

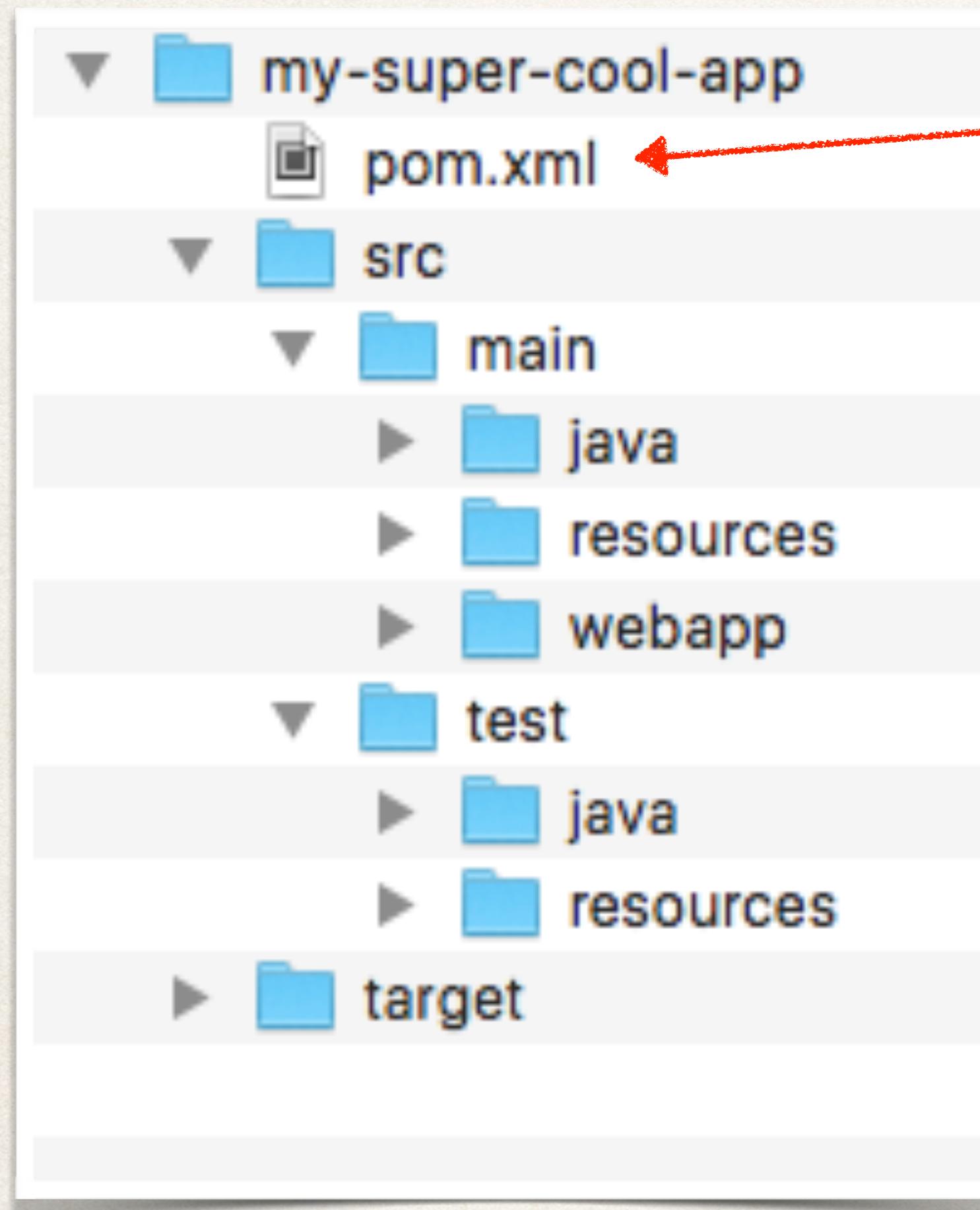
Maven Key Concepts



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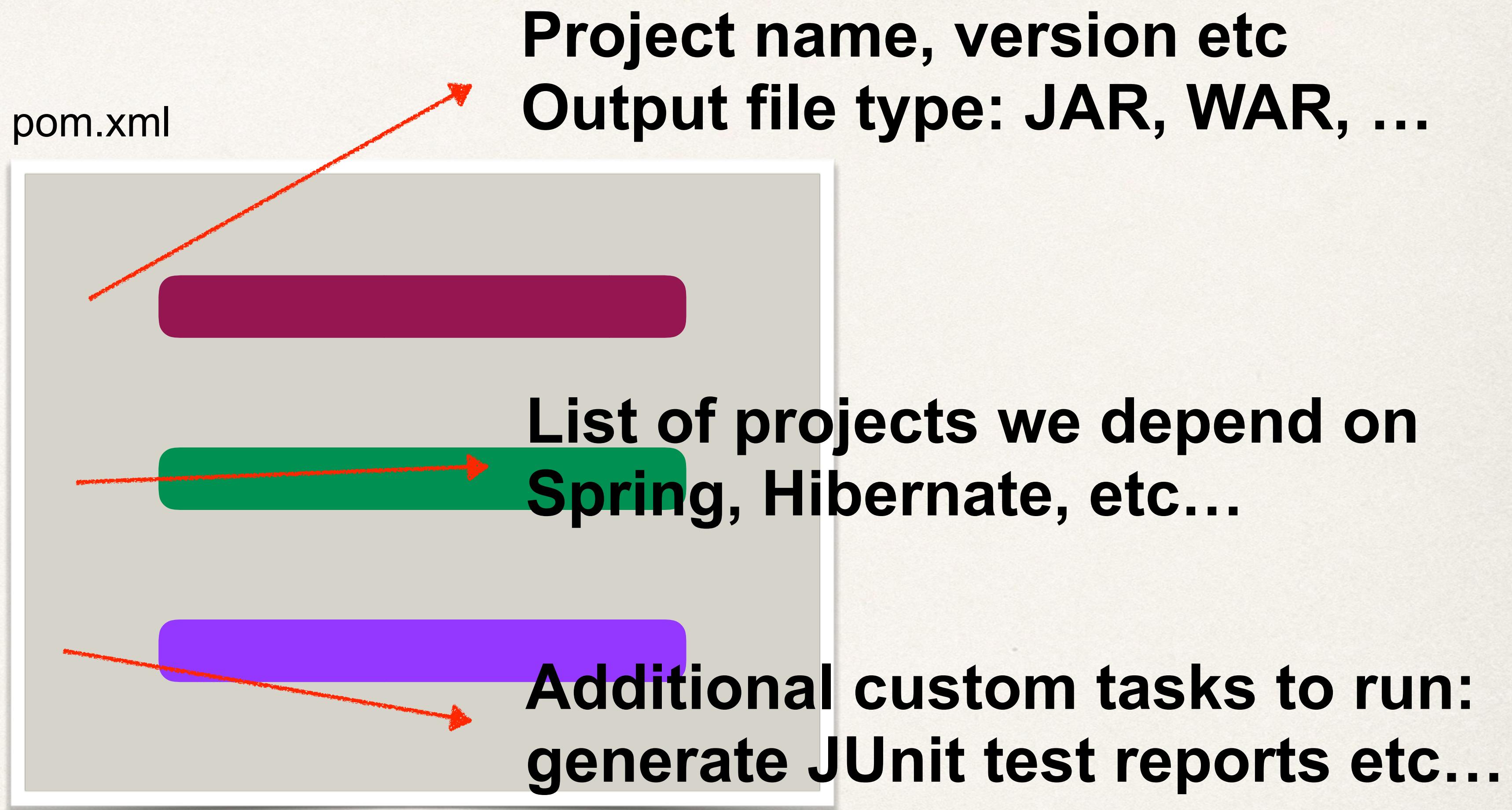
- POM File - pom.xml
- Project Coordinates

POM File - pom.xml



- Project Object Model file: POM file
- Configuration file for your project
- Basically your “shopping list” for Maven :-)
- Located in the root of your Maven project

POM File Structure



Simple POM File

```
<project ...>  
  
    <modelVersion>4.0.0</modelVersion>  
  
    <groupId>com.luv2code</groupId>  
    <artifactId>mycoolapp</artifactId>  
    <version>1.0.FINAL</version>  
    <packaging>jar</packaging>  
  
    <name>mycoolapp</name>  
  
    <dependencies>  
        <dependency>  
            <groupId>junit</groupId>  
            <artifactId>junit</artifactId>  
            <version>3.8.1</version>  
            <scope>test</scope>  
        </dependency>  
    </dependencies>  
  
    <!-- add plugins for customization -->  
  
</project>
```

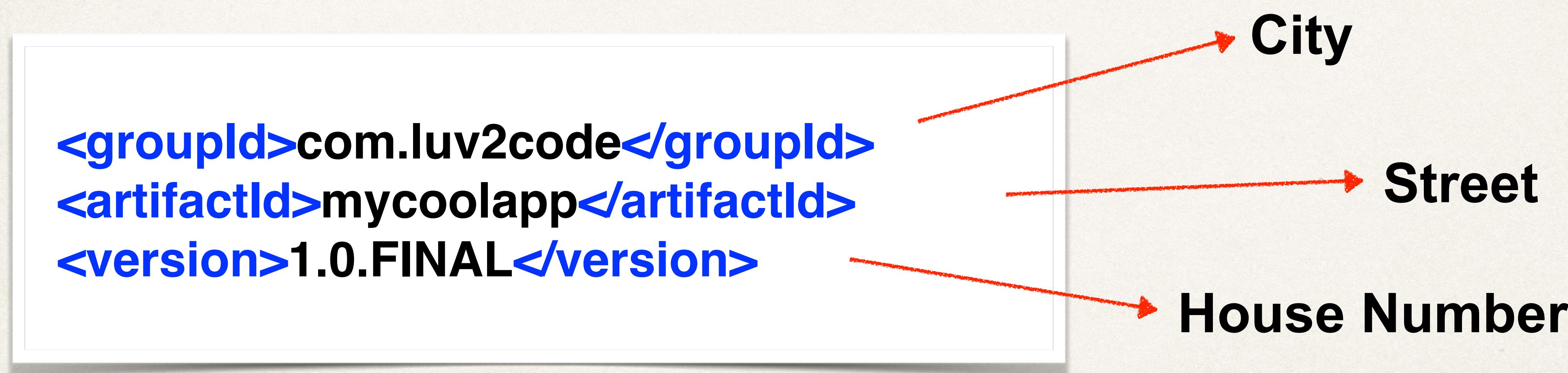
Project name, version etc
Output file type: JAR, WAR, ...

List of projects we depend on
Spring, Hibernate, etc...

Additional custom tasks to run:
generate JUnit test reports etc...

Project Coordinates

- Project Coordinates uniquely identify a project
 - Similar to GPS coordinates for your house: latitude / longitude
 - Precise information for finding your house (city, street, house #)



Project Coordinates - Elements

Name	Description
Group ID	Name of company, group, or organization. Convention is to use reverse domain name: com.luv2code
Artifact ID	Name for this project: mycoolapp
Version	A specific release version like: 1.0, 1.6, 2.0 ... If project is under active development then: 1.0-SNAPSHOT

```
<groupId>com.luv2code</groupId>
<artifactId>mycoolapp</artifactId>
<version>1.0.FINAL</version>
```

Example of Project Coordinates

```
<groupId>com.luv2code</groupId>
<artifactId>mycoolapp</artifactId>
<version>1.0.RELEASE</version>
```

```
<groupId>org.springframework</groupId>
<artifactId>spring-context</artifactId>
<version>5.0.0.RELEASE</version>
```

```
<groupId>org.hibernate</groupId>
<artifactId>hibernate-core</artifactId>
<version>5.2.11.Final</version>
```

Adding Dependencies

```
<project ...>
...
<dependencies>

    <dependency>
        <groupId>org.springframework</groupId>
        <artifactId>spring-context</artifactId>
        <version>5.0.0.RELEASE</version>
    </dependency>

    <dependency>
        <groupId>org.hibernate</groupId>
        <artifactId>hibernate-core</artifactId>
        <version>5.2.11.Final</version>
    </dependency>
    ...
</dependencies>

</project>
```

Dependency Coordinates

- To add given dependency project, we need
 - **Group ID, Artifact ID**
 - **Version** is optional ...
 - Best practice is to include the version (repeatable builds)
- May see this referred to as: **GAV**
 - Group ID, Artifact ID and Version

DevOps

How to Find Dependency Coordinates

- Option 1: Visit the project page (spring.io, hibernate.org etc)
- Option 2: Visit <http://search.maven.org> (easiest approach)