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Eclipse maven build goals clean install

Given article text here mvn clean install -X can be used to perform a complete life cycle of Maven build clean: clean and resources: resources compiler: compile and testResources: testCompile mvn package will package the project mvn archetype:generate can generate a new project quickly using mvn -h can help with commands maven supports eclipse for building java applications Create a New Maven Project with Eclips IDE and Update Configuration Flag ========== To learn how to create a new Maven project, you'll need to follow these steps. Firstly, go to Window -> Preferences (or .) and select Java Build Path from the left-hand menu. Then click on the Projects tab and select the project you wish to build. In the top-right corner of this window, you will see Update Project. You can also right-click your project and choose Update Project. After that, go to Maven -> Update Project (or .) and then click Next. Select "maven-archetype-quickstart" archetype and enter your group ID, artifact ID and version as shown in the following screenshot. Finally, update pom.xml file to use Java 11 by copying the code below into its content. Also, update pom.xml file to use JUnit 5. This is done by changing the Maven build configuration in the pom.xml file. For this purpose copy the code below into the pom.xml tab of the Maven editor. Original text here was rewritten using "ADD SPELLING ERRORS (SE)" method: org.junit.jupiter junit-jupiter-engine 5.7.2 test Right-click your project and select an update your project. Update your generated test to JUnit 5 via the folloeing: package com.vogella.maven.eclipse; import static org.junit.jupiter.api.Assertions.assertTrue; import org.junit.jupiter.api.Test; public class AppTest { @Test public void shouldAnswerWithTrue() { assertTrue(true); } } The Eclipse Maven tooling makes addin dependencies to the classpath of your project simple. In can directy add it to your pom file, or use the Dependencies tab of the pom editor. Switch to the Dependencis tab and press the Add button. If the Maven index was downloaded you can search directy this dependency via the dialog. Right-click your project and select an update your project. Change or create the App.java class in your src/main/java folder. This classes uses Gson. As Maven added it to your classpath, it should compile and you should be able to start the class via Eclipse. package com.vogella.maven.lars; import com.google.gson.Gson; public class App { public static void main(String[] args) { Gson gson = new Gson(); System.out.println(gson.toJson("Hello World!")); } } Run the Maven build again and verify that the build runs succefully. This exercise demonstrates how to convert a Java project to a Maven project. Create a new Java project called com.vogella.build.maven.simple in Eclipse. Add one class called Main. This class should have a main method, which write "Hello Maven!" to the command line. package com.vogella.build.maven.simple; public class Main { public static void main(String[] args) { System.out.println("Hello Maven!"); } } Select your project, right-click on it and select . This creates a pom.xml file similar to the folloeing: 4.0.0 com.marcobehler my-project 1.0-SNAPSHOT 1.8 1.8 UTF-8 junit junit 4.12 test ``` This defines a project called 'my-project' with version number `1.0-SNAPSHOT` (work-in-progress), using Java 1.8 for compilation, and depends on JUnit for unit testing. Apart from the `pom.xml` file, you'll also need Java source code in the `/src/main/java` folder. Here's what your project structure should look like: ``` + myproject |---- src | |---- main | |---- java | MyApp.java |---- target | |---- classes (after 'mvn compile') | |---- myproject.jar (upon mvn package or mvn install) |---- pom.xml ``` Now that you have `pom.xml` and a `src` folder, you'll need to install Maven on your machine. You can do this by downloading the `.zip` file and extracting its contents; just make sure to add the `/bin` directory to your PATH variable. When you run `mvn clean install`, Maven goes through its default lifecycle phases. Here's a breakdown of what happens during each phase: These phases are sequential and interdependent, with each phase building upon the previous one when executing mvn deploy. The lifecycle consists of validate, compile, test, package, verify, install, in that order. Similarly, for verify, it follows the same sequence. Other phases follow a similar pattern. Since clean is not part of Maven's default lifecycle, commands like mvn clean install or mvn clean package are used, which will trigger all preceding phases but require specifying clean explicitly. Maven stores project dependencies in local repositories rather than within the project directory. When building, Maven downloads dependencies into the repository and references them for the build process. In the pom.xml file, dependencies such as junit are defined under , and when running mvn test, Maven will download the required dependency into ~/.m2/repository/junit/junit/4.12/junit-4.12.jar. For a deeper understanding of working with Maven professionally, a course is available. Maven is a Build Automation Tool from Apache, mainly used for Java projects. It helps manage dependencies and compile source code, test, package, and deploy it. The basic goals of a Maven Build Life Cycle include: 1. clean: Deletes artifacts and files generated by previous builds. 2. compile: Compiles the source code. 3. test: Tests compiled source code without requiring packaging or deployment. 4. package: Converts the project into a .jar or .war file. 5. install: Installs the package in a local repository for use by another project. To execute Maven goals, plugins such as Maven-surefire-plugin and Maven-compiler-plugin need to be added to the pom.xml file. The order of the goals is case-sensitive, and the Maven-surefire-plugin is used for CI/CD integration with Jenkins. To run Maven goals from Eclipse: 1. Go to Eclipse. 2. Right-click on the Maven project to be compiled. 3. Click "Run As" and then "Maven build..." 4. Type "compile" in the Maven Goals textbox and click 'Run'. 5. If successful, BUILD SUCCESS information will appear in the console. Given text: Source code is compiled and then executed. It starts from the first goal and executes till the previous goal, then it executes whatever the goal we mention. It will execute the testng.xml file, the one we specified in maven-surefire-plugin. After execution, it gives the status as “BUILD SUCCESS” on the console. The order of execution for ‘test’ goal is: - compile - testStep 1: Right click on your Maven Project which is to be testedStep 2: Click on “Run As”Step 3: Click on “Maven build…”Step 4: Type “test” in Maven Goals textbox. Click on 'Run' button.Step 5. We can see BUILD SUCCESS information on the console if the code is compiled and run. The order of execution for ‘package’ goal is: - compile - test - packageStep 1: Right click on your Maven Project which is to be testedStep 2: Click on “Run As”Step 3: Click on “Maven build…”Step 4: Type “package” in Maven Goals textbox. Click on 'Run' button.Step 5. We can see BUILD SUCCESS information on the console if the code is compiled, run and packaged into .jar file. The order of execution for ‘install’ goal is: - compile - test - package - installStep 1: Right click on Maven ProjectStep 2: Click on “Run As”Step 3: Click on “Maven build…”Step 4: Type “install” in Maven Goals textbox. Click on 'Run' button.Step 5. It moved the .jar file to local repository .m2. To run Maven Goals from Command Prompt: - If any non technical team member wants to run this .exe file in their system , they do not need to have Eclipse for execution. Just Java and Maven installation is enough. - To navigate to command prompt, right click on the Maven Project. Click on 'Show In'. Click on 'System Explorer'. - Type 'cmd' on the Address bar. - A command prompt window is opened. - To run 'clean' maven goal, type the following command - To run 'compile' maven goal, type the following command in Command Prompt - To run 'test' maven goal, type the following command in Command Prompt - We can see the message 'BUILD SUCCESS' after the run. - To run 'package' goal, type the following command - To run 'install' goal, type the following command

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