

Maven:

1) Definition:

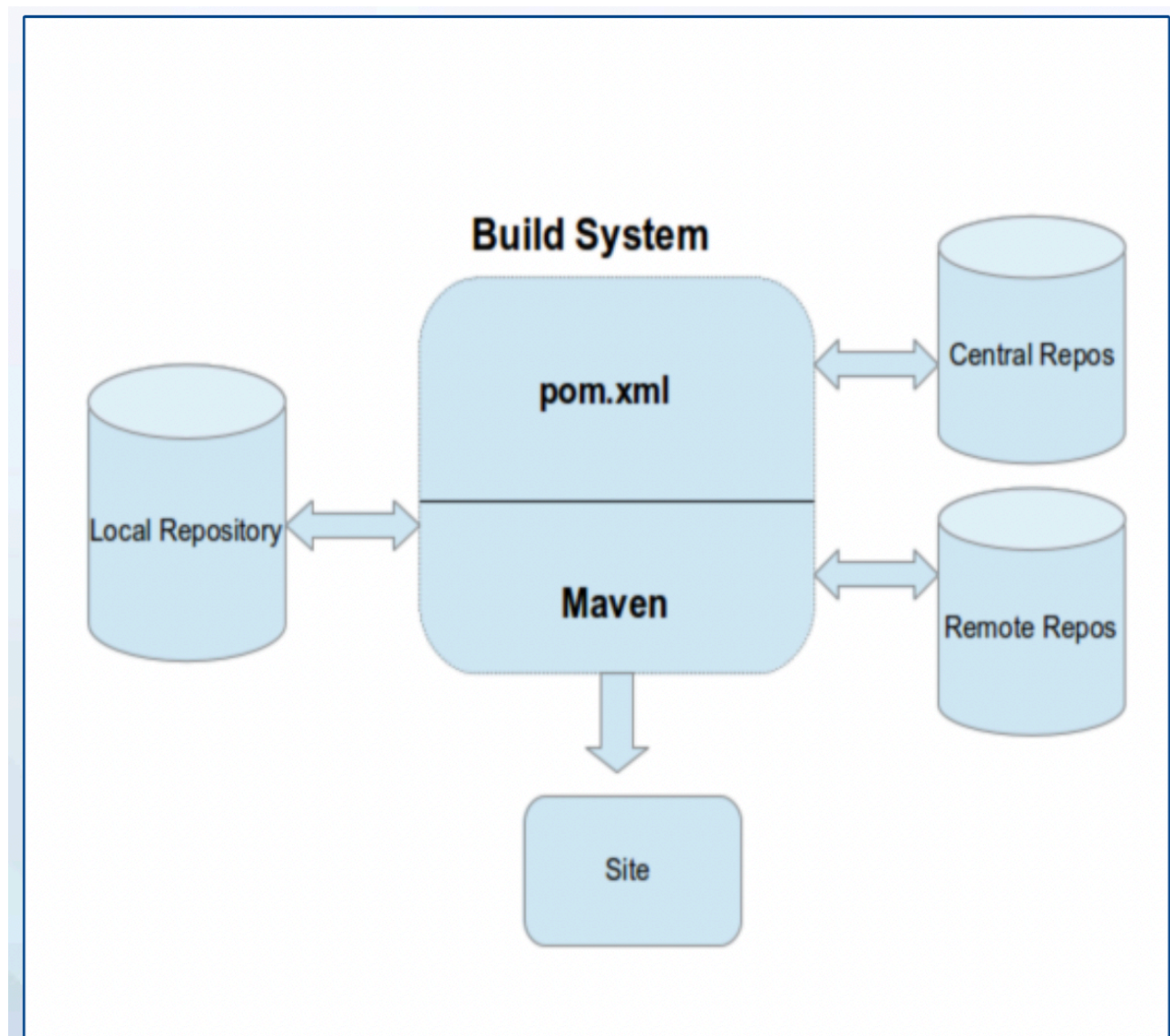
- 1) It is a software project management and comprehension tool
- 2) It is based on concept of POM(Project Object Model)

2) Objectives:

- 1) Making the build process easy
- 2) Provides a uniform build system
- 3) Provides quality project information
- 4) Provides guidelines for best practices
- 5) Allows transparent migration of new features

3) Architecture:

- 1) When we add dependencies in the POM, it will look into:
 - 1) Local Repository
 - 2) Central Repository
 - 3) Remote Repository



4) **POM:**

1) **Definition:**

- 1) Project Object Model
- 2) General Configurations: projects name, owner, dependencies on other projects
- 3) Individual phases of build as well -> add them as plugins

2) **Configurations:**

- 1) Project Dependencies
- 2) Plugins
- 3) Goals
- 4) Build profiles
- 5) Project version
- 6) Developers
- 7) Mailing list

3) **Basics:**

- 1) <groupId> -> unique for my project
- 2) <artifactId> -> generally name of the project
- 3) <version> -> used along with the above two to separate versions
- 4) <dependencyManagement> -> used in case of parent child
- 5) <dependencies>
- 6) <plugins>:
 - 1) Build:
 - 1) Executed during the build
 - 2) <build/> -> tag
 - 2) Reporting:
 - 1) Executed during the site generation
 - 2) Configured in <reporting />-> tag
 - 3) Should have basic info -> groupId, artifactId, version
 - 4) Used For:
 - 1) Creating Jar
 - 2) Creating War
 - 3) Compile code files
 - 4) Unit testing of code
 - 5) Create project documentation
 - 6) Create project reports

5) **Lifecycles:**

1) Standard:

- 1) Clean
- 2) default(or build)
- 3) Site

2) Typical Build lifecycle:

- 1) Validate
- 2) Compile
- 3) Test
- 4) Package
- 5) Integration Test
- 6) Verify
- 7) Install
- 8) Deploy

6) Steps to create a sample project:

- 1) Set maven path/ Install maven/ use it from eclipse
- 2) Create a Java project
- 3) Convert Java Project -> Maven Project
 - 1) Right click Project -> configure -> Convert To Maven
- 4) Create basic Java main class
- 5) Run the following(If you are running from eclipse no need to write mvn):
 - 1) mvn install
 - 2) mvn clean
 - 3) mvn compile
 - 4) mvn package
 - 5) mvn exec:java -Dexec.mainClass="com.sample.main.Welcome"

7) Create a Standard Maven Project:

- 1) mvn archetype:generate