

# **C++ Development Environment on Windows**

2024년 Spring

# MinGW Installation

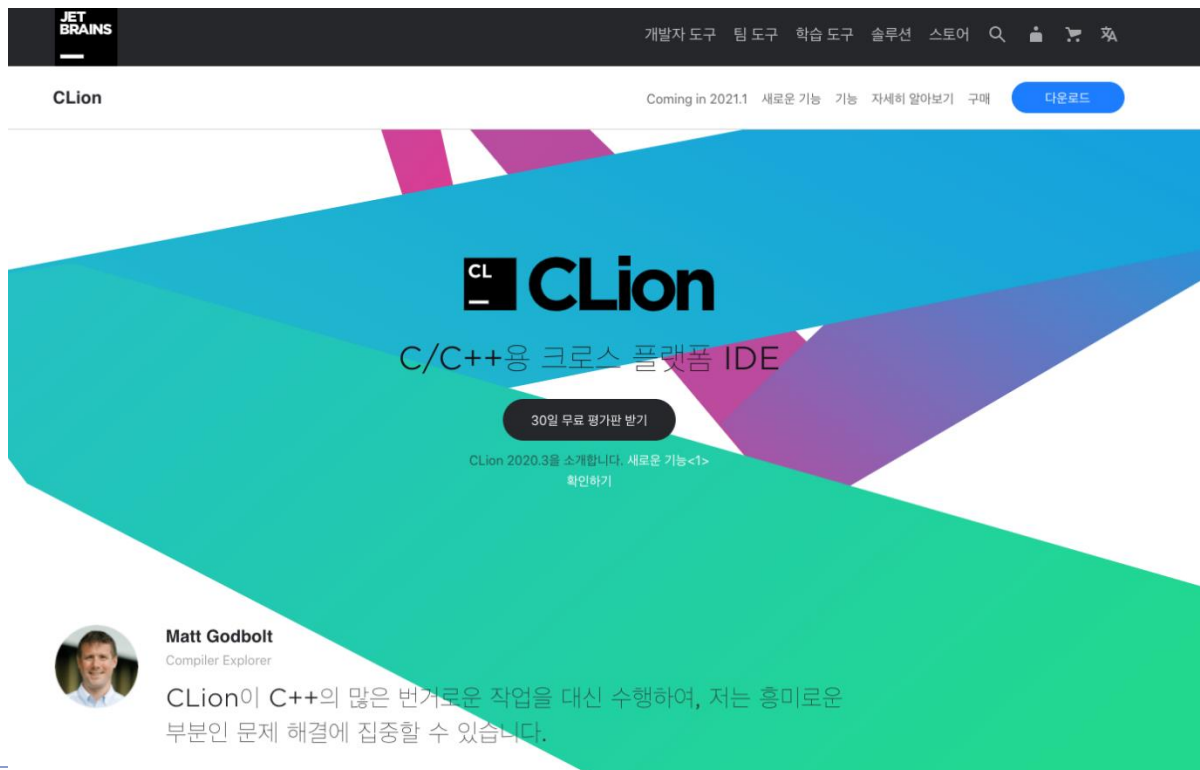
- ❖ <https://www.mingw-w64.org/downloads/>
- ❖ <https://www.msys2.org/>

MingW-W64-builds	Rolling	Windows	13.1.0/11.0.0	C, C++, Fortran	4 (gdb, libiconf, python, zlib)
 MSYS2	Rolling	Windows	13.2.0/trunk	Ada, C, C++, Fortran, Obj-C, Obj-C++, OCaml	many
WinLibs.com	Rolling	Windows	12.2.0	Ada, C, C++, Fortran, Obj-C, Obj-C++, Assembler	Package manager: work in progress (will offer > 2500 packages)

MSYS2 로  
이동하여  
다운로드 후  
설치

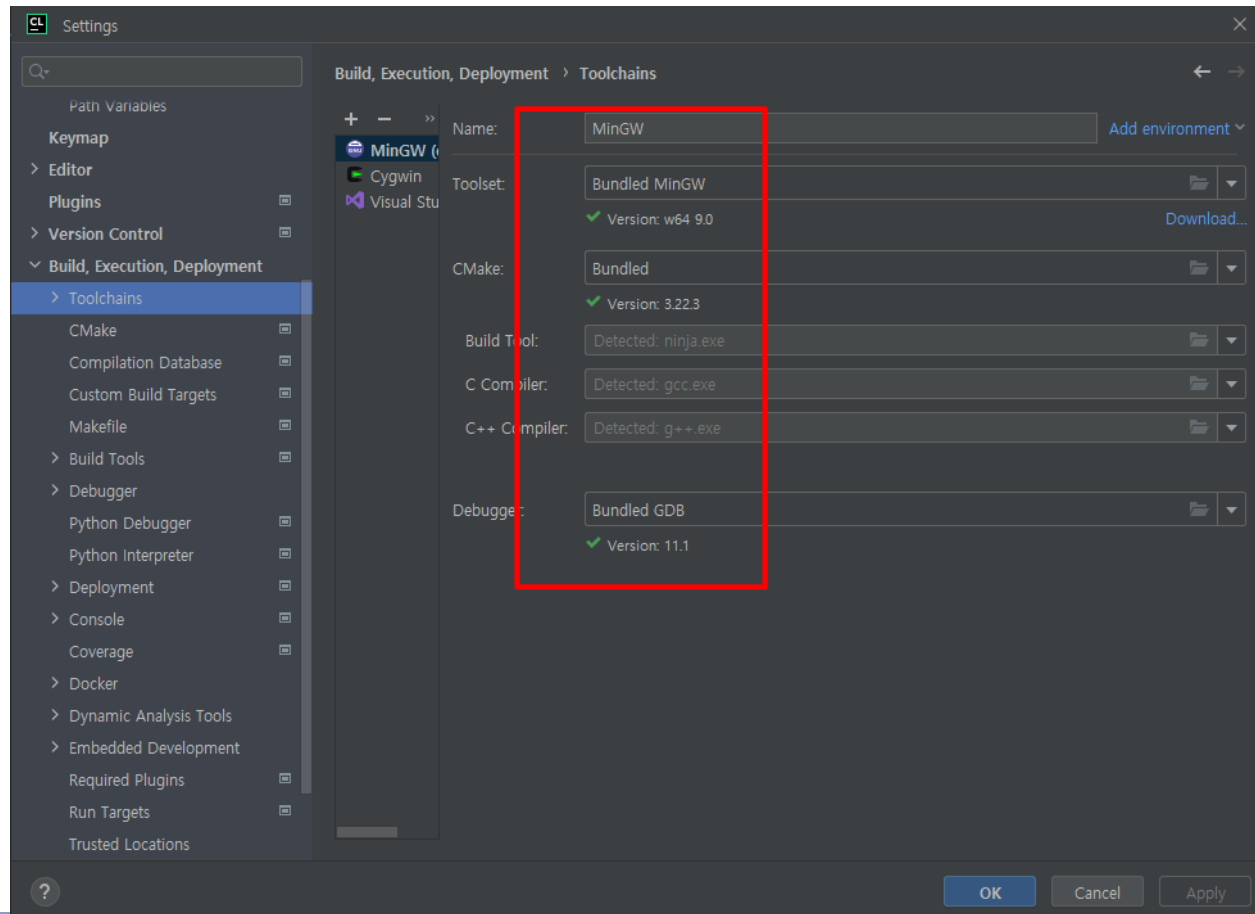
# CLion Installation #1

- ❖ <https://www.jetbrains.com/ko-kr/clion/>
- ❖ 자신의 학교 계정 (xxx@pusan.ac.kr) 으로 학생용 라이선스 신청
- ❖ <https://www.jetbrains.com/ko-kr/community/education/#students>
- ❖ 설치 후 Help > Register 에서 JB Acount (자신의 계정) 으로 등록



# CLion Installation #2

- ❖ File -> Settings -> Build, Execution, Deployment -> Toolchains
- ❖ 개발환경이 정상적으로 설정됐는지 확인함



# CLion Installation #3

- ❖ <https://www.jetbrains.com/community/education/#students>
- ❖ 학교 이메일 계정으로 학생 라이선스 신청함 (무료)

Free License  
Programs

[Academic Licensing](#) [Open Source](#) [User Groups](#) [Events Partnership](#) [Developer Recognition](#)

[For students and teachers](#)

[For schools and universities](#)

[For training courses and bootcamp](#)

## Individual licenses for students and teachers

Get free access to all JetBrains IDEs for personal use at school or at home.

### Who can get free individual licenses for education

Students and faculty from accredited educational institutions (high schools, colleges, and universities) are welcome to apply.

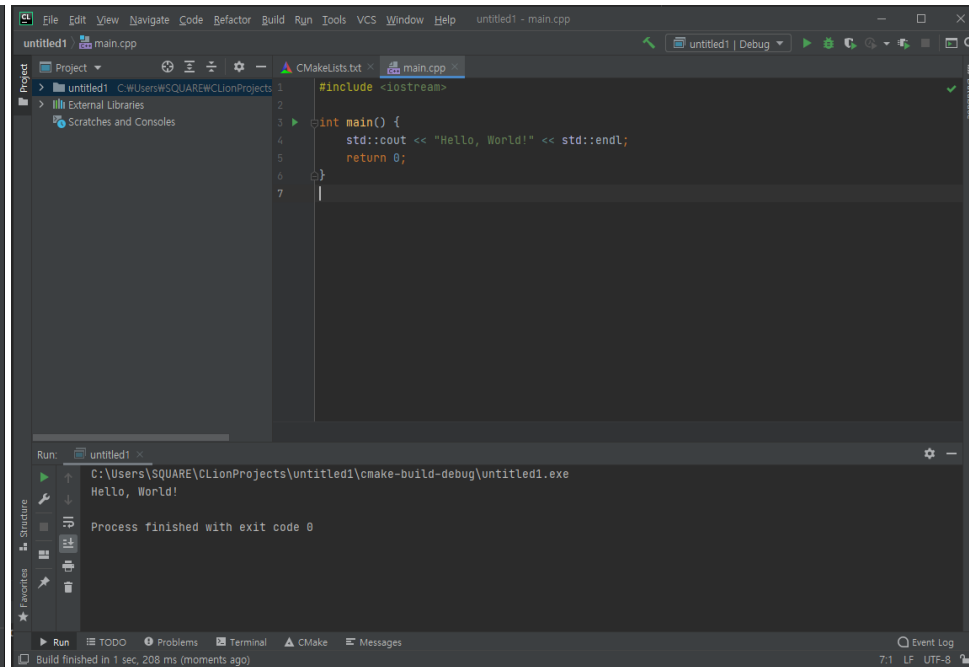
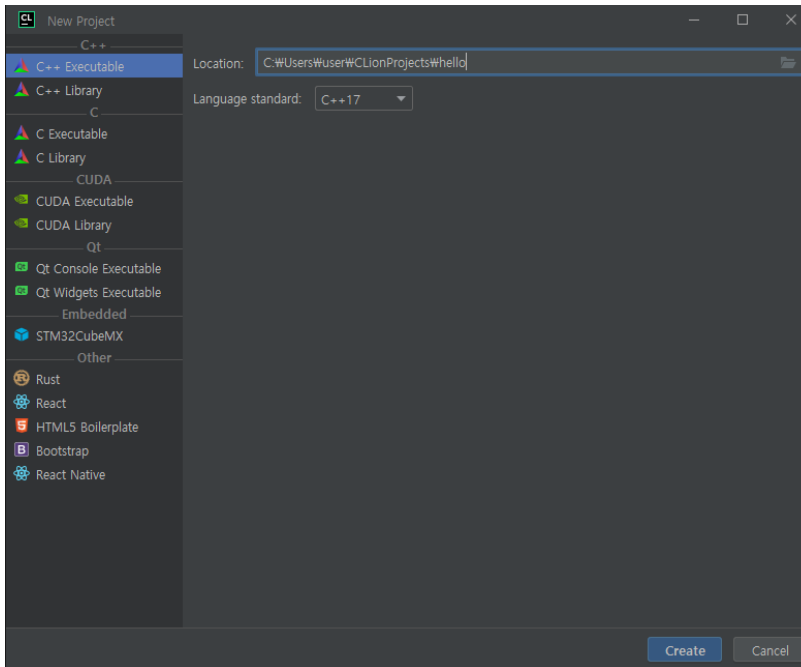
Students need to be enrolled in an accredited educational program that takes one or more years of full-time study to complete.

Not sure about the license terms? [Check out the FAQ](#) or read the full terms [here](#).

Apply now

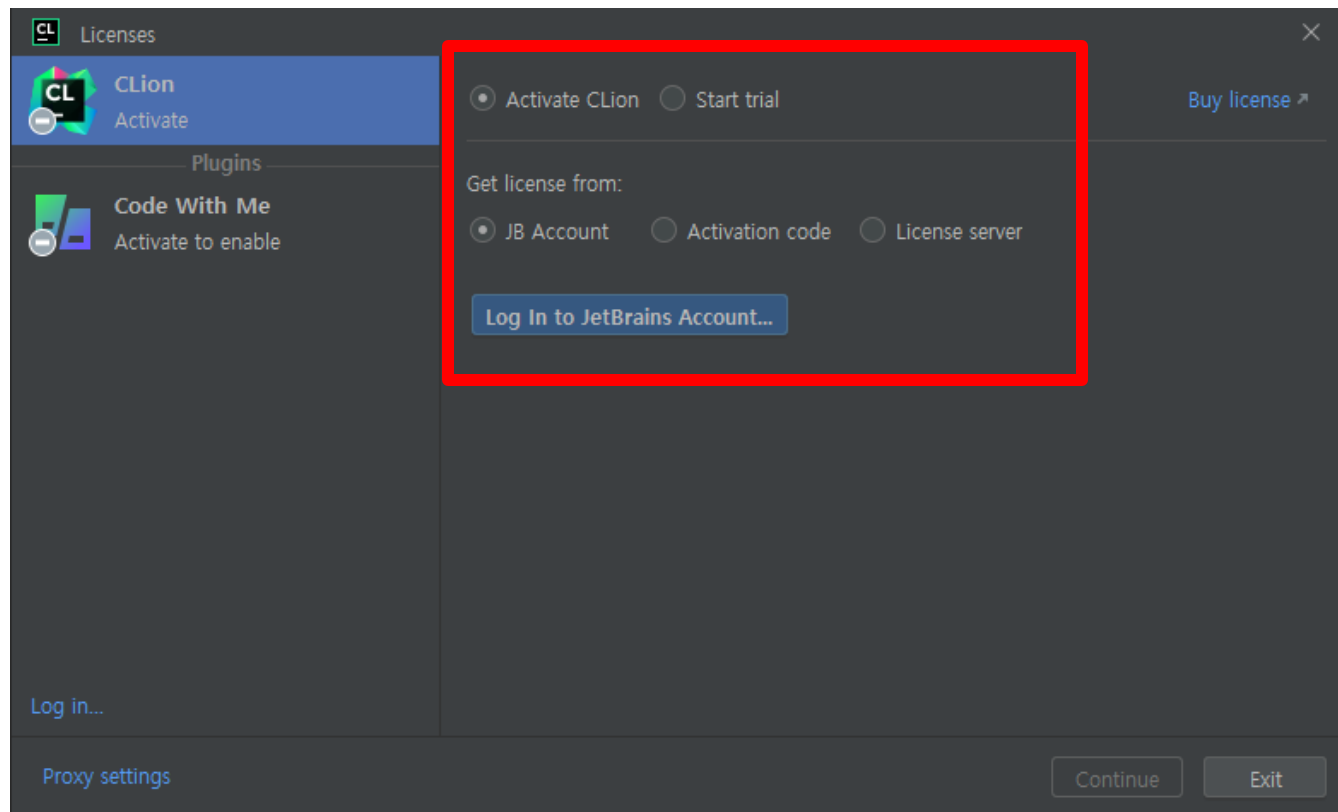
# CLion Installation #4

- ❖ hello 프로젝트 생성
  - File > New Project (C++17 표준 선택)
- ❖ hello, world 프로그램 실행
  - Run > Run xxx



# CLion Installation #5

- ❖ 학생 라이선스 획득 후
- ❖ Help > Register



# CLion

## Activity Tracker Installation

2024년 Spring

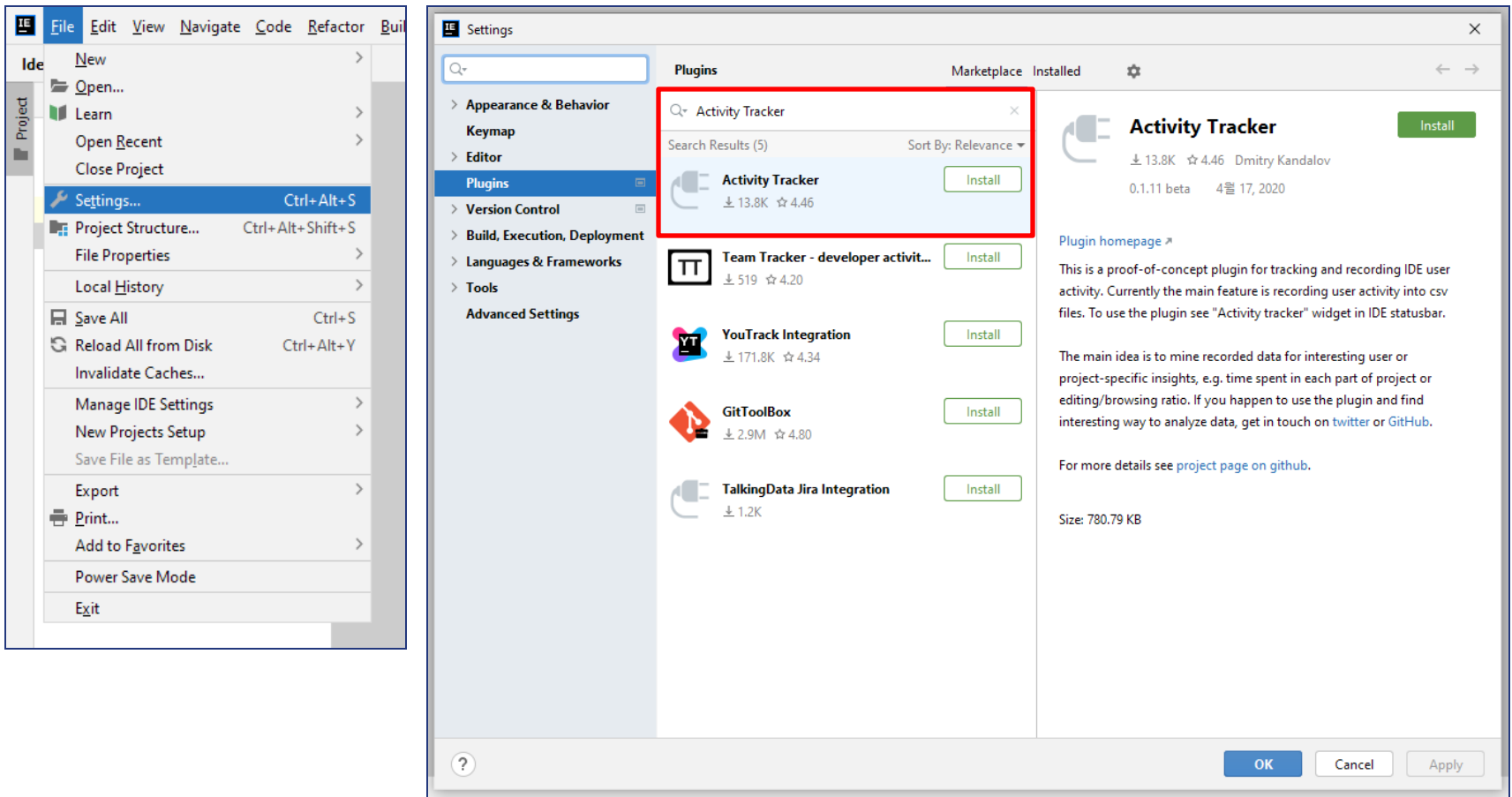


# What is Activity Tracker?

- ❖ This is proof-of-concept plugin for IntelliJ IDEs to track and record user activity.
- ❖ Currently, the main feature is recording user activity into csv files.

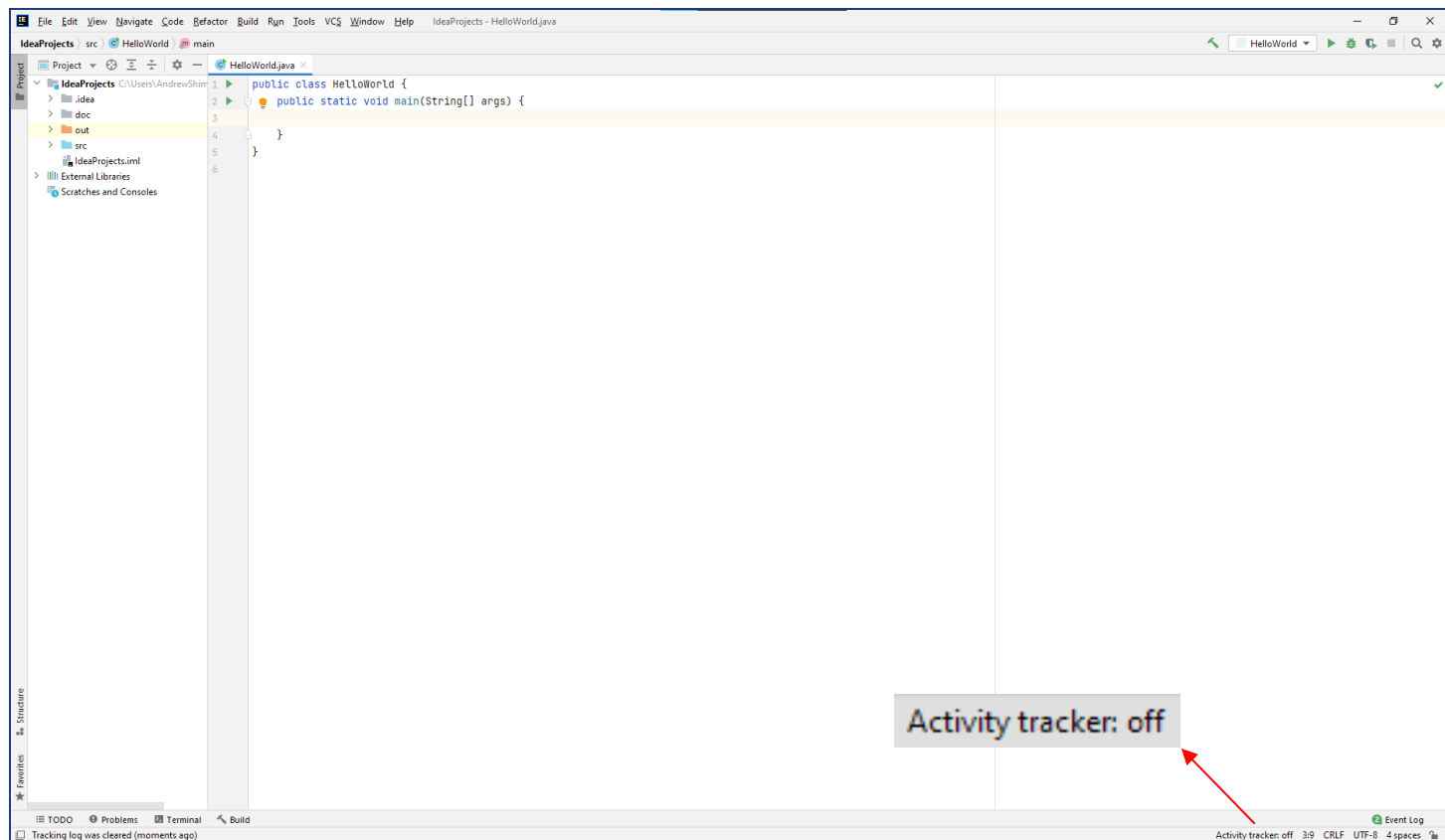
# Installation #1

- ❖ To install Activity Tracker, go to Setting->Plugin->Search for "Activity Tracker"->Click Install and restart IDE



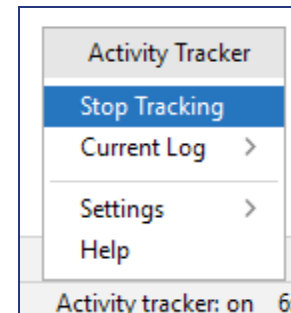
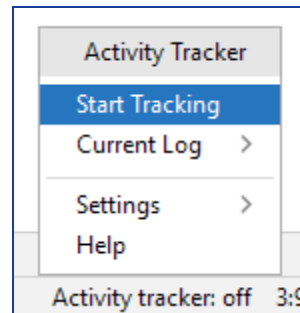
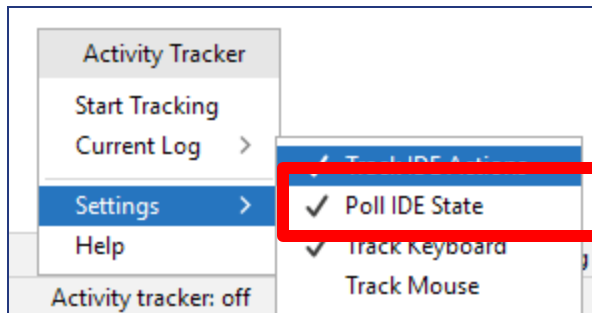
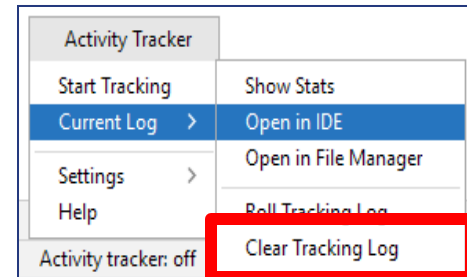
# Installation #2

- ❖ After installation, you'll see "Activity Tracker" widget in IDE status bar at the bottom.



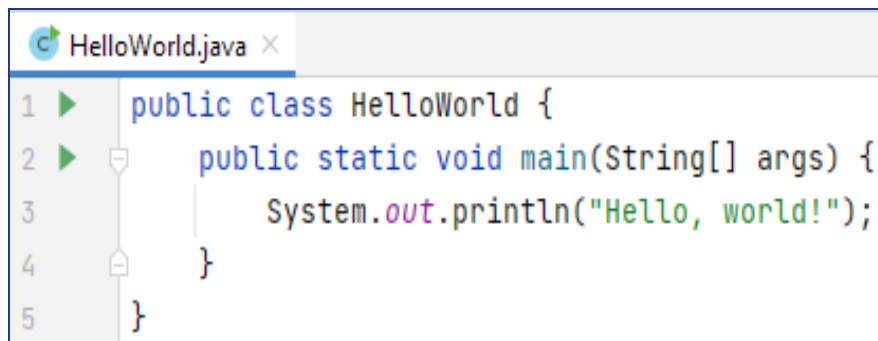
# How to use Activity Tracker #1

- ❖ Click on "Activity Tracker" widget in IDE status bar or invoke "Activity Tracker Popup" action. (ctrl+alt+shift+O shortcut)
- ❖ **First of all, click "Clear Tracking log" to remove previous logs for each assignment.**  
(코딩 전 반드시 기존 로그를 **Clear** 하세요!)
- ❖ Check "Track Keyboard" to enable tracking keyboard events.
- ❖ Click "Start Tracking" to track your activity, after you're done, Click "Stop Tracking".
- ❖ **Settings > Poll IDE State** 체크를 반드시 꺼야함!

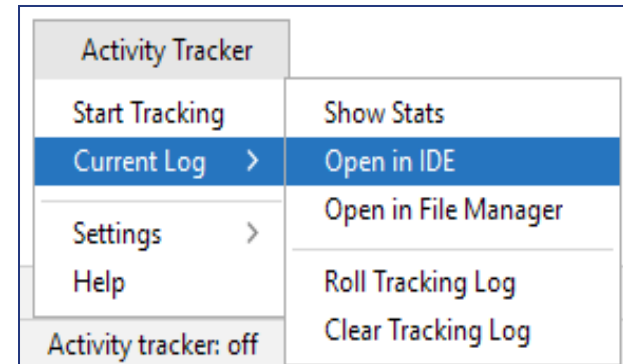


# How to use Activity Tracker #2

- ❖ All your events are written into "ide-events.csv" file located in predefined path. This file is referred to as "current log".
- ❖ The event log file is written as csv RFC4180 in UTF-8 encoding.
- ❖ After Typing code below, go to "Current Log-> "Open in IDE" to check your Activity



```
1 public class HelloWorld {
2     public static void main(String[] args) {
3         System.out.println("Hello, world!");
4     }
5 }
```



- ❖ Change the file name as required by the assignment
- ❖ Submit the file along with the source code to the "코딩과제" on PLATO

# How to use Activity Tracker #3

```
HelloWorld.java x ide-events.csv x
62 2021-08-31T11:25:47.699+09:00,AndrewShim,KeyEvent,72:72:1,IdeaProjects,Editor,C:/Users/AndrewShim/IdeaProjects/src/HelloWorld.java,HelloWorld::main,2,28,Default task
63 2021-08-31T11:25:47.891+09:00,AndrewShim,KeyEvent,101:69:0,IdeaProjects,Editor,C:/Users/AndrewShim/IdeaProjects/src/HelloWorld.java,HelloWorld::main,2,29,Default task
64 2021-08-31T11:25:47.979+09:00,AndrewShim,KeyEvent,108:76:0,IdeaProjects,Editor,C:/Users/AndrewShim/IdeaProjects/src/HelloWorld.java,HelloWorld::main,2,30,Default task
65 2021-08-31T11:25:48.049+09:00,AndrewShim,IdState,Active,IdeaProjects,Editor,C:/Users/AndrewShim/IdeaProjects/src/HelloWorld.java,HelloWorld::main,2,31,Default task
66 2021-08-31T11:25:48.107+09:00,AndrewShim,KeyEvent,108:76:0,IdeaProjects,Editor,C:/Users/AndrewShim/IdeaProjects/src/HelloWorld.java,HelloWorld::main,2,31,Default task
67 2021-08-31T11:25:48.284+09:00,AndrewShim,KeyEvent,111:79:0,IdeaProjects,Editor,C:/Users/AndrewShim/IdeaProjects/src/HelloWorld.java,HelloWorld::main,2,32,Default task
68 2021-08-31T11:25:48.660+09:00,AndrewShim,KeyEvent,44:44:0,IdeaProjects,Editor,C:/Users/AndrewShim/IdeaProjects/src/HelloWorld.java,HelloWorld::main,2,33,Default task
69 2021-08-31T11:25:48.836+09:00,AndrewShim,KeyEvent,32:32:0,IdeaProjects,Editor,C:/Users/AndrewShim/IdeaProjects/src/HelloWorld.java,HelloWorld::main,2,34,Default task
70 2021-08-31T11:25:48.972+09:00,AndrewShim,KeyEvent,119:87:0,IdeaProjects,Editor,C:/Users/AndrewShim/IdeaProjects/src/HelloWorld.java,HelloWorld::main,2,35,Default task
71 2021-08-31T11:25:49.052+09:00,AndrewShim,IdState,Active,IdeaProjects,Editor,C:/Users/AndrewShim/IdeaProjects/src/HelloWorld.java,HelloWorld::main,2,36,Default task
72 2021-08-31T11:25:49.211+09:00,AndrewShim,KeyEvent,111:79:0,IdeaProjects,Editor,C:/Users/AndrewShim/IdeaProjects/src/HelloWorld.java,HelloWorld::main,2,36,Default task
73 2021-08-31T11:25:49.420+09:00,AndrewShim,KeyEvent,114:82:0,IdeaProjects,Editor,C:/Users/AndrewShim/IdeaProjects/src/HelloWorld.java,HelloWorld::main,2,37,Default task
74 2021-08-31T11:25:49.531+09:00,AndrewShim,KeyEvent,108:76:0,IdeaProjects,Editor,C:/Users/AndrewShim/IdeaProjects/src/HelloWorld.java,HelloWorld::main,2,38,Default task
75 2021-08-31T11:25:49.636+09:00,AndrewShim,KeyEvent,100:68:0,IdeaProjects,Editor,C:/Users/AndrewShim/IdeaProjects/src/HelloWorld.java,HelloWorld::main,2,39,Default task
76 2021-08-31T11:25:49.812+09:00,AndrewShim,KeyEvent,65535:16:1,IdeaProjects,Editor,C:/Users/AndrewShim/IdeaProjects/src/HelloWorld.java,HelloWorld::main,2,40,Default task
77 2021-08-31T11:25:49.915+09:00,AndrewShim,KeyEvent,33:49:1,IdeaProjects,Editor,C:/Users/AndrewShim/IdeaProjects/src/HelloWorld.java,HelloWorld::main,2,40,Default task
78 2021-08-31T11:25:50.054+09:00,AndrewShim,IdState,Active,IdeaProjects,Editor,C:/Users/AndrewShim/IdeaProjects/src/HelloWorld.java,HelloWorld::main,2,41,Default task
79 2021-08-31T11:25:50.567+09:00,AndrewShim,Action,EditorRight,IdeaProjects,Editor,C:/Users/AndrewShim/IdeaProjects/src/HelloWorld.java,HelloWorld::main,2,41,Default task
80 2021-08-31T11:25:50.569+09:00,AndrewShim,KeyEvent,65535:39:0,IdeaProjects,Editor,C:/Users/AndrewShim/IdeaProjects/src/HelloWorld.java,HelloWorld::main,2,42,Default task
81 2021-08-31T11:25:50.716+09:00,AndrewShim,Action,EditorRight,IdeaProjects,Editor,C:/Users/AndrewShim/IdeaProjects/src/HelloWorld.java,HelloWorld::main,2,42,Default task
82 2021-08-31T11:25:50.717+09:00,AndrewShim,KeyEvent,65535:39:0,IdeaProjects,Editor,C:/Users/AndrewShim/IdeaProjects/src/HelloWorld.java,HelloWorld::main,2,43,Default task
83 2021-08-31T11:25:51.051+09:00,AndrewShim,KeyEvent,59:59:0,IdeaProjects,Editor,C:/Users/AndrewShim/IdeaProjects/src/HelloWorld.java,HelloWorld::main,2,43,Default task
84 2021-08-31T11:25:51.056+09:00,AndrewShim,IdState,Active,IdeaProjects,Editor,C:/Users/AndrewShim/IdeaProjects/src/HelloWorld.java,HelloWorld::main,2,44,Default task
85 2021-08-31T11:25:52.060+09:00,AndrewShim,IdState,Active,IdeaProjects,Editor,C:/Users/AndrewShim/IdeaProjects/src/HelloWorld.java,HelloWorld::main,2,44,Default task
86 2021-08-31T11:25:52.139+09:00,AndrewShim,KeyEvent,65535:17:2,IdeaProjects,Editor,C:/Users/AndrewShim/IdeaProjects/src/HelloWorld.java,HelloWorld::main,2,44,Default task
87 2021-08-31T11:25:52.180+09:00,AndrewShim,KeyEvent,65535:16:3,IdeaProjects,Editor,C:/Users/AndrewShim/IdeaProjects/src/HelloWorld.java,HelloWorld::main,2,44,Default task
88 2021-08-31T11:25:52.340+09:00,AndrewShim,Action,RunClass,IdeaProjects,Editor,C:/Users/AndrewShim/IdeaProjects/src/HelloWorld.java,HelloWorld::main,2,44,Default task
89 2021-08-31T11:25:52.428+09:00,AndrewShim,KeyEvent,65535:121:3,IdeaProjects,Editor,C:/Users/AndrewShim/IdeaProjects/src/HelloWorld.java,HelloWorld::main,2,44,Default task
90 2021-08-31T11:25:53.062+09:00,AndrewShim,IdState,Active,IdeaProjects,Editor,C:/Users/AndrewShim/IdeaProjects/src/HelloWorld.java,HelloWorld::main,2,44,Default task
91 2021-08-31T11:25:54.065+09:00,AndrewShim,IdState,Active,IdeaProjects,Editor,C:/Users/AndrewShim/IdeaProjects/src/HelloWorld.java,HelloWorld::main,2,44,Default task
92 2021-08-31T11:25:55.069+09:00,AndrewShim,IdState,Active,IdeaProjects,Editor,C:/Users/AndrewShim/IdeaProjects/src/HelloWorld.java,HelloWorld::main,2,44,Default task
93 2021-08-31T11:25:56.073+09:00,AndrewShim,IdState,Active,IdeaProjects,Editor,C:/Users/AndrewShim/IdeaProjects/src/HelloWorld.java,HelloWorld::main,2,44,Default task
94 2021-08-31T11:25:57.127+09:00,AndrewShim,IdState,Active,IdeaProjects,Editor,C:/Users/AndrewShim/IdeaProjects/src/HelloWorld.java,HelloWorld::main,2,44,Default task
95 2021-08-31T11:25:58.138+09:00,AndrewShim,IdState,Active,IdeaProjects,Editor,C:/Users/AndrewShim/IdeaProjects/src/HelloWorld.java,HelloWorld::main,2,44,Default task
96 2021-08-31T11:25:59.141+09:00,AndrewShim,IdState,Active,IdeaProjects,Popup,C:/Users/AndrewShim/IdeaProjects/src/HelloWorld.java,HelloWorld::main,2,44,Default task
97 2021-08-31T11:25:59.496+09:00,AndrewShim,Action,Start/Stop Activity Tracking,,,,,-1,-1,
```

<Ide-events.csv file >

# PLATO 코딩과제 제출하기

2024년 Spring

# 코딩과제 제출하기

- ❖ 실습/과제의 제출파일을 확인 후 소스 코드와 로그 파일을 제출함
- ❖ PLATO 코딩과제 서버의 OS 는 리눅스임
  - 대소문자를 구분함 (Helloworld.cpp, Main.cpp, P100.csv ...)

▼ 제출

설명

파일 첨부

파일을 선택하세요... 최대 첨부 용량: 1GB

  
첨부파일을 마우스로 끌어 놓으세요.

파일 첨부

파일을 선택하세요... 최대 첨부 용량: 1GB

  
첨부파일을 마우스로 끌어 놓으세요.



# 제출결과 확인하기

- ❖ 실습/과제를 제출하면 코딩 결과 탭을 통해 점수와 평가 결과가 출력됨
  - 코딩 결과 탭에 출력된 점수(grade)가 실습/과제 제출 점수임
  - 실습/과제 점수는 키로그, 표절검사 등을 거쳐 추후 확정됨
- ❖ 제출시 확인사항 (문제별로 상이함)
  - 제출 파일 이름 확인
  - 키로그 확인
  - 표절 확인
  - Modern C++ 및 C 스타일 확인
  - 예약어 포함 여부 확인
  - 금지어 포함 여부 확인
  - ...

## 성적

채점일 : 2022-06-18 21:01 ()  
grade: 10.00 / 10.00 비공개

### 평가결과[-]

[+]Summary of tests

최종 제출일 : 2022-06-18 20:04 ([다운로드](#))

### 자동 평가[-]

자동 채점 결과 : 10 / 10

### 컴파일[-]

zip: 0

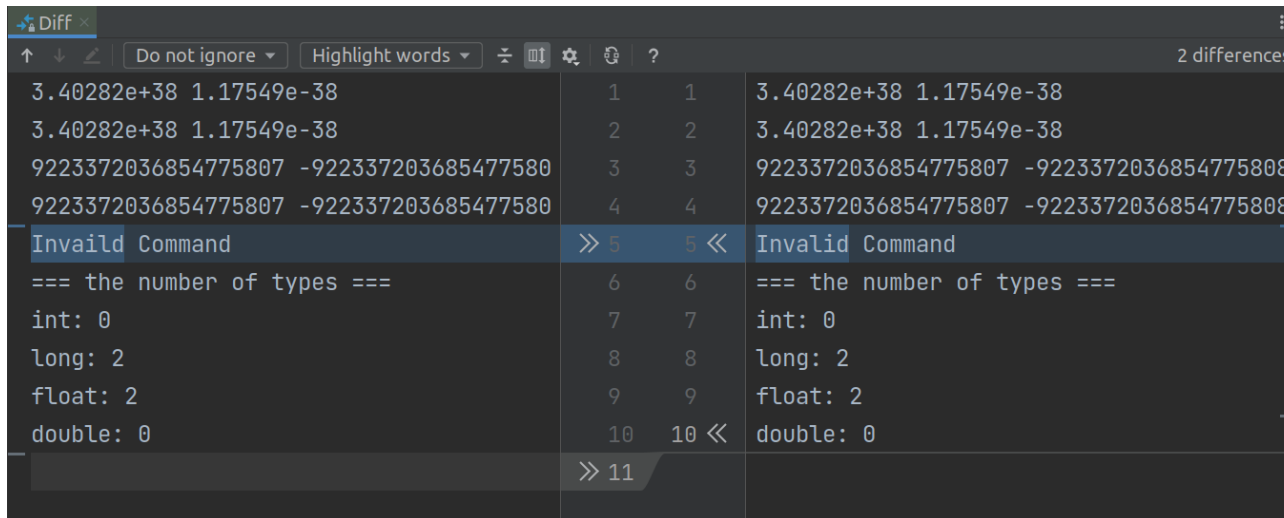
[+] checking file names consistency....  
[+] checking keylog....  
[+] checking plagiarism...  
[+] Check modern programmer  
[+] Check 98 programmer  
[+] checking reserved keywords ...  
[+] checking stop words ...

### 설명[-]

[+]Summary of tests

# 오탈자 찾는 방법

- ❖ PLATO 코딩과제 시스템은 기계가 채점을 하기 때문에 오탈자 등에 엄격함
- ❖ Program Output 과 Exptected Output을 눈으로 확인해도 어디가 문제인지 발견하기 어려움
- ❖ CLion 에서 제공하는 diff 기능을 사용해 보는 것을 추천
  - Press Ctrl+Shift+A and start typing to locate the Open Blank Diff Window action.



```
Diff
↑ ↓ ↗ Do not ignore Highlight words 2 differences
3.40282e+38 1.17549e-38      1 1 3.40282e+38 1.17549e-38
3.40282e+38 1.17549e-38      2 2 3.40282e+38 1.17549e-38
9223372036854775807 -922337203685477580 3 3 9223372036854775807 -9223372036854775808
9223372036854775807 -922337203685477580 4 4 9223372036854775807 -9223372036854775808
Invalid Command >> 5 5 << Invalid Command
=== the number of types ===
int: 0      6 6 === the number of types ===
long: 2     7 7 int: 0
float: 2    8 8 long: 2
double: 0   9 9 float: 2
           10 10 double: 0
           >> 11
```

- ❖ PLATO 코딩과제 정답 비교 방법
  - 단어만 검사 되고 나머지 문자는 무시됨 (공백, 엔터, 괄호, 느낌표 등은 무시함)
  - 대소문자를 구분하지 않음

# Q&A