

# Guide to Eclipse and SQLite JDBC driver

# 1. Install JDK

<https://www.oracle.com/technetwork/java/javase/downloads/index.html>

### Java SE Downloads

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## Java SE Development Kit 15

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macOS Compressed Archive	176.07 MB	 <a href="#">jdk-15_osx-x64_bin.tar.gz</a>
Windows x64 Installer	159.68 MB	 <a href="#">jdk-15_windows-x64_bin.exe</a>
Windows x64 Compressed Archive	179.24 MB	 <a href="#">jdk-15_windows-x64_bin.zip</a>

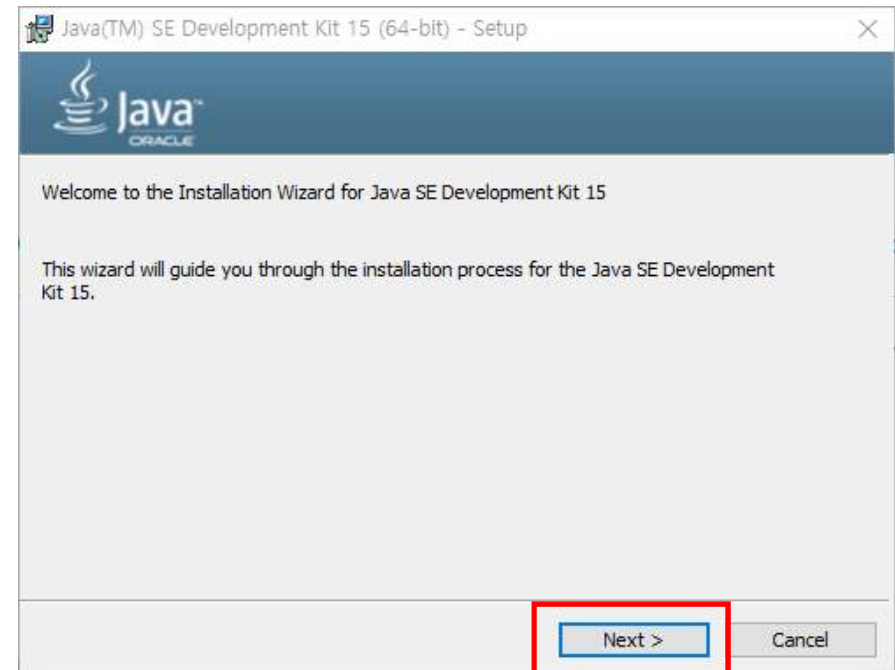
Choose a version for your OS.

# 1. Install JDK

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# 1. Install JDK



## 2. Download and unzip Eclipse

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

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

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File: [eclipse-java-2020-09-R-win32-x86\\_64.zip](#) SHA-512

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After downloading eclipse, unzip it.

## 2. Download and unzip Eclipse

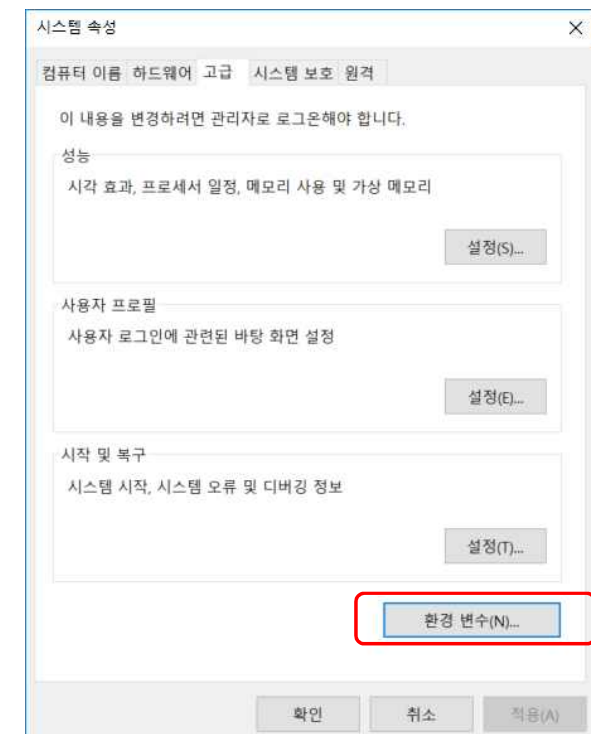
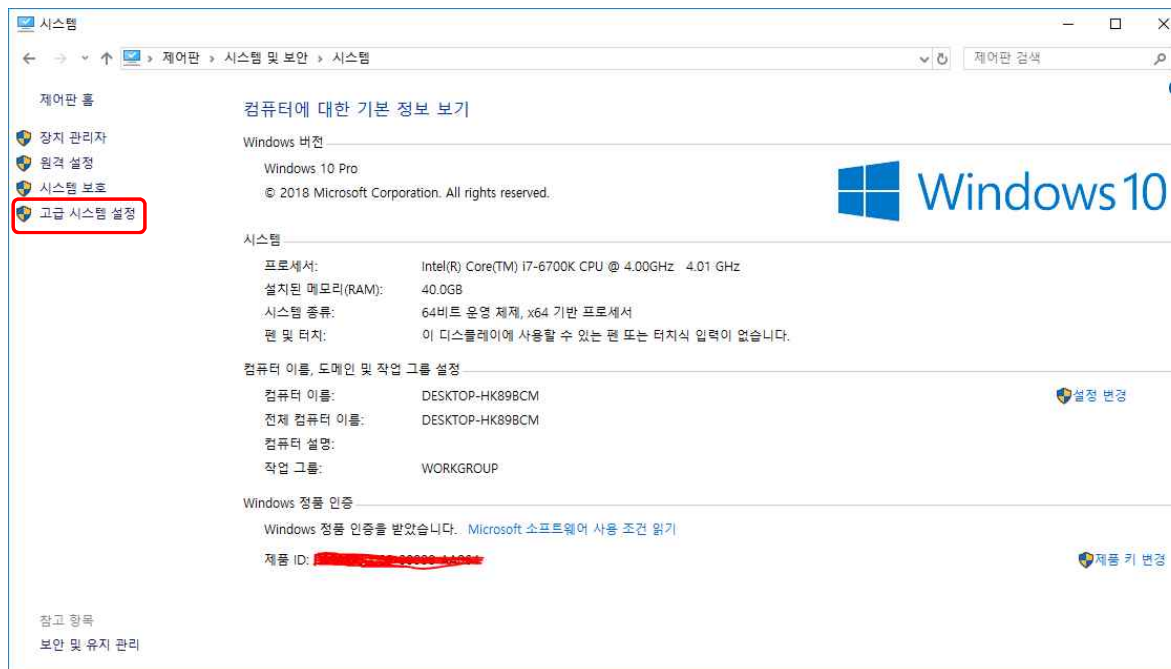
- After downloading eclipse, unzip it.

이름	수정된 날짜	유형	크기
configuration	2020-09-29 오전...	파일 폴더	
dropins	2020-09-29 오전...	파일 폴더	
features	2020-09-29 오전...	파일 폴더	
p2	2020-09-29 오전...	파일 폴더	
plugins	2020-09-29 오전...	파일 폴더	
readme	2020-09-29 오전...	파일 폴더	
.eclipseproduct	2020-09-02 오후...	ECLIPSEPRODUCT...	1KB
artifacts	2020-09-10 오전...	XML 문서	110KB
eclipse	2020-09-10 오전...	응용 프로그램	417KB
eclipse	2020-09-10 오전...	구성 설정	1KB
eclipsec	2020-09-10 오전...	응용 프로그램	129KB

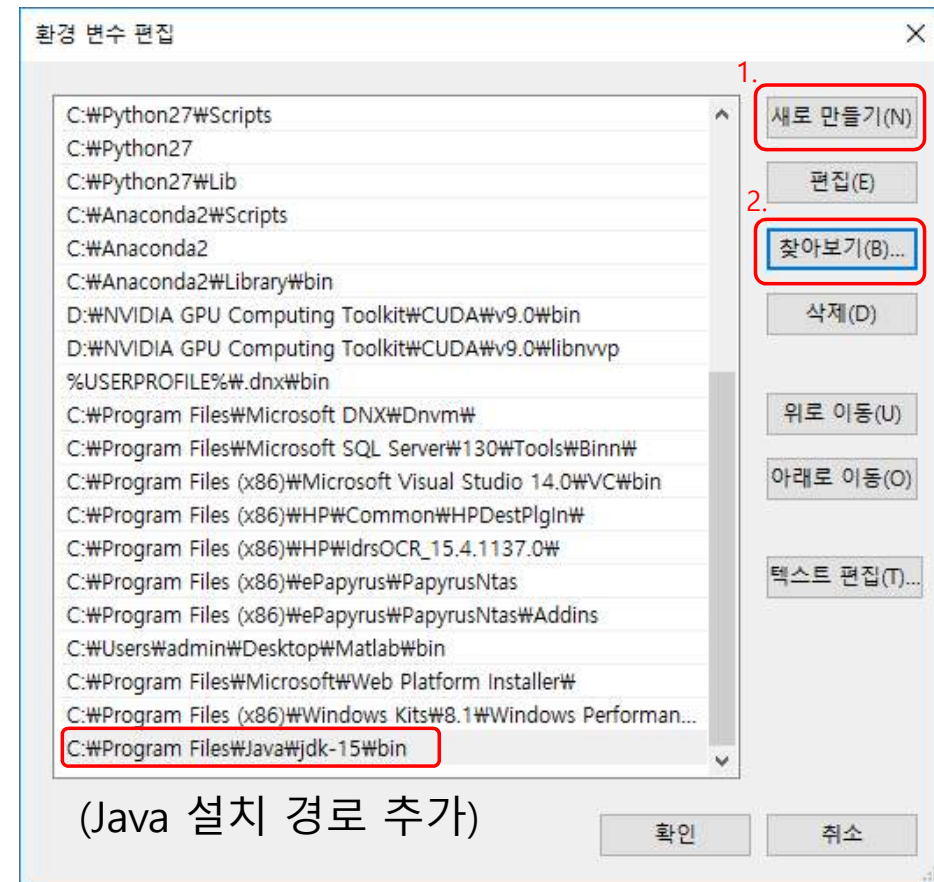
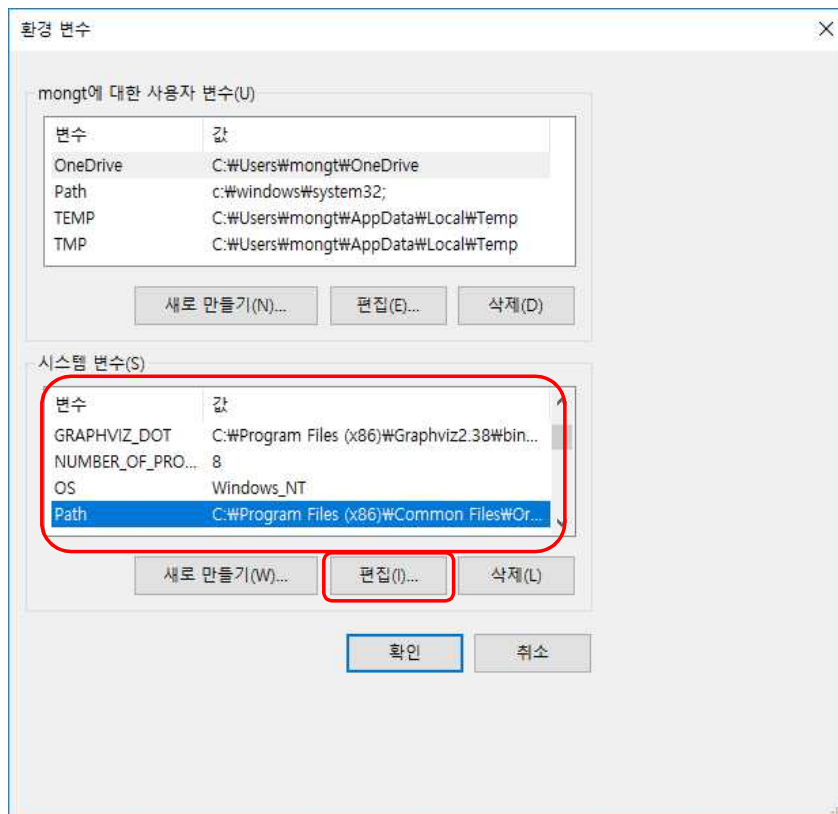
# 3. Environment variables settings before launching eclipse

자바 컴파일을 위한 환경변수 등록

Control Panel -> System and Security -> System -> Advanced system settings -> environment variable

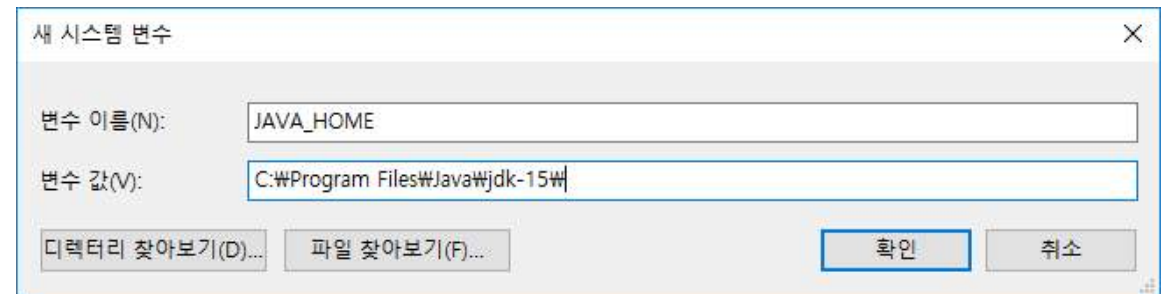
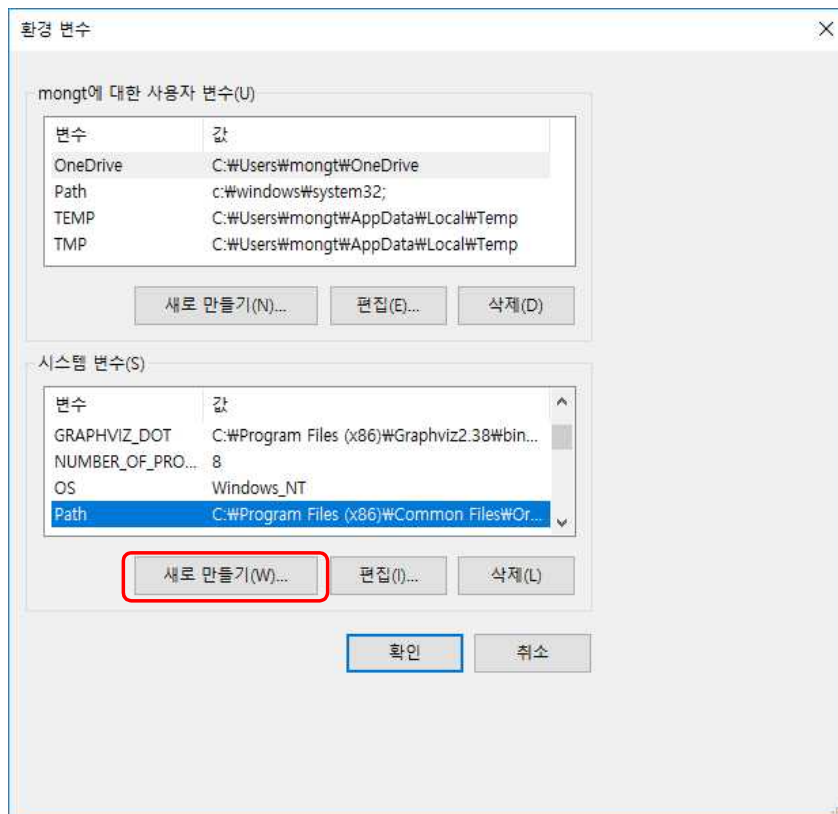


### 3. Environment variables settings before launching eclipse



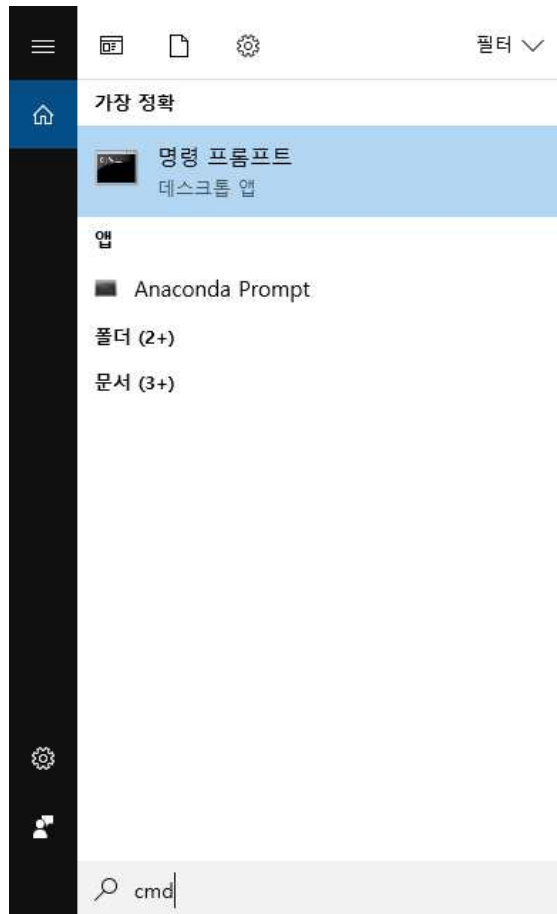


### 3. Environment variables settings before launching eclipse



### 3. Environment variables settings before launching eclipse

Check that you have the following result with "java" command in CMD.



```
명령 프롬프트
Microsoft Windows [Version 10.0.17134.950]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\admin>java
Usage: java [options] <mainclass> [args...]
        (to execute a class)
    or  java [options] -jar <jarfile> [args...]
        (to execute a jar file)
    or  java [options] -m <module>[/<mainclass>] [args...]
        java [options] --module <module>[/<mainclass>] [args...]
        (to execute the main class in a module)
    or  java [options] <sourcefile> [args]
        (to execute a single source-file program)

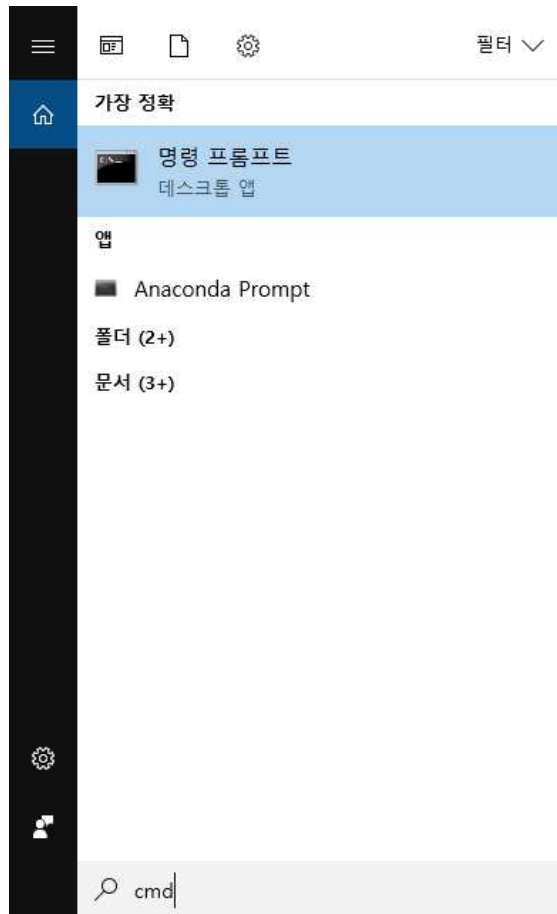
Arguments following the main class, source file, -jar <jarfile>,
-m or --module <module>/<mainclass> are passed as the arguments to
main class.

where options include:

    -cp <class search path of directories and zip/jar files>
    -classpath <class search path of directories and zip/jar files>
    --class-path <class search path of directories and zip/jar files>
                  A ; separated list of directories, JAR archives,
                  and ZIP archives to search for class files.
    -p <module path>
    --module-path <module path>...
                  A ; separated list of directories, each directory
                  is a directory of modules.
    --upgrade-module-path <module path>...
```

### 3. Environment variables settings before launching eclipse

Check that you have the following result with "javac" command in CMD.



```
C:\Users\Wadmin>javac
Usage: javac <options> <source files>
where possible options include:
  @<filename>                Read options and filenames from file
  -Akey[=value]              Options to pass to annotation processors
  --add-modules <module>(<module>)*
                             Root modules to resolve in addition to the initial modules, or all modules
                             on the module path if <module> is ALL-MODULE-PATH.
  --boot-class-path <path>, -bootclasspath <path>
                             Override location of bootstrap class files
  --class-path <path>, -classpath <path>, -cp <path>
                             Specify where to find user class files and annotation processors
  -d <directory>             Specify where to place generated class files
  -deprecation               Output source locations where deprecated APIs are used
  --enable-preview           Enable preview language features. To be used in conjunction with either -source or --release.
  -encoding <encoding>       Specify character encoding used by source files
  -endorseddirs <dirs>       Override location of endorsed standards path
  -extdirs <dirs>            Override location of installed extensions
  -g                          Generate all debugging info
  -g:{lines,vars,source}     Generate only some debugging info
  -g:none                    Generate no debugging info
  -h <directory>             Specify where to place generated native header files
  --help, -help, -?         Print this help message
  --help-extra, -X          Print help on extra options
  -implicit:{none,class}    Specify whether to generate class files for implicitly defined classes
```

## 4. Install SQLite JDBC driver

- <http://www.sqlitetutorial.net/sqlite-java/sqlite-jdbc-driver/>
- <https://bitbucket.org/xerial/sqlite-jdbc/downloads/>

Name	Size	Uploaded by	Downloads	Date
Download repository	107.8 MB			
sqlite-jdbc-3.27.2.1.jar	5.7 MB	Taro L. Saito	38196	2019-03-20
sqlite-jdbc-3.27.2.jar	6.8 MB	Taro L. Saito	4735	2019-03-15
sqlite-jdbc-3.23.1.jar	6.4 MB	Taro L. Saito	85876	2018-05-29
sqlite-jdbc-3.21.0.jar	6.4 MB	Taro L. Saito	56904	2017-11-14
sqlite-jdbc-3.20.1.jar	6.3 MB	Taro L. Saito	3272	2017-11-14



**That link has no power here**

[Return to the previous page](#) or [go back to your dashboard](#).

If you don't have access to the bitbucket.org page, then go to the next slide and download JDBC from Github.

# 4.1 Install SQLite JDBC driver

- <https://github.com/xerial/sqlite-jdbc>

## SQLite JDBC Driver build passing chat on gitter

SQLite JDBC is a library for accessing and creating [SQLite](#) database files in Java.

Our SQLiteJDBC library requires no configuration since native libraries for major OSs, including Windows, Mac OS X, Linux etc., are assembled into a single JAR (Java Archive) file. The usage is quite simple; [download](#) our sqlite-jdbc library, then append the library (JAR file) to your class path.

See [the sample code](#).

maven central 3.32.3.2 javadoc 3.32.3.2

- Release versions: [Download](#) or Maven <https://oss.sonatype.org/content/repositories/releases/org/xerial/sqlite-jdbc/>
- Latest snapshot (pre-release) versions are also available:  
<https://oss.sonatype.org/content/repositories/snapshots/org/xerial/sqlite-jdbc/>

Post bug reports or feature requests to [Issue Tracker](#)

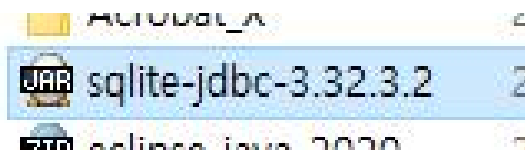
## org/xerial/sqlite-jdbc

...		
<a href="#">3.14.2/</a>	2016-09-27 00:06	-
<a href="#">3.14.2.1/</a>	2016-09-30 19:50	-
<a href="#">3.15.0/</a>	2016-11-04 20:03	-
<a href="#">3.15.1/</a>	2016-11-04 20:43	-
<a href="#">3.16.1/</a>	2017-01-11 06:39	-
<a href="#">3.18.0/</a>	2017-05-18 17:16	-
<a href="#">3.19.3/</a>	2017-06-23 07:47	-
<a href="#">3.20.0/</a>	2017-08-05 04:30	-
<a href="#">3.20.1/</a>	2017-10-08 21:51	-
<a href="#">3.21.0/</a>	2017-11-14 09:23	-
<a href="#">3.21.0.1/</a>	2017-12-07 20:11	-
<a href="#">3.23.1/</a>	2018-05-25 23:10	-
<a href="#">3.25.2/</a>	2018-10-01 00:18	-
<a href="#">3.27.2/</a>	2019-03-15 05:48	-
<a href="#">3.27.2.1/</a>	2019-03-20 22:37	-
<a href="#">3.28.0/</a>	2019-06-25 02:04	-
<a href="#">3.30.1/</a>	2019-12-23 20:51	-
<a href="#">3.31.1/</a>	2020-05-05 00:32	-
<a href="#">3.32.3/</a>	2020-06-19 16:44	-
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<a href="#">3.32.3.2/</a>	2020-07-28 17:59	-
<a href="#">3.5.7/</a>	-	-
<a href="#">3.5.8/</a>	-	-
<a href="#">3.5.9/</a>	-	-

## 4.1 Install SQLite JDBC driver

- <https://github.com/xerial/sqlite-jdbc>

**org/xerial/sqlite-jdbc/3.32.3.2**

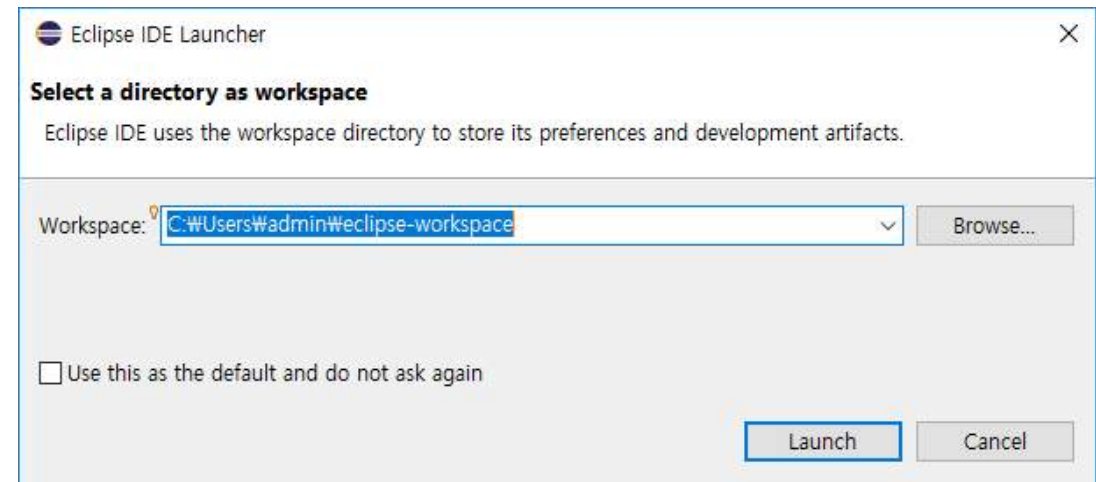
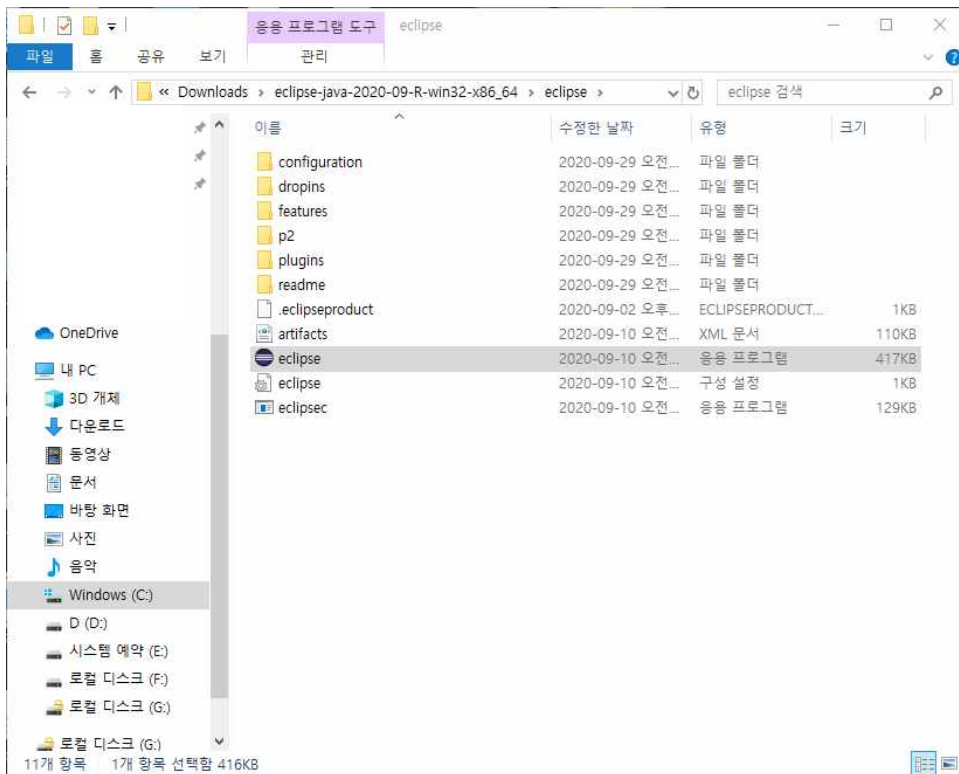


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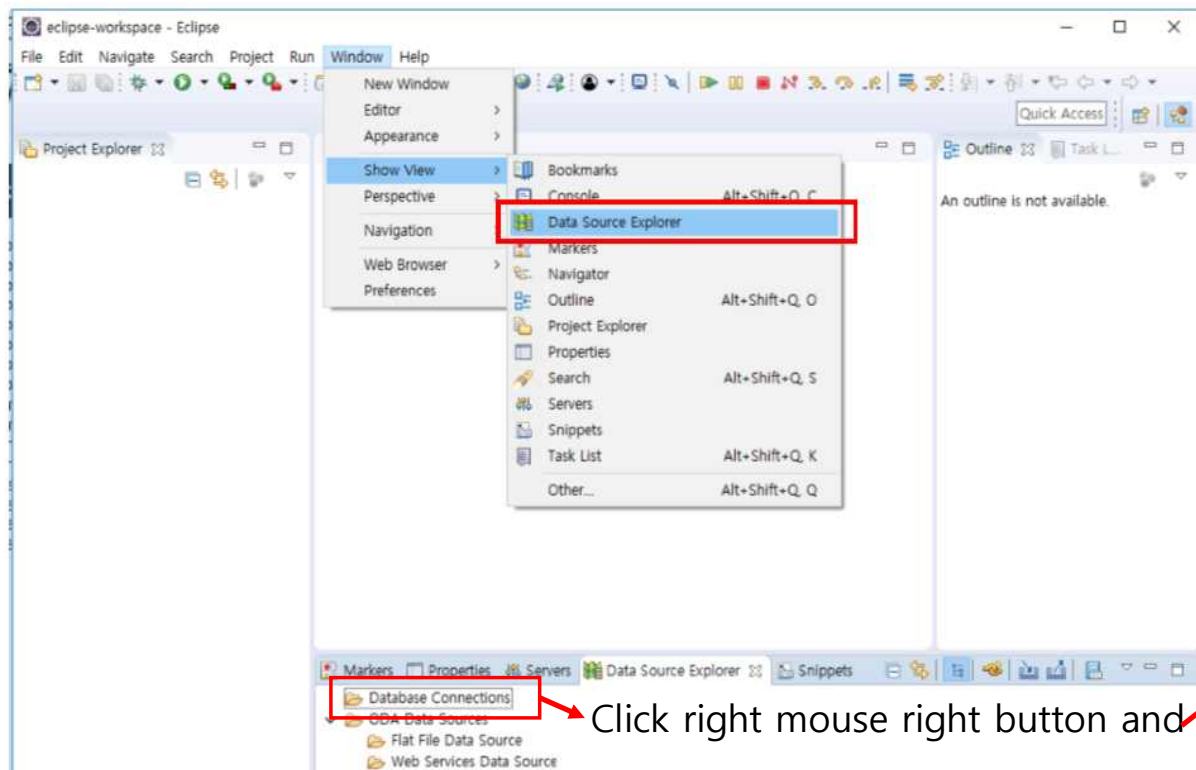
../		
<a href="#">sqlite-jdbc-3.32.3.2-javadoc.jar</a>	2020-07-28 17:59	925875
<a href="#">sqlite-jdbc-3.32.3.2-javadoc.jar.asc</a>	2020-07-28 17:59	488
<a href="#">sqlite-jdbc-3.32.3.2-javadoc.jar.md5</a>	2020-07-28 17:59	32
<a href="#">sqlite-jdbc-3.32.3.2-javadoc.jar.sha1</a>	2020-07-28 17:59	40
<a href="#">sqlite-jdbc-3.32.3.2-sources.jar</a>	2020-07-28 17:59	6664923
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<a href="#">sqlite-jdbc-3.32.3.2-sources.jar.md5</a>	2020-07-28 17:59	32
<a href="#">sqlite-jdbc-3.32.3.2-sources.jar.sha1</a>	2020-07-28 17:59	40
<a href="#">sqlite-jdbc-3.32.3.2.jar</a>	2020-07-28 17:59	7210681
<a href="#">sqlite-jdbc-3.32.3.2.jar.asc</a>	2020-07-28 17:59	488
<a href="#">sqlite-jdbc-3.32.3.2.jar.md5</a>	2020-07-28 17:59	32
<a href="#">sqlite-jdbc-3.32.3.2.jar.sha1</a>	2020-07-28 17:59	40
<a href="#">sqlite-jdbc-3.32.3.2.pom</a>	2020-07-28 17:59	6462
<a href="#">sqlite-jdbc-3.32.3.2.pom.asc</a>	2020-07-28 17:59	488
<a href="#">sqlite-jdbc-3.32.3.2.pom.md5</a>	2020-07-28 17:59	32
<a href="#">sqlite-jdbc-3.32.3.2.pom.sha1</a>	2020-07-28 17:59	40



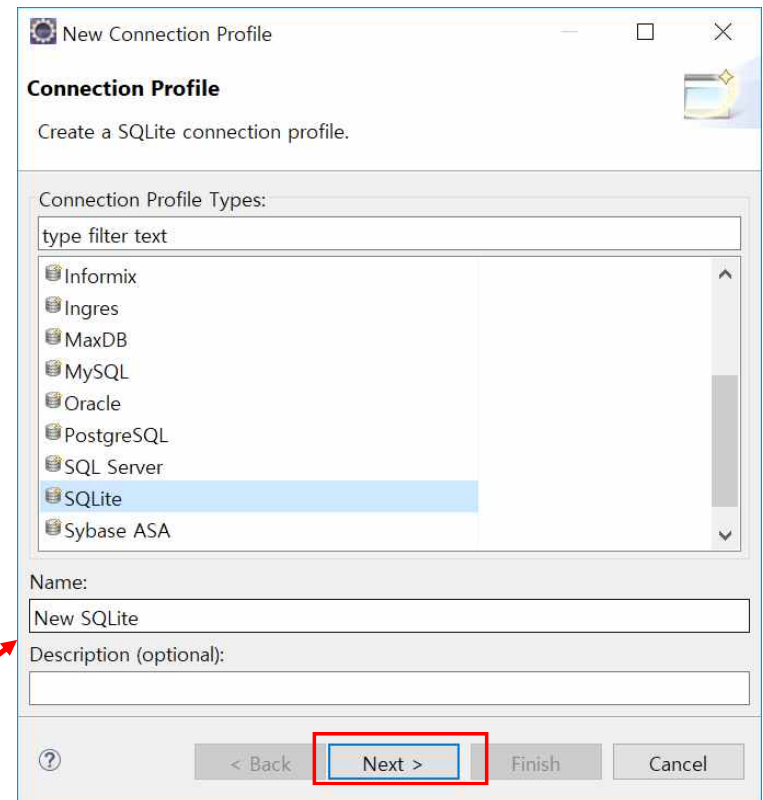
## 5. Launch Eclipse-workspace



## 6. Connect SQLite JDBC driver



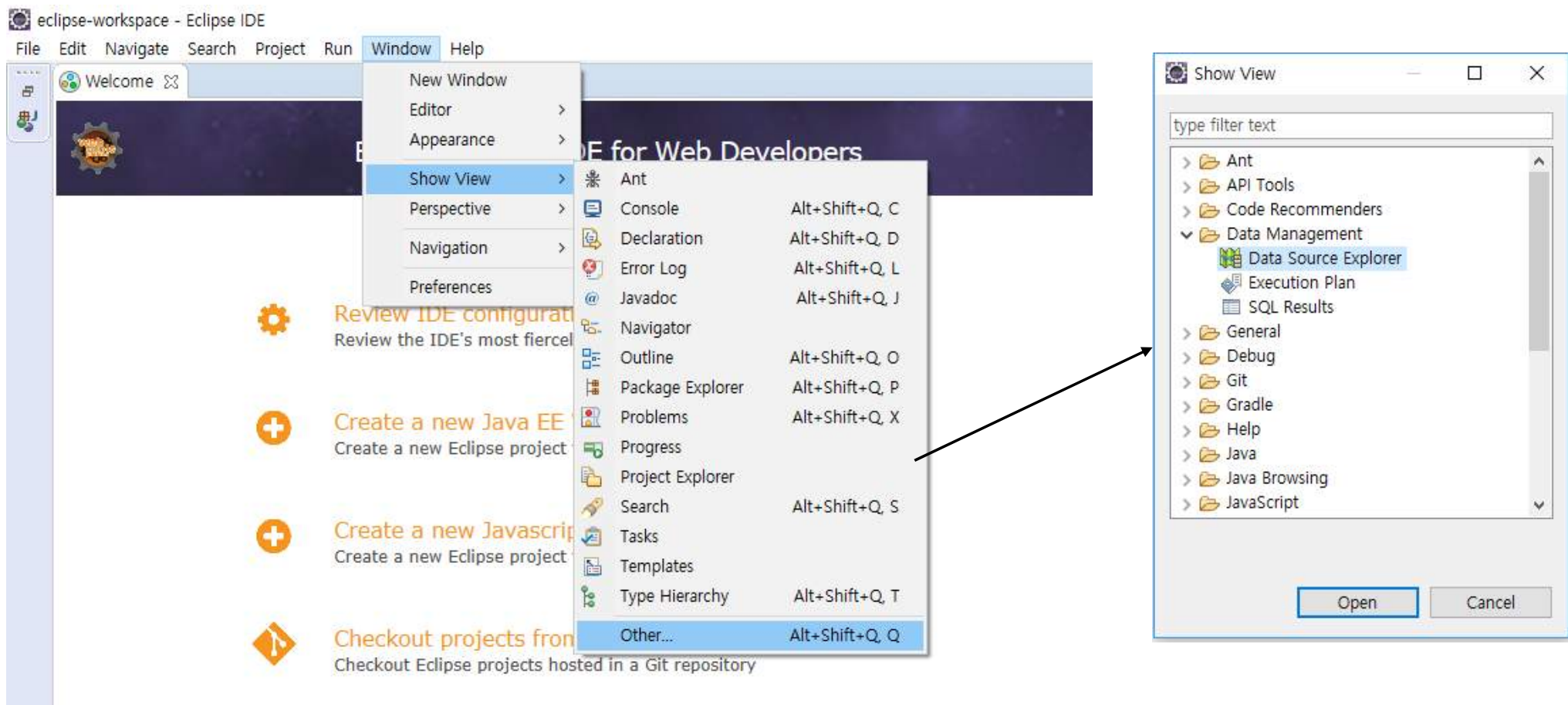
Click right mouse right button and new



If you cannot find "Data Source Explorer" at Show View, see next page

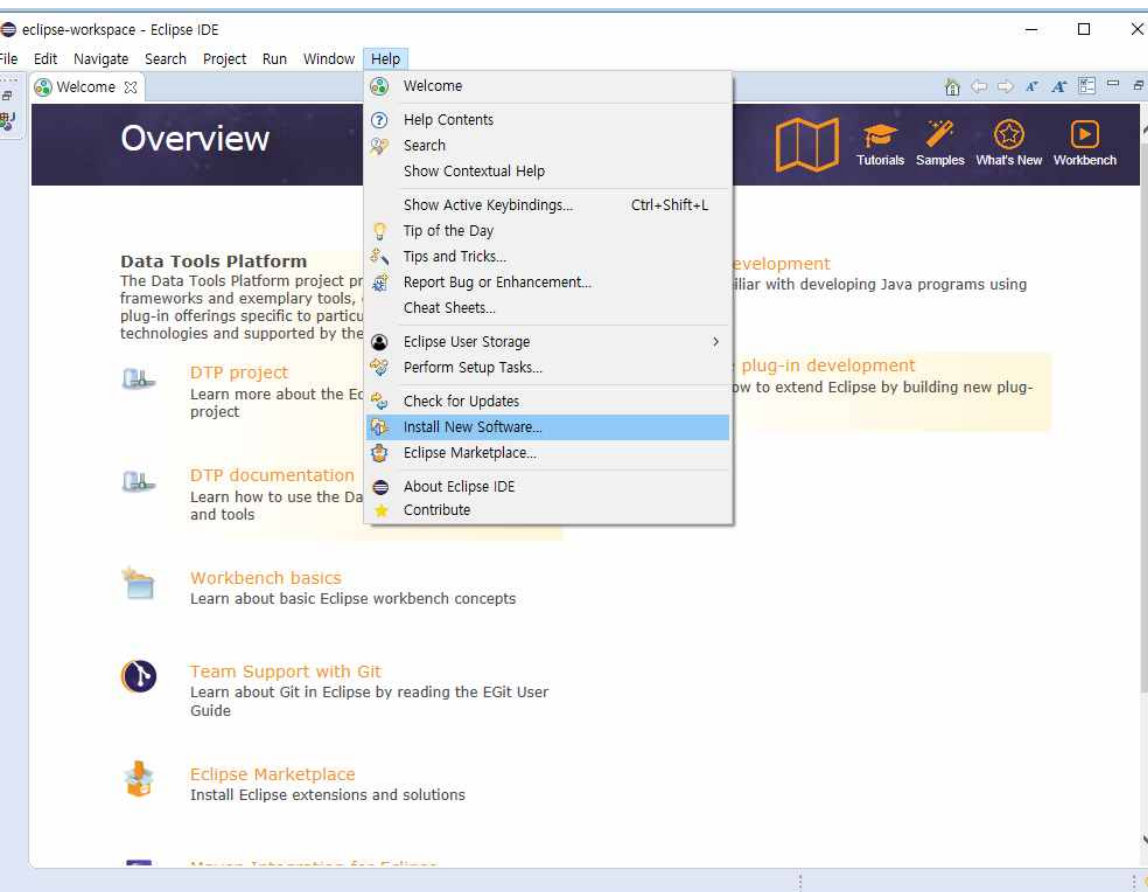


# 6-1. Connect SQLite JDBC driver

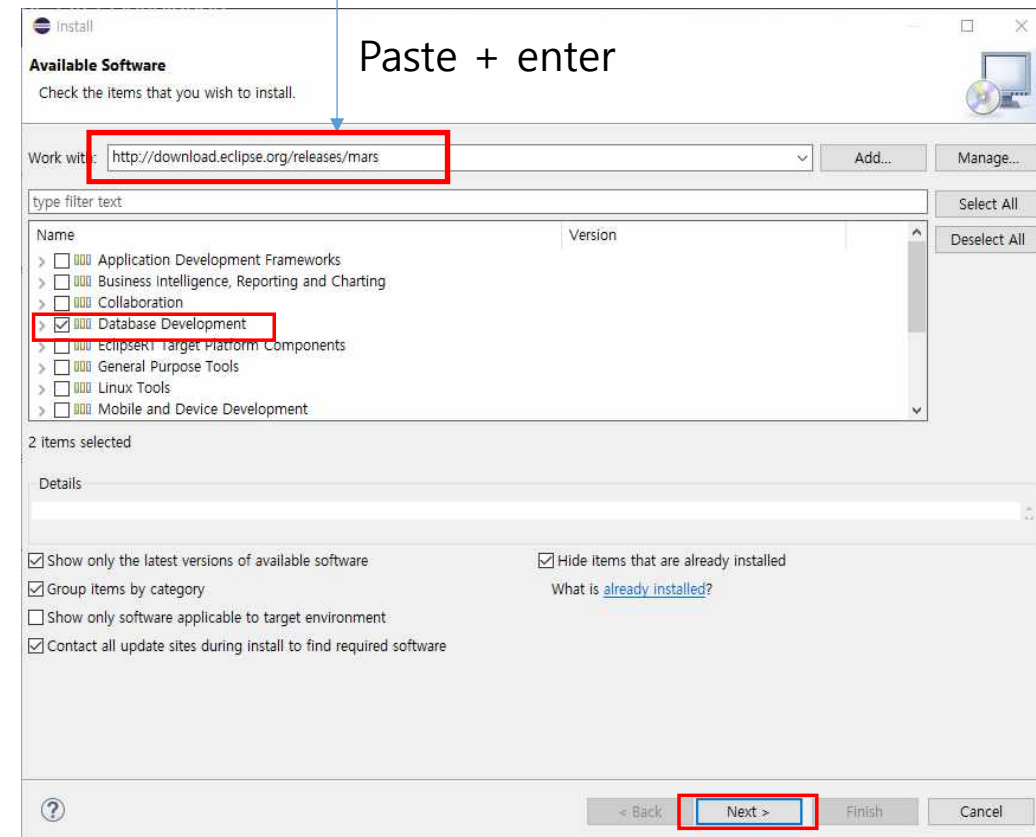


If you cannot find "Data Source Explorer" at Other also, see next page

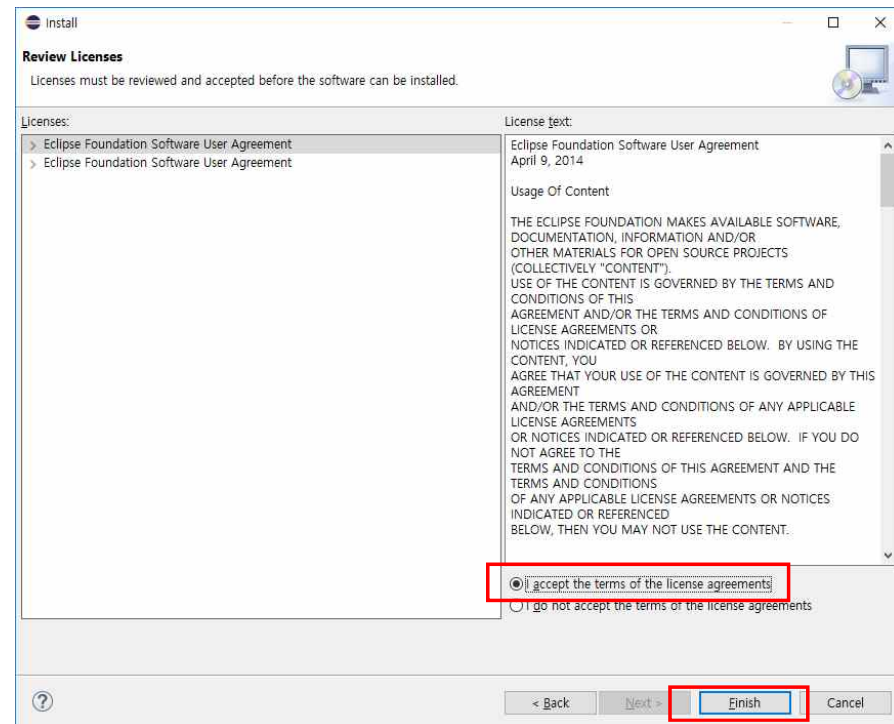
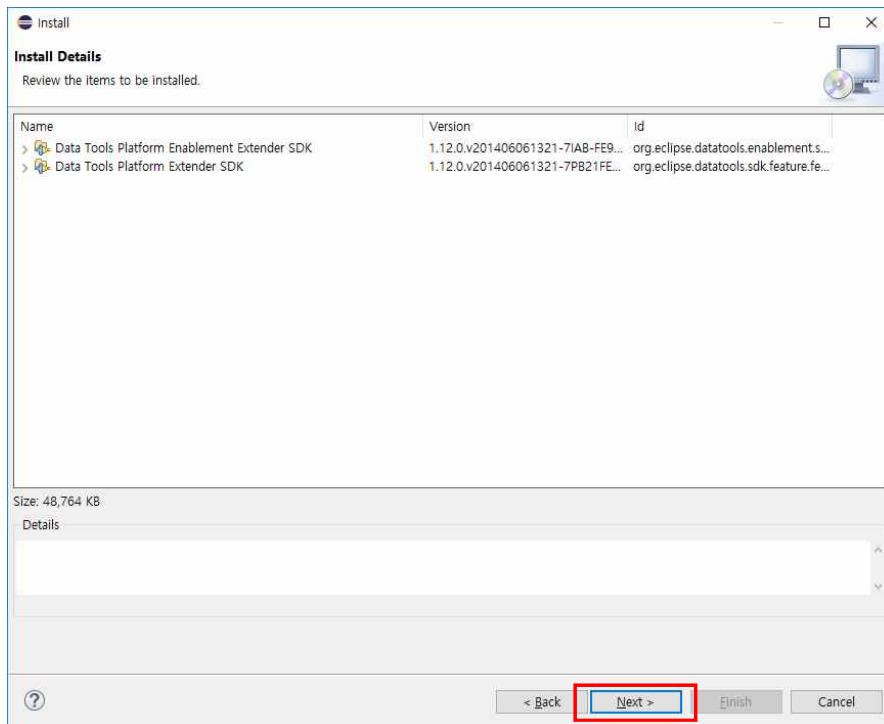
## 6-2. Connect SQLite JDBC driver



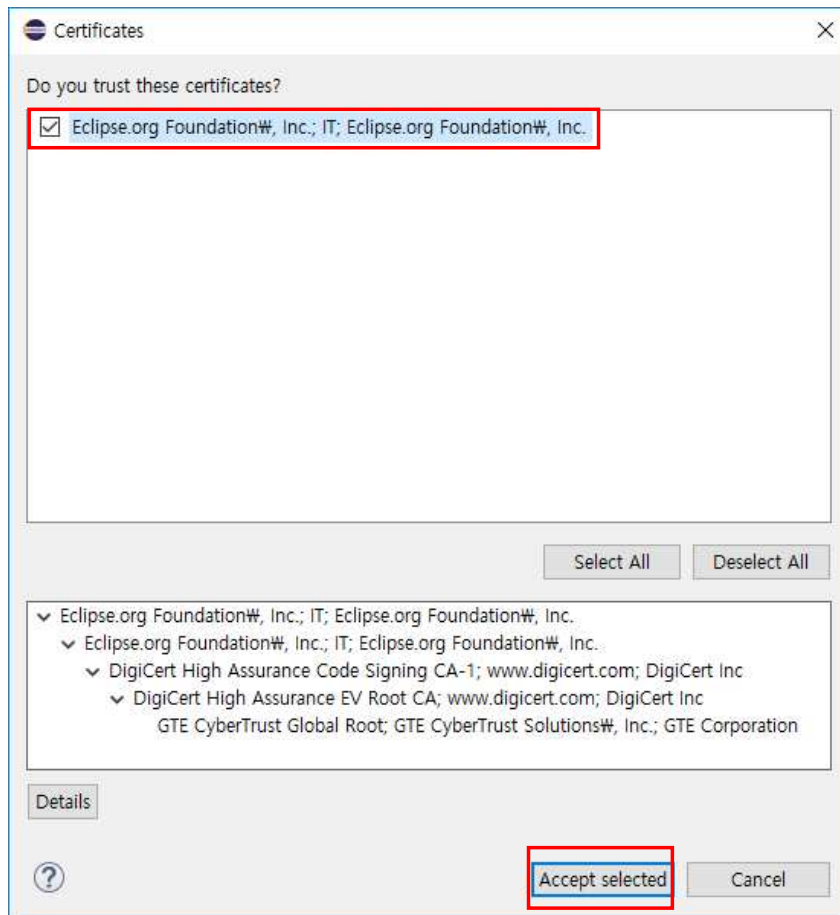
<http://download.eclipse.org/releases/mars>



## 6-2. Connect SQLite JDBC driver

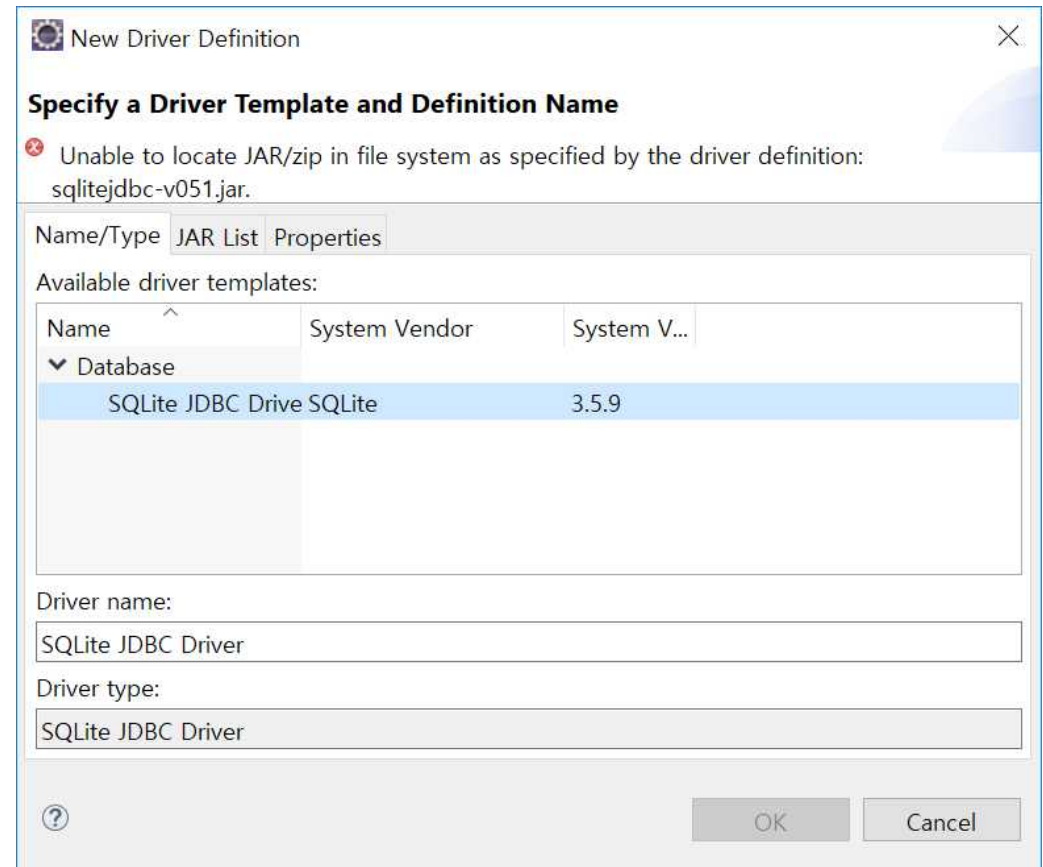
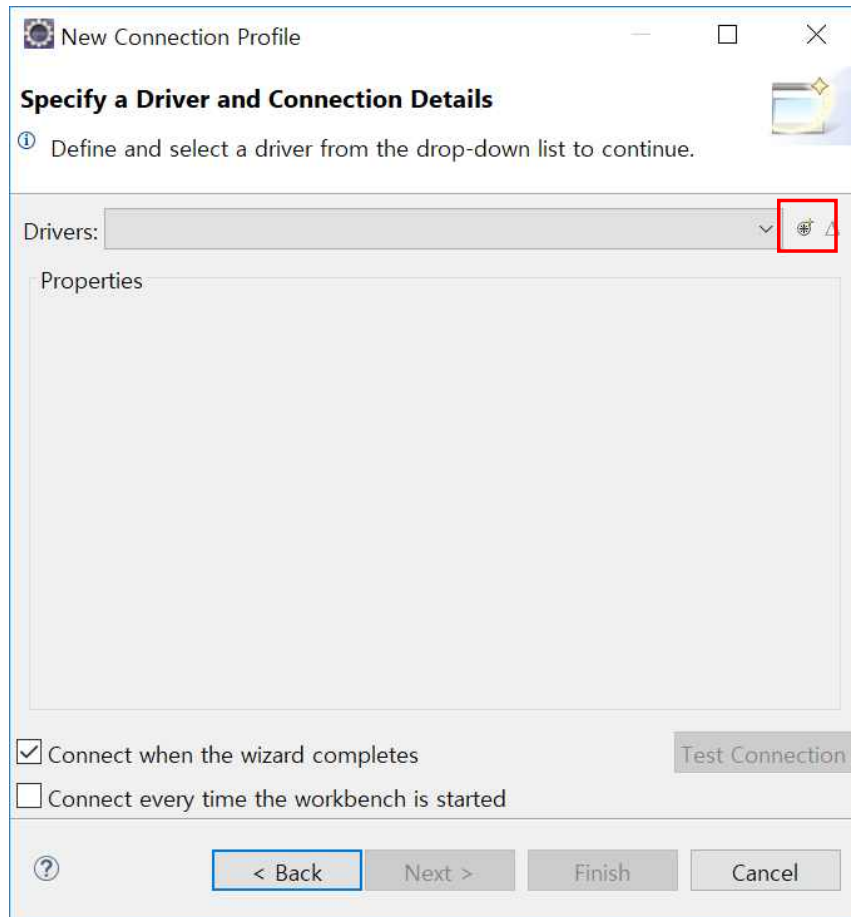


## 6-2. Connect SQLite JDBC driver

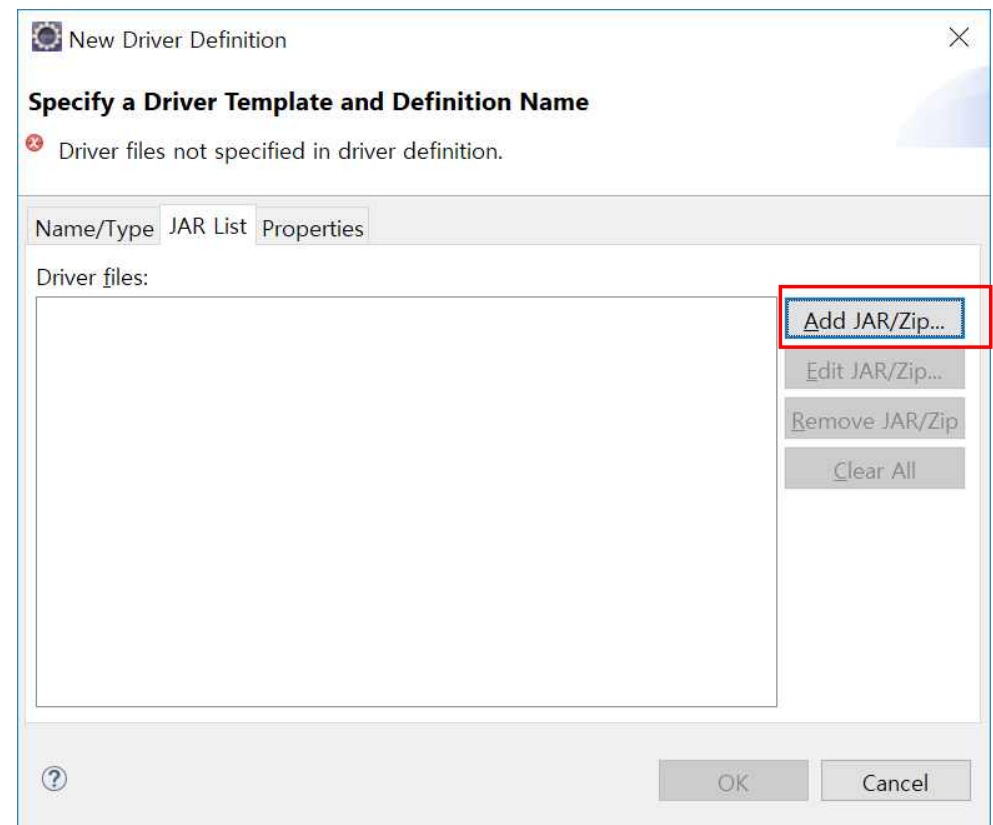
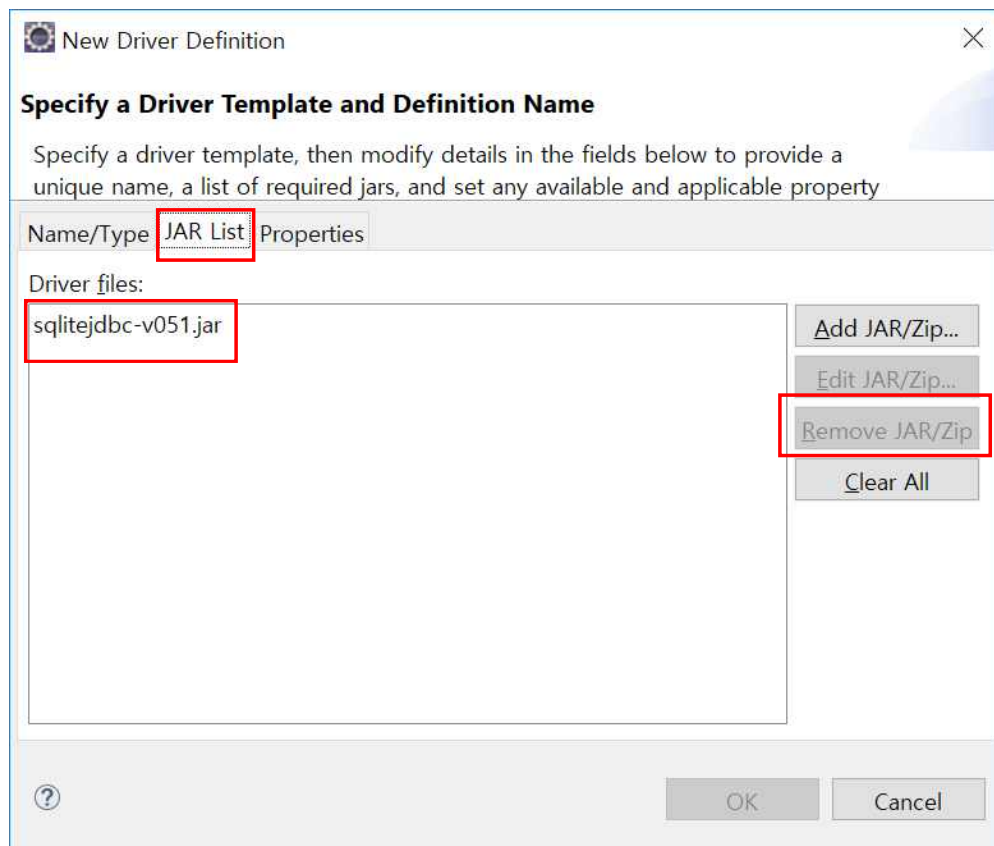


Restart eclipse and go back to ppt page 15

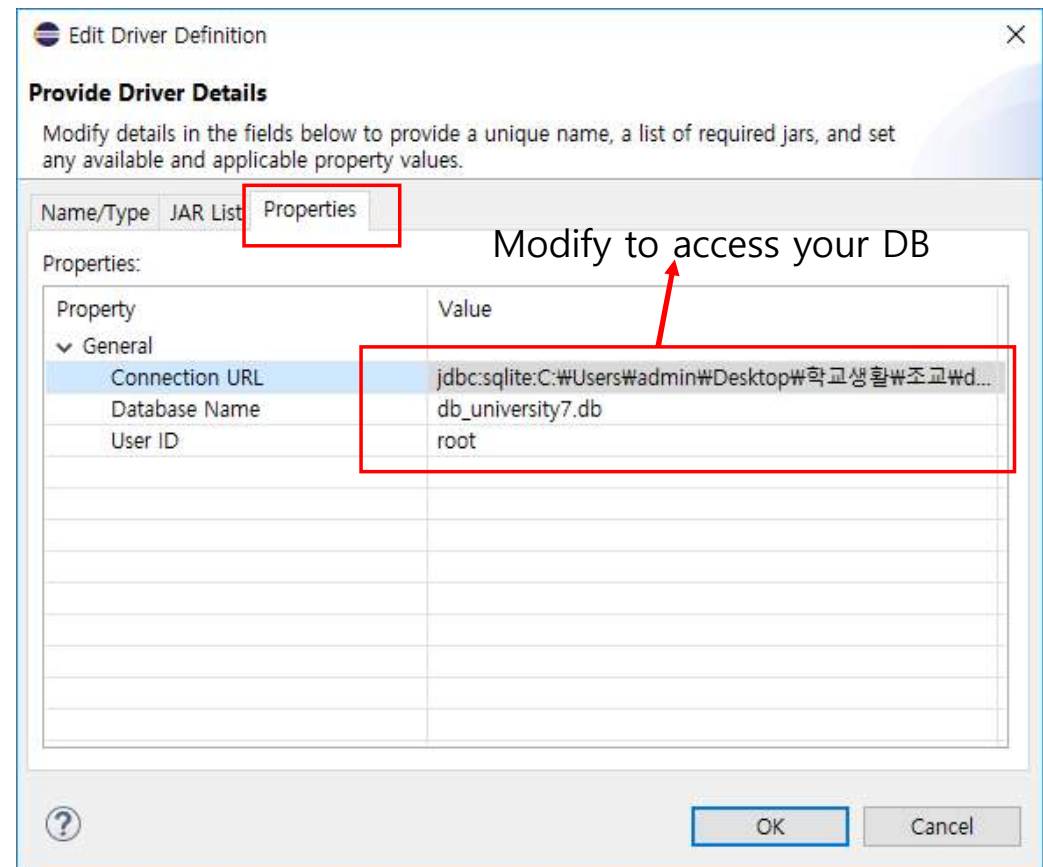
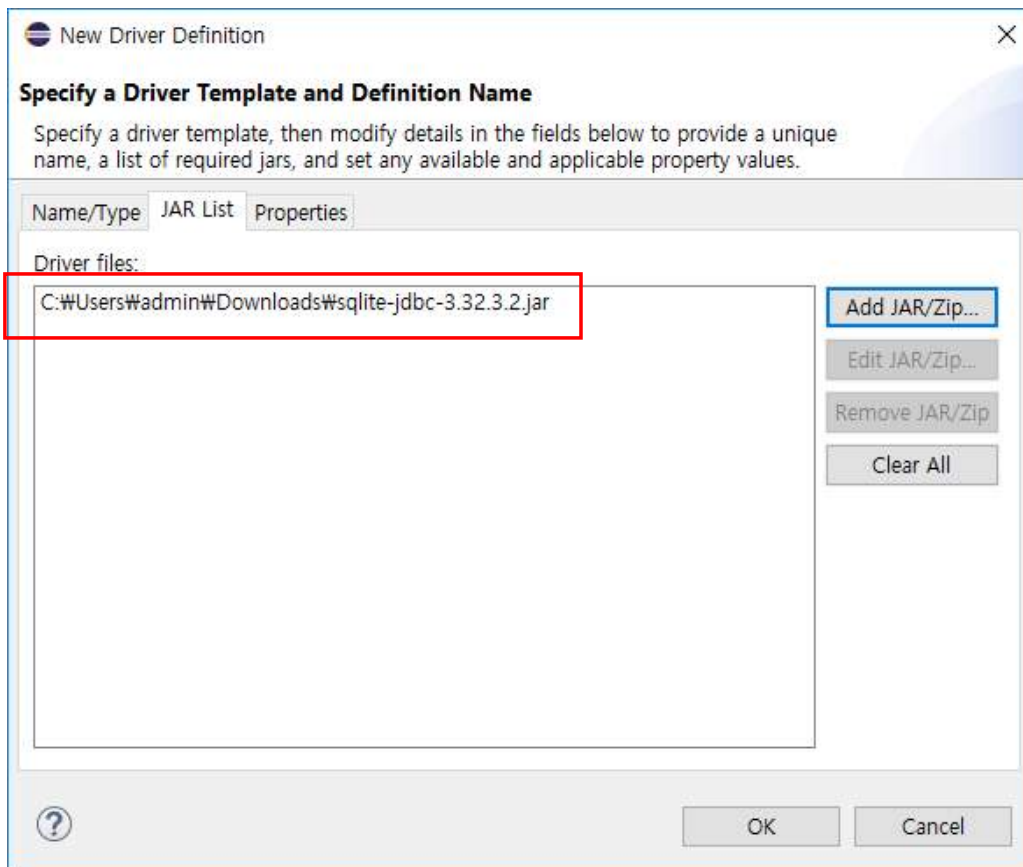
## 6. Connect SQLite JDBC driver



## 6. Connect SQLite JDBC driver



## 6. Connect SQLite JDBC driver





## 6. Connect SQLite JDBC driver

New Connection Profile

**Specify a Driver and Connection Details**

Select a driver from the drop-down and provide login details for the connection.

Drivers: SQLite JDBC Driver

Properties

General Optional

Database: db\_university7.db

Database location: C:\Users\admin\Desktop\학교생활기록부\조교\db\ Browse...

User name: root

Password: ●●●●

☐ Save Password

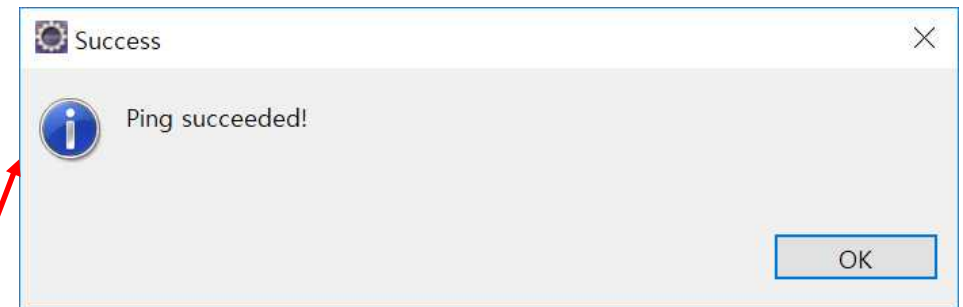
URL: jdbc:sqlite:C:\Users\admin\Desktop\학교생활기록부\조교\db\uni

☒ Connect when the wizard completes

☐ Connect every time the workbench is started









Test Connection

Finish



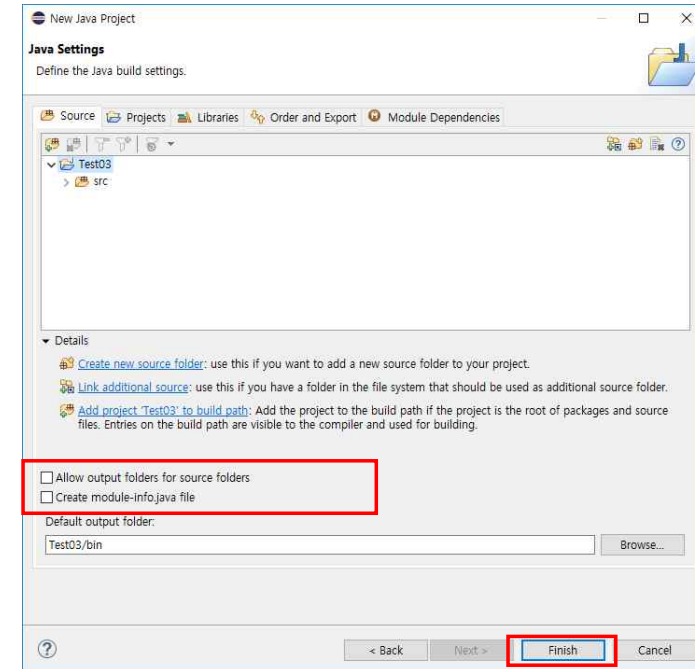
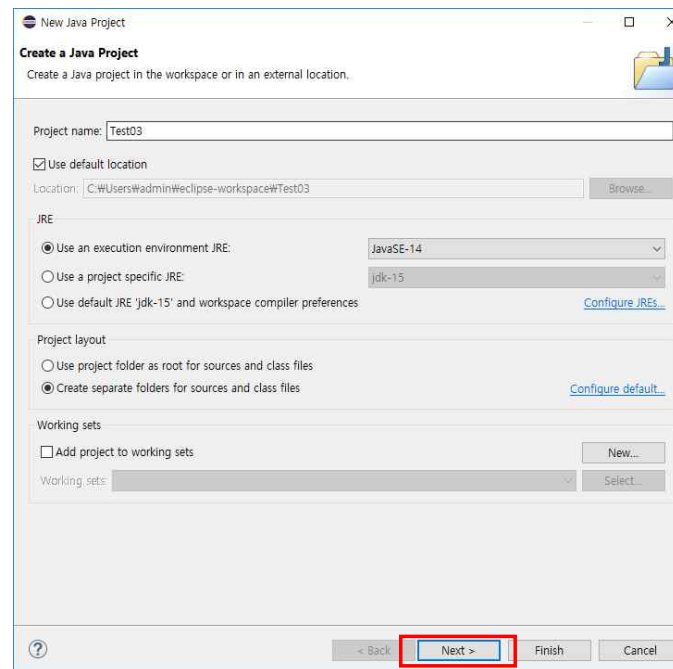
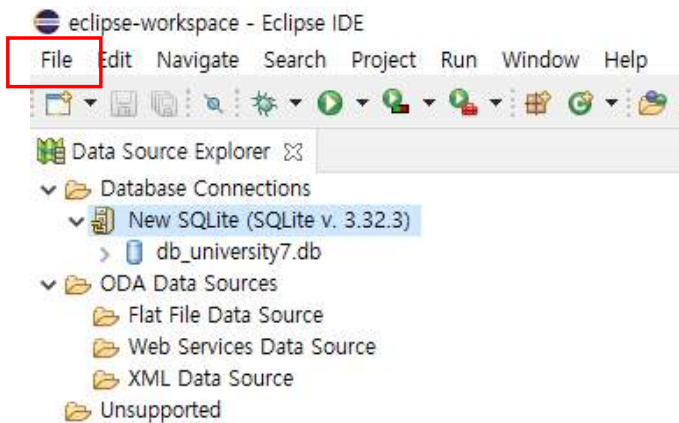


## 6. Connect SQLite JDBC driver

- ▼  Database Connections
  - ▼  New SQLite (SQLite v. 3.32.3)
    - >  db\_university7.db
- ▼  ODA Data Sources
  -  Flat File Data Source
  -  Web Services Data Source
  -  XML Data Source
  -  Unsupported

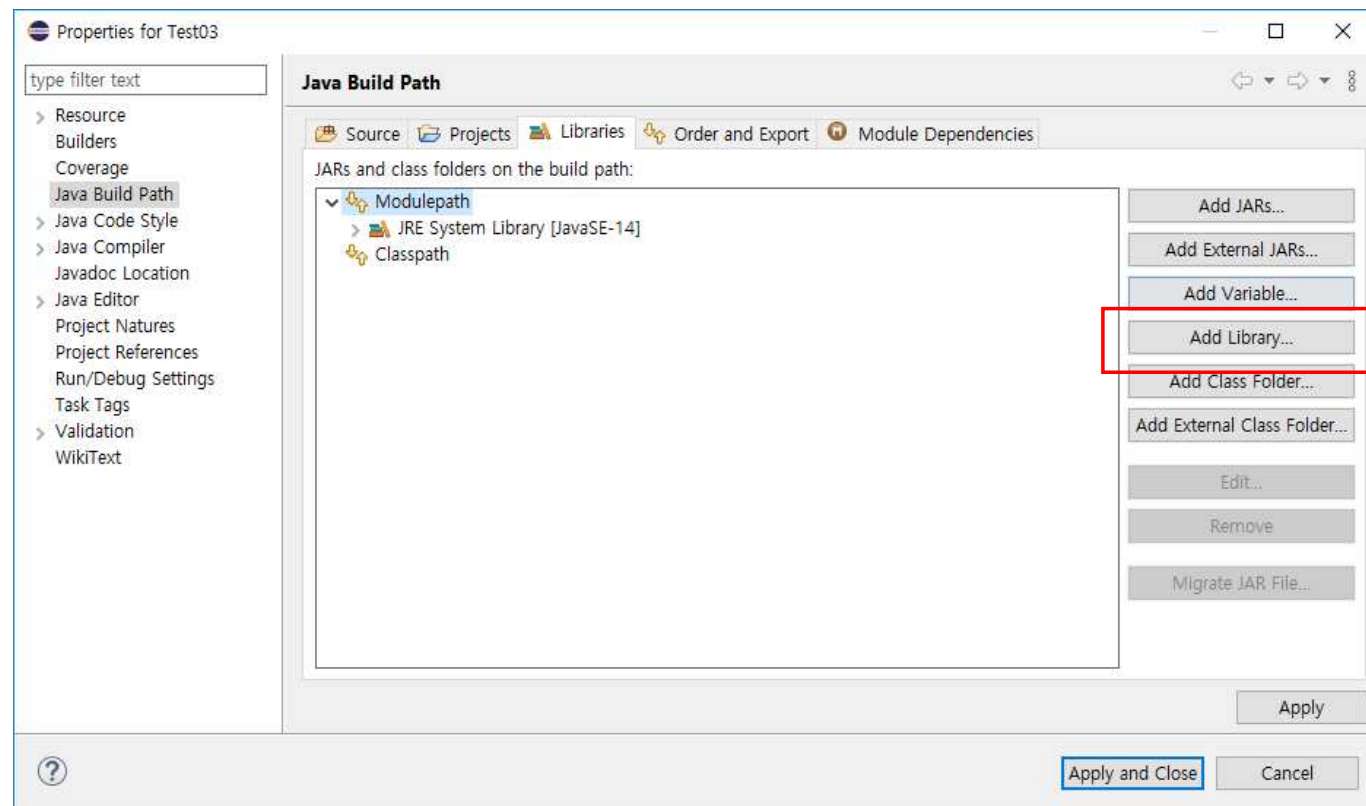
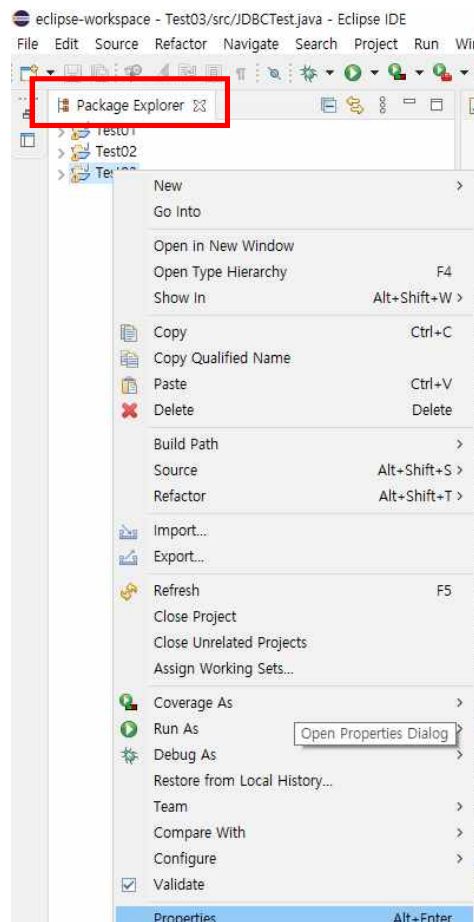
## 6. Connect SQLite JDBC driver

- "File" -> "New" -> Select "Java Project"

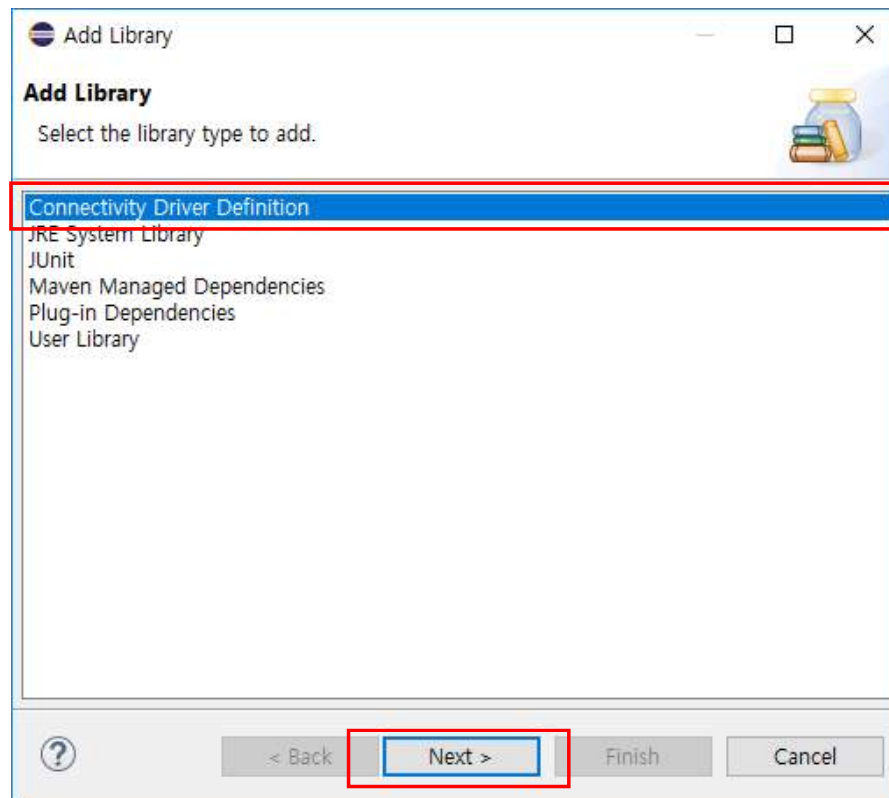


## 6. Connect SQLite JDBC driver

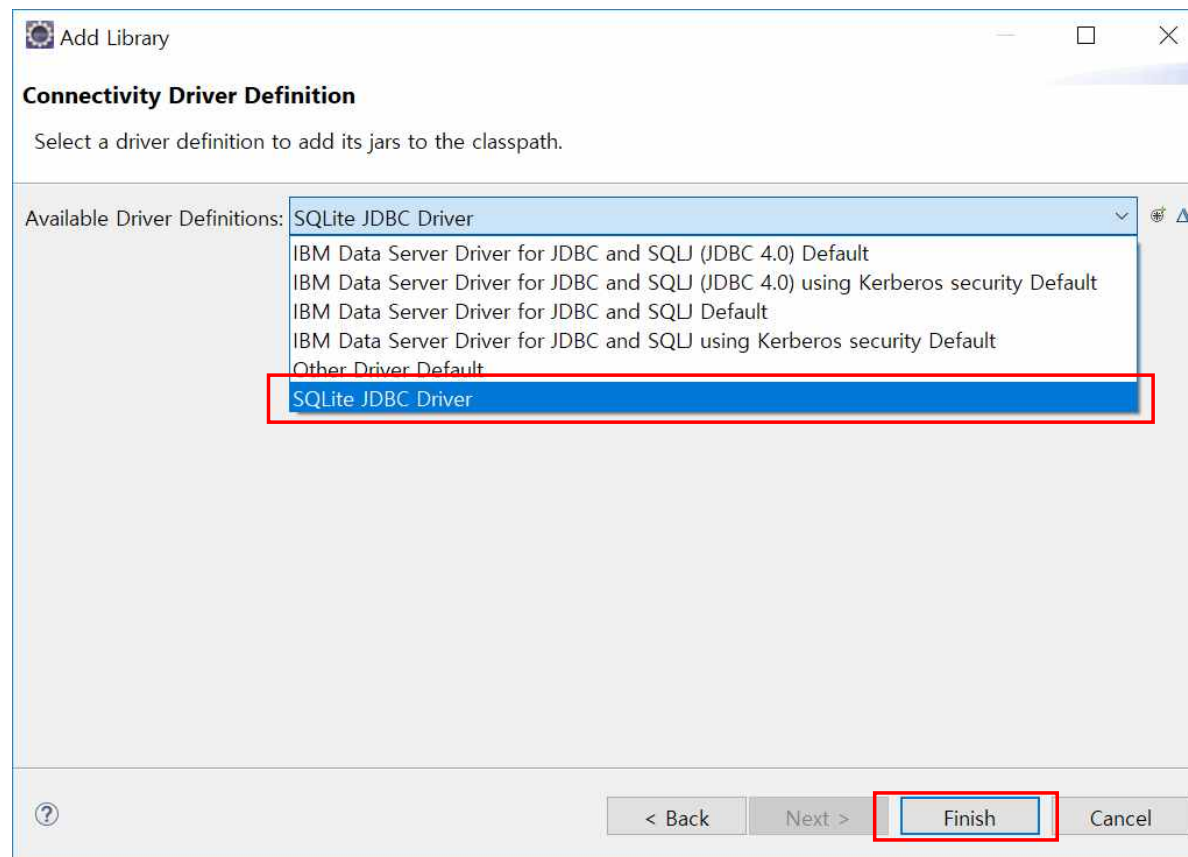
"Window" -> "Show View" -> "Package Explorer"



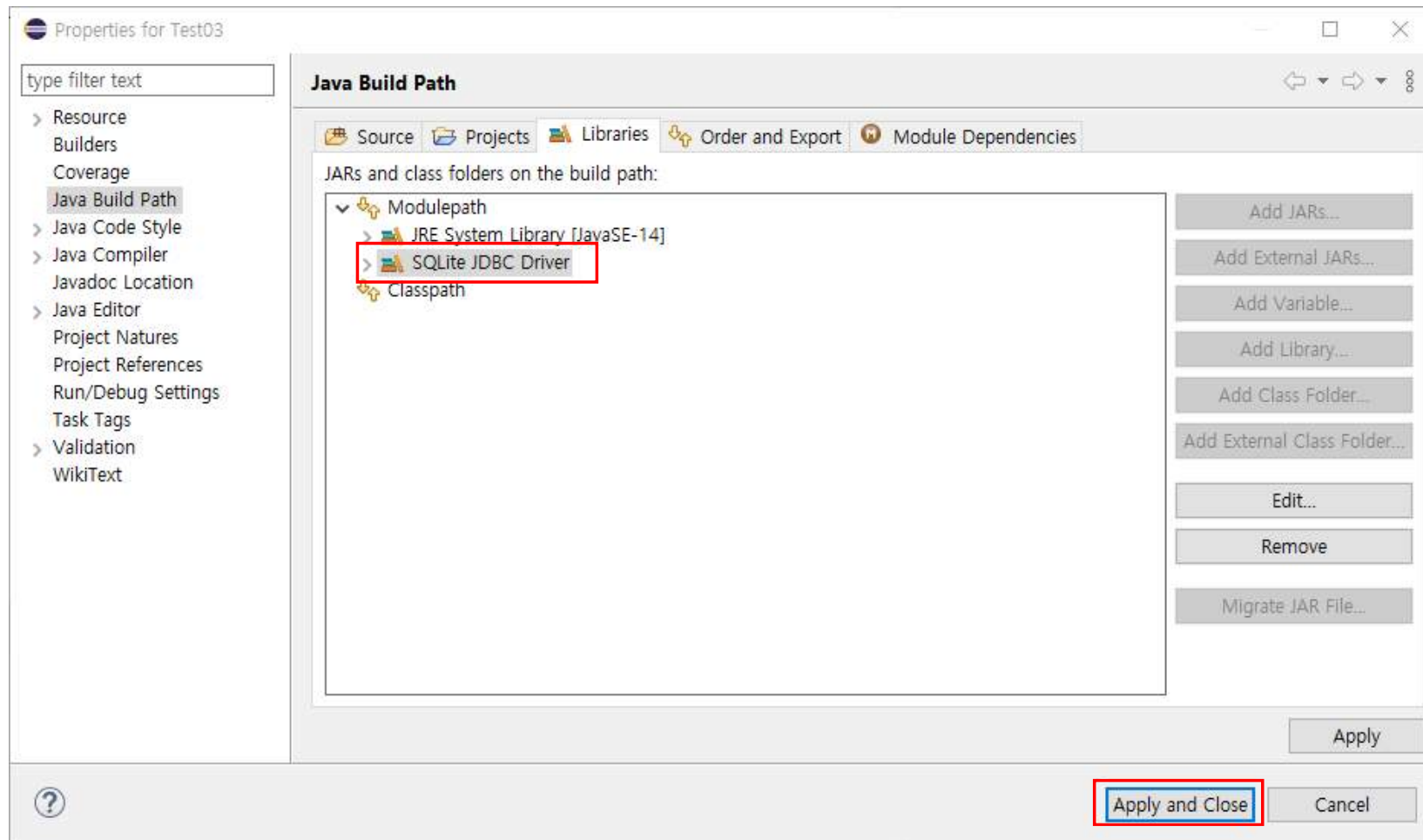
## 6. Connect SQLite JDBC driver



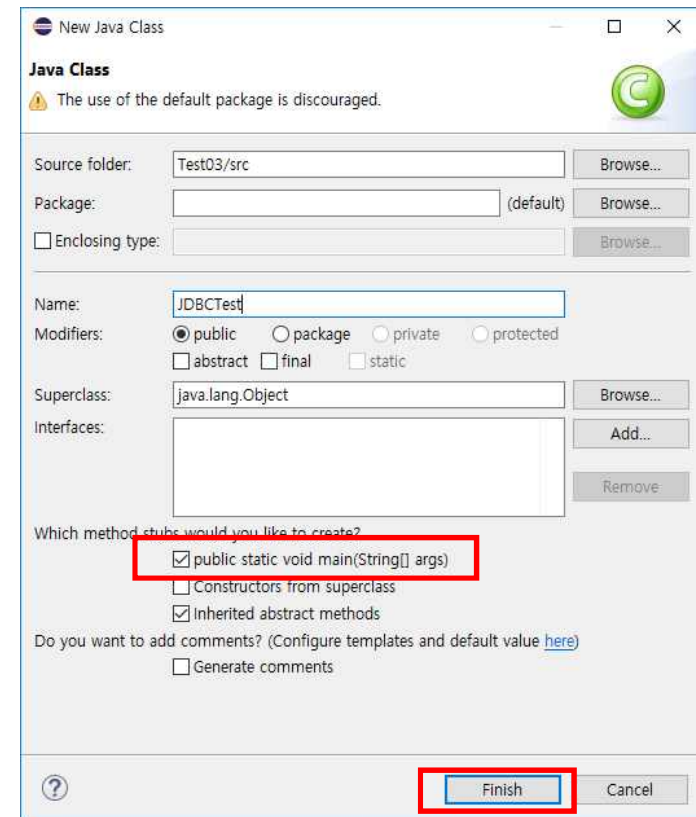
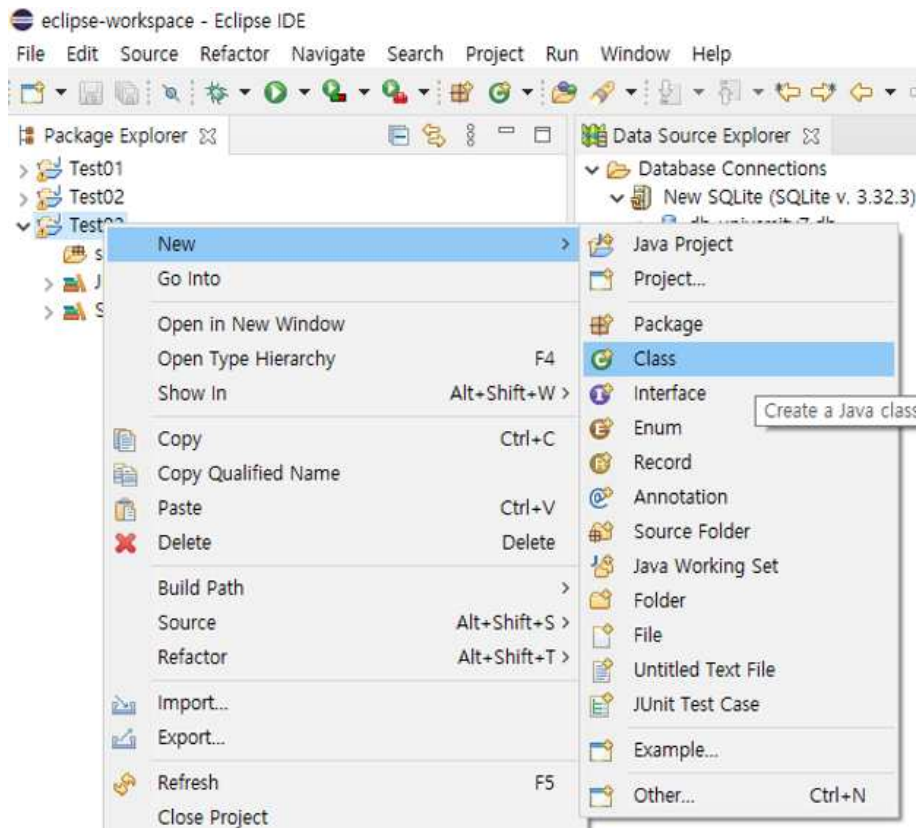
## 6. Connect SQLite JDBC driver



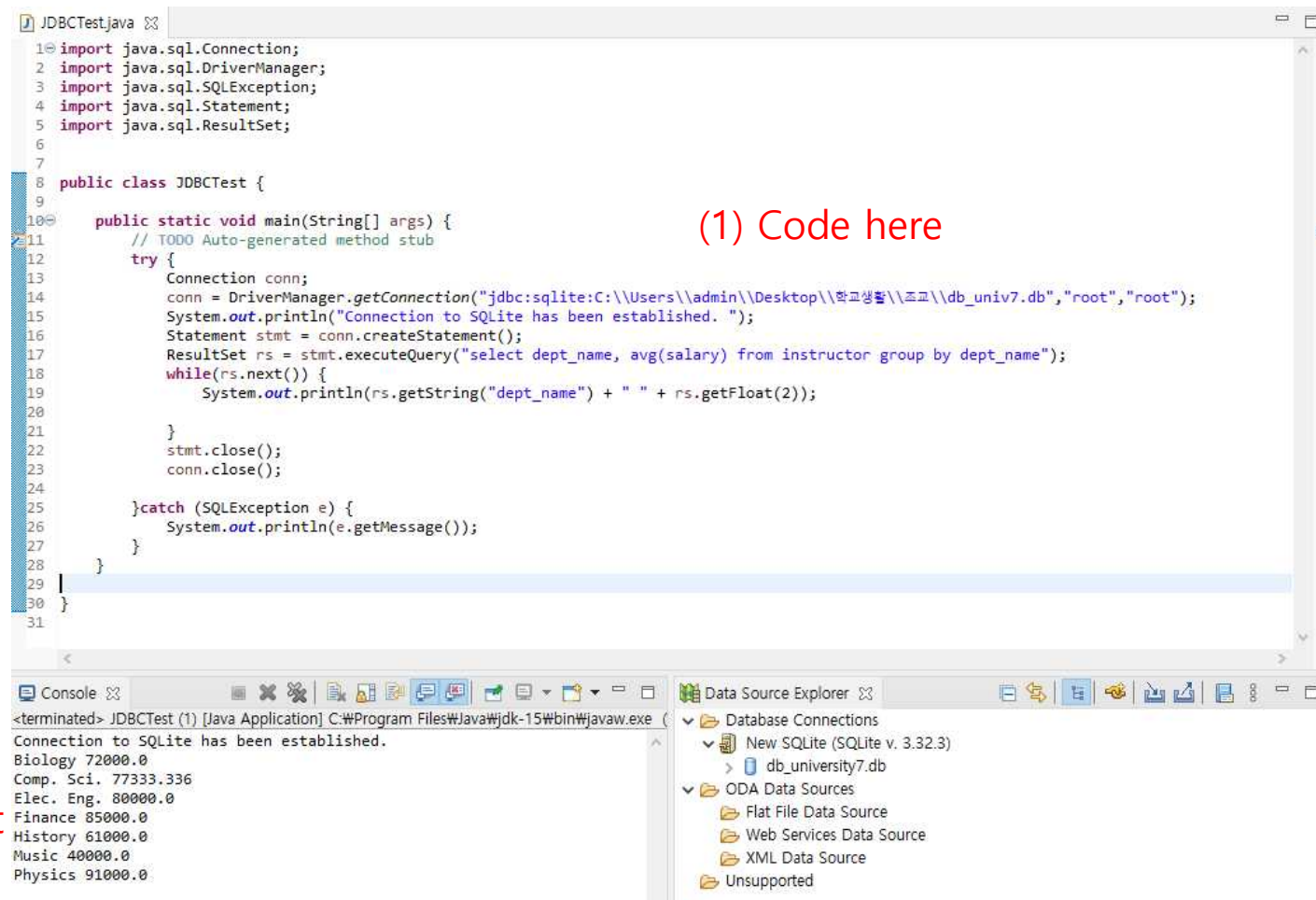
## 6. Connect SQLite JDBC driver



# 7. Create new class and start coding



## 7. Create new class and start coding



The screenshot shows an IDE with a Java file named JDBCTest.java. The code imports necessary JDBC classes and implements a main method that connects to a SQLite database, executes a query to retrieve department names and average salaries, and prints the results. A red arrow points from the text '(2) Check the result' to the console output.

```
1 import java.sql.Connection;
2 import java.sql.DriverManager;
3 import java.sql.SQLException;
4 import java.sql.Statement;
5 import java.sql.ResultSet;
6
7
8 public class JDBCTest {
9
10     public static void main(String[] args) {
11         // TODO Auto-generated method stub
12         try {
13             Connection conn;
14             conn = DriverManager.getConnection("jdbc:sqlite:C:\\Users\\admin\\Desktop\\학교생활\\조교\\db_univ7.db", "root", "root");
15             System.out.println("Connection to SQLite has been established. ");
16             Statement stmt = conn.createStatement();
17             ResultSet rs = stmt.executeQuery("select dept_name, avg(salary) from instructor group by dept_name");
18             while(rs.next()) {
19                 System.out.println(rs.getString("dept_name") + " " + rs.getFloat(2));
20             }
21             stmt.close();
22             conn.close();
23
24         } catch (SQLException e) {
25             System.out.println(e.getMessage());
26         }
27     }
28 }
29
30
31
```

(1) Code here

(2) Check the result

Console Output:

```
<terminated> JDBCTest (1) [Java Application] C:\Program Files\Java\jdk-15\bin\javaw.exe
Connection to SQLite has been established.
Biology 72000.0
Comp. Sci. 77333.336
Elec. Eng. 80000.0
Finance 85000.0
History 61000.0
Music 40000.0
Physics 91000.0
```

Data Source Explorer:

- Database Connections
  - New SQLite (SQLite v. 3.32.3)
    - db\_university7.db
- ODA Data Sources
  - Flat File Data Source
  - Web Services Data Source
  - XML Data Source
  - Unsupported