Differentiate between the different dependency scopes: compile, runtime, test, provided using different dependencies being defined in your pom.xml.

Ans. -

1. **Compile scope** - It is default scope if any scope is not defined or explicitly defined as compile. It is used when the dependency is required at compilation , execution and testing as well. The dependency with this scope is included in the final package and available for child projects.

ex - <dependency> <groupId>log4j</groupId> <artifactId>log4j</artifactId>

<scope>compile</scope>

</dependency>

1. **Runtime Scope** - Those dependencies which are not required at compile time but should be available at runtime these are included in the final package.

ex - <dependency> <groupId>mysql</groupId>

<artifactId>mysql-connector</artifactId>

<scope>runtime</scope>

</dependency>

1. **Test scope** - Those dependencies which are required when testing the system methods whether as unit testing or integration testing. These are not included in final package and not available for child packages.

ex -

<dependency>

<groupId>junit</groupId>

<artifactId>junit</artifactId>

<scope>test</scope>

</dependency>

1. **Provided scope** - These dependencies are required at compile time and test phase but not included in final package because these are provided but the runtime environment

ex-java servlet api