

- Maven

- Maven is project management tool.

- Most popular use of maven is for build management and dependencies.

- What problems does maven solve?

- When building your java project, you may need additional JAR files

- For example: spring, Hibernate, commons logging, JSON, etc...

- one approach is to download the JAR files from each project web-site.

- manually add the JAR files to your build path / classpath.

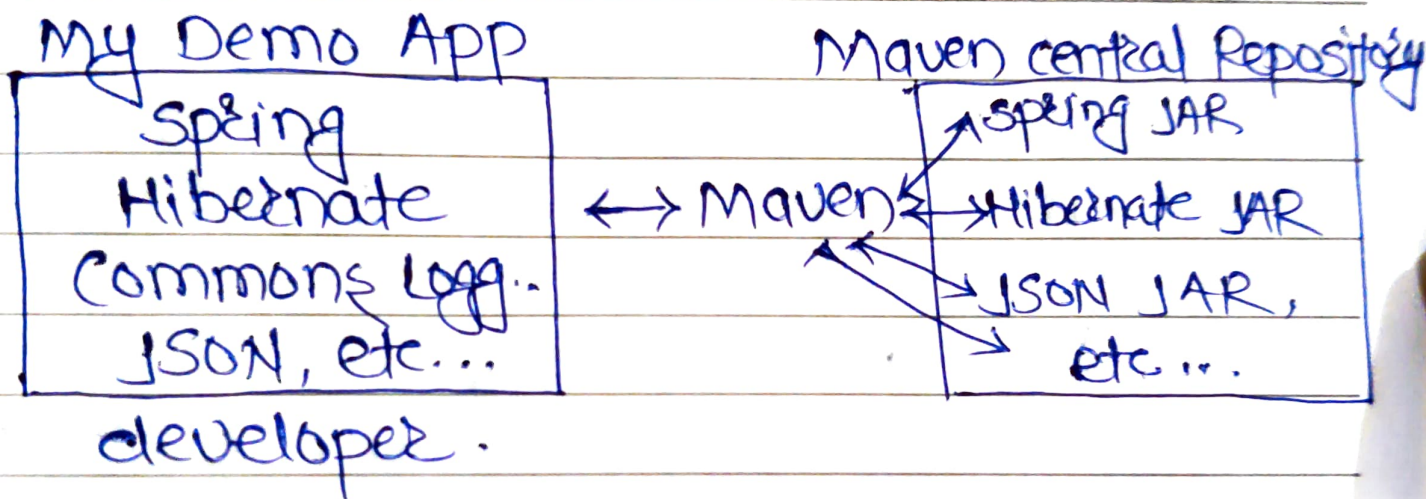
- Maven solution

- Tell maven the projects you are working with (dependencies)

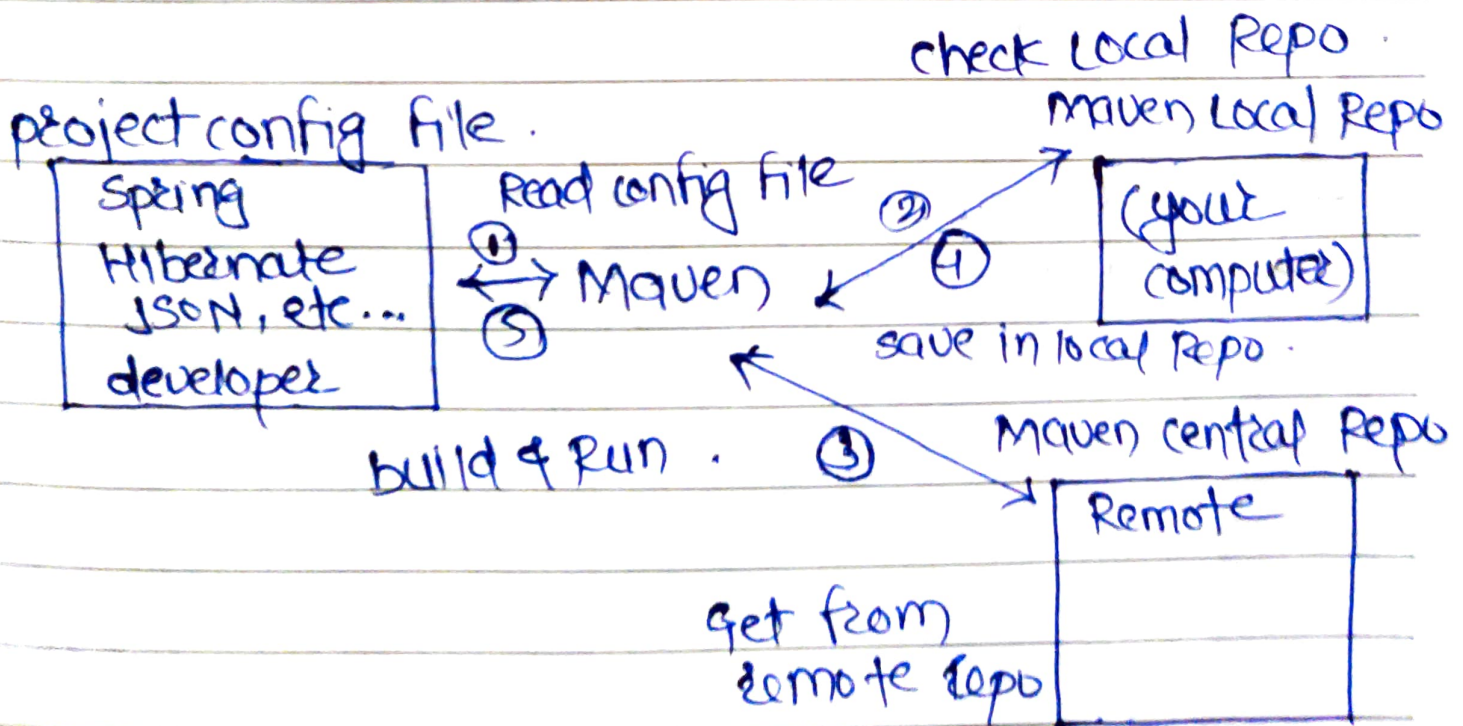
- spring, Hibernate, JSON, etc...

- maven will go out and download the JAR files for those projects for you.

- And maven will make those JAR files available during compile/run
- Think of maven as your friendly helper / personal shopper :-)
- My project with Maven :



## - Maven - How It Works





- Handling JAR dependencies
  - When Maven retrieves a project dependency.
  - It will also download supporting dependencies.
  - For example: Spring depends on commons-logging ...
  - Maven will handle this for us automatically.
- Building and Running.
  - When you build and run your app.
  - Maven will handle class / build path for you
  - Based on config file, Maven will add JAR files accordingly.

## - Standard Directory structure .

Directory	Description
- src/main/java	your java source code .
- src/main/resources	properties/config/files used by your app.
- src/main/webapp	JSP files and web config files other web assets (images, CSS, JS, etc)
- src/test	Unit Testing code and properties
- target	Destination directory for compiled code . Automatically created by maven .

- Standard Directory structure Benefits
- for new developers joining a project .
- They can easily find code, properties files, unit tests, web files etc ...



- most major IDE's have built-in support for maven.
- Eclipse, IntelliJ, NetBeans etc.
- IDEs can easily read / import maven projects.
- maven projects are portable
- Developers can easily share projects between IDEs.
- No need to fight about which IDE is the best LOL!

## Advantages of Maven

- Dependency Management
- Maven will find JAR files for you
- No more missing JARs.
- Building and Running your project
- No more build path / classpath issues
- Standard directory structure.