

Hands-on Lab: Create a Simple Java Application with Maven and Migrate to Gradle:

Step 1: Create a Simple Java Application with Maven

1. Create a Migration Project Folder

- A. Open a folder where you want to create the project.
- B. Copy the folder path.
- C. Open a command prompt (cmd).

2. Generate a Maven Project

Run the following command in the terminal:

```
# mvn archetype:generate -DgroupId=com.example -DartifactId=SimpleApp -DarchetypeArtifactId=maven-archetype-quickstart -DinteractiveMode=false
```

This creates a Maven project in the SimpleApp directory.

3. Navigate to the Project Directory

```
# cd SimpleApp
```

4. Verify the Project Structure

Go to the folder and check Your project should have the following structure:

SimpleApp

```
├── pom.xml
├── src
│   ├── main
│   │   └── java
│   │       └── com/example/App.java
│   └── test
```

```
| | | └─ java
| | |   └─ com/example/AppTest.java
```

Enter code .

5. Modify App.java (Optional)

Open src/main/java/com/example/App.java and replace its content with:

```
package com.example;

public class App {
    public static void main(String[] args) {
        System.out.println("Hello, AIT Welcome IS Branch!");
    }
}
```

6. Build the Maven Project

Run:

```
# mvn clean package
```

This will generate a **JAR file** inside the target directory.

Check jar in the folder and also in vs code.

7. Run the Application

```
# java -cp target/SimpleApp-1.0-SNAPSHOT.jar com.example.App
```

Expected Output:

Hello, Maven!

Step 2: Migrate to Gradle

Note : Check pom.xml in vScode and Folder before delete and check after delete

1. Delete Maven Files

Remove the pom.xml file:

- On Linux/macOS:
 - `rm pom.xml`
- On Windows (Command Prompt):
 - `del pom.xml`
- On Windows (PowerShell):
 - `Remove-Item pom.xml`
- Check the pom.xml file is deleted in the folder and vs code

2. Initialize Gradle

Run:

```
$ gradle init
```

Click on Yes of overwritten

When prompted, select the following options:

- **Project type:** Application
- **Language:** Java
- Project name (default: SimpleApp):default **click enter**
- Select the Application and library project
- **Build script DSL:** Groovy

3. Check the build.gradle is generated

4. Build the Project with Gradle

Run:

`gradle build`

5. Run the Application using Gradle

`gradle run`

Expected Output:

Hello, Maven! (Now running on Gradle)

Summary

You created a Java application using Maven.

You built and ran it successfully.

You migrated the project from Maven to Gradle.

You verified the migration by running the application with Gradle.

Now your application is successfully running on **Gradle** instead of **Maven**!