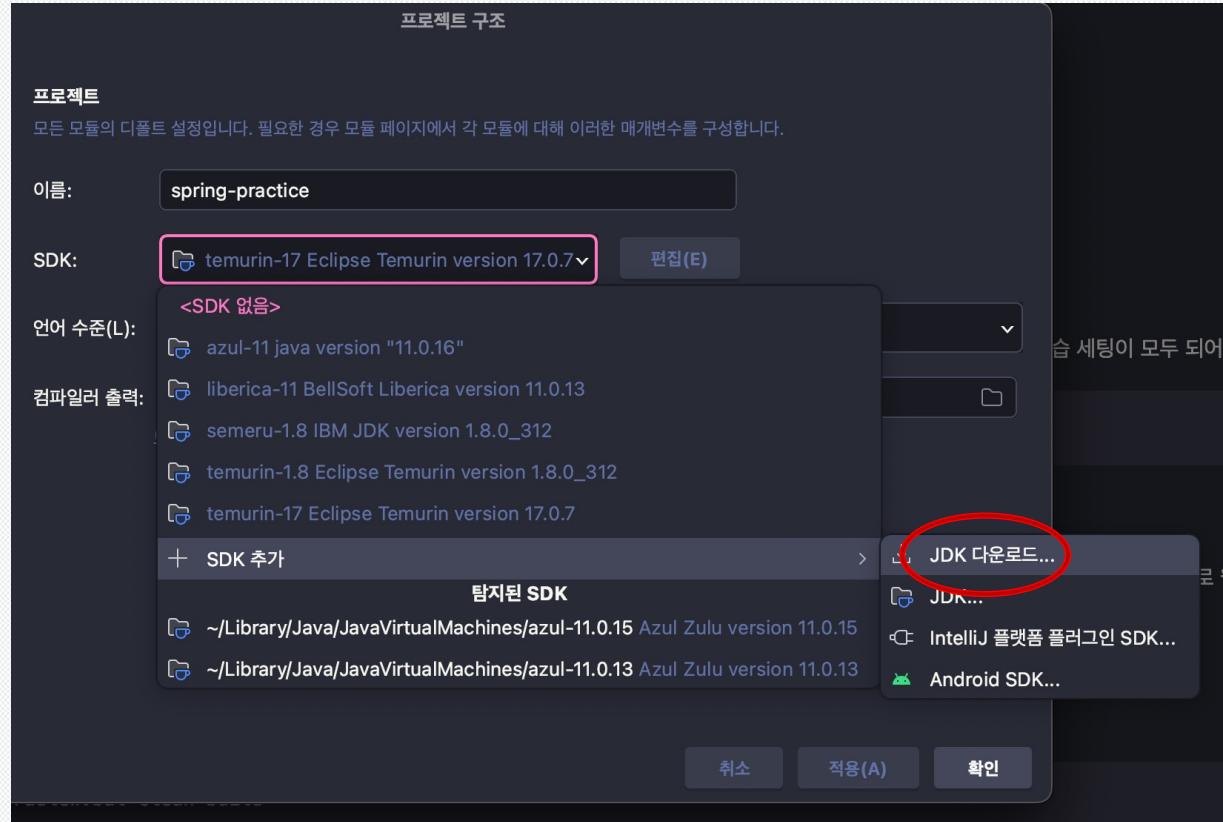
빌드옵션: JDK버전, 의존성 등

DB 자동설정을 위한 docker-compose

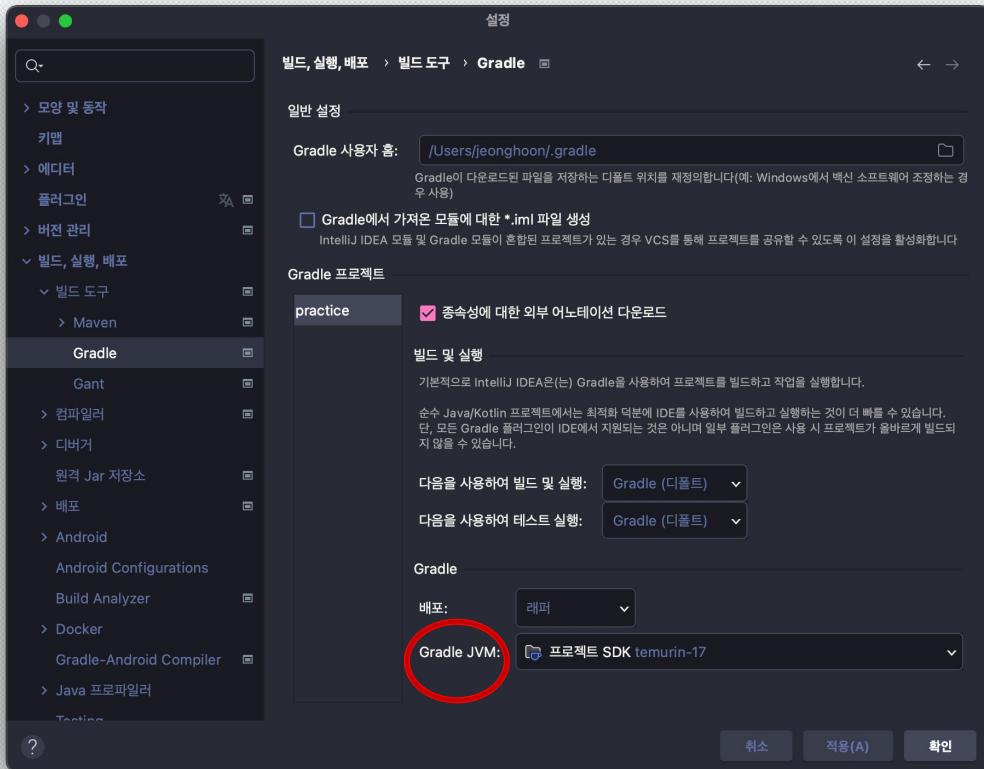
# 프로젝트 준비: clone, java 설치



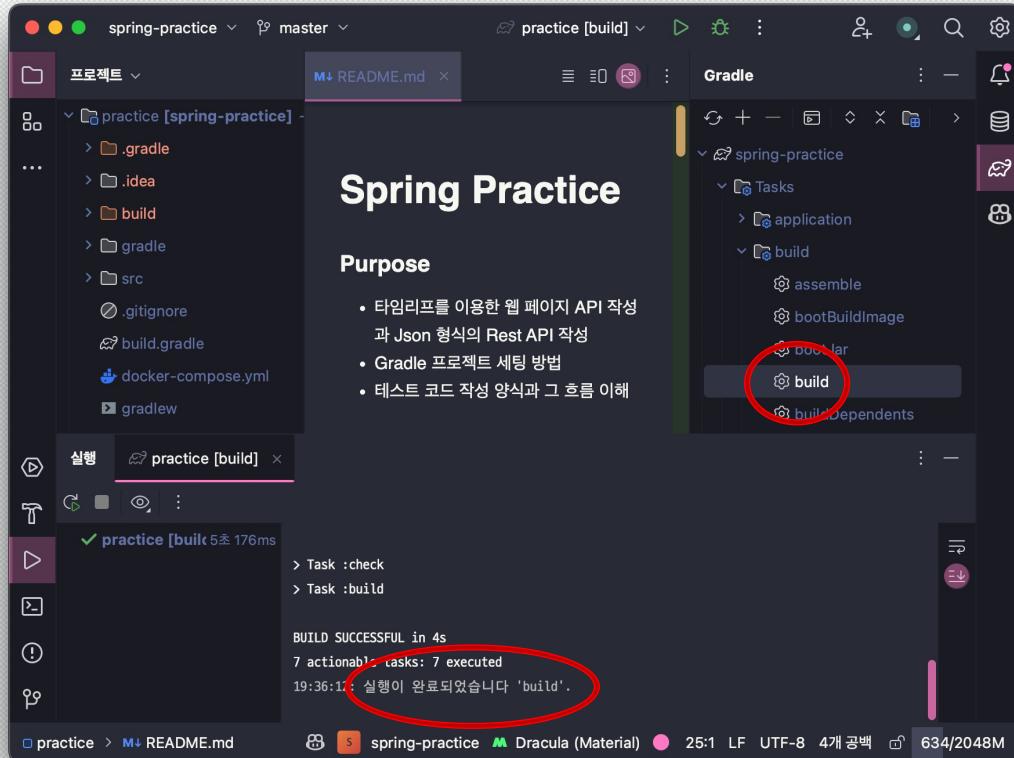
# 프로젝트 준비: clone, java 설치



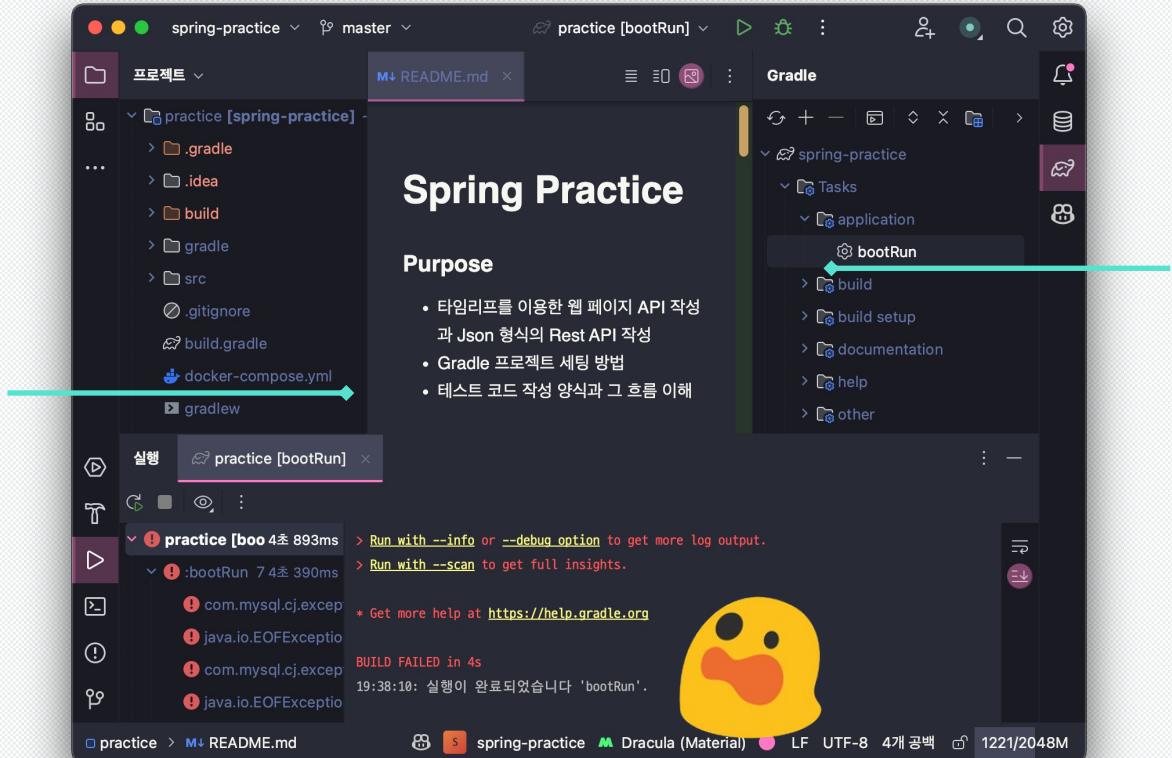
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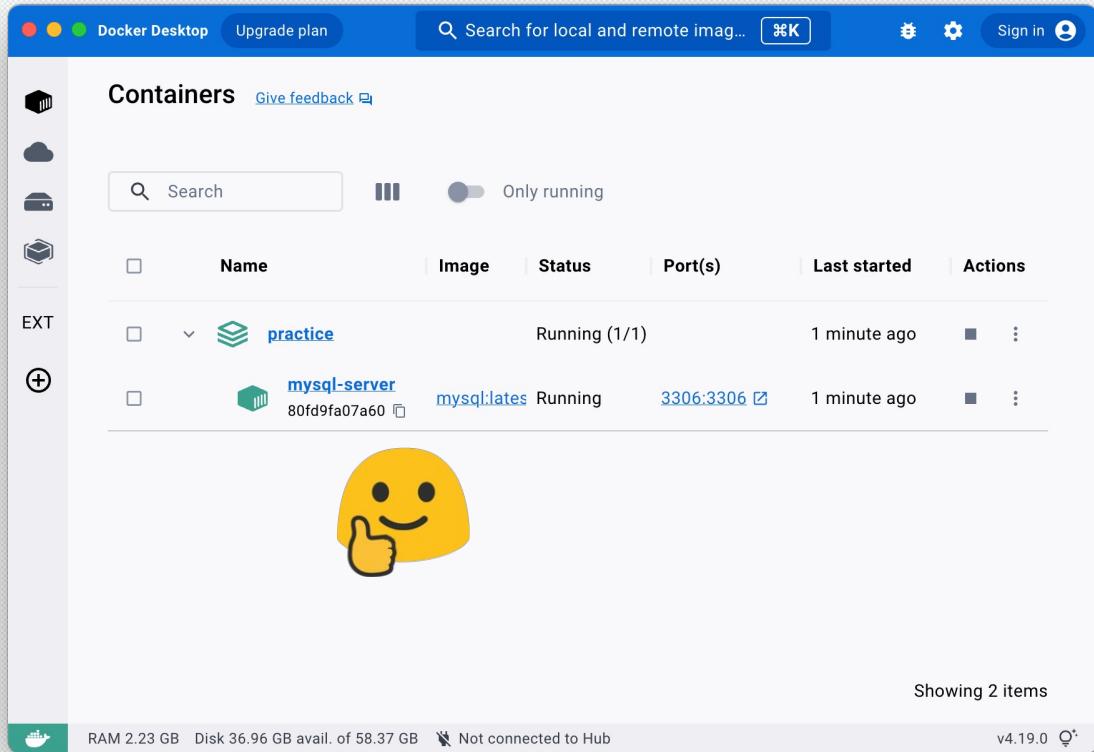
The screenshot shows a Java project named "spring-practice" in an IDE. The project structure on the left includes ".gradle", ".idea", "build", "gradle", "src", ".gitignore", "build.gradle", and "docker-compose.yml". The "docker-compose.yml" file is open in the main editor area, showing configuration for a MySQL database:

```
version: '3.7'
services:
  mysql:
    container_name: mysql-server
    image: mysql:latest
    restart: unless-stopped # 사용자가 직접 끄기 전까지 계속 재시작
    ports:
      - "3306:3306"
    environment:
      MYSQL_ROOT_PASSWORD: root
      MYSQL_DATABASE: test
      # MYSQL_USER: root
      MYSQL_PASSWORD: root
```

Below the editor, the terminal window shows the command "docker compose up -d" being run, indicating the project is now running in a Docker container.

Bottom status bar: docker-c, spring-practice, Dracula (Material), 13:26, LF, UTF-8, 2개 공백, JSON 스키마 없음, 1249/2048M

# 프로젝트 준비: clone, java 설치



The screenshot shows the Docker Desktop application interface. At the top, there are three colored window control buttons (red, yellow, green) followed by the text "Docker Desktop" and a "Upgrade plan" button. To the right is a search bar with the placeholder "Search for local and remote images..." and a "K" icon. Further right are icons for settings, Docker Hub, and user sign-in.

The main area is titled "Containers" with a "Give feedback" link. It includes a search bar and a filter section with a "Only running" toggle switch. Below this is a table with the following columns: Name, Image, Status, Port(s), Last started, and Actions.

	Name	Image	Status	Port(s)	Last started	Actions
EXT	practice		Running (1/1)		1 minute ago	⋮
+	mysql-server 80fd9fa07a60	mysql:latest	Running	3306:3306	1 minute ago	⋮

A large yellow emoji of a hand pointing up is overlaid on the bottom left of the container list. In the bottom right corner, it says "Showing 2 items".

At the very bottom, there are status indicators: a ship icon, "RAM 2.23 GB Disk 36.96 GB avail. of 58.37 GB", a "Not connected to Hub" message, and the version "v4.19.0" with a "Q" icon.

# 프로젝트 준비: clone, java 설치

The screenshot shows the IntelliJ IDEA IDE interface with the following details:

- Project Structure:** The left sidebar shows the project structure for "spring-practice" with modules like ".gradle", ".idea", "build", and "gradle".
- Compose File:** The main editor window displays a `docker-compose.yml` file with the following content:

```
ports:
  - "3306:3306"
environment:
  MYSQL_ROOT_PASSWORD: root
  MYSQL_DATABASE: test
  # MYSQL_USER: root
```
- Run Configuration:** The bottom-left panel shows a run configuration for "practice [bootRun]" with a green icon.
- Task Bar:** The bottom bar includes icons for Docker, GitHub, and Dracula theme, along with status information: 38:1 LF, UTF-8, 2개 공백, JSON 스키마 없음, 1411/2048M.