**Maven : Steps to Create a Project**

mvn --version

**Maven Phases**

Although hardly a comprehensive list, these are the most common default lifecycle phases executed.

validate: validate the project is correct and all necessary information is available

compile: compile the source code of the project

test: test the compiled source code using a suitable unit testing framework. These tests should not require the code be packaged or deployed

package: take the compiled code and package it in its distributable format, such as a JAR.

integration-test: process and deploy the package if necessary into an environment where integration tests can be run

verify: run any checks to verify the package is valid and meets quality criteria

install: install the package into the local repository, for use as a dependency in other projects locally

deploy: done in an integration or release environment, copies the final package to the remote repository for sharing with other developers and projects.

There are two other Maven lifecycles of note beyond the default list above. They are

clean: cleans up artifacts created by prior builds

site: generates site documentation for this project

**Building a Console Application**   
  
mvn -B archetype:generate -DgroupId=griffinapps -DartifactId=griffinfirstapp -DarchetypeArtifactId=maven-archetype-quickstart -DarchetypeVersion=1.4

cd griffinfirstapp

Under this directory you will notice the following standard project structure.

my-app

|-- pom.xml

`-- src

|-- main

| `-- java

| `-- com

| `-- mycompany

| `-- app

| `-- App.java

`-- test

`-- java

`-- com

`-- mycompany

`-- app

`-- AppTest.java

The src/main/java directory contains the project source code, the src/test/java directory contains the test source, and the pom.xml file is the project's Project Object Model, or POM.

mvn validate

mvn compile

mvn test

**Build the package**  
  
mvn package

The command line will print out various actions, and end with the following:

...

[INFO] ------------------------------------------------------------------------

[INFO] BUILD SUCCESS

[INFO] ------------------------------------------------------------------------

[INFO] Total time: 2.953 s

[INFO] Finished at: 2019-11-24T13:05:10+01:00

[INFO] ------------------------------------------------------------------------

cd target

java -cp griffinfirstapp-1.0-SNAPSHOT.jar griffinapps.App

Machine generated alternative text:
java -cp griffinfirstapp-1.Ø-SNAPSHOT.jar griffinapps .App 
Nelcome to Griffins World! 

mvn clean compile test package

**Building a Web Application**

mvn archetype:generate -DgroupId=griffinwebapps -DartifactId=griffinapps2 -DarchetypeArtifactId=maven-archetype-webapp -DinteractiveMode=false

mvn clean compile test package

**Maven & Git Integration**

mvn archetype:generate -DgroupId=griffinwebapps -DartifactId=griffinapps2 -DarchetypeArtifactId=maven-archetype-webapp -DinteractiveMode=false

cd griffinapps2

git init .

git remote add origin "<https://github.com/griffinlewis/Maven.git>"

git pull origin master

mvn clean compile test package

git add \*.\*

git commit -am "Maven Web App"

git push origin master