CTIP 환경 구축 (2)

T6

201513205 송승현

201511273 여찬종
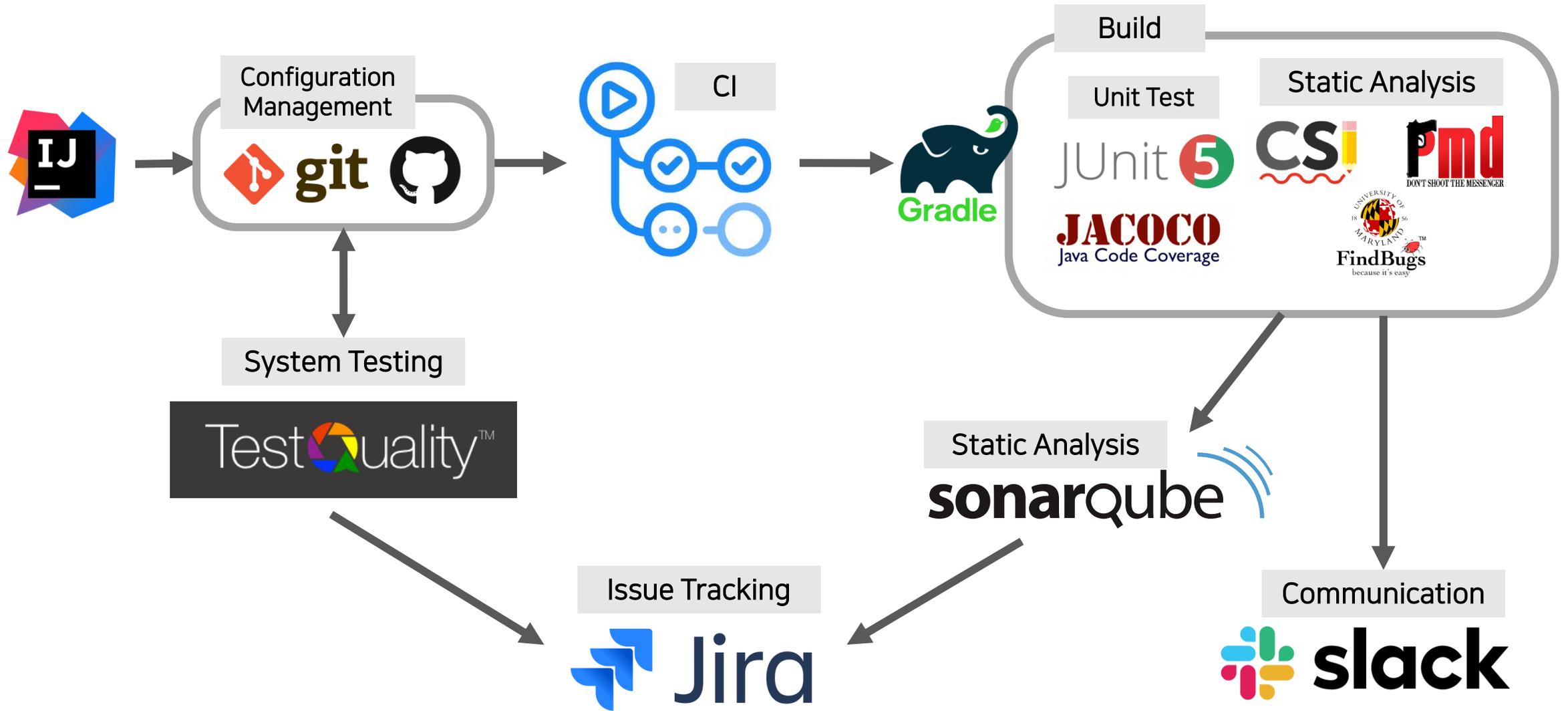
201612368 이지우

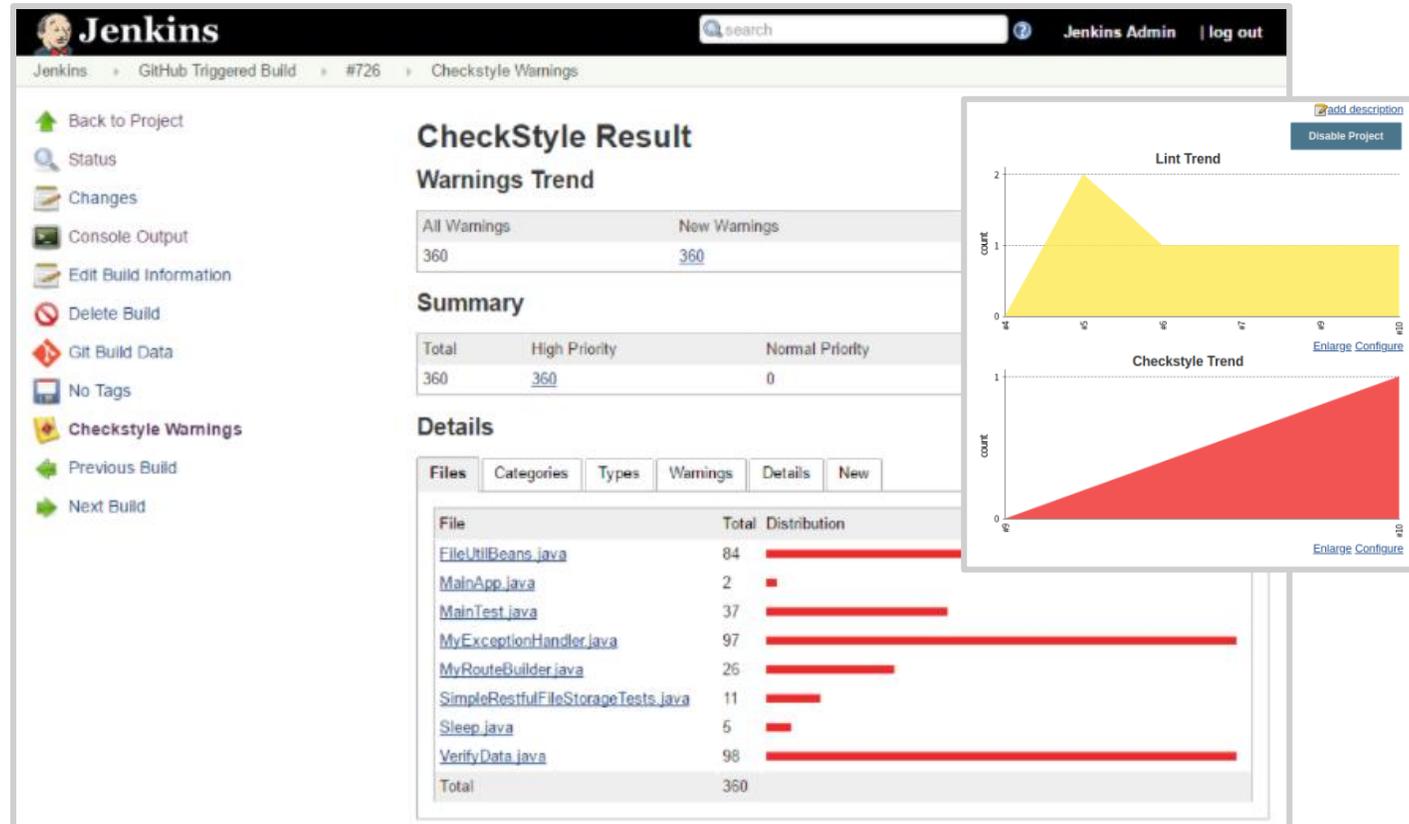201811301 한지희

CONTENTS

01 Overall

Configuration Management

CI

Build

Unit Test

Static Analysis

System Testing

Static Analysis
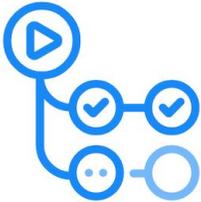
Issue Tracking

Communication

02 Static Analysis / Unit Test Report 개선

Jenkins 및 기타 CI/CD는 친숙한 HTML 형식으로 보고서를 표기

02 Static Analysis / Unit Test Report 개선

GitHub Actions / testtool
succeeded 2 days ago in 0s

reviewdog [testtool] report

reported by reviewdog 🐶

▶ Findings (0)

▼ Filtered Findings (64)

src/test/java/MainTest.java|6| 'method def modifier' has incorrect indentation level 4, expected level should be 2.
src/test/java/MainTest.java|8| 'method def rcurly' has incorrect indentation level 4, expected level should be 2.
src/test/java/MainTest.java|10| 'method def modifier' has incorrect indentation level 4, expected level should be 2.
src/test/java/MainTest.java|12| 'method def rcurly' has incorrect indentation level 4, expected level should be 2.
src/test/java/MainTest.java|14| 'method def modifier' has incorrect indentation level 4, expected level should be 2.
src/test/java/MainTest.java|16| 'method def rcurly' has incorrect indentation level 4, expected level should be 2.
src/test/java/MainTest.java|18| 'method def modifier' has incorrect indentation level 4, expected level should be 2.
src/test/java/MainTest.java|20| 'method def rcurly' has incorrect indentation level 4, expected level should be 2.
src/test/java/MainTest.java|22| 'method def modifier' has incorrect indentation level 4, expected level should be 2.
src/test/java/MainTest.java|24| 'method def rcurly' has incorrect indentation level 4, expected level should be 2.
src/test/java/MainTest.java|26| 'method def modifier' has incorrect indentation level 4, expected level should be 2.
src/test/java/MainTest.java|28| 'method def rcurly' has incorrect indentation level 4, expected level should be 2.
src/test/java/MainTest.java|30| 'method def modifier' has incorrect indentation level 4, expected level should be 2.
src/test/java/MainTest.java|32| 'method def rcurly' has incorrect indentation level 4, expected level should be 2.
src/main/java/Main.java|2| 'member def modifier' has incorrect indentation level 4, expected level should be 2.
src/main/java/Main.java|3| 'member def modifier' has incorrect indentation level 4, expected level should be 2.
src/main/java/Main.java|4| 'member def modifier' has incorrect indentation level 4, expected level should be 2.
src/main/java/Main.java|6| 'ctor def modifier' has incorrect indentation level 4, expected level should be 2.
src/main/java/Main.java|7| 'ctor def' child has incorrect indentation level 8, expected level should be 4.
src/main/java/Main.java|8| 'ctor def rcurly' has incorrect indentation level 4, expected level should be 2.
src/main/java/Main.java|10| 'ctor def modifier' has incorrect indentation level 4, expected level should be 2.

- GitHub Actions은 환경 구성 시 작성하는 workflow에 있어 매우 개방적이고 다양하게 구현 가능
  => 즉, 원하면 다 구현 필수

- workflow의 시간이 제한되므로 각 분석 도구들의 Report(.html)를 따로 보여 줄 수 있는 workflow 외부의 호스팅 필요

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02 Static Analysis / Unit Test Report 개선

- GitHub와 연동하여 Public Repository에 한해 무료 Website Hosting 제공

- GitHub Actions을 통해 Build시 발생하는 Report를 즉각적으로 반영하여 보여줄 수 있음.
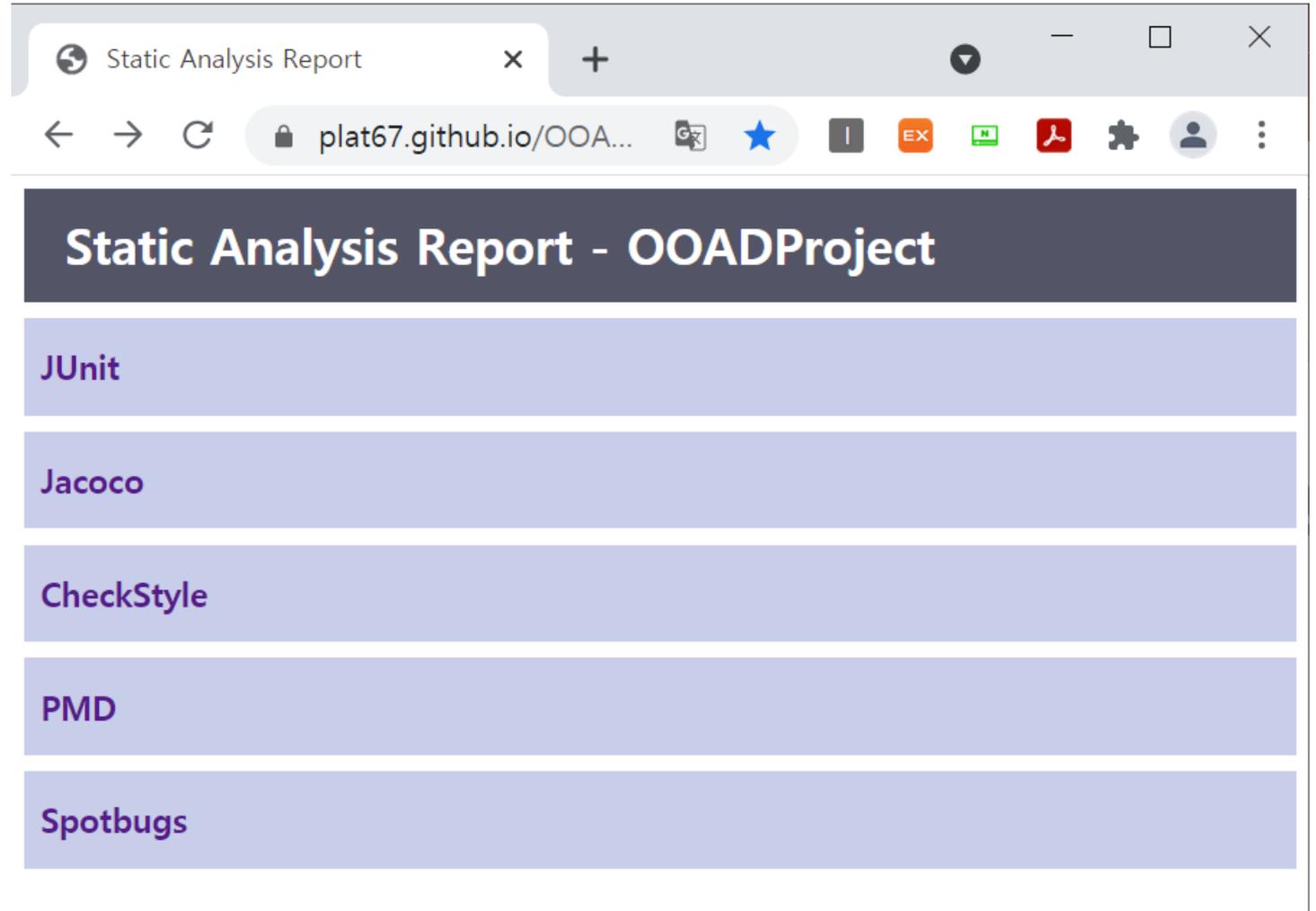
JUnit Report

Test Summary

8	1	0	0.023s
tests	failures	ignored	duration

87%
successful

Failed tests | Packages | Classes

MainTest. retError()

Generated by Gradle 6.1.1 at 2021. 4. 28. 오후 12:39:27

Jacoco Report

OOADProject   Sessions

OOADProject

Element	Missed Instructions	Cov.	Missed Branches	Cov.	Missed	Cxty	Missed	Lines	Missed	Methods	Missed
default		0%		0%	4	4	14	14	2	2	1
Total	60 of 60	0%	4 of 4	0%	4	4	14	14	2	2	1

Created with JaCoCo 0.8.5.201910111838

OOADProject > **default**   Source Files   Sessions

default

Element	Missed Instructions	Cov.	Missed Branches	Cov.	Missed	Cxty	Missed	Lines	Missed	Methods	Missed
Main		0%		0%	4	4	14	14	2	2	1
Total	60 of 60	0%	4 of 4	0%	4	4	14	14	2	2	1

Created with JaCoCo 0.8.5.201910111838

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SpotBugs Report

Warnings

Click on a warning row to see full context information.

Internationalization Warnings

Code	Warning
Dm	Found reliance on default encoding in Main.main(String[]): new java.io.InputStreamReader(InputStream)

Dodgy code Warnings

Code	Warning
DLS	Dead store to N in Main.main(String[])
NP	Dereference of the result of readLine() without nullcheck in Main.main(String[])
NP	Immediate dereference of the result of readLine() in Main.main(String[])

Details

DLS_DEAD_LOCAL_STORE: Dead store to local variable

Summary

Warning Type	Number
Internationalization Warnings	1
Dodgy code Warnings	3
Total	4

Checkstyle Report

CheckStyle Audit

Designed for use with CheckStyle and Ant.

Summary	
Files	**Errors**
1	39

Error Description	Line
Missing a Javadoc comment.	6
'method def modifier' has incorrect indentation level 4, expected level should be 2.	8
Missing a Javadoc comment.	8
'method def' child has incorrect indentation level 8, expected level should be 4.	9
WhitespaceAround: '=' is not preceded with whitespace.	9
'method def' child has incorrect indentation level 8, expected level should be 4.	10
'method def' child has incorrect indentation level 8, expected level should be 4.	11
Local variable name 'N' must match pattern '^[a-z]([a-z0-9][a-zA-Z0-9]*)?$'.	11

03 System Testing **TestQuality**

- MileStones (Cycle 기간 설정 가능)

- Test Suite, Test Case 설정

- Test Plan, Test Plan Run 설정

- Run에 따른 결과 확인 가능

- Git 연동으로 코드 바로 접근 가능,
  빠른 결함 관리 가능

Testquality Board

04 Issue Tracking Jira

- OOAD에 적합

  (스프린트, 스크럼 별 이슈 관리)

- Issue 관리에 대한 History를 통해

  비슷한 Issue 발생 시의 처리 용이

Jira – Testquality, SonarQube 연동

05 CTIP Traceability

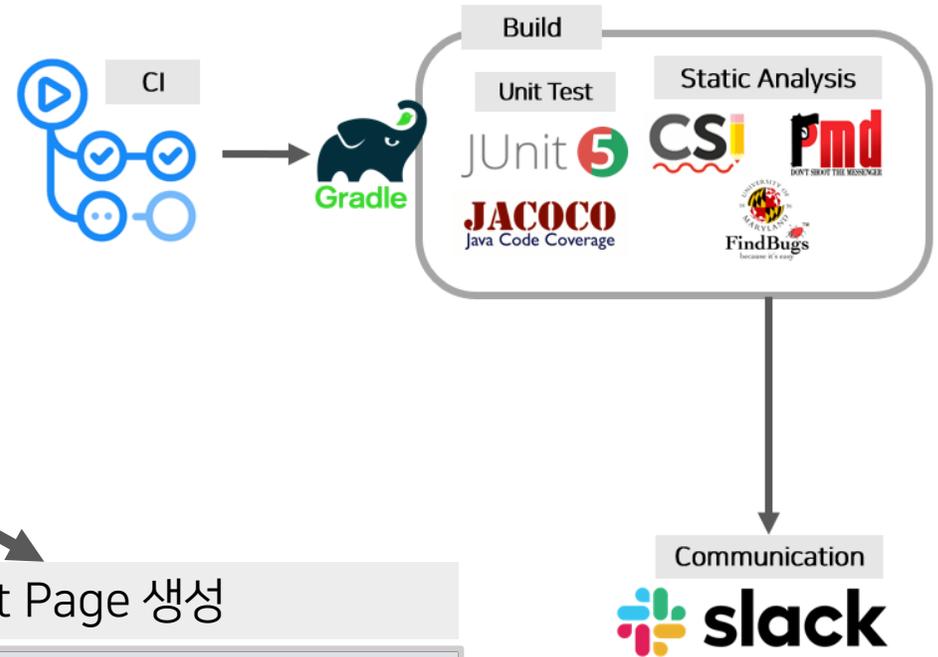# IntelliJ(IDE) → GitHub Develop branch로 pull request

Configuration Management
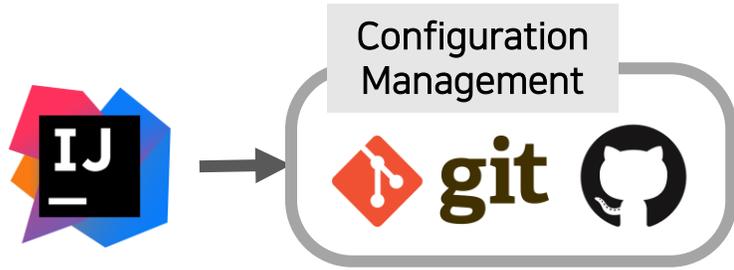
IntelliJ에서 Commit
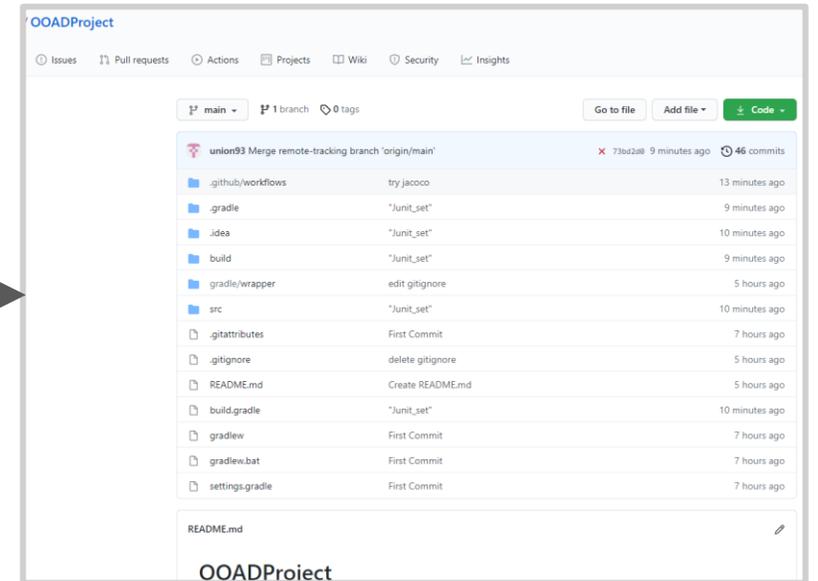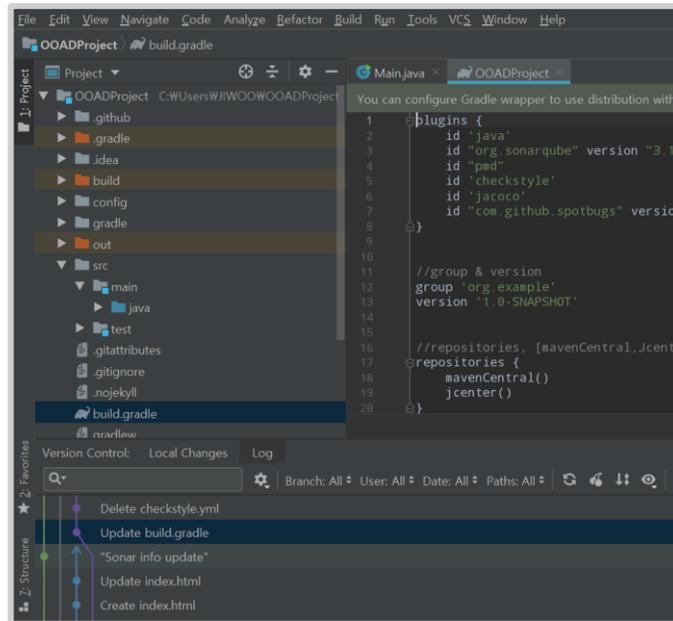
GitHub Actions Build 후 Slack으로 알림 + Report 생성

GitHub Actions를 통해 Gradle Build

Build 시 Slack으로 알람

Report Page 생성

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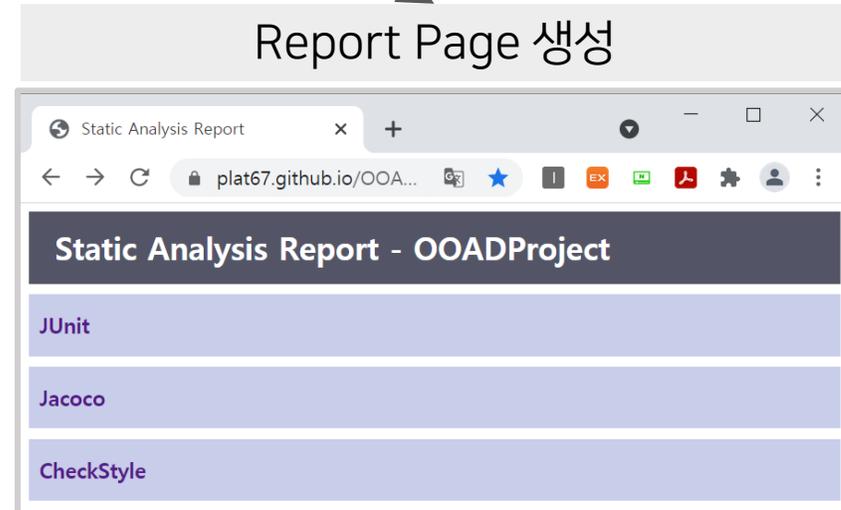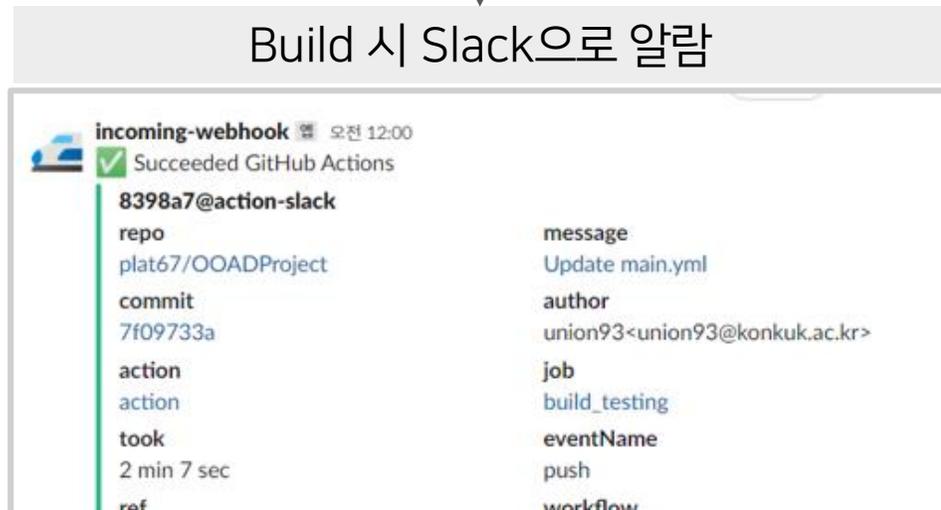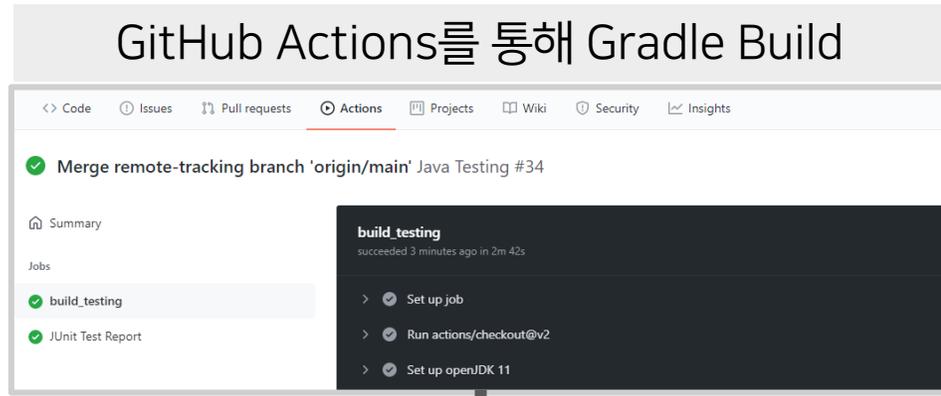
Jira에 발생한 Issue 등록 후 관리

Sonar/Testquality를 통해 분석된 Code Smell 등의 문제를 Jira Issue에 추가

Tests should include assertions	Java	1	+	KVT62-9
Standard outputs should not be used directly to log anything	Java	2	+	KVT62-10
Assertion arguments should be passed in the correct order	Java	1	+	

Jira의 칸반 보드를 통한 Issue 관리

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Overall