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## 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:



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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)

	New Project	
🖬 Java 🌐 Android	<b>Project SDK: La 1.7</b> (java version "1.7.0_80")	
🗖 Java FX	Create from archetype	
🖋 Intellil Platform Plugin		
m Mayan	com.atiassian.maven.archetypes:bamboo-plugin-archetype	
AD	com atlassian maven archetypes.comuence-pidgin-archetype	
Gradie	<ul> <li>com rfc maven archetypes:jna-maven-archetype</li> <li>com rfc maven archetypes:ina-maven-archetype</li> </ul>	
6 Groovy	de.akquinet.ibosscc:ibosscc-seam-archetype	
Griffon	▶ net.databinder:data-app	
🚩 Kotlin	net.liftweb:lift-archetype-basic	
Kotiin	net.liftweb:lift-archetype-blank	
Empty Project	net.sf.maven-har:maven-archetype-har	
	net.sf.maven-sar:maven-archetype-sar	
	org.apache.camel.archetypes:camel-archetype-activemq	
	org.apache.camel.archetypes:camel-archetype-component	
	org.apache.camel.archetypes:camel-archetype-java	
	org.apache.camel.archetypes:camel-archetype-scala	
	org.apache.camel.archetypes:camel-archetype-spring	
	org.apache.camel.archetypes:camel-archetype-war	
	org.apache.cocoon:cocoon-22-archetype-block	
	org.apache.cocoon:cocoon-22-archetype-block-plain	
	org.apache.cocoon:cocoon-22-archetype-webapp	
	org.apache.maven.archetypes:maven-archetype-j2ee-simple	
	org.apache.maven.archetypes:maven-archetype-marmalade-mojo	
	org.apache.maven.archetypes:maven-archetype-mojo	
	org.apache.maven.archetypes:maven-archetype-portlet	
	org.apacne.maven.arcnetypes.maven-arcnetype-profiles	
Help Cancel		Previous Next

- Enter the package name, project name and project location
  - GroupId (equal to the package name): com.ict6.oop
  - o 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:
  - o Create a new package "com.ict6.oop" in Java folder
  - o Create a new Java class "App" in "com.ict6.oop" package



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- 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
  - $\circ~$  Right click on App.java to open context menu
  - o 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