

Object – Oriented Programming

LAB #1. ECLIPSE

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Introduction

- Assistant : 이효식
 - Office : IT/BT #402-2
 - E-mail : lhs9394@naver.com

Schedule

Week	Lecture	Lab
1	Course Overview	Eclipse IDE
2	Getting Started (ch. 1) Console Input and Output (ch. 2)	Flow of Control(ch.3)
3	Defining Classes I (ch. 4)	Git & GitLab
4	Defining Classes II (ch. 5)	UML
5	Defining Classes II (ch. 5)	
6	Arrays (ch. 6)	
7	Inheritance (ch. 7)	Quiz 1
8	Midterm exam	Buddha's Birthday


Schedule

Week	Lecture	Lab
9	Polymorphism and Abstract Classes (ch. 8)	
10	Exception Handling (ch. 9)	File I/O
11	Interface and Inner Classes (ch. 13)	Java Thread
12	Generics and the ArrayList Class (ch. 14)	Quiz 2
13	Design Patterns: Intro, Singleton	
14	Design Patterns: Observer, Decorator	
15	Final Exam	

Install Eclipse

Install Eclipse - JDK


<https://download.eclipse.org/oomph/jre/>



MembersWorking GroupsProjectsMore★ Donate

Home / Projects / oomph / Java Missing


Java for Windows


Thank you for using
Eclipse Installer


Unfortunately the Java version needed to run Eclipse Installer couldn't be found on your system. You need the following version or a higher version:

Java 1.8.0 (64 Bit)

Please download and install a Java Runtime Environment (JRE) or a Java Development Kit (JDK)

 [Oracle JDK 13](#)
Manual addition of `--add-modules=ALL-SYSTEM` required for applications based on Eclipse Neon (4.7) or older.








 [Oracle JDK 12](#)
Manual addition of `--add-modules=ALL-SYSTEM` required for applications based on Eclipse Neon (4.7) or older. This version has reached **end of life**.
Use JDK 13 instead.

 [Oracle JDK 11](#)
Manual addition of `--add-modules=ALL-SYSTEM` required for applications based on Eclipse Neon (4.7) or older.

Install Eclipse - JDK

Java SE Development Kit 13.0.2

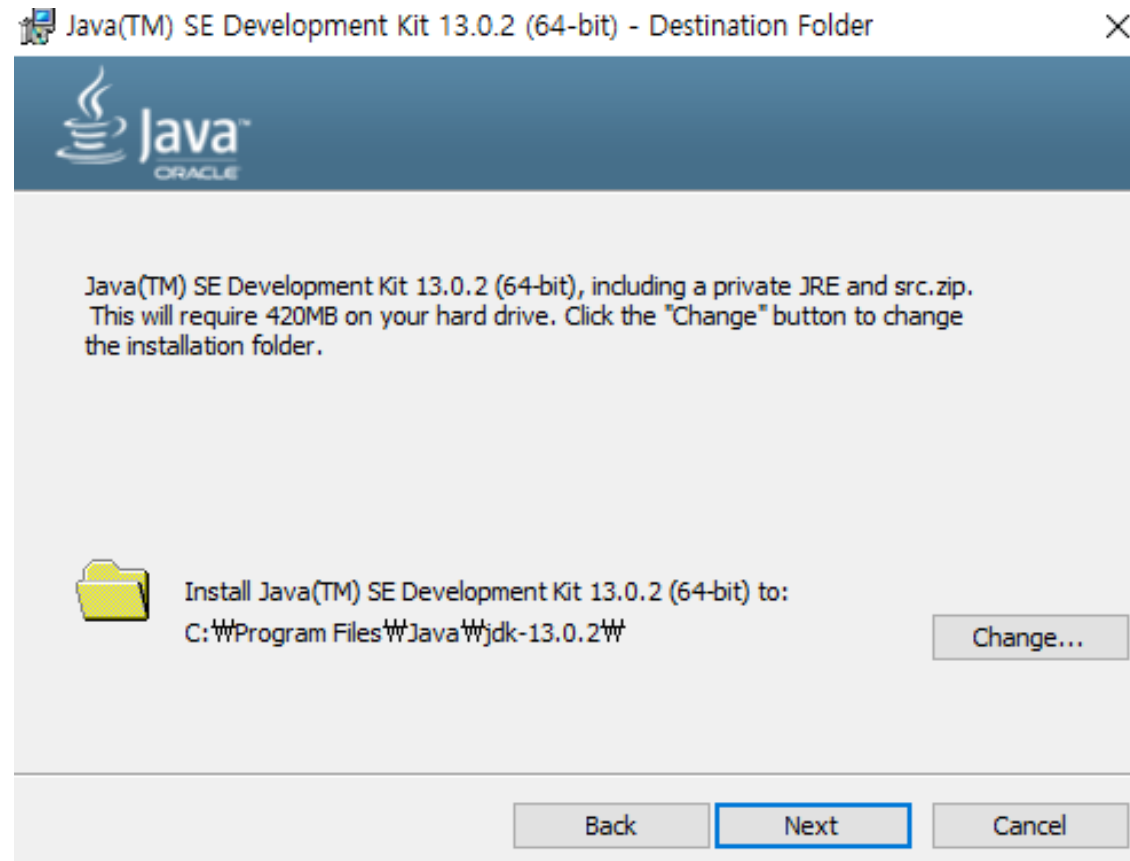
This software is licensed under the [Oracle Technology Network License Agreement for Oracle Java SE](#)

Product / File Description	File Size	Download
Linux Debian Package	155.72 MB	 jdk-13.0.2_linux-x64_bin.deb
Linux RPM Package	162.66 MB	 jdk-13.0.2_linux-x64_bin.rpm
Linux Compressed Archive	179.41 MB	 jdk-13.0.2_linux-x64_bin.tar.gz
macOS Installer	173.3 MB	 jdk-13.0.2_osx-x64_bin.dmg
macOS Compressed Archive	173.7 MB	 jdk-13.0.2_osx-x64_bin.tar.gz
Windows x64 Installer	159.83 MB	 jdk-13.0.2_windows-x64_bin.exe
Windows x64 Compressed Archive	178.99 MB	 jdk-13.0.2_windows-x64_bin.zip

Install Eclipse - JDK



Install Eclipse - JDK

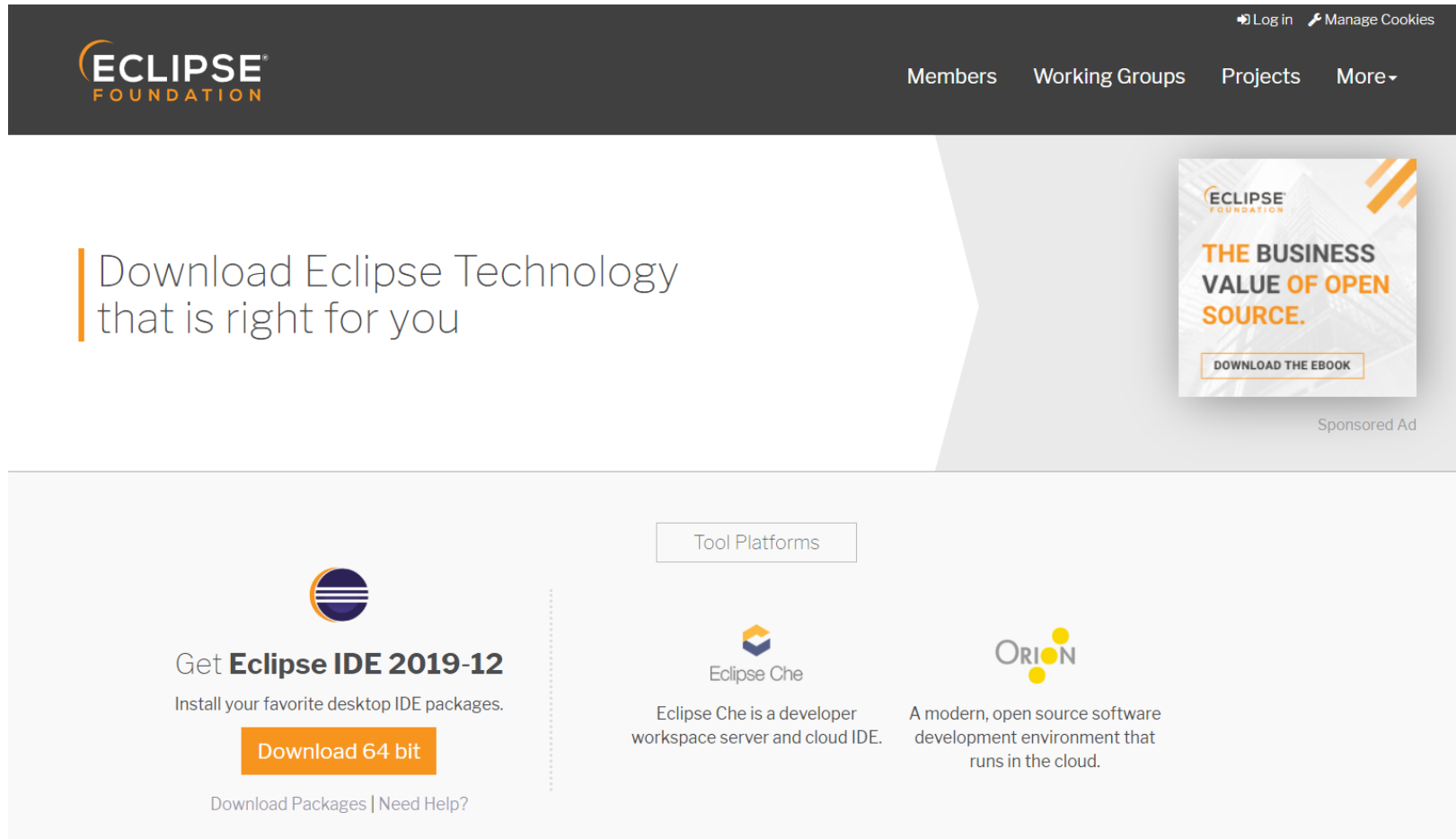


Install Eclipse - JDK



Install Eclipse

<https://www.eclipse.org/downloads/>



The screenshot shows the Eclipse Foundation website. At the top is a dark navigation bar with the Eclipse Foundation logo on the left and links for 'Log in', 'Manage Cookies', 'Members', 'Working Groups', 'Projects', and 'More' on the right. Below the navigation bar is a large white section with the text 'Download Eclipse Technology that is right for you'. To the right of this text is a sponsored advertisement for 'THE BUSINESS VALUE OF OPEN SOURCE' with a 'DOWNLOAD THE EBOOK' button. Below this section is a light gray area featuring three product tiles. The first tile is for 'Eclipse IDE 2019-12', showing the Eclipse logo and a 'Download 64 bit' button. The second tile is for 'Eclipse Che', showing the Che logo and a description: 'Eclipse Che is a developer workspace server and cloud IDE.' The third tile is for 'ORION', showing the Orion logo and a description: 'A modern, open source software development environment that runs in the cloud.'

ECLIPSE FOUNDATION

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Download Eclipse Technology that is right for you

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DOWNLOAD THE EBOOK

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Get **Eclipse IDE 2019-12**
Install your favorite desktop IDE packages.
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Download Packages | Need Help?

Eclipse Che
Eclipse Che is a developer workspace server and cloud IDE.

ORION
A modern, open source software development environment that runs in the cloud.

Install Eclipse



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Home / Downloads / Eclipse downloads - Select a mirror

All downloads are provided under the terms and conditions of the Eclipse Foundation Software User Agreement unless otherwise specified.


Download

Download from: Japan - Japan Advanced Institute of Science and Technology ([http](http://www.aist.go.jp))

File: `eclipse-inst-win64.exe` SHA-512

>> Select Another Mirror


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Squish

Cross-Platform
GUI Test
Automation

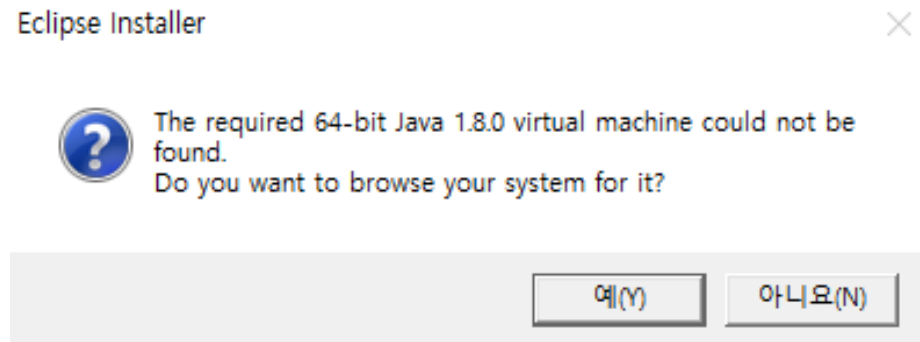
Other options for this file

- All mirrors (xml)
- Direct link to file (download starts immediately from best mirror)

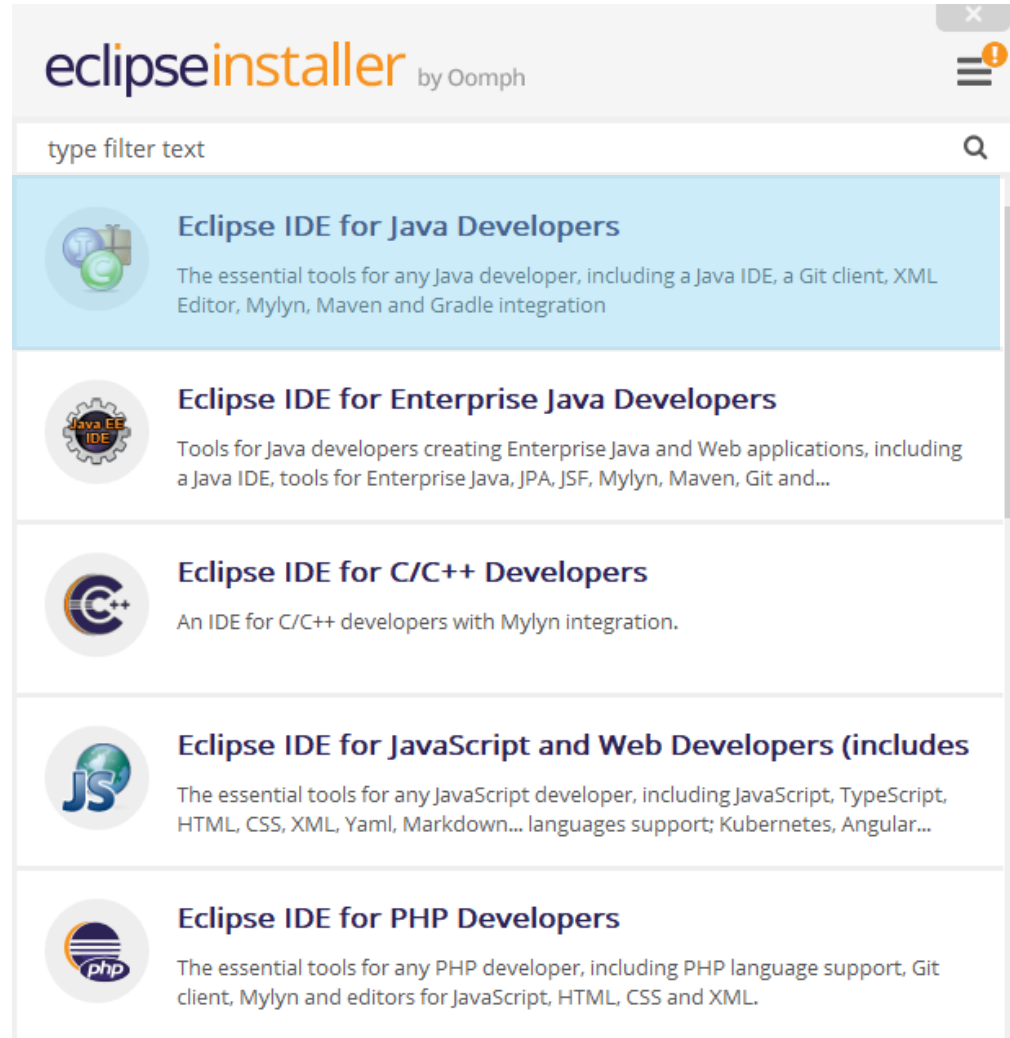
Related Links

- Donate
- Becoming a mirror site
- Updating and installing Eclipse components
- Eclipse forums


Install Eclipse



Install Eclipse




Install Eclipse




Eclipse IDE for Java Developers
The essential tools for any Java developer, including a Java IDE, a Git client, XML Editor, Mylyn, Maven and Gradle integration.

Java 1.8+ VM


C:\Program Files\Java\jdk-13.0.2 (Current) 


Installation Folder

C:\Users\user\eclipse\java-2019-122 

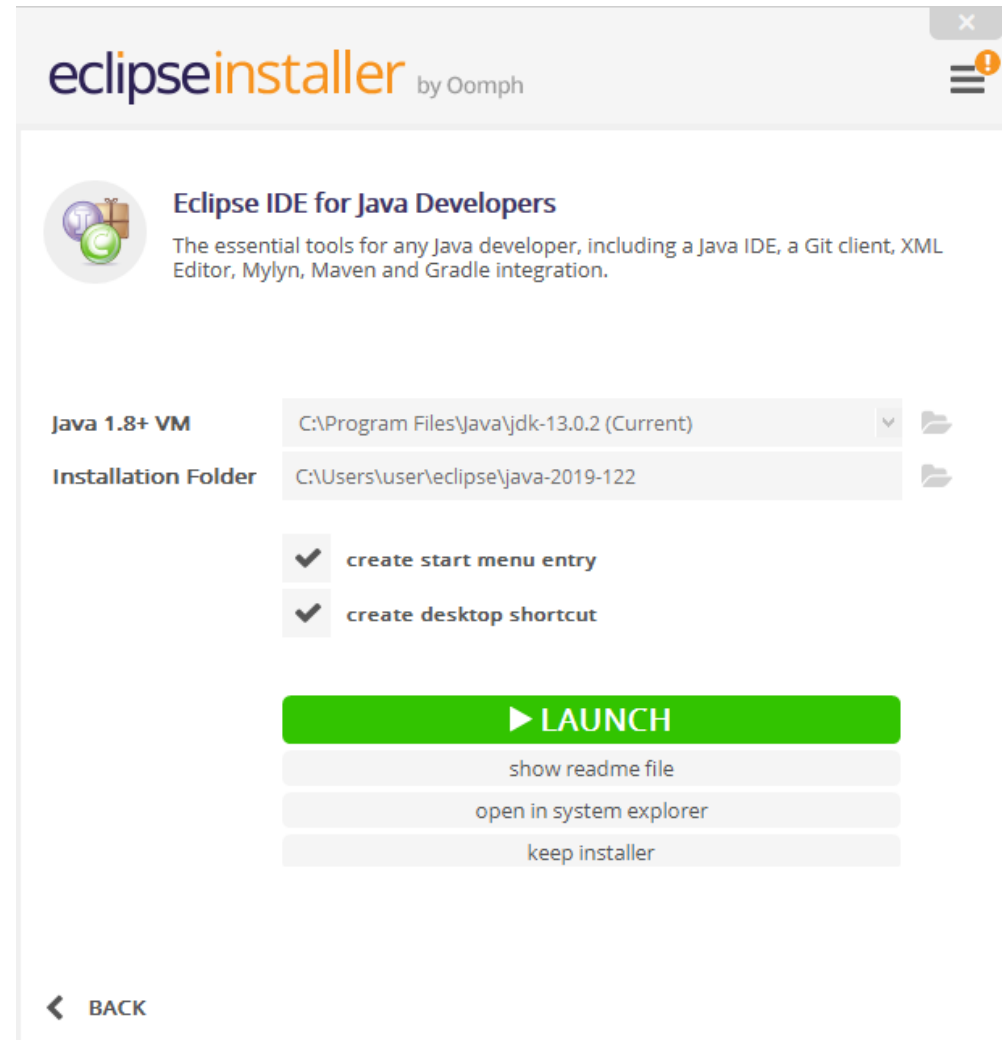
☒ create start menu entry

☒ create desktop shortcut

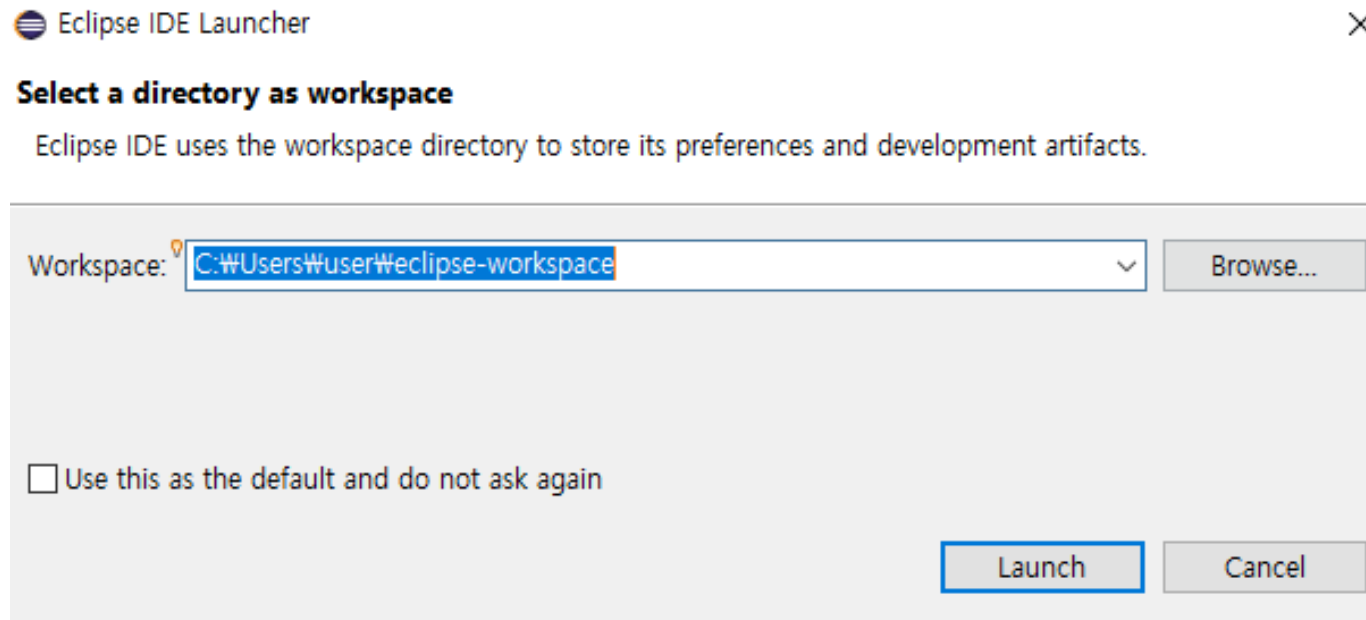
 **INSTALL**

 **BACK**

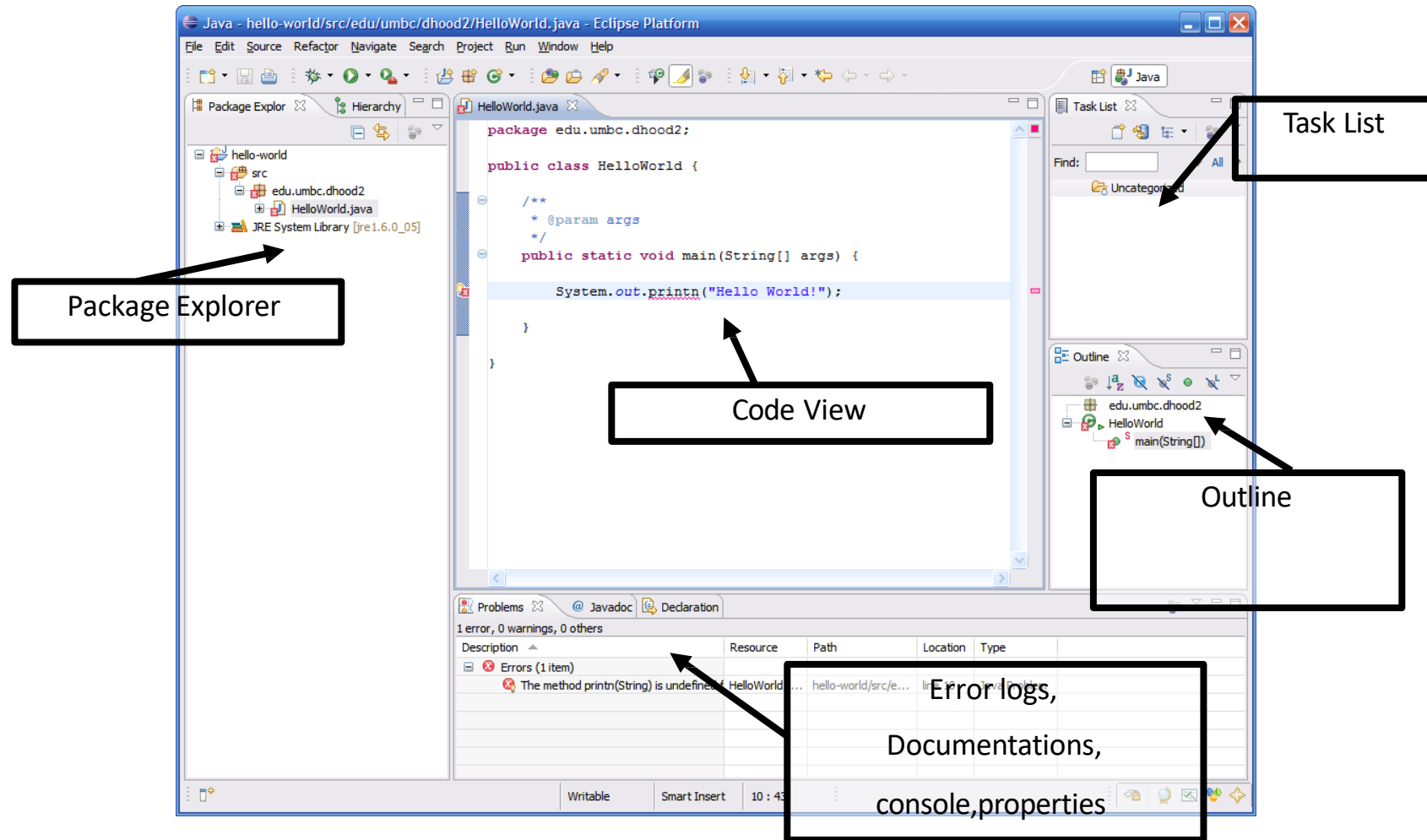
Install Eclipse



Install Eclipse

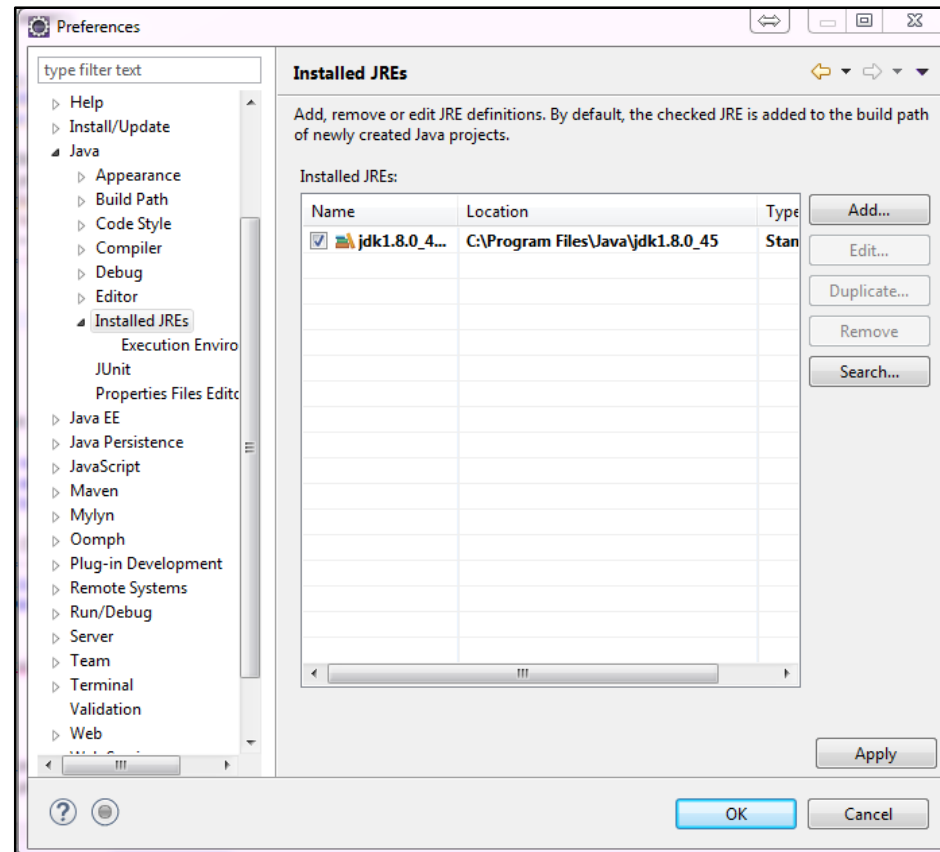


Running Eclipse



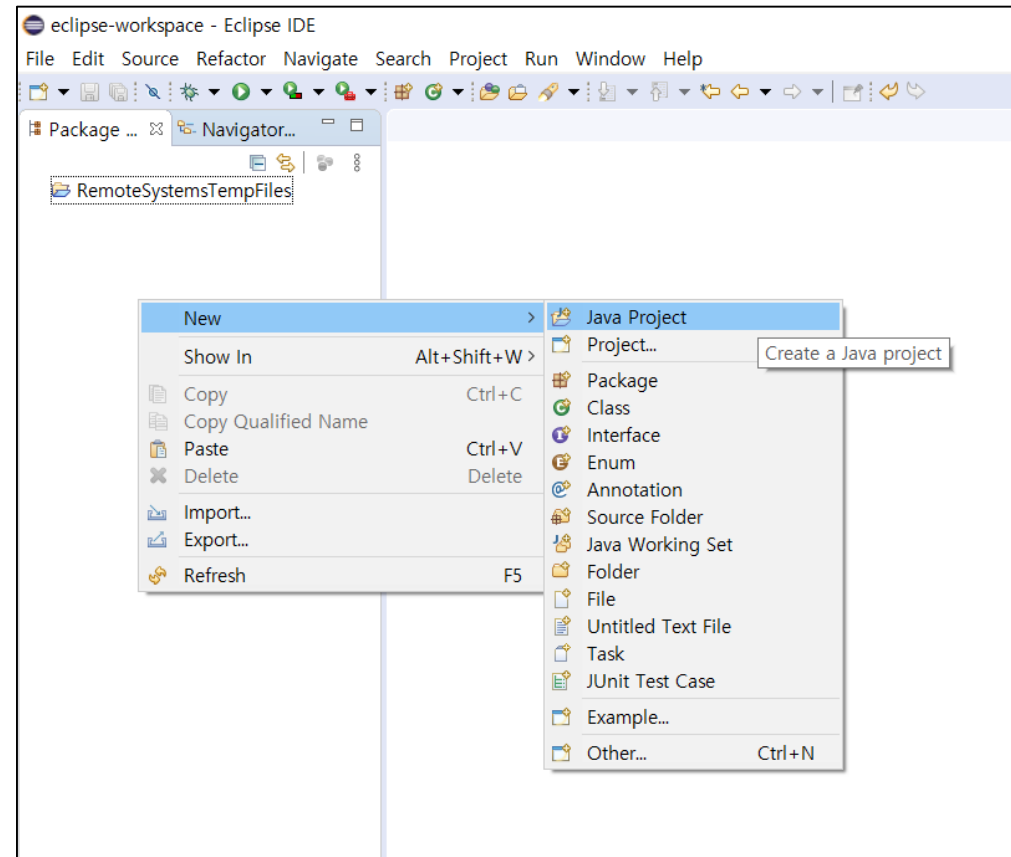
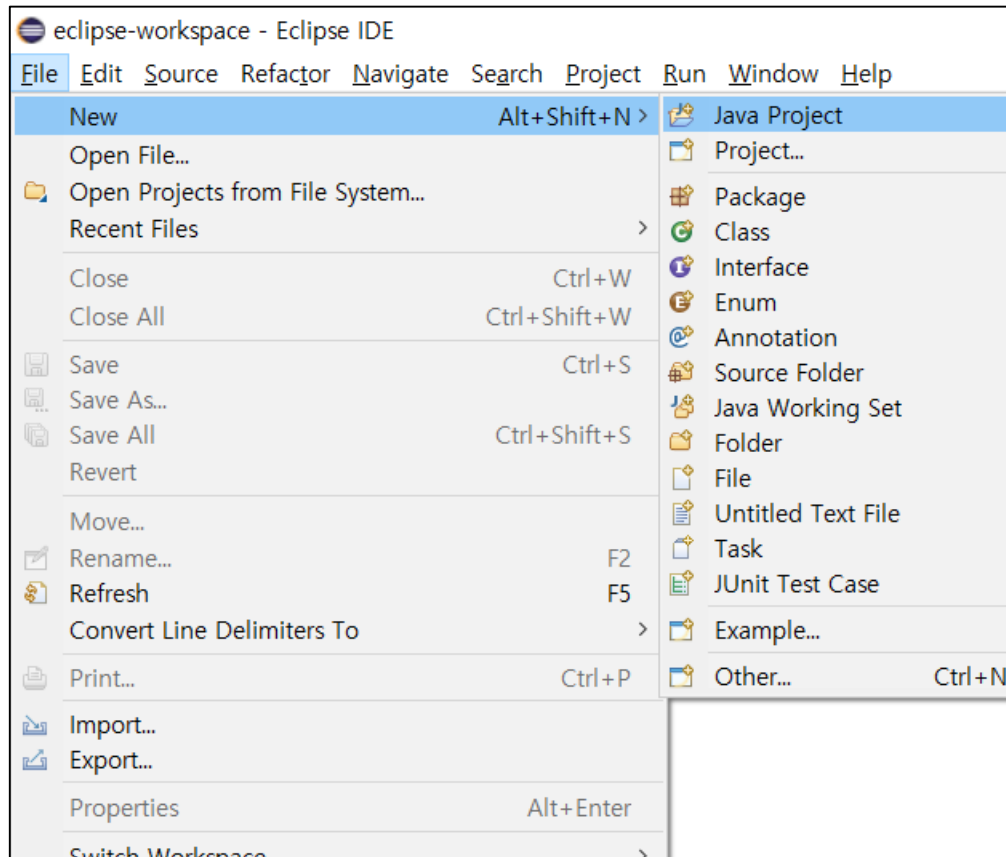
- Window → Preferences

- Window → Preferences



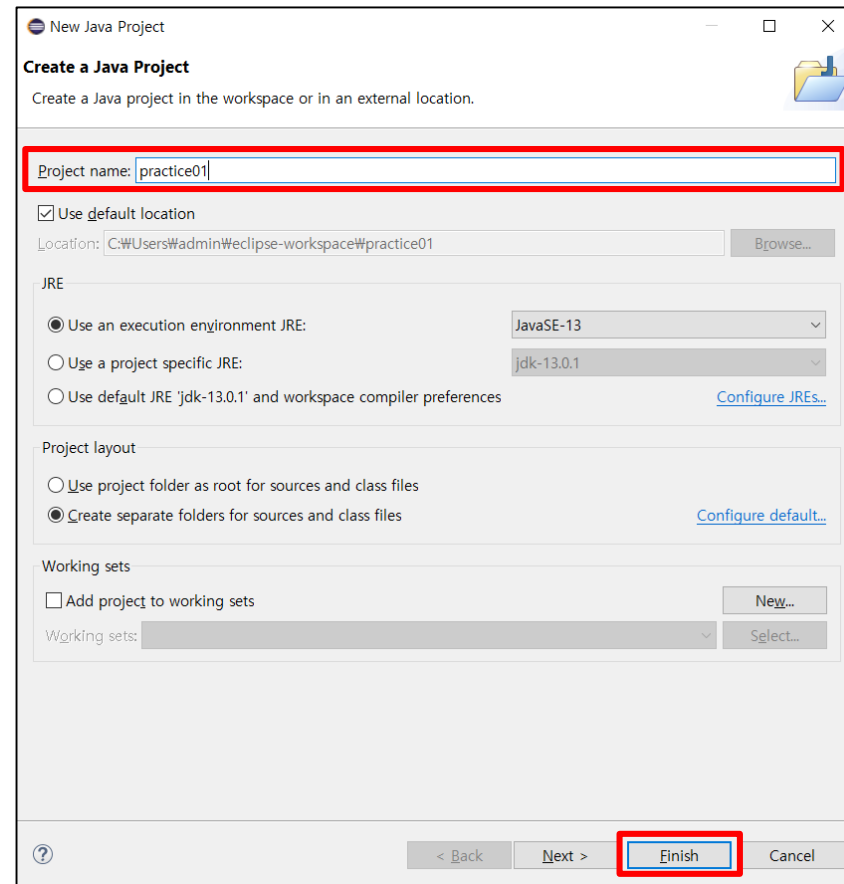
Running Eclipse

- Create Project



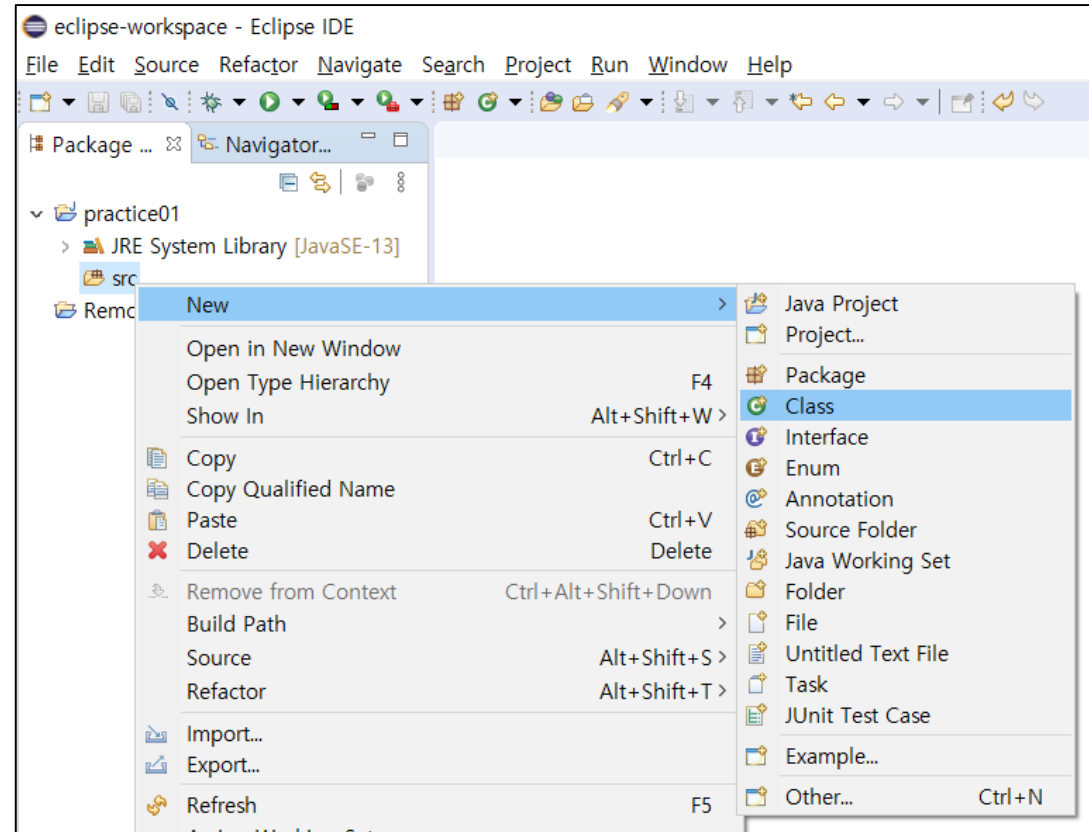
Running Eclipse

- Create Project



Running Eclipse

- Create Project



Running Eclipse

- Create Project

New Java Class

Java Class

Create a new Java class.

Source folder: practice01/src Browse...

Package: practice01 Browse...

☐ Enclosing type: Browse...

Name: Practice01

Modifiers: ☒ public ☐ package ☐ private ☐ protected
☐ abstract ☐ final ☐ static

Superclass: java.lang.Object Browse...

Interfaces: Add...
Remove

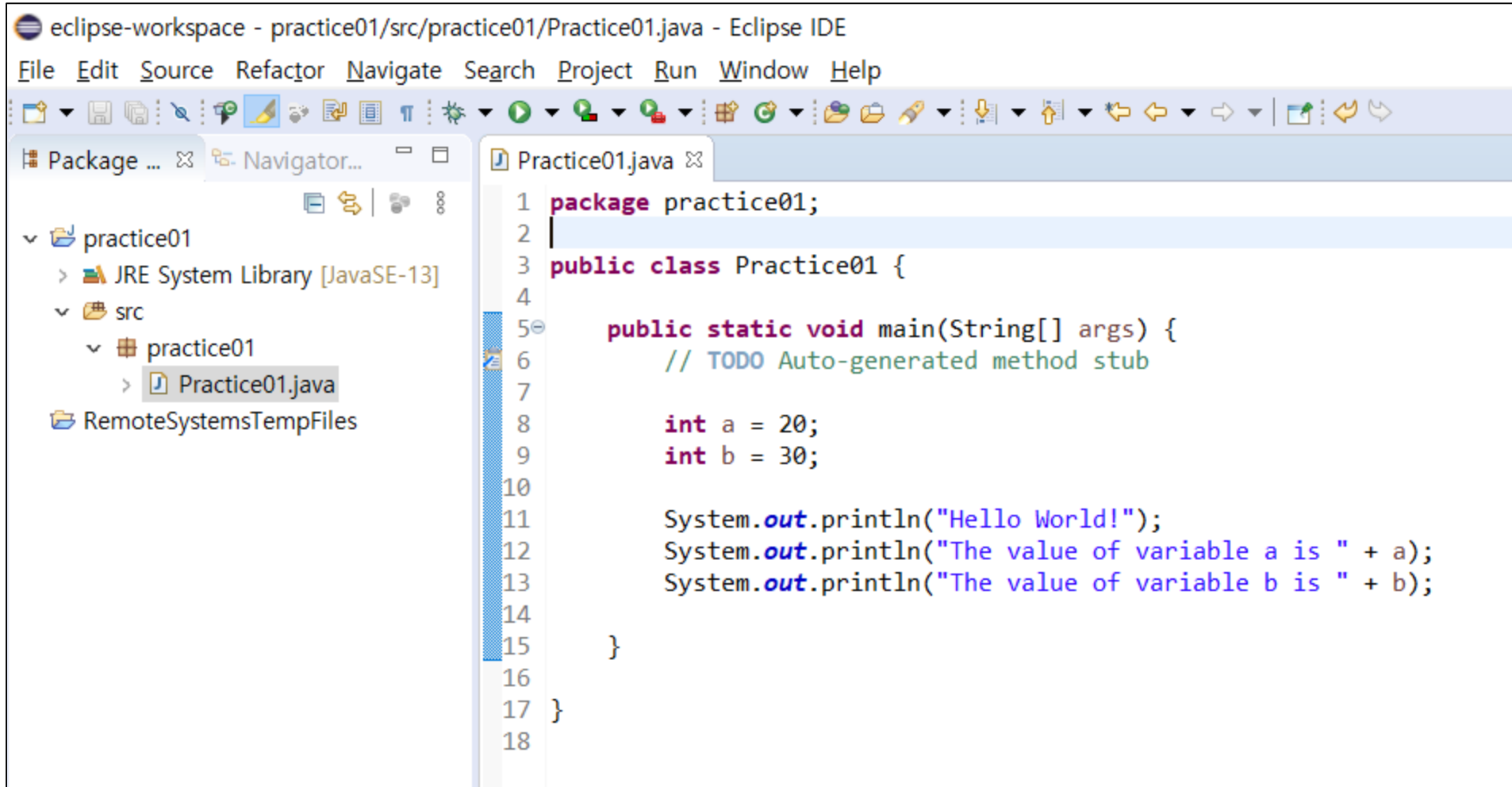
Which method stubs would you like to create?

☒ public static void main(String[] args)
☐ Constructors from superclass
☒ Inherited abstract methods

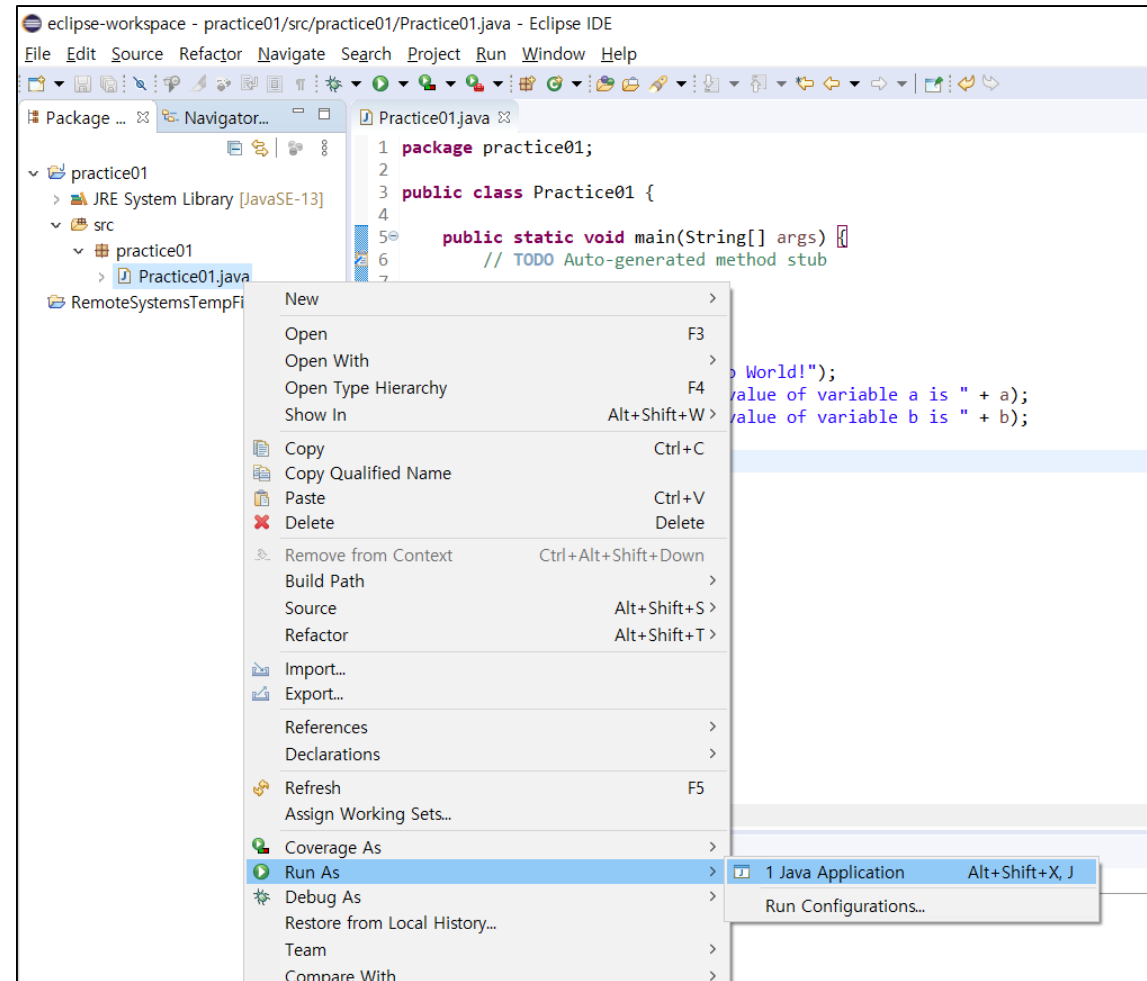
Do you want to add comments? (Configure templates and default value [here](#))
☐ Generate comments

? Finish Cancel

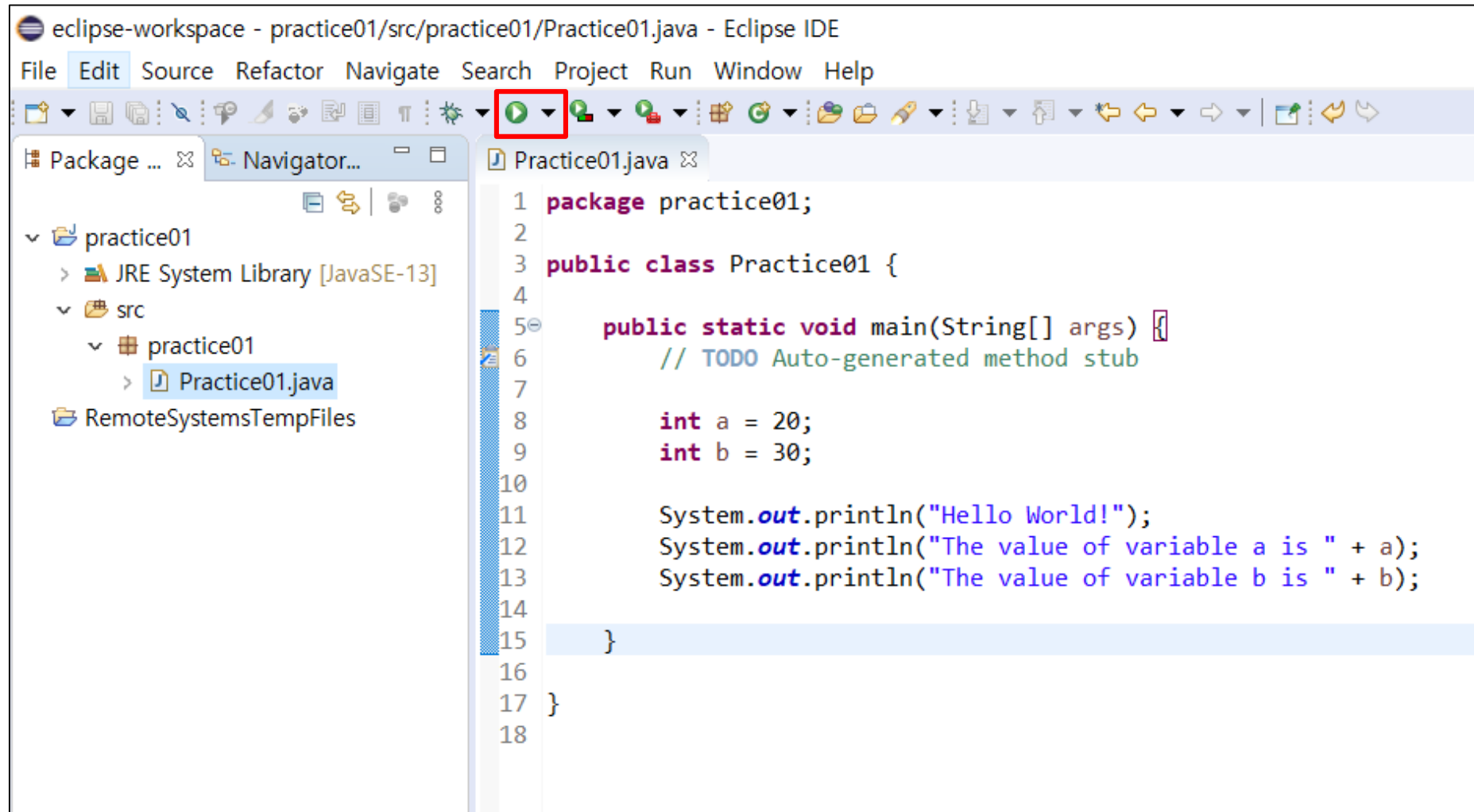
Running Eclipse



Running Eclipse



Running Eclipse



Running Eclipse

- Console Output(System.out.println)

```
int a = 20;  
int b = 30;  
  
System.out.println("Hello World!");  
System.out.println("The value of variable a is " + a);  
System.out.println("The value of variable b is " + b);
```

```
Hello World!  
The value of variable a is 20  
The value of variable b is 30
```

Example Compilation Error

패키지 및 클래스 오류

오류 구문 라인 표시 및 해결 방법

오류나는 항목

모든 프로젝트에 대한 오류를 표 형식으로 표시

```
package edu.umbc.dhood2;

public class HelloWorld {

    /**
     * @param args
     */
    public static void main(String[] args) {

        System.out.println("Hello World!");

    }

}
```

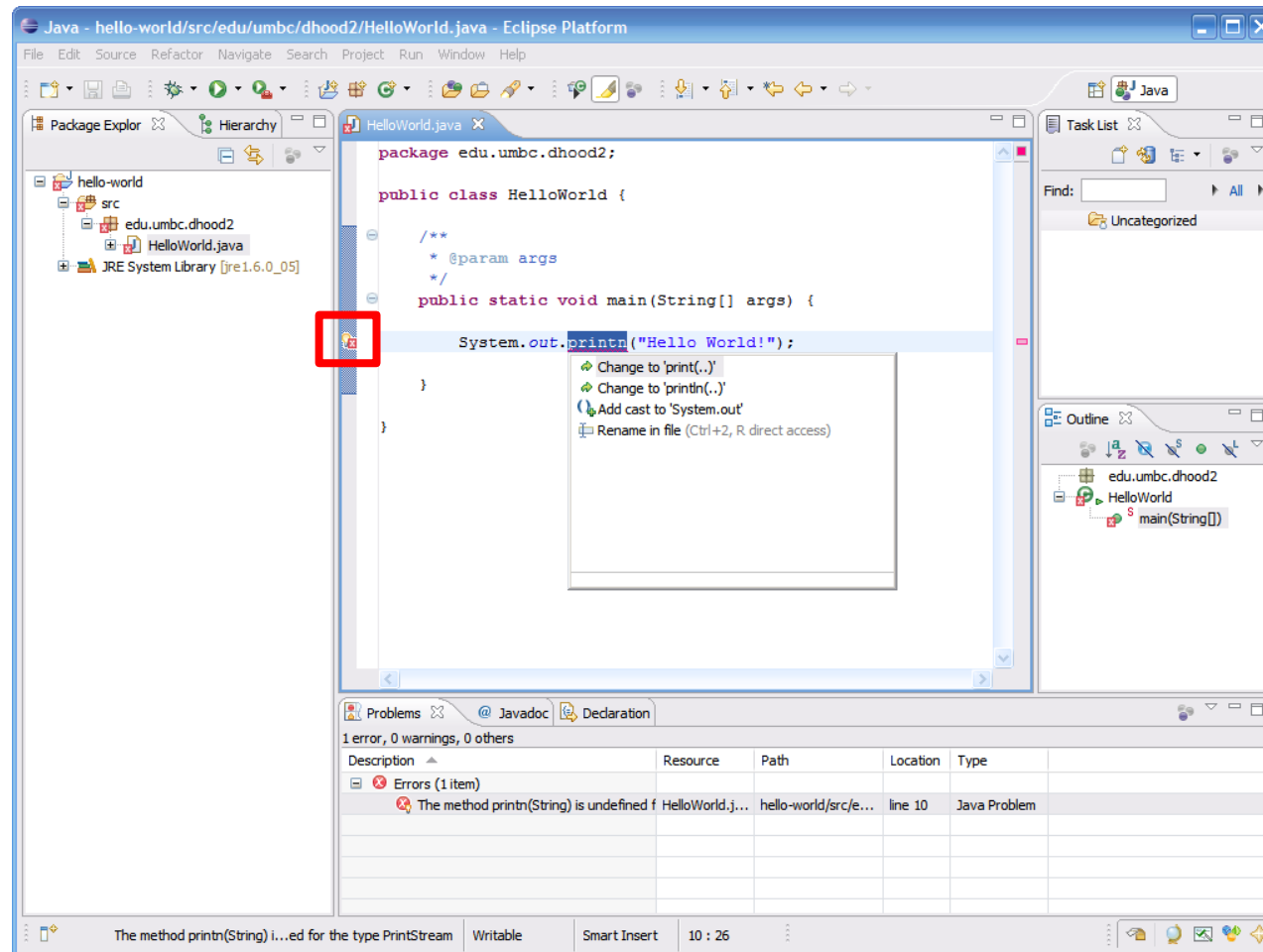
Problems (1 item)

Description	Resource	Path	Location	Type
The method println(String) is undefined for the type HelloWorld	undefined f HelloWorld.j...	hello-world/src/e...	line 10	Java Problem

20

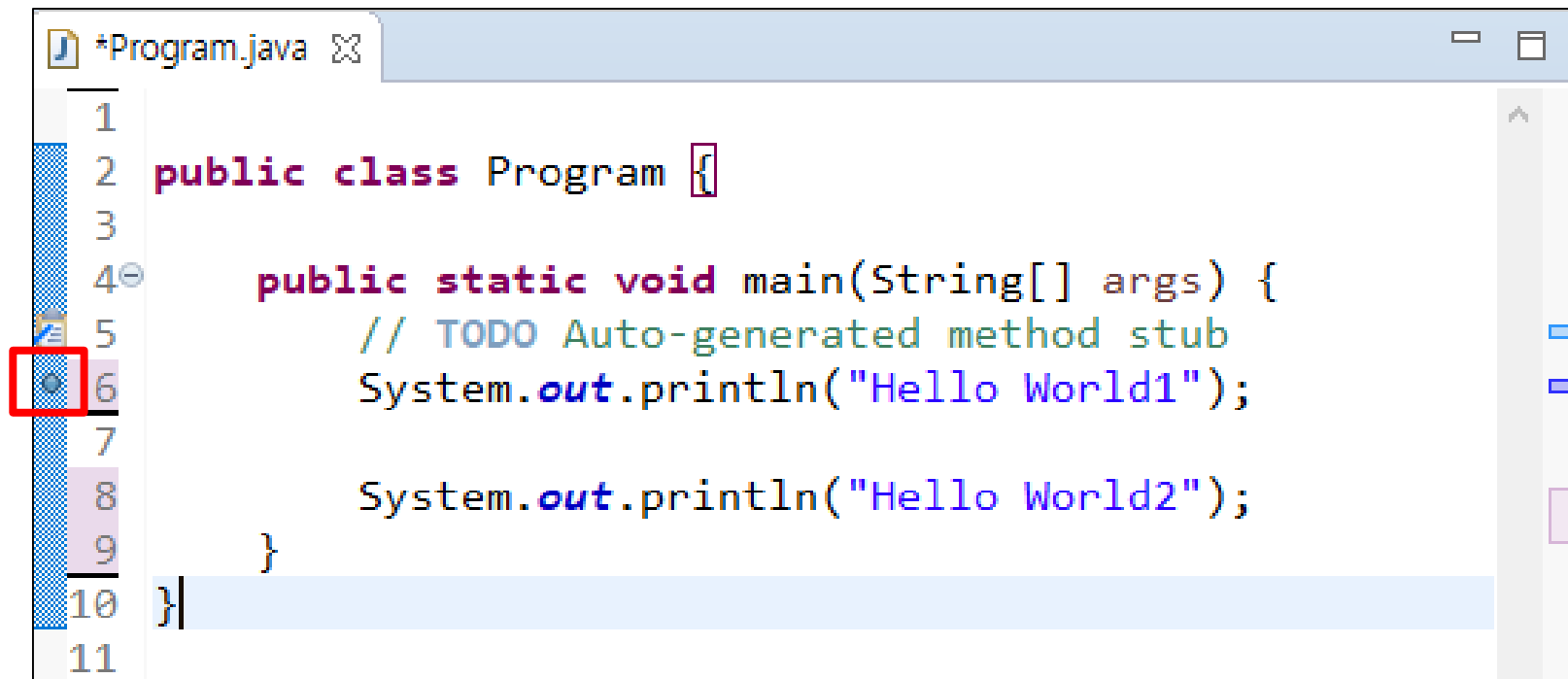
Example Compilation Error

- 전구 버튼을 눌러 해결방법을 확인



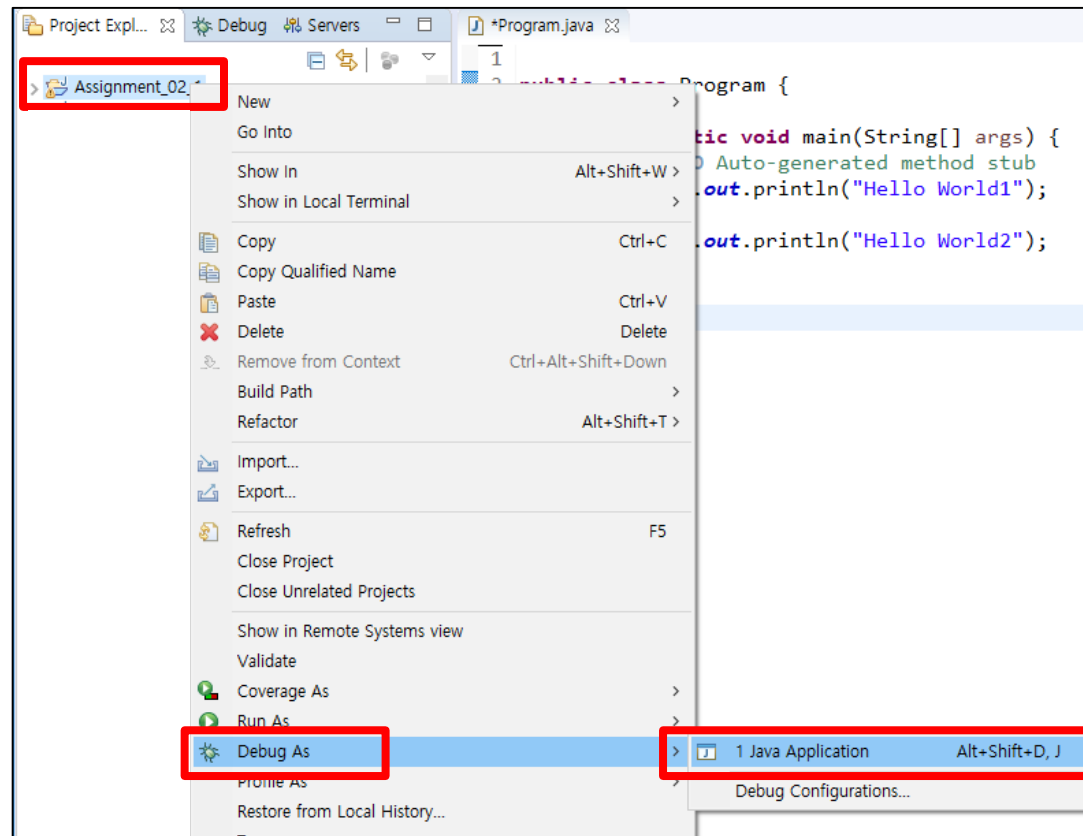
Debugging Code

- 원하는 Line의 왼쪽을 더블 클릭하여 Break Point 생성

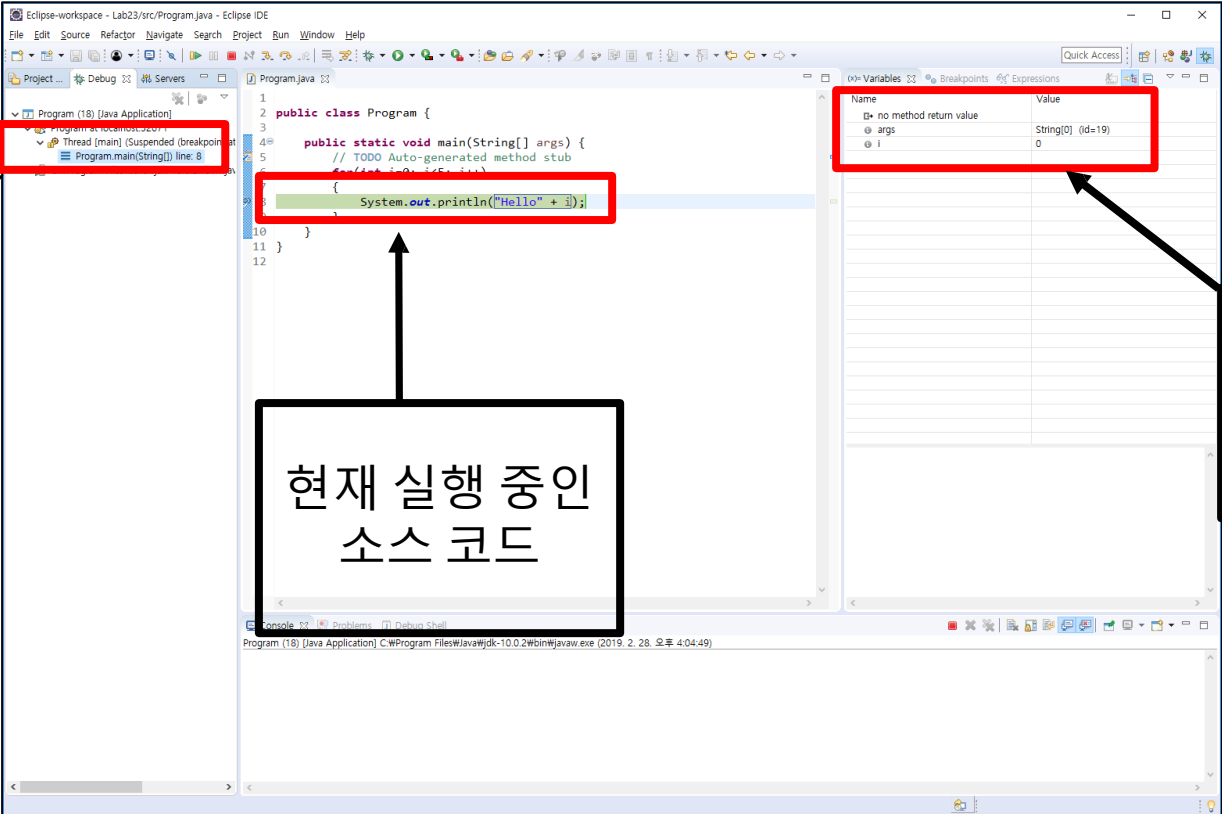


Debugging Code

- 프로젝트 우클릭 – [Debug As] – [Java Application] 클릭



Debugging Code



BreakPoints
리스트

현재 실행 중인
소스 코드

범위 내의 현재
변수 값 확인

```
1 public class Program {  
2  
3  
4 public static void main(String[] args) {  
5 // TODO Auto-generated method stub  
6  
7  
8 System.out.println("Hello" + i);  
9  
10 }  
11 }  
12
```

Name	Value
no method return value	
args	String[0] (id=19)
i	0

GitLab

GitLab 로그인 및 초기 설정

1. <https://hconnect.hanyang.ac.kr> 접속 후



You need to sign in or sign up before continuing.

GitLab Community Edition

Open source software to collaborate on code

Manage Git repositories with fine-grained access controls that keep your code secure. Perform code reviews and enhance collaboration with merge requests. Each project can also have an issue tracker and a wiki.

Sign in

Username or email

Password

☐ Remember me

[Forgot your password?](#)

Sign in

Sign in with

Hanyang

GitLab 로그인 및 초기 설정

2. 한양인 계정으로 로그인



한양대학교 | 로그인

고객님의 정보에 접근하기 위하여 인증이 필요합니다.
한양대학교 포털 한양인(HY-in)계정으로 로그인 하시기 바랍니다.

Portal Login

ID	<input type="text" value="아이디를 입력하세요"/>	<div>로그인</div>
Password	<input type="password" value="비밀번호를 입력하세요"/>	

GitLab 로그인 및 초기 설정

3. 정보 제공 동의



한양대학교 | 개인정보의 제 3자 제공동의 요청

한양대학교 OPEN API는 아래와 같은 개인정보를 온라인 소프트웨어 교육 지원 시스템 - Real 에 제공합니다.

제공 받는자

커넥트재단 (온라인 소프트웨어 교육 지원 시스템 - REAL)

제공 목적

웹상에서 학생 실습코드를 저장하고 빌드 하며 채점, 코드 리뷰를 수행하는 시스템 입니다.

실습 코드 저장은 GITLABCE를 활용할 예정이고

코드 리뷰는 REVIEW BOARD, 빌드 및 채점은 JENKINS를 사용할 예정입니다.

한양대 도메인을 통해 서비스 하고 한양대 학생 인증을 적용할 예정입니다.

** 실제 서비스를 사용자가 사용하는 환경 입니다.

제공 항목

모든 항목에 동의하셔야만 이용 가능합니다.

로그인사용자 정보조회

[포털에서 설정한 대표 신분 정보]

로그인한 사용자의 성명, 사용자ID, 학번(개인번호), 재학(재직) 여부, 소속대학, 소속명, 소속코드, 소속ID, 사용자구분명의 정보를 제공합니다.

전체 동의합니다. ☐

동의합니다. ☐

동의

취소

GitLab 로그인 및 초기 설정

4. Password 설정

≡ 김종빈

Search

1

Profile

2 Settings

Help

Sign out

김종빈

@2007002245 · Member since Feb 13, 2017 12:38pm

Activity Groups Contributed projects Personal projects Snippets

Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb

M

W

F

Summary of issues, merge requests, and push events

GitLab 로그인 및 초기 설정

4. Password 설정

≡ User Settings

Search

Profile Account Applications Chat Access Tokens Emails Password Notifications SSH Keys Preferences Audit Log

Password

After a successful password update, you will be redirected to the login page where you can log in with your new password.

Change your password or recover your current one

Current password

You must provide your current password in order to change it.

New password

Password confirmation

Save password

forgot my password

초기 패스워드: 한양인 패스워드

3

4

5

GitLab 로그인 및 초기 설정

5. E-mail 설정

User Settings

Profile

Account

Applications

Chat

Access Tokens

Emails

Password

Notifications

SSH Keys

Preferences

Audit Log


Search

🔔

🌐

Public Avatar

You can upload an avatar here or change it at gravatar.com



Upload new avatar

Browse file...

No file chosen

The maximum file size allowed is 200KB.

Main settings

This information will appear on your profile.

Name

Enter your name, so people you know can recognize you.

Email

We also use email for avatar detection if no avatar is uploaded.

Bio

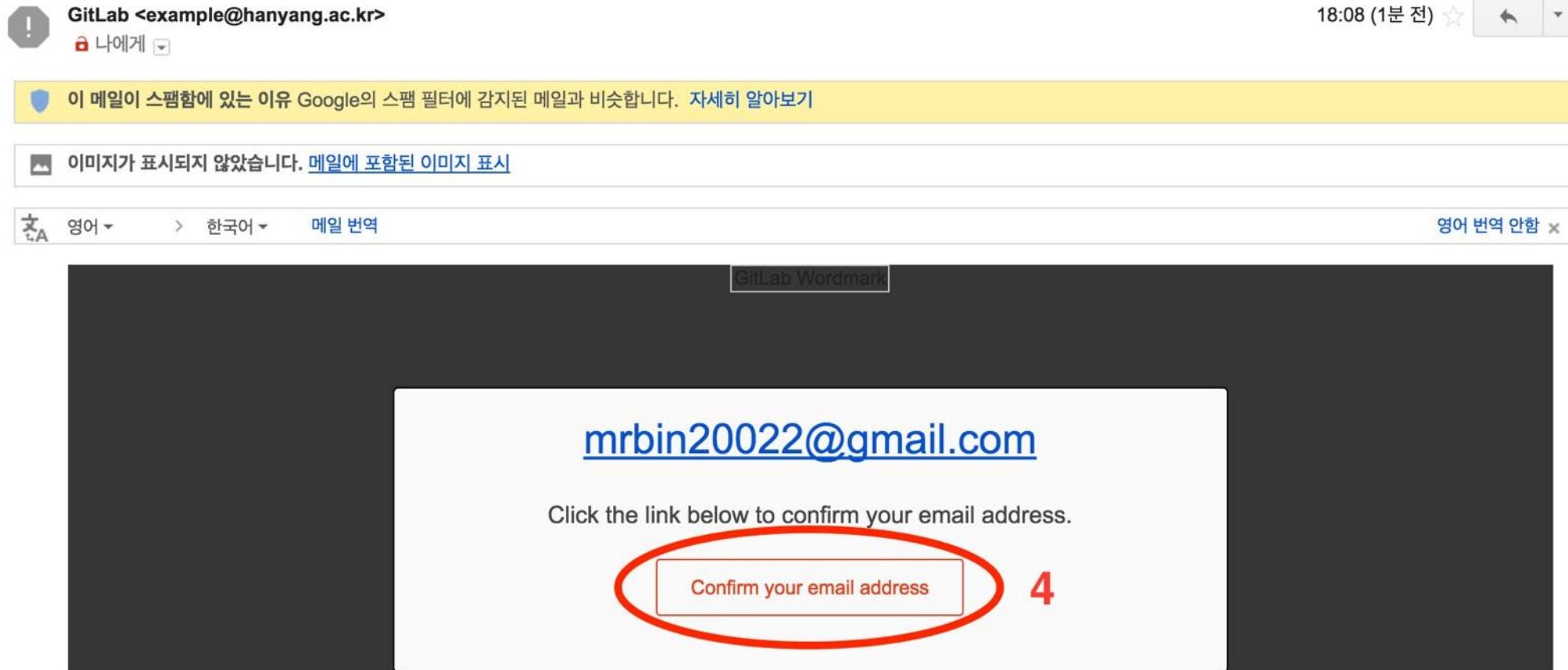
Tell us about yourself in fewer than 250 characters.

Update profile settings

Cancel

GitLab 로그인 및 초기 설정

5. E-mail 설정 – 변경한 E-mail 로그인 후 승인



GitLab 로그인 및 초기 설정

6. 이후, 로그인은 학번/email과 변경한 password로 가능



GitLab Community Edition

Open source software to collaborate on code

Manage Git repositories with fine-grained access controls that keep your code secure. Perform code reviews and enhance collaboration with merge requests. Each project can also have an issue tracker and a wiki.

Sign in

Username or email

2007002245

Password

.....|

☐ Remember me

[Forgot your password?](#)

Sign in

Sign in with

Hanyang

과제

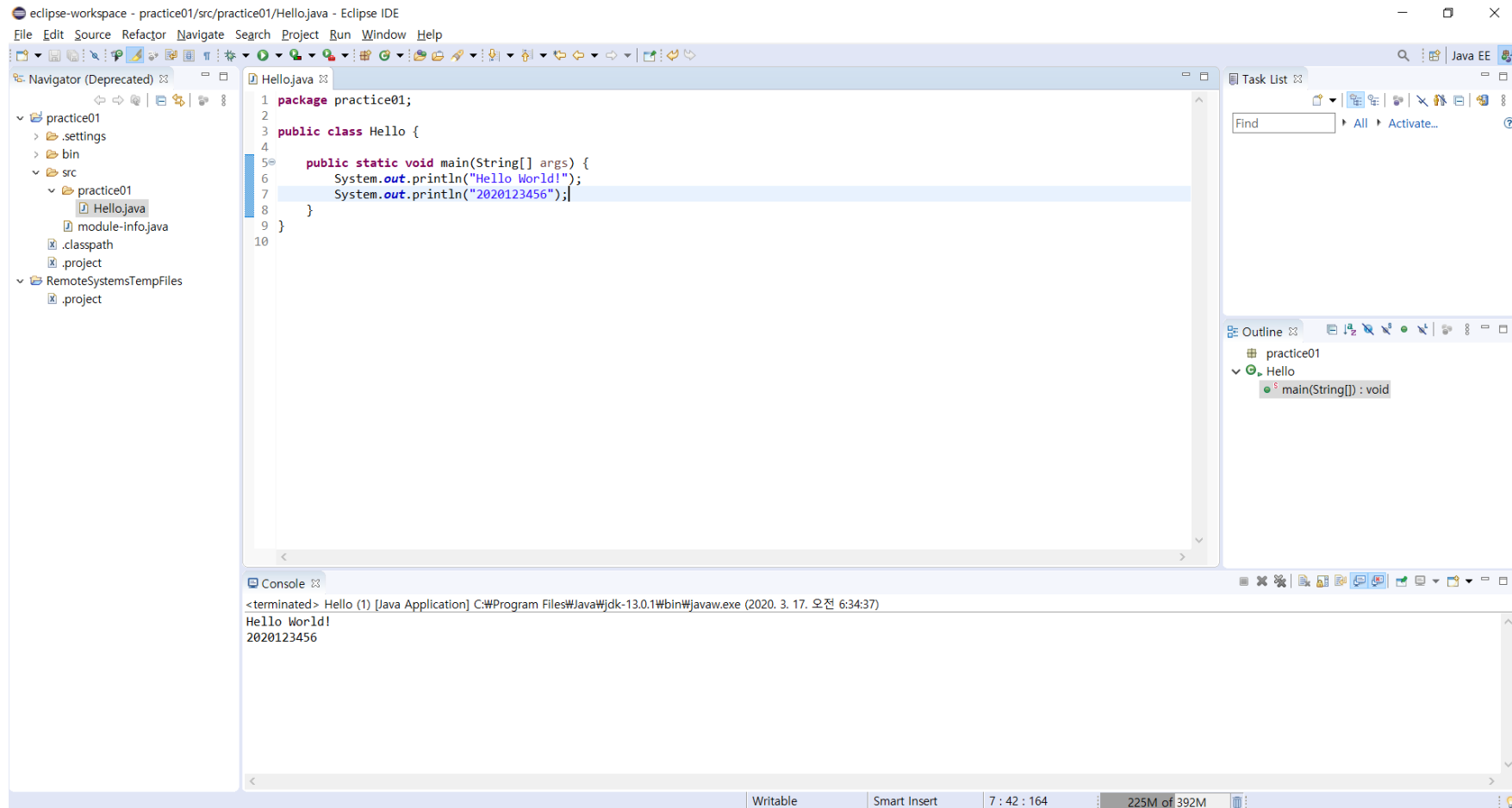
1) Eclipse 설치

- 'practice01' project의 'Hello' class를 생성
- 'Hello World!'와 본인의 학번을 출력하는 코드 작성
- 코드와 실행된 화면을 캡처 후 저장하여 제출

2) GitLab 가입

과제

< 과제 예시 >



Q & A