Updating Maven Dependencies in Spring Boot using VS Code

To update Maven dependencies when creating or working with a Spring Boot project in Visual Studio Code (VS Code), follow these steps:

1. Ensure Maven is Installed:

   - Make sure you have Maven installed on your system and added to the PATH. You can check by running:

   mvn -v

2. Add or Modify Dependencies in pom.xml:

   - Open your Spring Boot project in VS Code.

   - Navigate to the pom.xml file located at the root of your project.

   - Add or update the desired dependency under the <dependencies> section. For example:

   <dependencies>

     <dependency>

       <groupId>org.springframework.boot</groupId>

       <artifactId>spring-boot-starter-web</artifactId>

       <version>3.1.0</version>

     </dependency>

   </dependencies>

3. Reload Maven Project:

   - Save the pom.xml file after making changes.

   - Use the Maven extension in VS Code to reload the project:

- Open the Command Palette (Ctrl + Shift + P or Cmd + Shift + P on macOS).

- Search for "Maven: Reload Project" and execute it.

- This will ensure that VS Code recognizes the new or updated dependencies.

4. Download Dependencies:

   - Maven will automatically download the updated or new dependencies into your local repository (~/.m2/repository).

   - If the dependencies do not download automatically, you can manually force an update:

     - Open a terminal in VS Code and run:

     mvn clean install

     - Alternatively, you can run:

     mvn dependency:resolve

5. Check Dependency Download:

   - If you face issues with dependencies not downloading, you can clear and refresh the dependencies:

     mvn dependency:purge-local-repository

     mvn clean install

6. Verify Dependencies:

   - Open the Maven Projects tab in VS Code:

     - You can access it from the Explorer Sidebar (usually on the left).

   - Expand your project to see the list of dependencies under Dependencies.

   - Ensure the added or updated dependency is listed.

7. Restart Application:

   - If your Spring Boot application is already running in the terminal, restart it to reflect the changes:

```
mvn spring-boot:run
```

Tips for VS Code Maven Plugin:

- Install the "Maven for Java" extension in VS Code for better Maven support.

- Use the Spring Boot Dashboard plugin (if installed) for managing Spring Boot applications efficiently.

This process ensures that your Maven dependencies are correctly updated and integrated into your Spring Boot project.