Java Programming I

Lab0

514760
Spring 2025
3/6/2025
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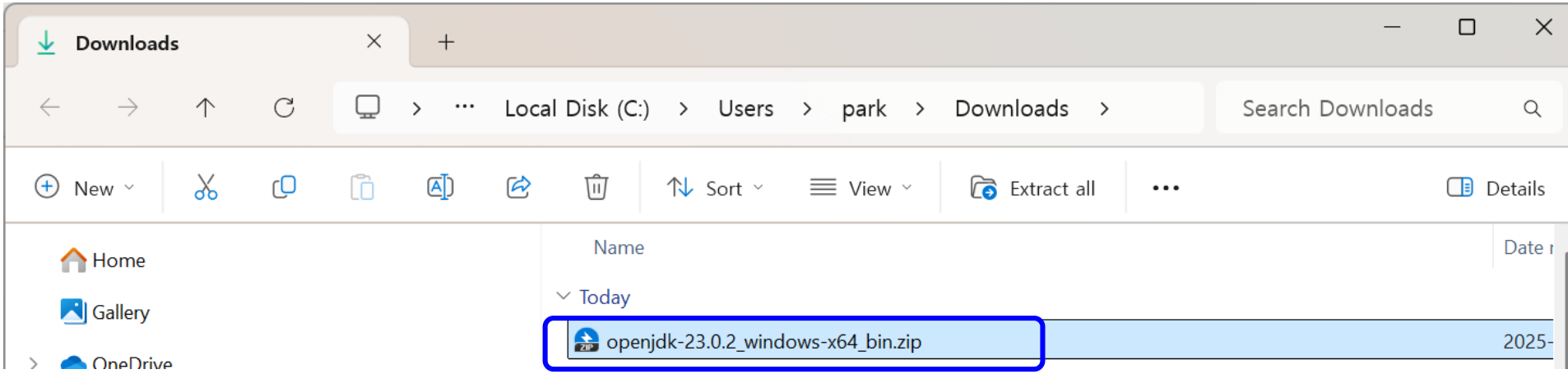
Lab0

1. Install OpenJDK 23.0.2 & Set Environment Variables https://jdk.java.net/
2. Download Visual Studio Code & Install https://code.visualstudio.com/download#
3. Install “Extension Pack for Java” In Visual Studio Code which supports Java version 1.5 or above.
4. Run Hello.java

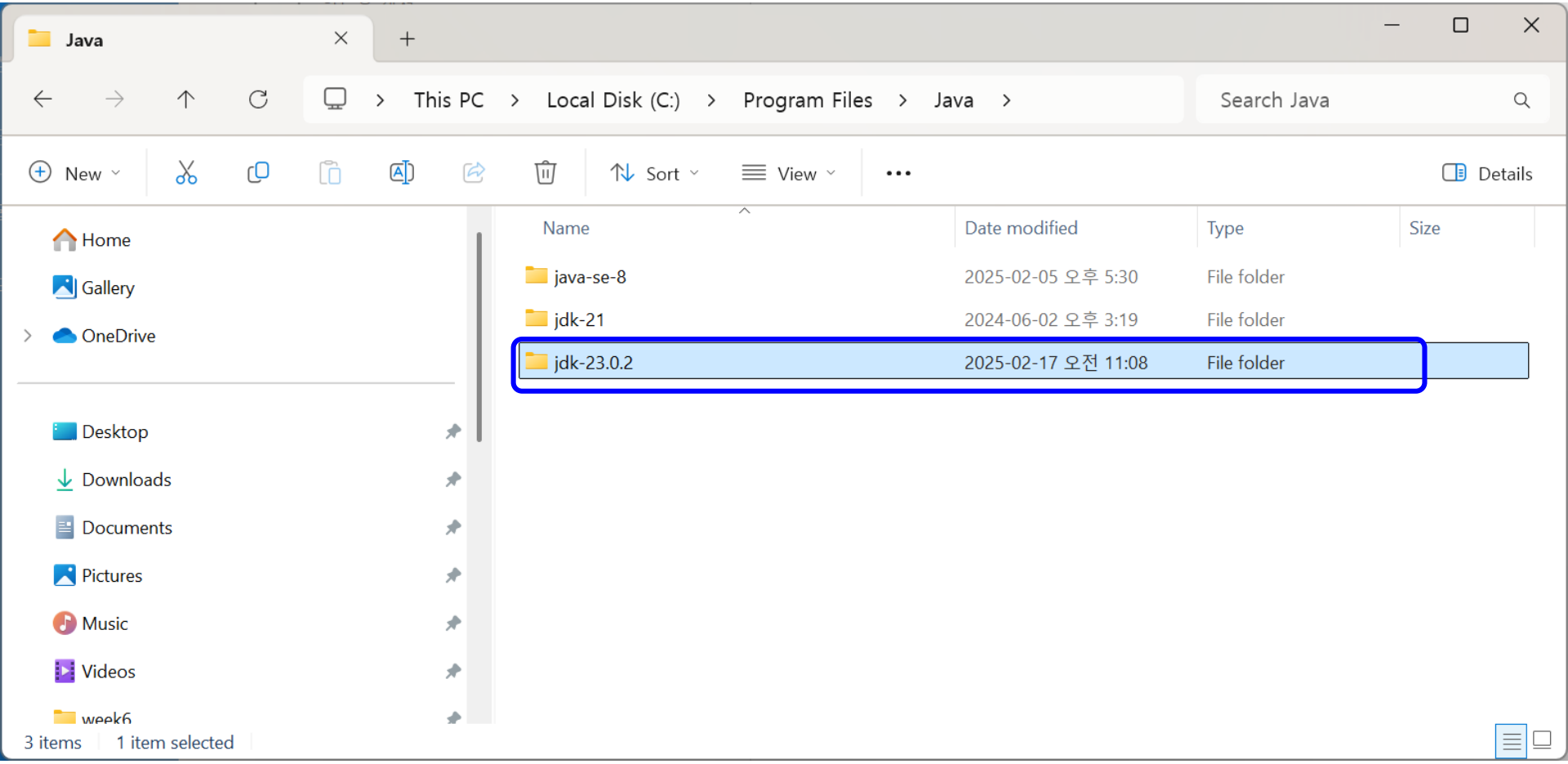
Lab0

- Download OpenJDK 23.0.2 https://jdk.java.net/23/

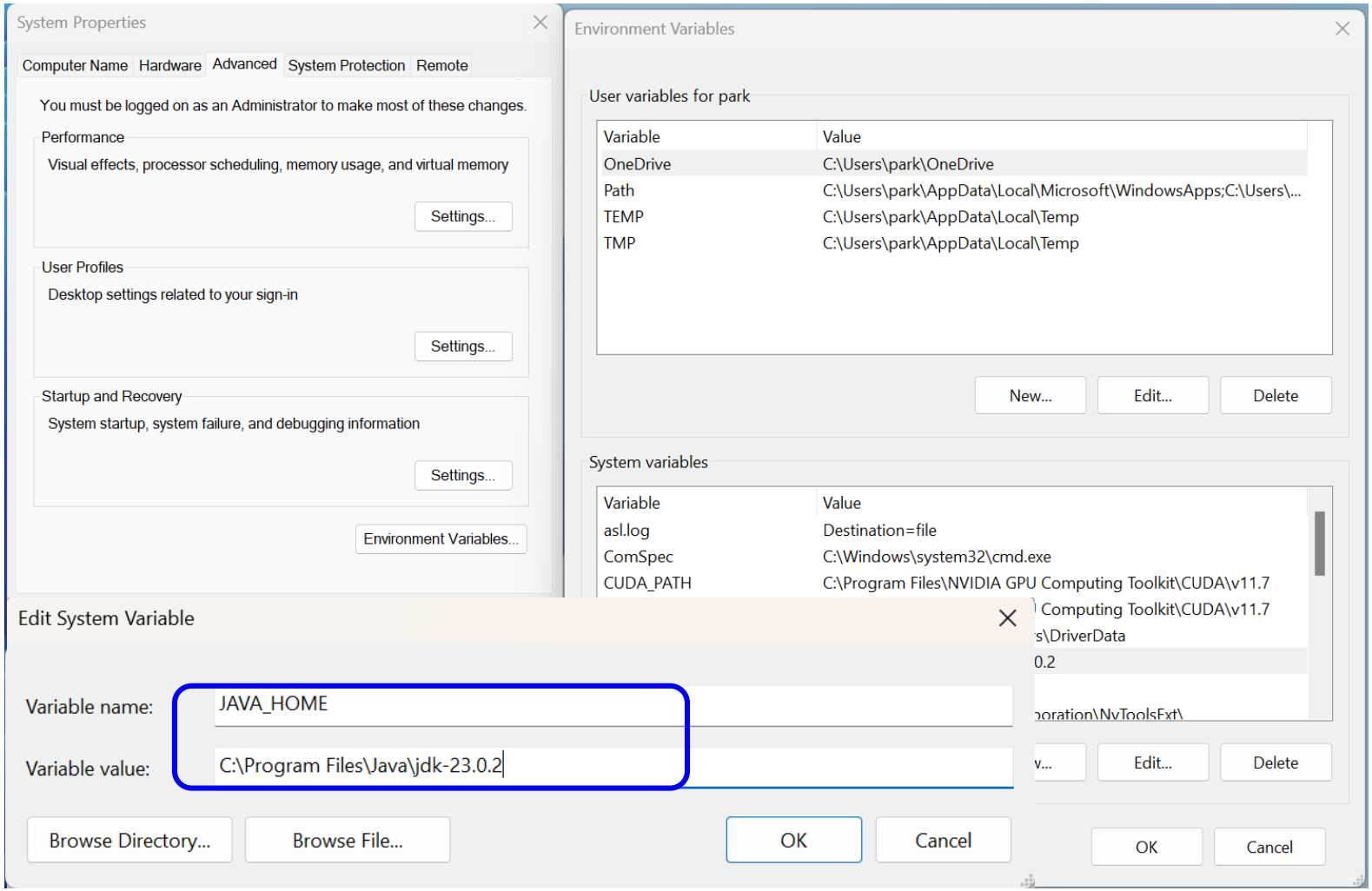
Lab0


Downloads
Local Disk (C:)
Users
park
Downloads
Search Downloads
New
Sort
View
Extract all
Details
Home
Gallery
OneDrive
Name
Today
openjdk-23.0.2_windows-x64_bin.zip
2025-

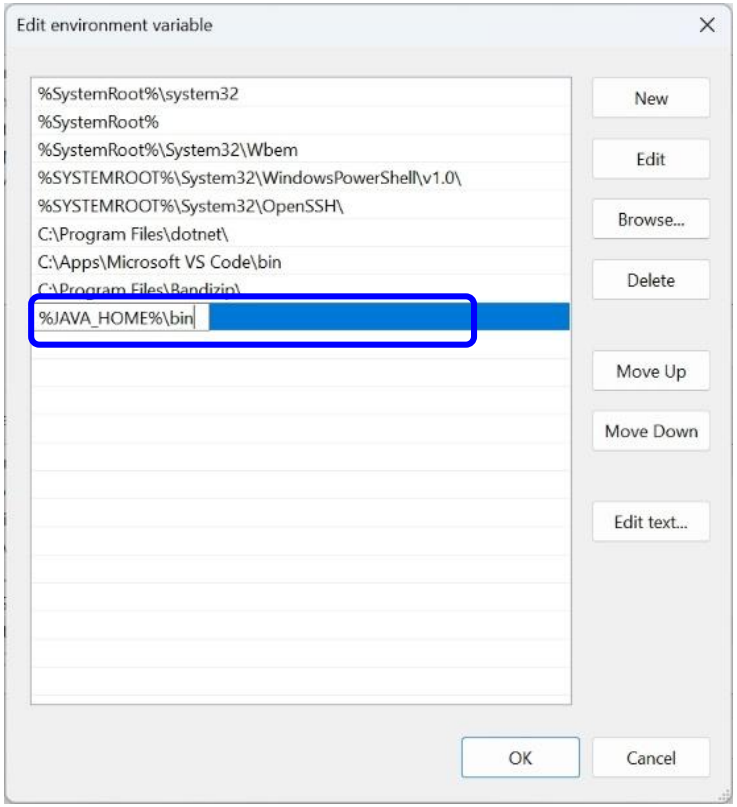
Lab0


Java
This PC
Local Disk (C:)
Program Files
Java
Search Java
New
Sort
View
Details
Home
Gallery
OneDrive
Desktop
Downloads
Documents
Pictures
Music
Videos
week6
Name
Date modified
Type
Size
java-se-8
2025-02-05 오후 5:30
File folder
jdk-21
2024-06-02 오후 3:19
File folder
jdk-23.0.2
2025-02-17 오전 11:08
File folder
3 items
1 item selected

Lab0

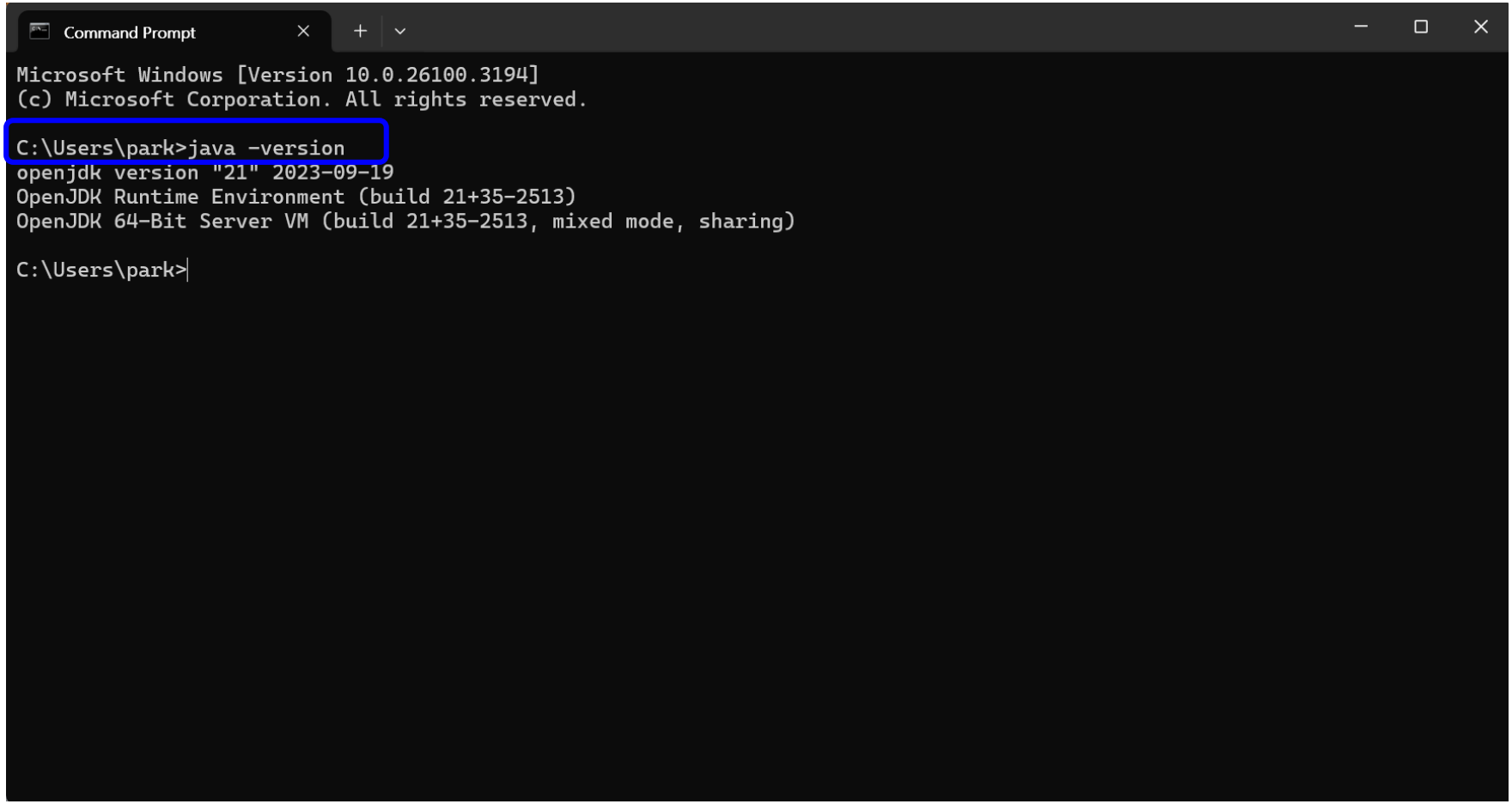

System Properties
Computer Name
Hardware
Advanced
System Protection
Remote
You must be logged on as an Administrator to make most of these changes.
Performance
Visual effects, processor scheduling, memory usage, and virtual memory
Settings...
User Profiles
Desktop settings related to your sign-in
Settings...
Startup and Recovery
System startup, system failure, and debugging information
Settings...
Environment Variables...
Environment Variables
User variables for park
Variable
Value
OneDrive
C:\Users\park\OneDrive
Path
C:\Users\park\AppData\Local\Microsoft\WindowsApps;C:\Users\...
TEMP
C:\Users\park\AppData\Local\Temp
TMP
C:\Users\park\AppData\Local\Temp
New...
Edit...
Delete
System variables
Variable
Value
asl.log
Destination=file
ComSpec
C:\Windows\system32\cmd.exe
CUDA_PATH
C:\Program Files\NVIDIA GPU Computing Toolkit\CUDA\v11.7
Edit...
Delete
OK
Cancel
Edit System Variable
Variable name:
JAVA_HOME
Variable value:
C:\Program Files\Java\jdk-23.0.2
Browse Directory...
Browse File...
OK
Cancel

Lab0


Edit environment variable
%SystemRoot%\system32
%SystemRoot%
%SystemRoot%\System32\Wbem
%SYSTEMROOT%\System32\WindowsPowerShell\v1.0\
%SYSTEMROOT%\System32\OpenSSH\
C:\Program Files\dotnet\
C:\Apps\Microsoft VS Code\bin
%JAVA_HOME%\bin
New
Edit
Browse...
Delete
Move Up
Move Down
Edit text...
OK
Cancel

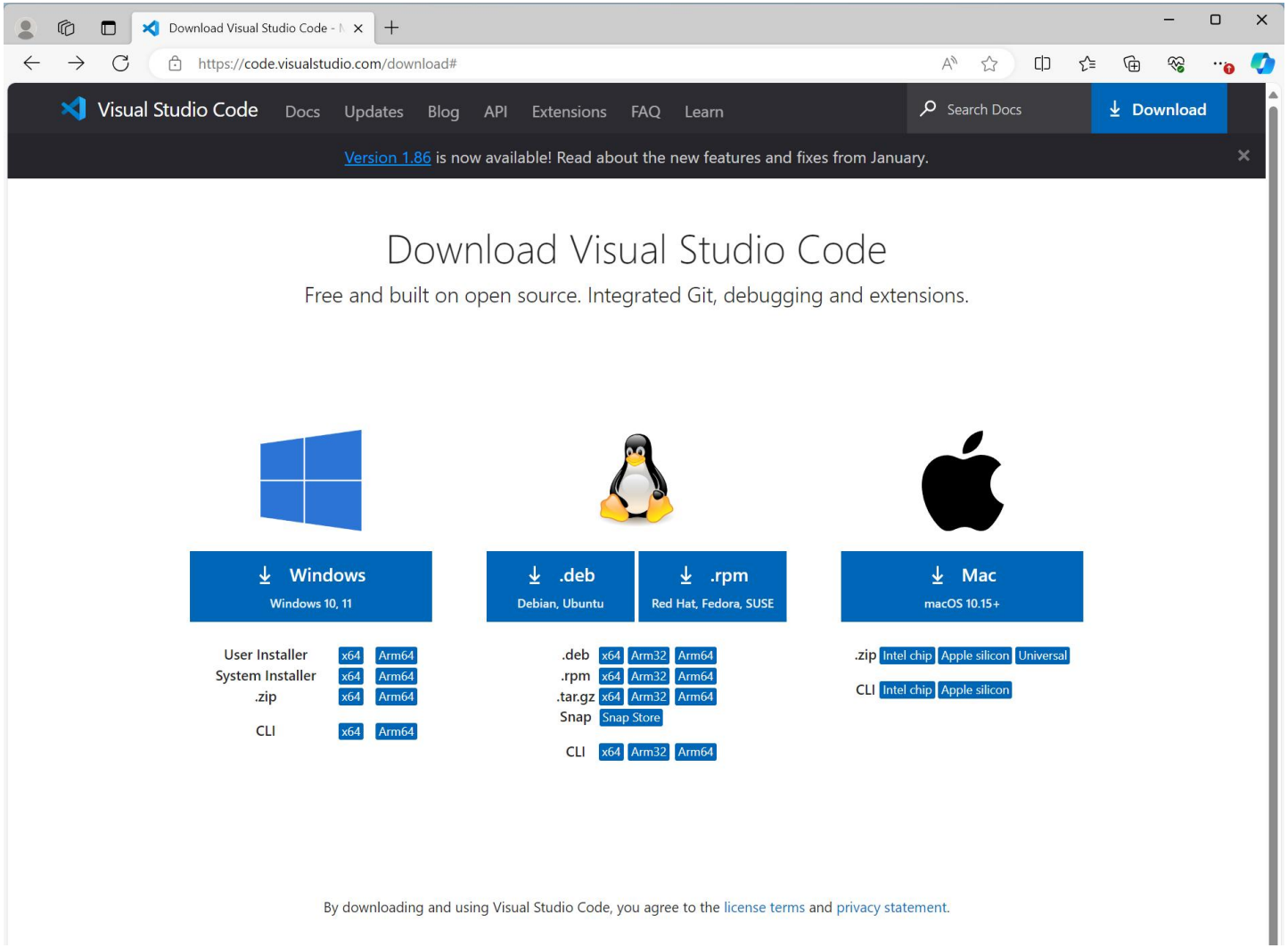
Lab0

- Run java -version



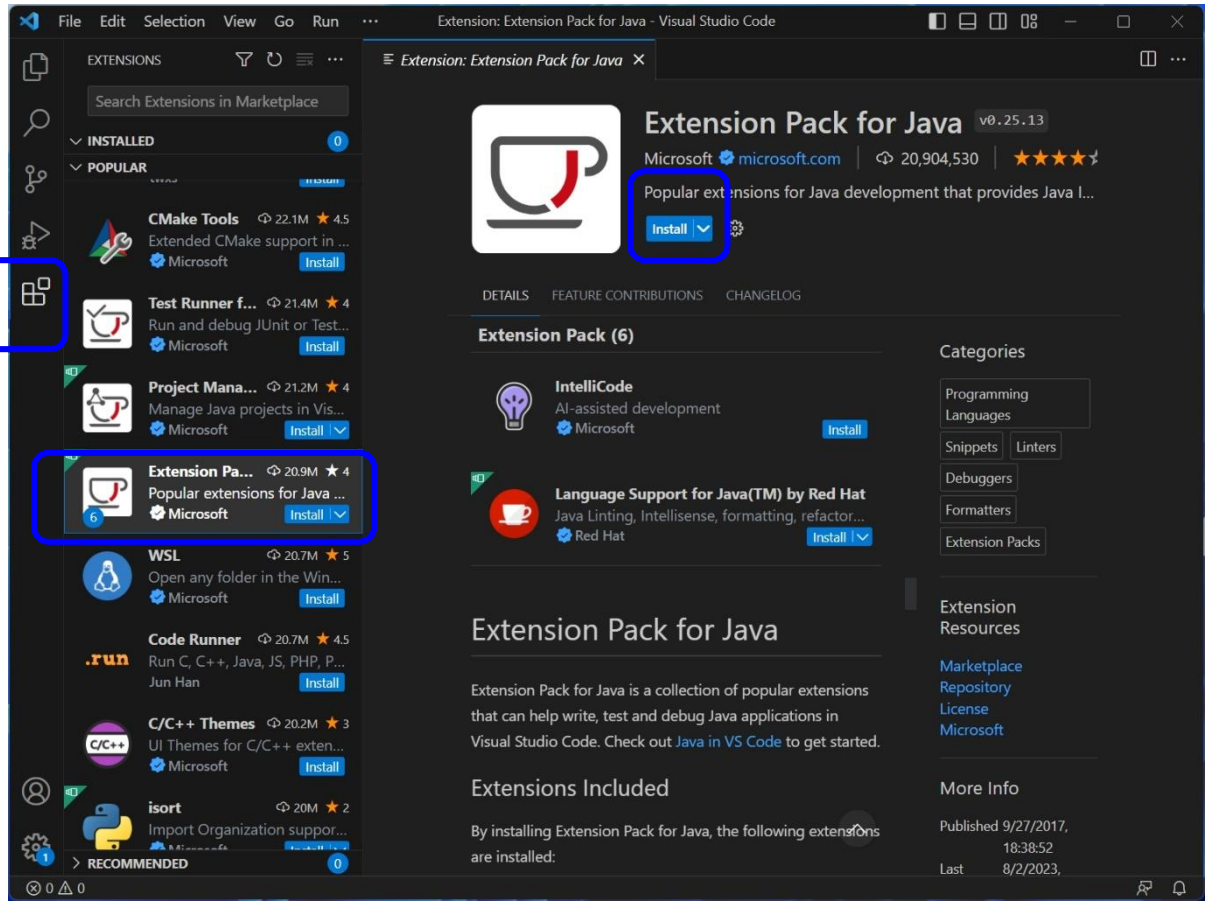
Lab0

- Download Visual Studio Code & Install

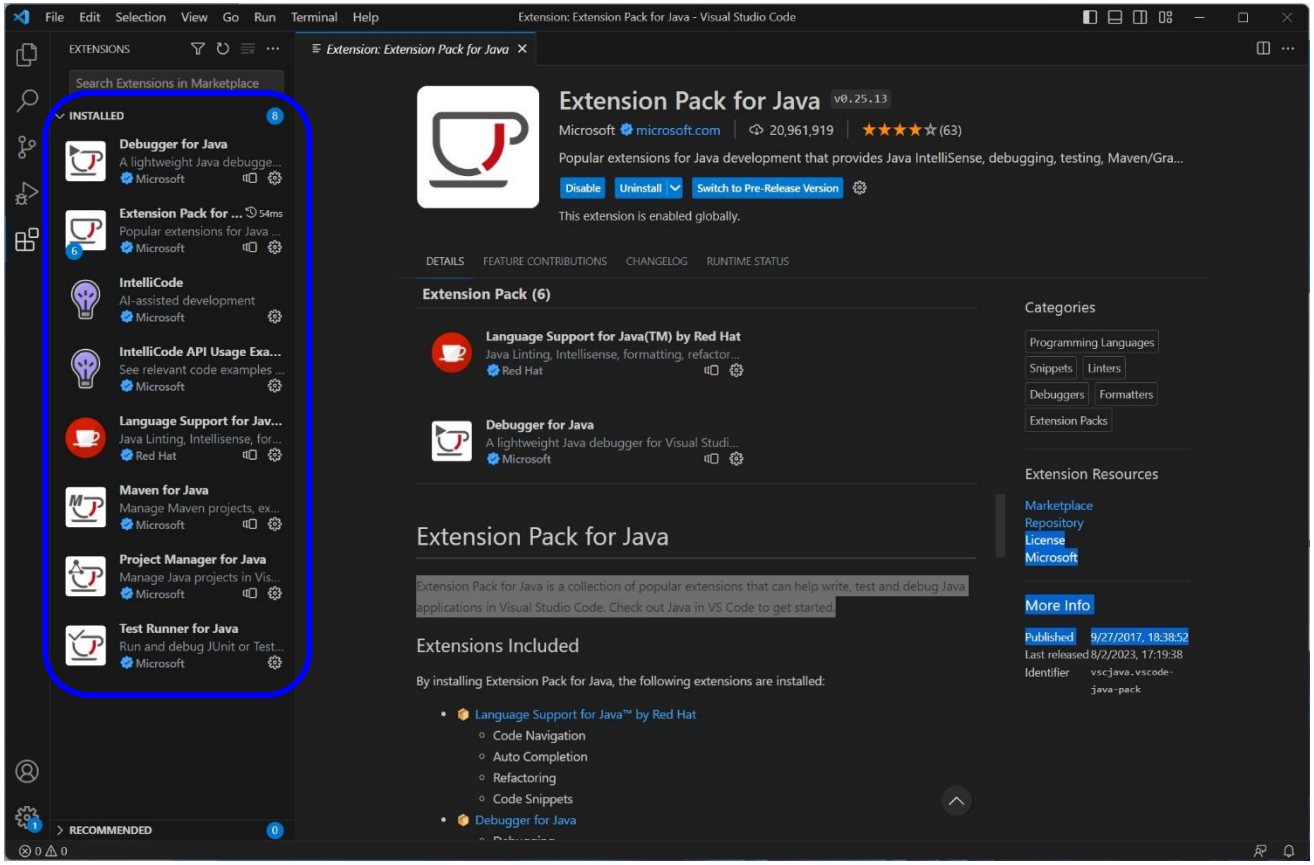


Lab0

- Install “Extension Pack for Java”

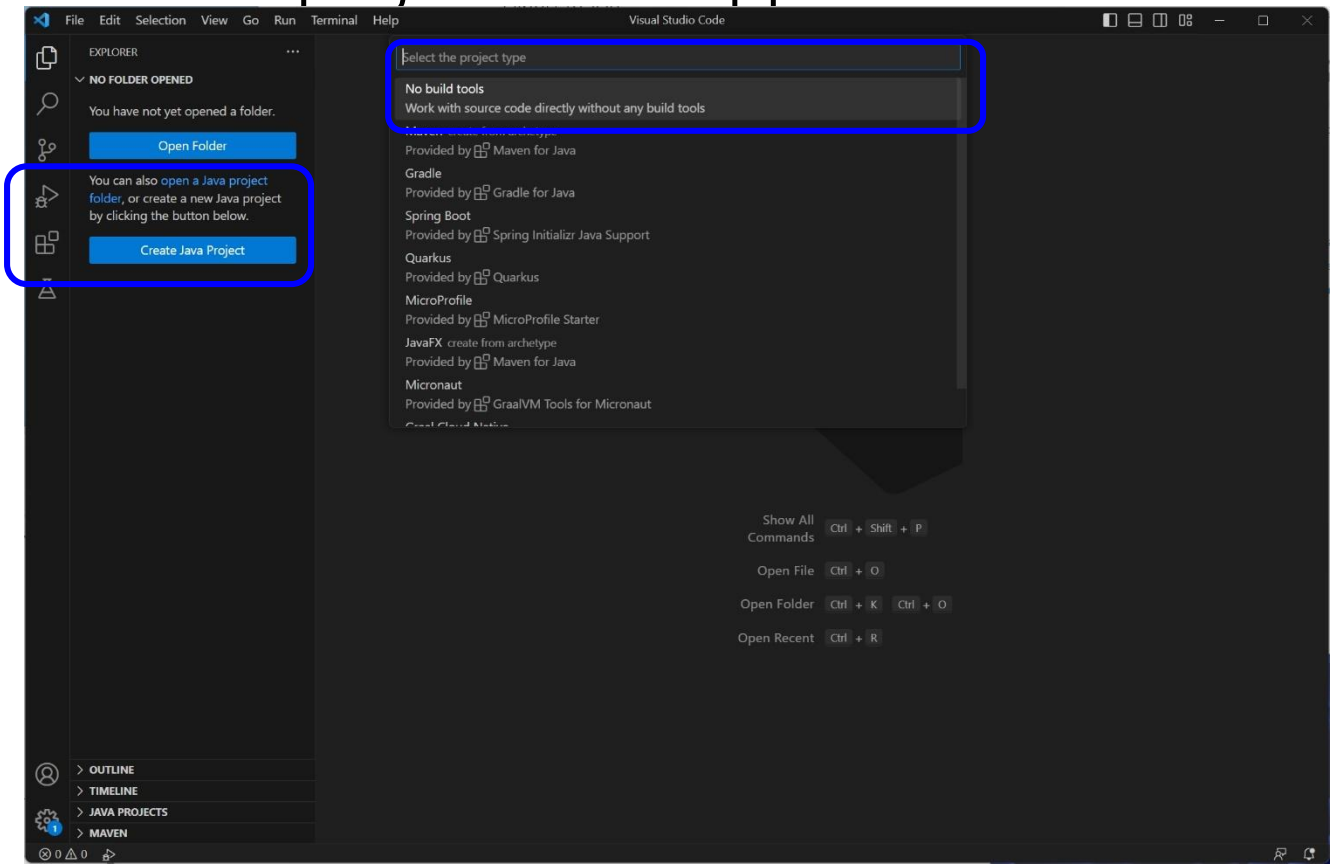


Lab0

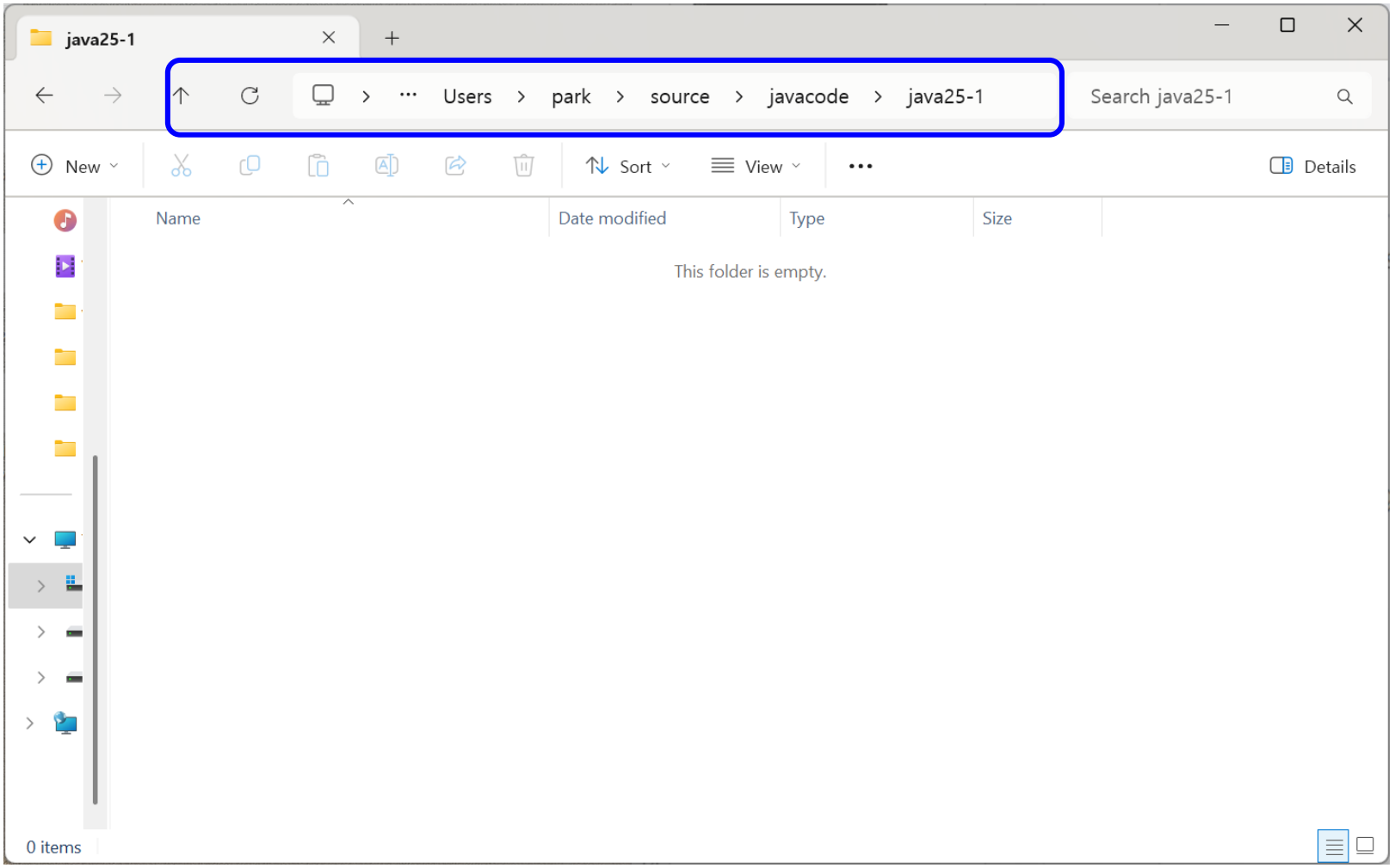

File Edit Selection View Go Run Terminal Help
Extension: Extension Pack for Java - Visual Studio Code
EXTENSIONS
Search Extensions in Marketplace
INSTALLED 8
Debugger for Java
A lightweight Java debugge...
Microsoft
Extension Pack for ... 54ms
Popular extensions for Java ...
Microsoft
IntelliCode
AI-assisted development
Microsoft
IntelliCode API Usage Exa...
See relevant code examples ...
Microsoft
Language Support for Jav...
Java Linting, Intellisense, for...
Red Hat
Maven for Java
Manage Maven projects, ex...
Microsoft
Project Manager for Java
Manage Java projects in Vis...
Microsoft
Test Runner for Java
Run and debug JUnit or Test...
Microsoft
RECOMMENDED 0
Extension: Extension Pack for Java
Extension Pack for Java v0.25.13
Microsoft microsoft.com 20,961,919 (63)
Popular extensions for Java development that provides Java IntelliSense, debugging, testing, Maven/Gra...
Disable Uninstall Switch to Pre-Release Version
This extension is enabled globally.
DETAILS FEATURE CONTRIBUTIONS CHANGELOG RUNTIME STATUS
Extension Pack (6)
Language Support for Java(TM) by Red Hat
Java Linting, Intellisense, formatting, refactor...
Red Hat
Debugger for Java
A lightweight Java debugger for Visual Studi...
Microsoft
Extension Pack for Java
Extension Pack for Java is a collection of popular extensions that can help write, test and debug Java applications in Visual Studio Code. Check out Java in VS Code to get started.
Extensions Included
By installing Extension Pack for Java, the following extensions are installed:
Language Support for Java™ by Red Hat
Code Navigation
Auto Completion
Refactoring
Code Snippets
Debugger for Java
Categories
Programming Languages
Snippets
Linters
Debuggers
Formatters
Extension Packs
Extension Resources
Marketplace
Repository
License
Microsoft
More Info
Published 9/27/2017, 18:38:52
Last released 8/2/2023, 17:19:38
Identifier vscjava.vscode-java-pack

Lab0

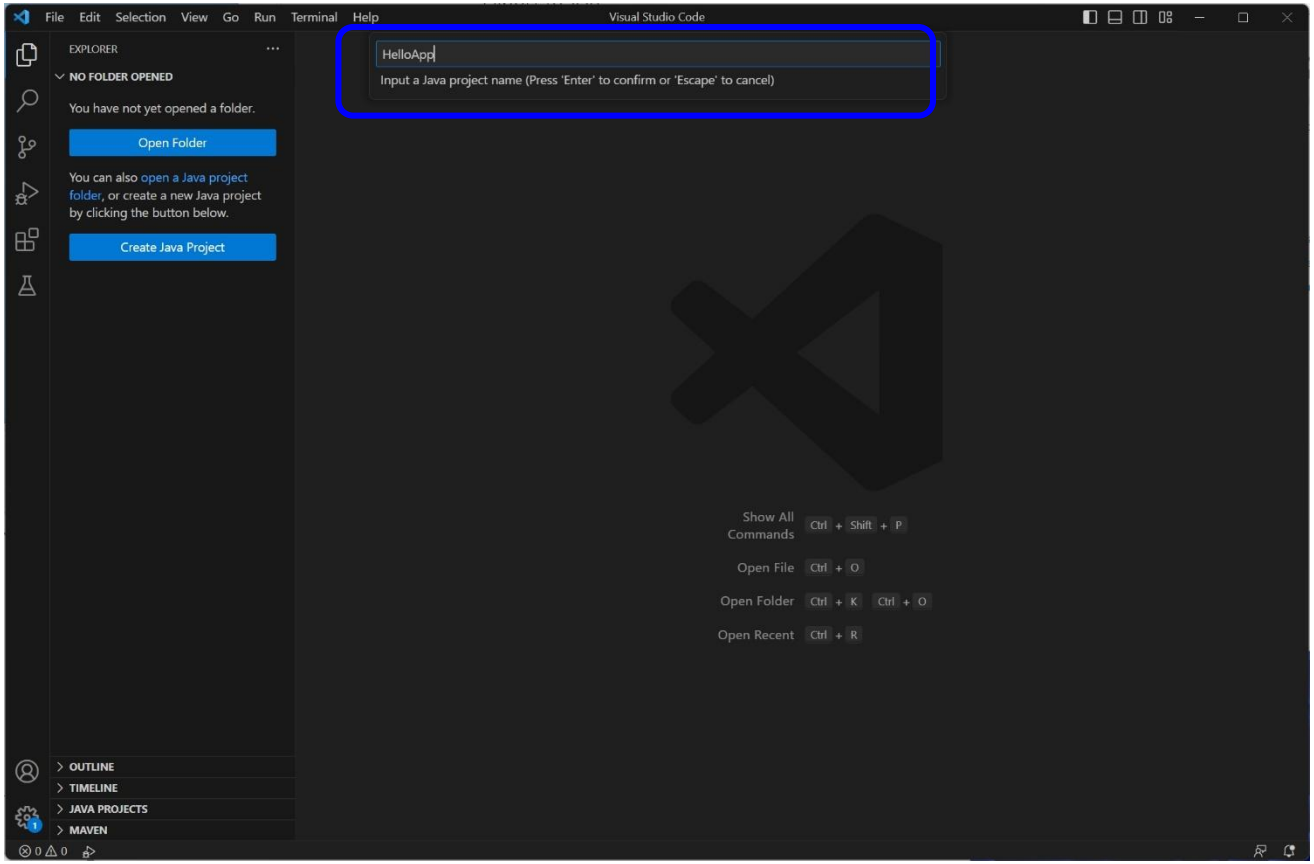
- Create a Java project: HelloApp



Lab0

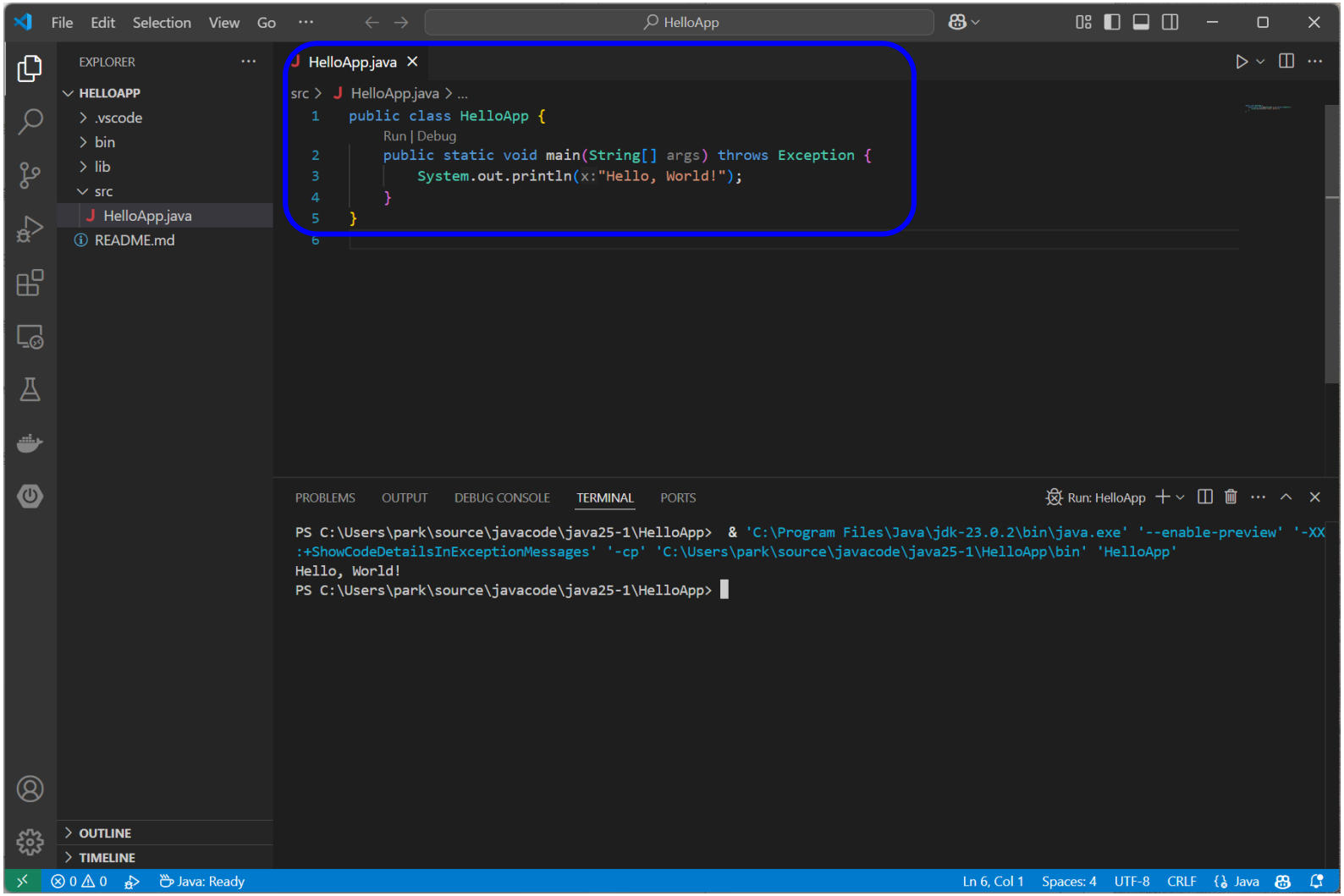

java25-1
Users
park
source
javacode
java25-1
Search java25-1
New
Sort
View
Details
Name
Date modified
Type
Size
This folder is empty.
0 items

Lab0


File Edit Selection View Go Run Terminal Help
Visual Studio Code
EXPLORER
NO FOLDER OPENED
You have not yet opened a folder.
Open Folder
You can also open a Java project folder, or create a new Java project by clicking the button below.
Create Java Project
HelloApp
Input a Java project name (Press 'Enter' to confirm or 'Escape' to cancel)
Show All Commands Ctrl + Shift + P
Open File Ctrl + O
Open Folder Ctrl + K Ctrl + O
Open Recent Ctrl + R
OUTLINE
TIMELINE
JAVA PROJECTS
MAVEN

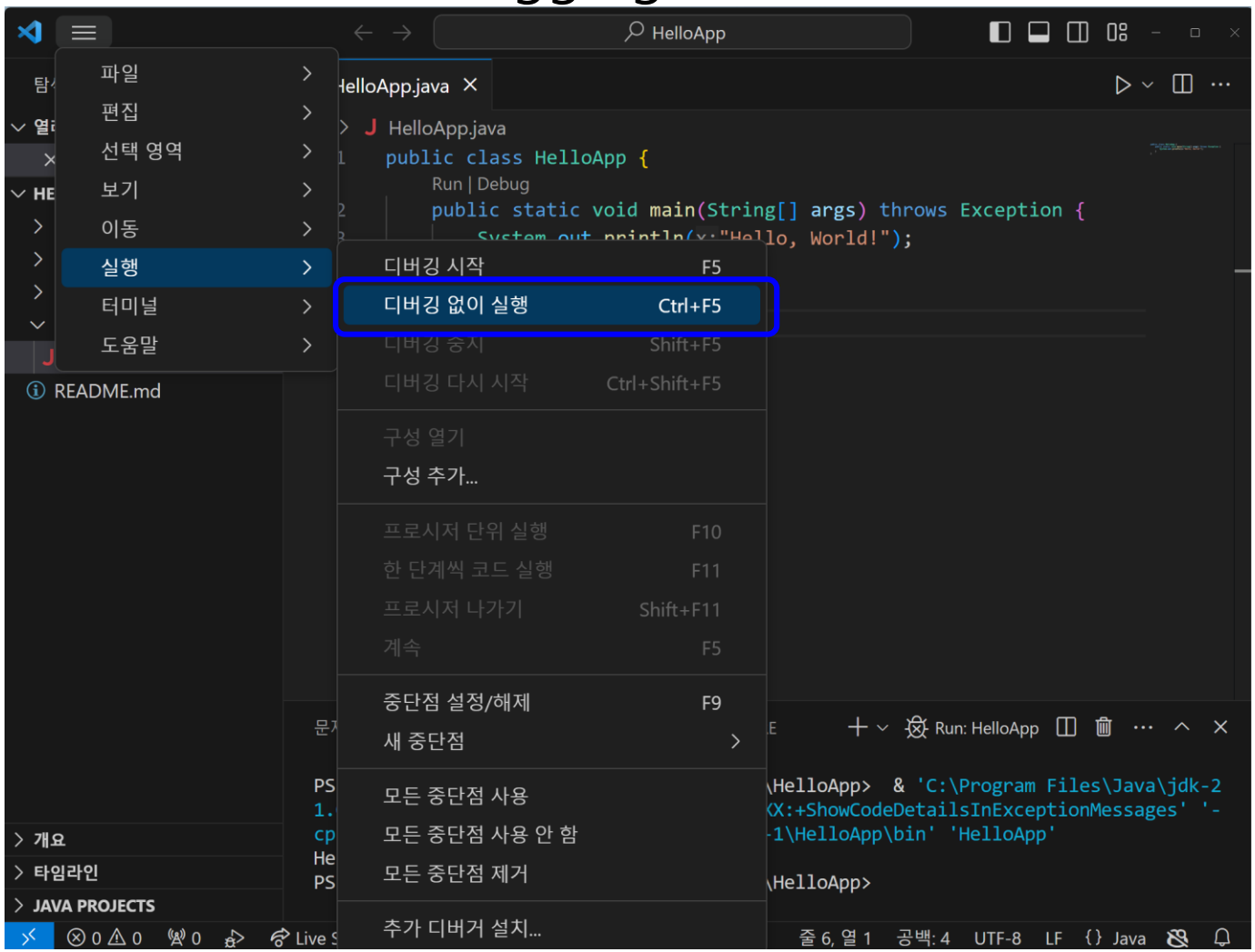
Lab0

- Create HelloApp.java

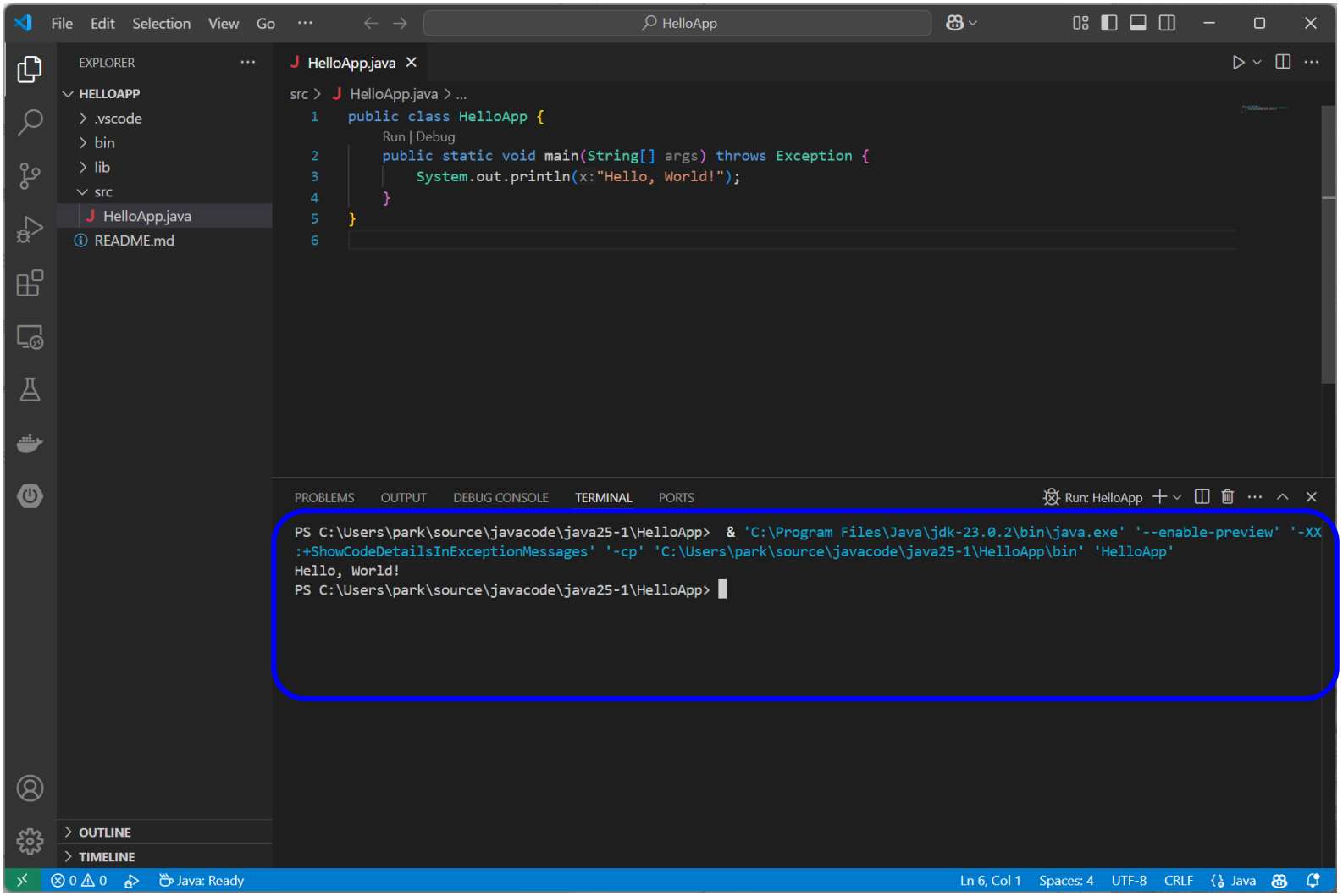


Lab0

- Run Without Debugging

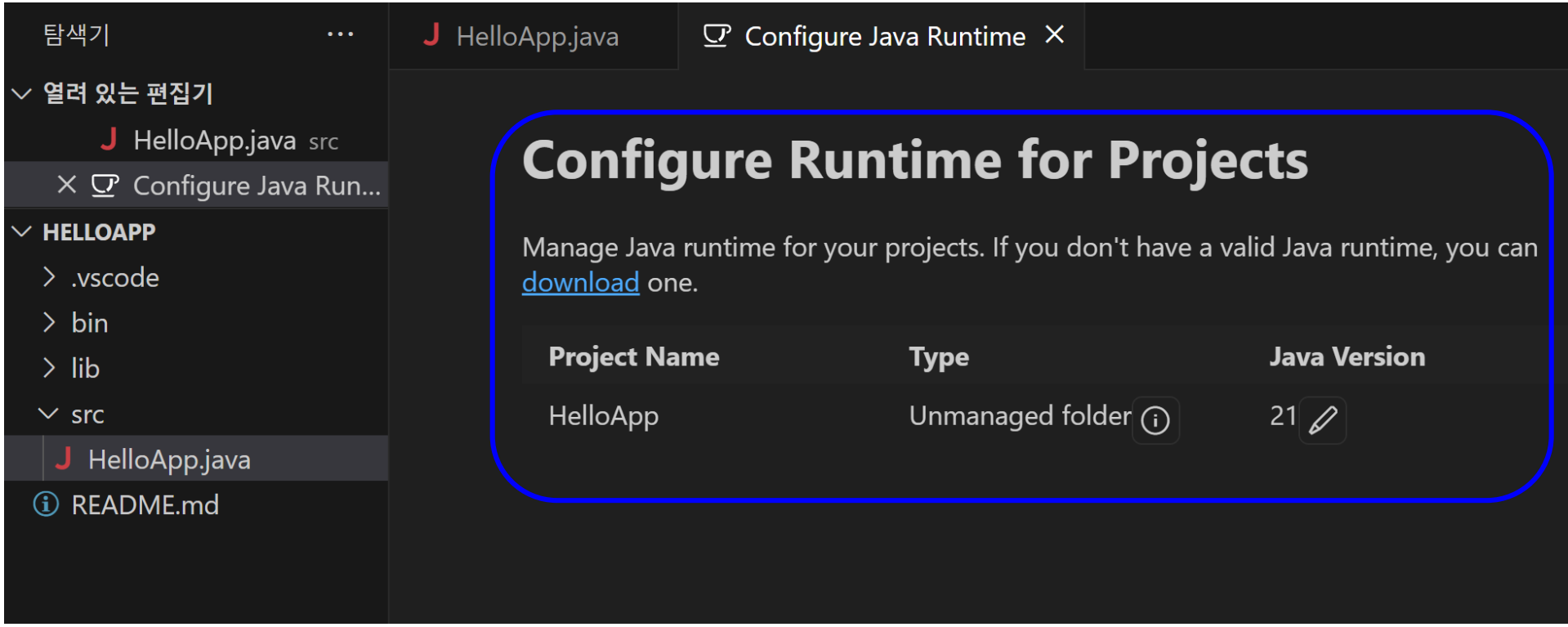


Lab0


File Edit Selection View Go
HelloApp
EXPLORER
HELLOAPP
.vscode
bin
lib
src
HelloApp.java
README.md
HelloApp.java
src > HelloApp.java > ...
1 public class HelloApp {
Run | Debug
2 public static void main(String[] args) throws Exception {
3 System.out.println(x:"Hello, World!");
4 }
5 }
6
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
Run: HelloApp
PS C:\Users\park\source\javacode\java25-1\HelloApp> & 'C:\Program Files\Java\jdk-23.0.2\bin\java.exe' '--enable-preview' '-XX:+ShowCodeDetailsInExceptionMessages' '-cp' 'C:\Users\park\source\javacode\java25-1\HelloApp\bin' 'HelloApp'
Hello, World!
PS C:\Users\park\source\javacode\java25-1\HelloApp>
OUTLINE
TIMELINE
Java: Ready
Ln 6, Col 1 Spaces: 4 UTF-8 CRLF Java

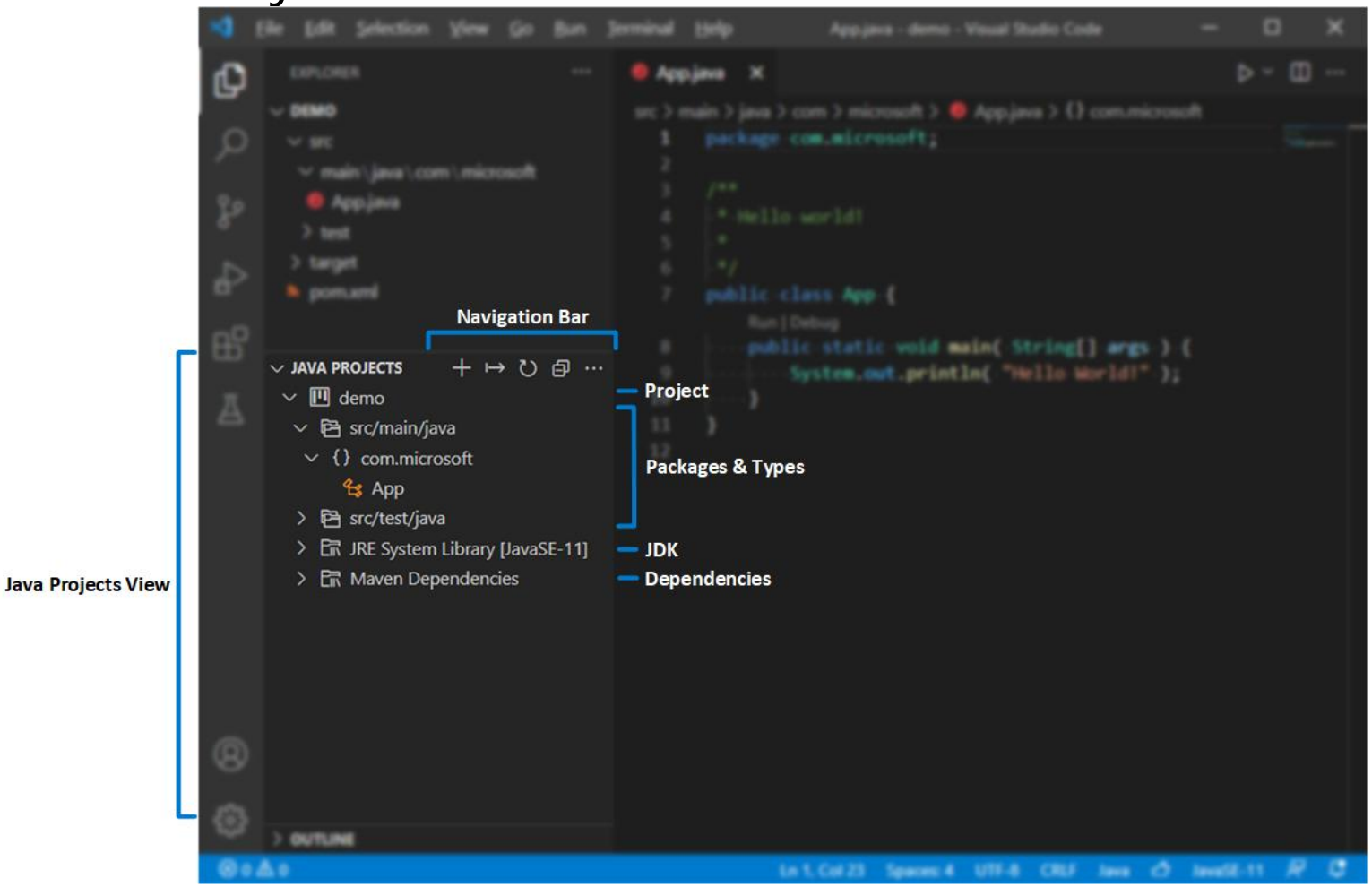
Lab0

- Configure Runtime for Projects
  - **Java: Configure Java Runtime** in **Command Palette** (Ctrl+Shift+P)



Lab0

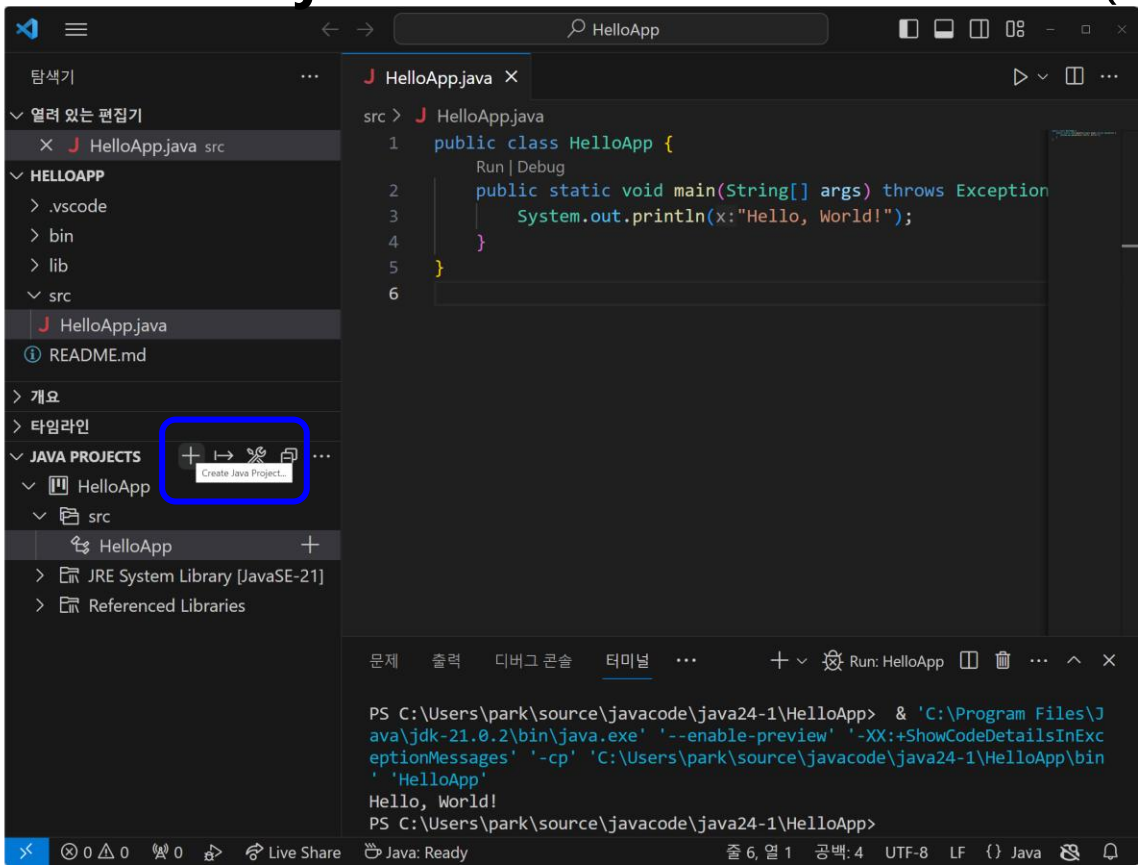
- Java Project View



https://code.visualstudio.com/docs/java/java-project#_configure-runtime-for-projects

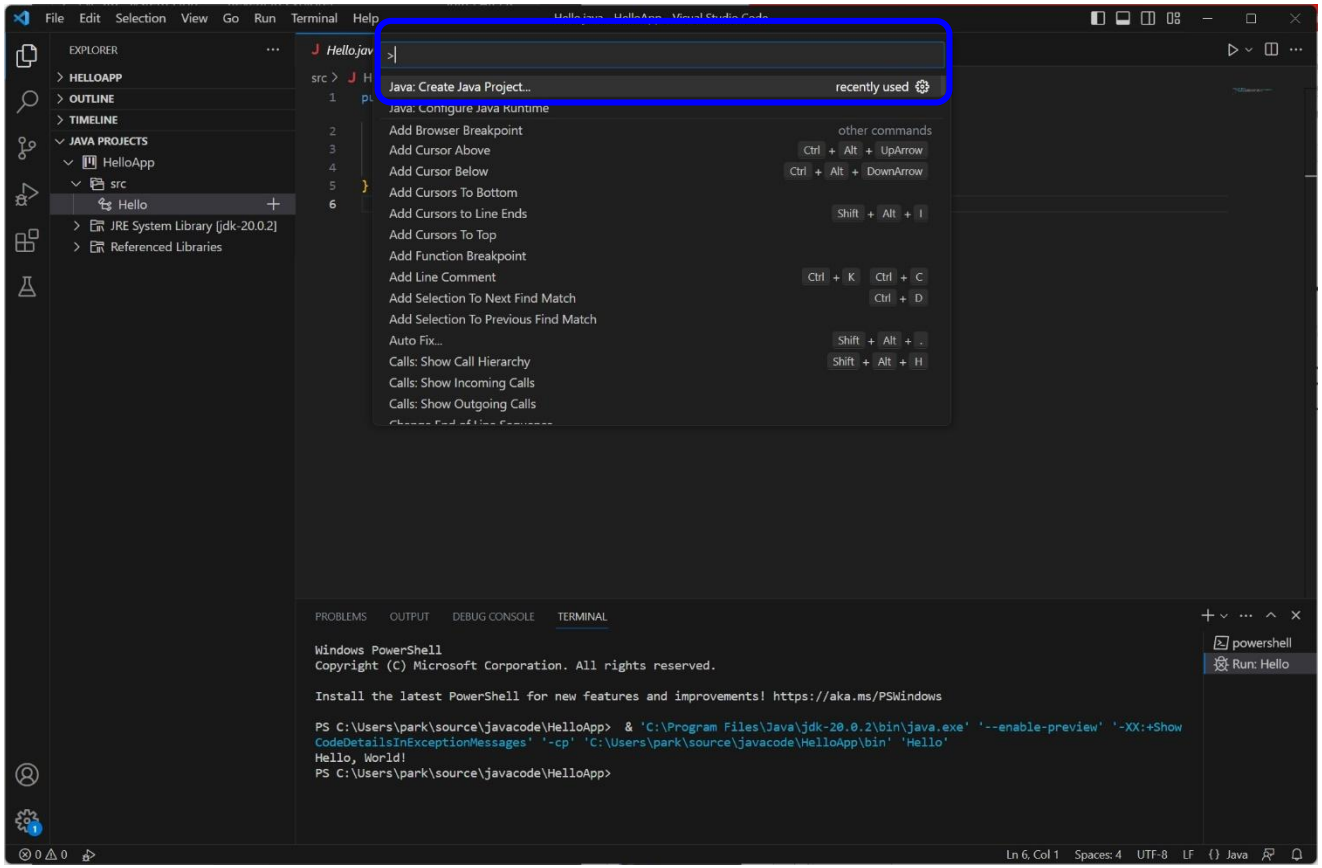
Lab0

- Create a New Java project by clicking the **+ button in the navigation bar**, or through the command: **Java: Create Java Project...** in Command Palette (Ctrl+Shift+P).



Lab0

- Create a New Java project by clicking the **+ button in the navigation bar**, or through the command: **Java: Cr eate Java Project...** in Command Palette (Ctrl+Shift+P).

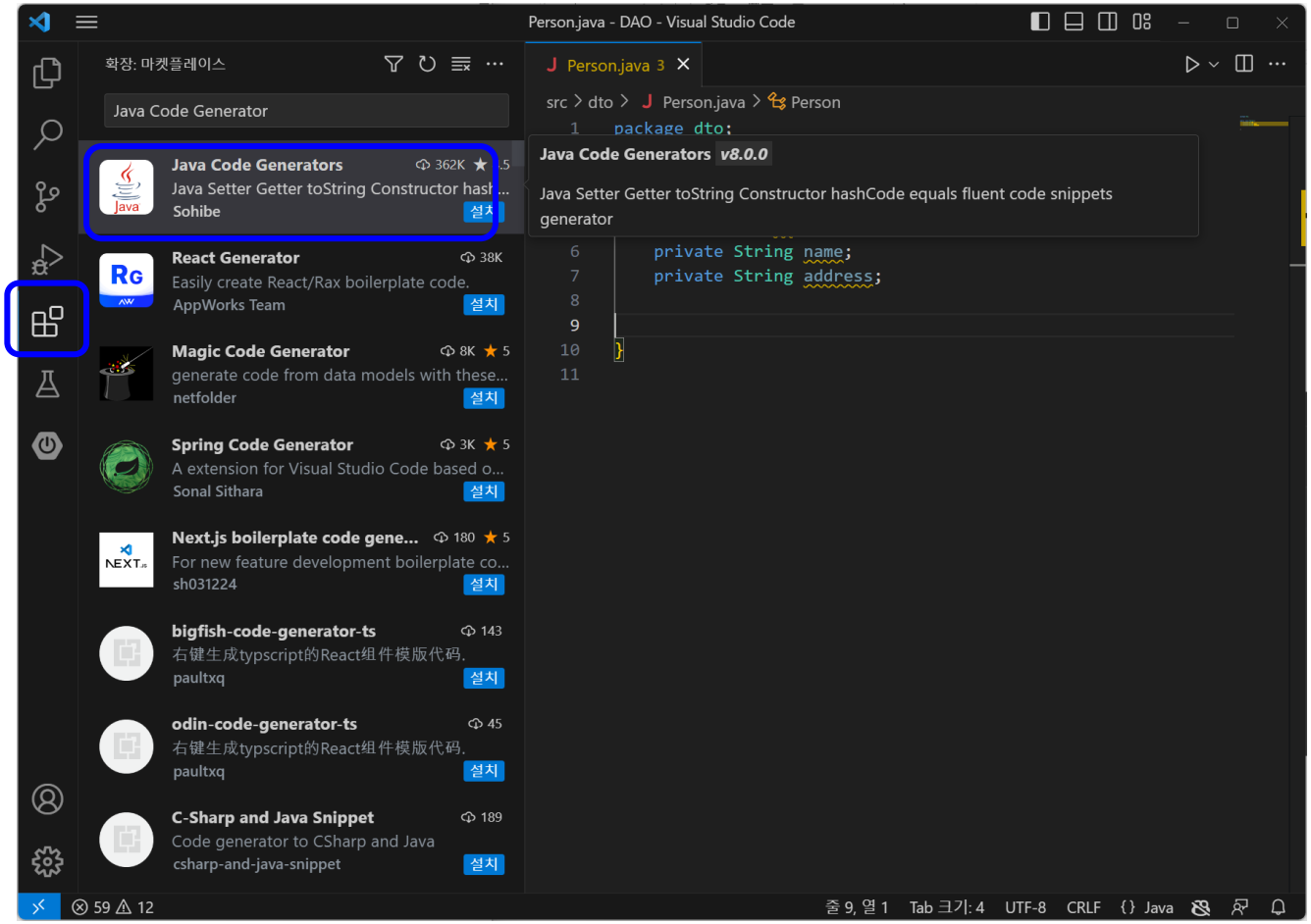


Submit to e-learning

- Submit the Lab0 assignment (including the 1-page report) to e-learning **(due by 3/12)**.
- https://code.visualstudio.com/docs/java/java-project#_configure-runtime-for-projects

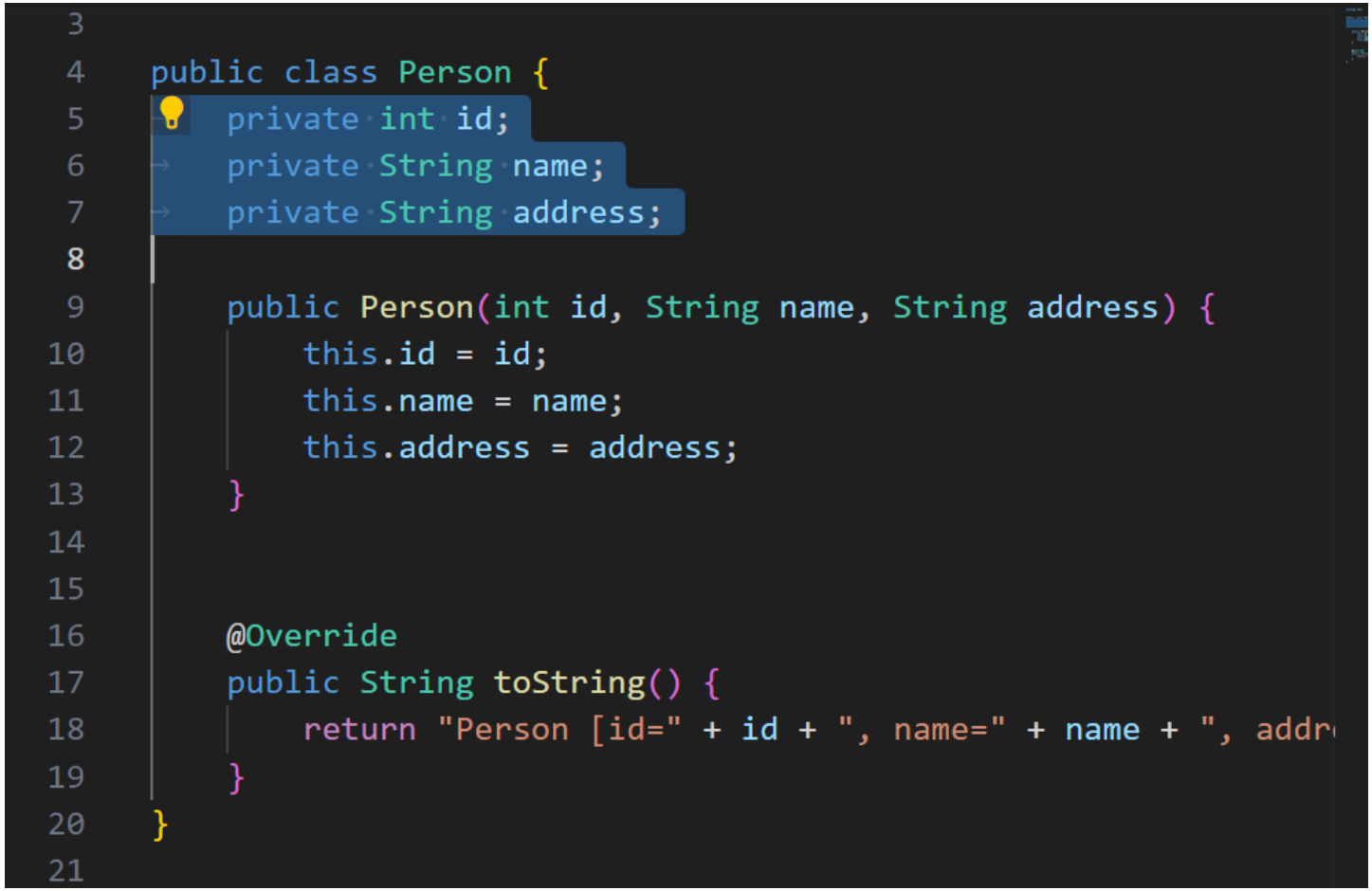
VS Code Generator

- **Ctrl + Shift + X (Extensions)**
- Install **Getter and Setter Generator**



VS Code Getter/Setter

- Drag the member field to create Getter/Setter



```
3
4   public class Person {
5       private int id;
6       private String name;
7       private String address;
8
9       public Person(int id, String name, String address) {
10          this.id = id;
11          this.name = name;
12          this.address = address;
13      }
14
15
16      @Override
17      public String toString() {
18          return "Person [id=" + id + ", name=" + name + ", addr
19      }
20  }
21
```

VS Code Getter/Setter

- Ctrl + Shift + P (or F1) prompt command
- Generate constructor, getter & setter, hashCode & equal, toString