**Maven:**

* A dependency that depends on other dependencies(**transitive dependencies**).

Eg: if we want to download depdency X and dependency Y is downloaded along with X. Then Y is called transitive dependency. Here X is dependent on Y.

* Maven provides **ArchType** – which is a templating tool. Use existing template to create project.
* **Effective POM or super POM** – which will have in detail configuration details.
* Don’t use snapshot versions because they are under development.
* Group – package name for class  
  Artifact ID – another project referring to your project (similar to class name)  
  POM – Project Object Model
* Spring-boot-starter is having a lot of other dependencies called transitive dependency’s.
* Spring-boot-starter-test is for writing unit tests.
* **Difference between maven dependencies and Spring dependencies** ?  
  Spring dependencies are some thing inside specific class , based on annotations it will autowire.  
  Maven dependencies are for building a project.
* Parent of spring-boot-starter-parent is spring-boot-dependencies.
* If any project want to use your project as dependency then they can make use of your groupId, artifactId and version in pom.xml file.
* **Maven build lifecycles** :  
  when we run a maven command, maven build life cycle is used.  
  Validate, Compile, Test, Package, Integration Test, Verify, Install, deploy
* **Maven Commands**:  
  In STS you can directly use run as Maven build and give –version instead of specifying mvn at beginning.  
  mvn --version (prints apache maven version)  
  mvn compile (compile the source files)  
  mvn test-compile (compile source and test files)  
  mvn clean (Maven Clean in dropdown) - target folder is cleared  
  mvn test (Maven test in dropdown) – to run unit test  
  mvn package – creates a jar  
  mvn help – effective -pom for displaying all dependencies  
  mvn dependency – show tree structure of dependencies
* **Versioning** scheme in spring   
  Major.Minor.Patch[-modifier]  
  modifier is optional  
  Major – significant amount of work to upgrade (10.0.0 to 11.0.0)  
  Minor – little to no work to upgrade (10.1.0 to 10.2.0)  
  patch – No work to upgrade (10.5.4 to 10.5.5)  
  Modifier – indicates whether it is release/milestone/RC(Release candidates)/snapshot
* Central maven repository is only having released versions.
* Spring milestones repository will contain milestones and release candidates.
* **Order of versions** :  
  snapshot -> M1 -> M2 -> RC1 -> RC2 -> release (modifier is absent)
* **Recommendations**:  
  avoid snapshots  
  use only release versions in production.

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