



## Lab Session 2 : Maven and IntelliJ IDEA

### Task 1: Download and Install Maven

- Introduction: Apache Maven is a software project management and comprehension tool. Maven is used to compile, test and deploy Java systems. Maven can be used with other IDE like Eclipse or IntelliJ IDEA.

- Download Maven:

<http://maven.apache.org/download.cgi>

- Install Maven (here instruction is given for Windows):

**Step 1:** unzip downloaded **apache-maven-3.3.9-bin.zip** file into a folder where you prefer to store Maven projects. For example, if your preferred folder is C:\Apache, then you should have the folder: **C:\Apache\apache-maven-3.3.9**

**Step 2:** Set “Environment Variables”

- Open Control Panel → System → Advanced System Settings → choose tab “Advanced”, click button “Environment Variables”
- Add to the end of variable **PATH** the string C:\Apache\apache-maven-3.3.9\bin

**Step 3:** Check to see if Maven is installed successfully

- Open console, execute the following command:

```
mvn -version
```

- If you see the output in your console similarly to the following, then you have installed Maven successfully:

```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 10.0.10240]
(c) 2015 Microsoft Corporation. All rights reserved.

C:\Users\phuong>mvn -version
Apache Maven 3.3.9 (bb52d8502b132ec0a5a3f4c09453c07478323dc5; 2015-11-10T08:41:47-08:00)
Maven home: C:\Program Files\Apache Software Foundation\apache-maven-3.3.9
Java version: 1.8.0_77, vendor: Oracle Corporation
Java home: C:\Program Files\Java\jdk1.8.0_77\jre
Default locale: en_US, platform encoding: Cp1252
OS name: "windows 10", version: "10.0", arch: "amd64", family: "dos"

C:\Users\phuong>
```

## Task 2: Download and Install IntelliJ IDEA Community Version

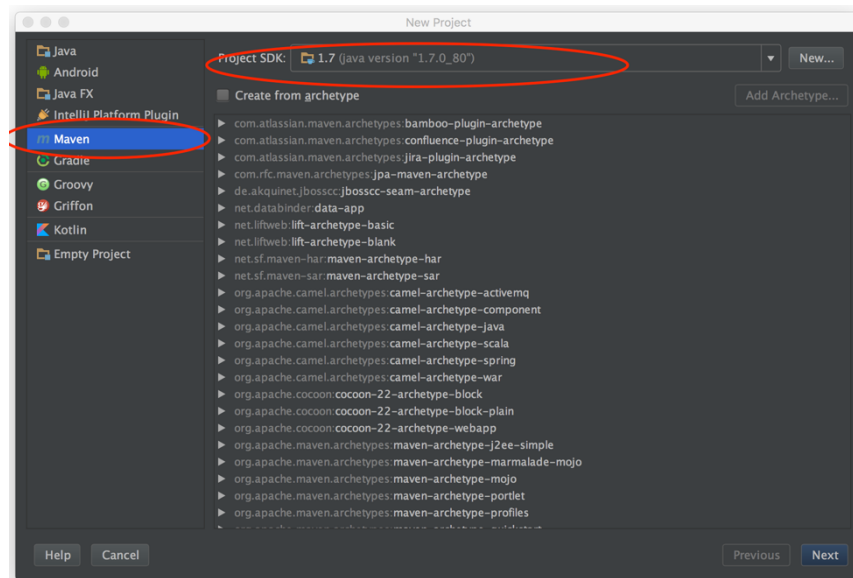
- Introduction: IntelliJ IDEA Community Version is an open source version of IntelliJ IDEA, an IDE (Integrated Development Environment) for Java and other programming languages such as Scala.

- Download and install IntelliJ IDEA Community Version:

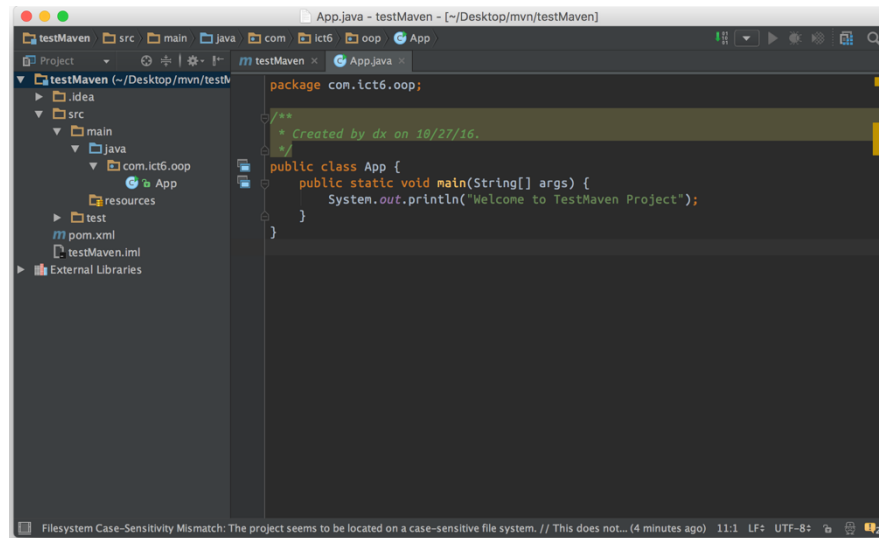
<https://www.jetbrains.com/idea/download/#section=windows>

## Task 3: Create a Java project with Maven and IntelliJ IDEA Community Version

- Open IntelliJ IDEA
- Select “Create New Project”
- Create an IntelliJ IDEA project with Maven: click on “Maven” option on the left menu
- Choose Project SDK (Software Development Kit)



- Enter the package name, project name and project location
  - GroupId (equal to the package name): com.ict6.oop
  - ArtifactId (equal to the project name): testMaven
  - Project name: testMaven
  - Project location: ~/Desktop/mvn/testMaven (give your preferred folder to your project)
- Click the “finish” button. Now you have created a maven project in IntelliJ IDEA.
- To continue:
  - Create a new package “com.ict6.oop” in Java folder
  - Create a new Java class “App” in “com.ict6.oop” package



- Build a maven project in IntelliJ IDEA:
  - Select “testMaven” project
  - Select “Build menu” → “Rebuild Project” option

You can see the output in IntelliJ IDEA Console:

“10:03:35 PM Compilation completed successfully in 2s 172ms”

- Run Maven-based Java application in IntelliJ IDEA:
  - Select “testMaven” project
  - Right click on App.java to open context menu
  - Select “Run App.main()” option

You can see the output in IntelliJ IDEA Console:

“Welcome to TestMaven Project”

**Task 4:** Try to do the exercises in “Labwork1-extra” using IntelliJ IDEA with/without Maven.

**Notes:** if you prefer, you can use other IDEs such as Eclipse, NetBeans, etc. instead of IntelliJ IDEA