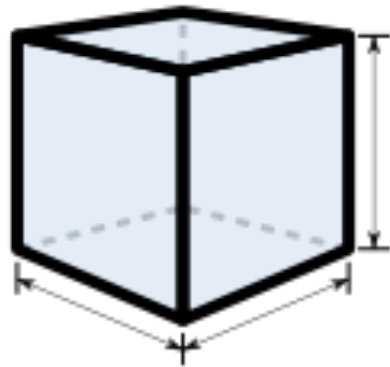




prof. Giovanni Stilo

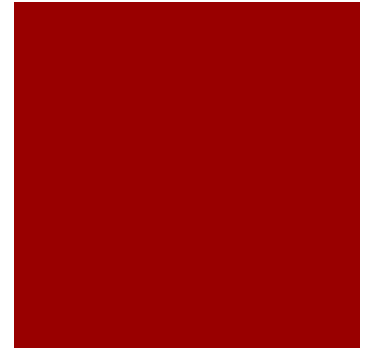


Take the best Maven on
your side.

Very fast introduction and basic principles to Maven

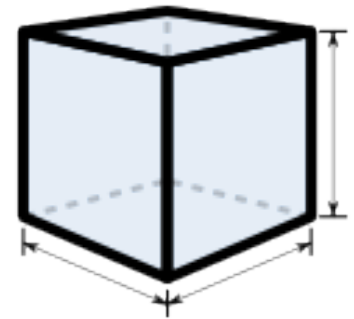
Maven

- Maven is a project **development management** and comprehension tool.
- Based on the concept of a **project object model**:
 - **builds**
 - **dependency** management
 - **documentation** creation
 - site **publication**
- Maven can be extended by plugins to utilize a number of other development tools for **reporting** or the **build process**.



Project Object Model

- Maven is based around the central concept of a **build lifecycle**. What this means is that the process for building and *distributing* a particular *artifact* (project) is **clearly defined**.
- **Learn** a **small set** of commands **to build** any Maven project, and the POM will **ensure** they get the desired results they.
- There are three built-in build lifecycles:
 - **Default** / Install (handles your project deployment)
 - **Clean** (handles project cleaning)
 - ~~**Site** (creation of your project's site documentation)~~



Dependencies

- **Dependency management** is one of the key features of Maven that is **best** known to users and is one of the areas where Maven **excels**.
- There is not much difficulty in managing dependencies for a single a project, but when you start getting into dealing with multi-module projects and applications (that consist of tens or hundreds of modules) this is where Maven can help you a great deal in maintaining a high degree of control and stability.

- An artifact id defined by:

<dependency>

<groupId>*dependencies-group***</groupId>**

<artifactId>*dependency-name***</artifactId>**

<version>*dependency-version***</version>**

</dependency>



POM File



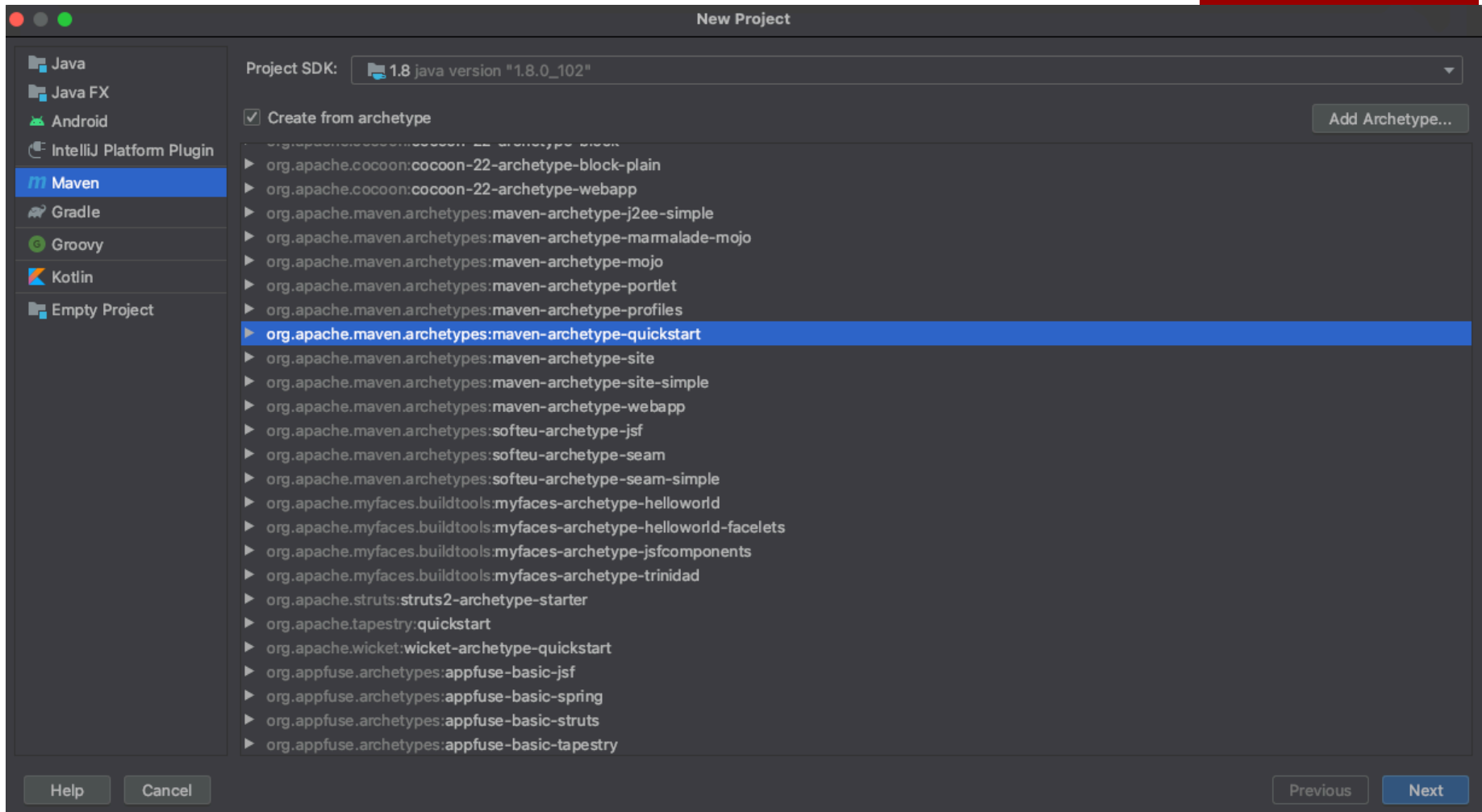
```
<project xmlns="http://maven.apache.org/POM/4.0.0"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://maven.apache.org/POM/4.0.0
http://maven.apache.org/xsd/maven-4.0.0.xsd">
  <modelVersion>4.0.0</modelVersion>
  <groupId>it.domain.project-name</groupId>
  <artifactId>artifact-name</artifactId>
  <version>1.0</version>
  <packaging>jar</packaging>
  <dependencies>
    <dependency>
      <groupId>org.twitter4j</groupId>
      <artifactId>twitter4j-stream</artifactId>
      <version>4.0.1</version>
    </dependency>
    .
    . More Dependencies
    .
  </dependencies>
</project>
```

Excercise

- **Install** or check that your IDE support **Maven**, *Netbeans* or **IDEA InttelliJ** (suggested) have native support (to Python as well).
- **Create** a maven **project** (pom.xml) and use the following libraries as **dependencies**
 - search the web for the needed **snippets**:
 - **twitter4j-core**
 - **twitter4j-stream**



Create Maven project in Netbeans



```
<pluginRepositories>
  <pluginRepository>
    <id>central</id>
    <name>Central Repository</name>
    <url>https://repo.maven.apache.org/maven2</url>
    <layout>default</layout>
    <snapshots>
      <enabled>false</enabled>
    </snapshots>
    <releases>
      <updatePolicy>never</updatePolicy>
    </releases>
  </pluginRepository>
</pluginRepositories>
<repositories>
  <repository>
    <id>central</id>
    <name>Central Repository</name>
    <url>https://repo.maven.apache.org/maven2</url>
    <layout>default</layout>
    <snapshots>
      <enabled>false</enabled>
    </snapshots>
  </repository>
</repositories>
```

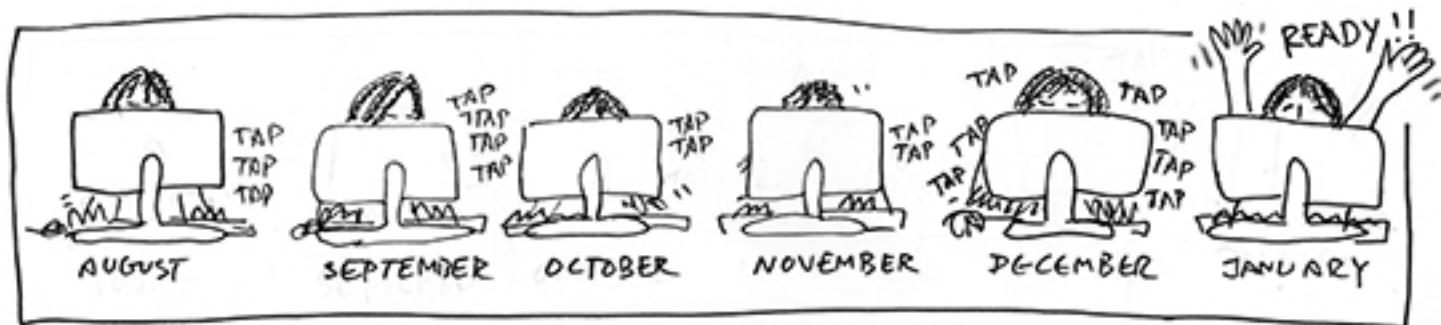


Proxy ~/.m2/settings.xml

```
<settings xmlns="http://maven.apache.org/SETTINGS/1.0.0"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://maven.apache.org/SETTINGS/1.0.0
http://maven.apache.org/xsd/settings-1.0.0.xsd">
...
<proxies>
  <proxy>
    <id>myproxy</id>
    <active>true</active>
    <protocol>http</protocol>
    <host>151.100.17.8</host>
    <port>3128</port>
    <username>USERNAME</username>
    <password>PASSWORD</password>
    <nonProxyHosts>*.google.com | ibiblio.org</nonProxyHosts>
  </proxy>
</proxies>
...
</settings>
```



Let's Try?!?!?



Preparing Next Lesson

- Register to Twitter as common User
- Goto: <https://apps.twitter.com/>
- Login with credentials and generate new app.
- Generate all keys:
 - Consumer Key (API Key)
 - Consumer Secret (API Secret)
 - Access Token
 - Access Token Secret

