Download & Install

Please google if you don't know how to download and install below tools.

Note: It is better to put maven and tomcat to the same folder, for example: ~/Documents/software

- Apple Mac with M chip please pick **ARM version**(otherwise use **x86**)

JDK

17 : https://www.oracle.com/java/technologies/downloads/#java17

Note: please only download **JDK 8*(version). Other versions might result in bugs in future projects and all the big companies are currently using Java 8. Also make sure you are** downloading JDK not JRE**.
New: There are several reasons for choosing JDK 17 as the preferred version. One of them is that one of our repositories includes JDK 11 features, which require JDK 11 or a higher version to be compiled and executed correctly. Additionally, JDK 17 is supported by Spring 3.0, unlike JDK 8 which is limited in its compatibility. Moreover, JDK 17 is gaining popularity in the developer community, making it a favorable choice for improved performance, security updates, and new language features. By adopting JDK 17, we can benefit from the latest advancements and ensure better compatibility with modern libraries and frameworks.

Java IDE

IntelliJ: https://www.jetbrains.com/idea/download/

Note:

- Download **IntelliJ Ultimate** (not the community version) and its **NOT** free. You can use your **edu address or your friends edu address** to get a 1 year of free trial.
  - Optional IDE -- **VScode** (NOT **Eclipse**) <mark>NO Option, IntelliJ is the only IDE</mark>
- If you don't have edu email, you can buy the account in Taobao.

Run Sample Java:

1. Print Hello World from both IDE.

1. Note: you need to add your JDK to your IDE's class path.

2. Reverse String

    1. "abcdef" -> "fedcba"

Maven

Tutorial: https://www.baeldung.com/install-maven-on-windows-linux-mac

Tomcat(web server/container) -- optional

https://tomcat.apache.org/download-90.cgi

Database

MySQL*(Relational DB)

https://dev.mysql.com/downloads/

Note: Download **MySQL Community Server** and **MySQLWorkBench**(SQL IDE) (version 8.x)

![image-20220808230703959](/Users/charles/Library/Application Support/typora-user-images/image-20220808230703959.png)

- **MySQL Workbench** is just a graphic user interface. You need both to get it working.

- After downloading and installing those two, create a table with 3 columns: ID, Name, Phone number.

- Add 2 entries to the table.

- Query your table.

NoSQL

Please download and install the below databases. It is **optional** to learn how to do **CRUD(Crete, Read, Update, Delete)** with the two databases.

- **MonogoDB**

    - https://www.mongodb.com/try/download/community

- **Cassandra**

    - https://cassandra.apache.org/_/index.html