

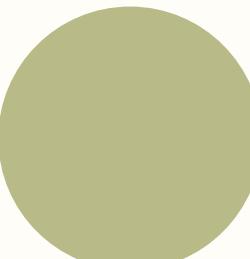
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MAVEN

WHAT IS MAVEN + AND KEY CONCEPTS ←

Maven is a powerful build automation tool for Java projects, simplifying the management of builds, dependencies, and documentation. The core of Maven is the Project Object Model (POM), defined in the pom.xml file. Maven's build lifecycle includes phases like validate, compile, test, and package, which structure the build process.



PROJECT SETUP



MAVEN

Creating a Maven project is straightforward using Maven archetypes, which generate project templates. The POM file is central, containing project coordinates (<groupId>, <artifactId>, <version>), dependencies, and plugins.

Dependencies are external libraries your project needs, and **plugins** extend Maven's capabilities.

MANAGING DEPENDENCIES

Dependencies are added to your project by specifying them in the `<dependencies>` section of `pom.xml`. Each dependency can have a scope such as `compile`, `provided`, `runtime`, or `test`, which determines when the dependency is available in the build lifecycle. Managing these effectively is crucial for a stable build.



BUILDING AND RUNNING PROJECTS

Maven provides simple commands for various build tasks: mvn compile compiles the code, mvn test runs tests, and mvn package creates a JAR or WAR file. You can also install your package to the local repository with mvn install or deploy it to a remote repository using mvn deploy. Common plugins like Surefire and Compiler add specific functionality to your build.

Best Practices and Resources

To get the most out of Maven, keep your POM files clean, avoid excessive dependencies, and regularly update them. Resources like the Maven Official Documentation and community forums on Stack Overflow are valuable for learning more and troubleshooting issues.

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"SurName" => null
"username" => "admin"
"gender" => null
"email" => "info@mecanbay.com"
"email_verified_at" => null
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"isActive" => 1
"user_role" => "Administrator"
"avatar" => "assets/img/users/default-user.png"
"remember_token" => "0dwr7SXo3pwu17f1Rt1bgokewi
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"updated_at" => "2022-01-02 15:01:18"
```