

2. Maven and Gradle Environmental Setup for Java Applications.

Part 1: Maven Project

Pre-requisites:

- Maven installed on your system.
- A shell or command prompt ready for executing commands.

Steps:

1. Create a Directory for the Project:

- Start by creating a directory where your project will reside. Navigate to this directory in your shell or command prompt.

```
mkdir my-maven-project
cd my-maven-project
```

2. Generate the Maven Project:

- Execute the following Maven goal to generate a new project using the maven-archetype-quickstart archetype. This archetype provides a basic template for a Java project.

```
mvn archetype:generate -DgroupId=com.mycompany.app -DartifactId=my-app
-DarchetypeArtifactId=maven-archetype-quickstart -DarchetypeVersion=1.4 -
-DinteractiveMode=false
```

```
Microsoft Windows [Version 10.0.22631.3958]
(c) Microsoft Corporation. All rights reserved.

F:\sem 7\Devops\practical2>mvn archetype:generate -DgroupId=com.mycompany.app -DartifactId=my-app -DarchetypeArtifactId=maven-archetype-quickstart -DarchetypeVersion=1.4 -DinteractiveMode=false
[INFO] Scanning for projects...
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-clean-plugin/3.2.0/maven-clean-plugin-3.2.0.pom (5.3 kB at 1.5 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-clean-plugin/3.2.0/maven-clean-plugin-3.2.0.pom (5.3 kB at 1.5 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-plugins/35/maven-plugins-35.pom (9.9 kB at 3.4 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-plugins/35/maven-plugins-35.pom (9.9 kB at 3.4 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven-parent/35/maven-parent-35.pom (45 kB at 14 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven-parent/35/maven-parent-35.pom (45 kB at 14 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/apache/25/apache-25.pom (21 kB at 22 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/apache/25/apache-25.pom (21 kB at 22 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-clean-plugin/3.2.0/maven-clean-plugin-3.2.0.jar (36 kB at 27 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-clean-plugin/3.2.0/maven-clean-plugin-3.2.0.jar (36 kB at 27 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-install-plugin/3.1.2/maven-install-plugin-3.1.2.pom (8.5 kB at 32 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-install-plugin/3.1.2/maven-install-plugin-3.1.2.pom (8.5 kB at 32 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-plugins/42/maven-plugins-42.pom (7.7 kB at 13 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-plugins/42/maven-plugins-42.pom (7.7 kB at 13 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven-parent/42/maven-parent-42.pom (50 kB at 3.9 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven-parent/42/maven-parent-42.pom (50 kB at 3.9 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/apache/32/apache-32.pom (24 kB at 11 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/apache/32/apache-32.pom (24 kB at 11 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/junit/junit-bom/5.10.2/junit-bom-5.10.2.pom (5.6 kB at 9.0 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/junit/junit-bom/5.10.2/junit-bom-5.10.2.pom (5.6 kB at 9.0 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-install-plugin/3.1.2/maven-install-plugin-3.1.2.jar (32 kB at 2.6 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-install-plugin/3.1.2/maven-install-plugin-3.1.2.jar (32 kB at 2.6 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-deploy-plugin/3.1.2/maven-deploy-plugin-3.1.2.pom (9.6 kB at 2.1 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-deploy-plugin/3.1.2/maven-deploy-plugin-3.1.2.pom (9.6 kB at 2.1 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-deploy-plugin/3.1.2/maven-deploy-plugin-3.1.2.jar (40 kB at 4.7 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-deploy-plugin/3.1.2/maven-deploy-plugin-3.1.2.jar (40 kB at 4.7 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-site-plugin/3.12.1/maven-site-plugin-3.12.1.pom (20 kB at 5.9 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-site-plugin/3.12.1/maven-site-plugin-3.12.1.pom (20 kB at 5.9 kB/s)
```

```
Downloaded from central: https://repo.maven.apache.org/maven2/org/ow2/asm/asm-util/4.0/asm-util-4.0.jar (37 kB at 3.0 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/ow2/asm/asm-analysis/4.0/asm-analysis-4.0.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/ow2/asm/asm-analysis/4.0/asm-analysis-4.0.jar (20 kB at 1.5 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/beanshell/bsh/2.0b4/bsh-2.0b4.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/commons/commons-lang3/3.8.1/commons-lang3-3.8.1.jar (502 kB at 39 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/ant/ant/1.8.1/ant-1.8.1.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/beanshell/bsh/2.0b4/bsh-2.0b4.jar (202 kB at 21 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/ant/ant/1.8.1/ant-1.8.1.jar (1.5 MB at 55 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/codehaus/groovy/groovy/2.0.1/groovy-2.0.1.jar (3.3 MB at 37 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/codehaus/groovy/groovy-all/2.4.16/groovy-all-2.4.16.jar (7.2 MB at 37 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/com/ibm/icu/icu4j/70.1/icu4j-70.1.jar (14 MB at 69 kB/s)
[INFO] Generating project in Batch mode
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/archetypes/maven-archetype-quickstart/1.4/maven-archetype-quickstart-1.4.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/archetypes/maven-archetype-quickstart/1.4/maven-archetype-quickstart-1.4.pom
(1.6 kB at 1.3 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/archetypes/maven-archetype-bundles/1.4/maven-archetype-bundles-1.4.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/archetypes/maven-archetype-bundles/1.4/maven-archetype-bundles-1.4.pom (4.5 kB at 46 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/archetypes/maven-archetype-quickstart/1.4/maven-archetype-quickstart-1.4.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/archetypes/maven-archetype-quickstart/1.4/maven-archetype-quickstart-1.4.jar
(7.1 kB at 32 kB/s)
[INFO] -----
[INFO] Using following parameters for creating project from Archetype: maven-archetype-quickstart:1.4
[INFO] -----
[INFO] Parameter: groupId, Value: com.mycompany.app
[INFO] Parameter: artifactId, Value: my-app
[INFO] Parameter: version, Value: 1.0-SNAPSHOT
[INFO] Parameter: package, Value: com.mycompany.app
[INFO] Parameter: packageInPathFormat, Value: com/mycompany/app
[INFO] Parameter: package, Value: com.mycompany.app
[INFO] Parameter: groupId, Value: com.mycompany.app
[INFO] Parameter: artifactId, Value: my-app
[INFO] Parameter: version, Value: 1.0-SNAPSHOT
[INFO] Project created from Archetype in dir: F:\sem 7\Devops\practical2\my-app
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 06:05 min
[INFO] Finished at: 2024-08-02T11:35:00+05:30
[INFO] -----
```

- Note: If Maven is newly installed, it may take some time to download the necessary artifacts to your local repository. In case of a timeout, you might need to execute the command again.

3. Navigate to the Project Directory:

- Once the project is generated, change into the directory that was created. The directory will have the same name as the artifactId specified.

```
cd my-app
```

4. Directory Structure:

- The my-app directory now contains the following structure:

```
my-app
├── pom.xml
├── src
│   ├── main
│   │   ├── java
│   │   │   ├── com
│   │   │   │   ├── mycompany
│   │   │   │   │   ├── app
│   │   │   │   │   └── App.java
│   │   └── test
│   │       ├── java
│   │       │   ├── com
│   │       │   │   ├── mycompany
│   │       │   │   │   ├── app
│   │       │   │   │   └── AppTest.java
```

- pom.xml: The Project Object Model (POM) file containing the project configuration.

- src/main/java: Contains the source code of the application.
- src/test/java: Contains the test code.

5. Validate the Project:

- Validate the project to ensure all necessary information is available for the build process.

```
mvn validate
```

```
F:\sem 7\Devops\practical2\my-app>mvn validate
[INFO] Scanning for projects...
[INFO]
[INFO] -----< com.mycompany.app:my-app >-----
[INFO] Building my-app 1.0-SNAPSHOT
[INFO] from pom.xml
[INFO] -----[ jar ]-----
[INFO]
[INFO] BUILD SUCCESS
[INFO]
[INFO] Total time: 0.111 s
[INFO] Finished at: 2024-08-02T11:44:50+05:30
[INFO] -----
```

6. Compile the Project:

- Compile the source code of the project.

```
mvn compile
```

```
F:\sem 7\Devops\practical2\my-app>mvn compile
[INFO] Scanning for projects...
[INFO]
[INFO] -----< com.mycompany.app:my-app >-----
[INFO] Building my-app 1.0-SNAPSHOT
[INFO] from pom.xml
[INFO] -----[ jar ]-----
[INFO]
[INFO] --- resources:3.0.2:resources (default-resources) @ my-app ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] skip non existing resourceDirectory F:\sem 7\Devops\practical2\my-app\src\main\resources
[INFO]
[INFO] --- compiler:3.8.0:compile (default-compile) @ my-app ---
[INFO] Changes detected - recompiling the module!
[INFO] Compiling 1 source file to F:\sem 7\Devops\practical2\my-app\target\classes
[INFO]
[INFO] BUILD SUCCESS
[INFO]
[INFO] Total time: 1.497 s
[INFO] Finished at: 2024-08-02T11:45:44+05:30
[INFO] -----
```

7. Test the Project:

- Run the tests (if any). Maven will compile and execute the test classes.

```
mvn test
```

```
F:\sem 7\Devops\practical2\my-app>mvn test
[INFO] Scanning for projects...
[INFO]
[INFO] -----< com.mycompany.app:my-app >-----
[INFO] Building my-app 1.0-SNAPSHOT
[INFO] from pom.xml
[INFO] -----[ jar ]-----
[INFO]
[INFO] --- resources:3.0.2:resources (default-resources) @ my-app ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] skip non existing resourceDirectory F:\sem 7\Devops\practical2\my-app\src\main\resources
[INFO]
[INFO] --- compiler:3.8.0:compile (default-compile) @ my-app ---
[INFO] Nothing to compile - all classes are up to date
[INFO]
[INFO] --- resources:3.0.2:testResources (default-testResources) @ my-app ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] skip non existing resourceDirectory F:\sem 7\Devops\practical2\my-app\src\test\resources
```

8. Package the Project:

- Package the compiled code into its distributable format, such as a JAR file.

mvn package

```
F:\sem 7\Devops\practical2\my-app>mvn package
[INFO] Scanning for projects...
[INFO]
[INFO] -----< com.mycompany.app:my-app >-----
[INFO] Building my-app 1.0-SNAPSHOT
[INFO] from pom.xml
[INFO] -----[ jar ]-----
[INFO]
[INFO] --- resources:3.0.2:resources (default-resources) @ my-app ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] skip non existing resourceDirectory F:\sem 7\Devops\practical2\my-app\src\main\resources
[INFO]
[INFO] --- compiler:3.8.0:compile (default-compile) @ my-app ---
[INFO] Nothing to compile - all classes are up to date
[INFO]
[INFO] --- resources:3.0.2:testResources (default-testResources) @ my-app ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] skip non existing resourceDirectory F:\sem 7\Devops\practical2\my-app\src\test\resources
[INFO]
[INFO] --- compiler:3.8.0:testCompile (default-testCompile) @ my-app ---
[INFO] Nothing to compile - all classes are up to date
[INFO]
[INFO] --- surefire:2.22.1:test (default-test) @ my-app ---
[INFO]
[INFO] -----
[INFO] T E S T S
[INFO] -----
[INFO] Running com.mycompany.app.AppTest
[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.03 s - in com.mycompany.app.AppTest
[INFO]
[INFO] Results:
[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0
[INFO]
[INFO] --- jar:3.0.2:jar (default-jar) @ my-app ---
[INFO] Building jar: F:\sem 7\Devops\practical2\my-app\target\my-app-1.0-SNAPSHOT.jar
[INFO]
[INFO] BUILD SUCCESS
[INFO]
```

- This will create a JAR file in the target directory.

9. Install the Project:

- Install the package into your local Maven repository. This step allows other projects to use this project as a dependency.

mvn install

```
F:\sem 7\Devops\practical2\my-app>cd target
F:\sem 7\Devops\practical2\my-app\target>java -jar my-app-1.0-SNAPSHOT.jar
no main manifest attribute, in my-app-1.0-SNAPSHOT.jar
F:\sem 7\Devops\practical2\my-app\target>cd ..
F:\sem 7\Devops\practical2\my-app>mvn package
[INFO] Scanning for projects...
[INFO]
[INFO] -----< com.mycompany.app:my-app >-----
[INFO] Building my-app 1.0-SNAPSHOT
[INFO] from pom.xml
[INFO] -----[ jar ]-----
[INFO]
[INFO] --- resources:3.0.2:resources (default-resources) @ my-app ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] skip non existing resourceDirectory F:\sem 7\Devops\practical2\my-app\src\main\resources
[INFO]
[INFO] --- compiler:3.8.0:compile (default-compile) @ my-app ---
[INFO] Nothing to compile - all classes are up to date
[INFO]
[INFO] --- resources:3.0.2:testResources (default-testResources) @ my-app ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] skip non existing resourceDirectory F:\sem 7\Devops\practical2\my-app\src\test\resources
[INFO]
[INFO] --- compiler:3.8.0:testCompile (default-testCompile) @ my-app ---
[INFO] Nothing to compile - all classes are up to date
[INFO]
[INFO] --- surefire:2.22.1:test (default-test) @ my-app ---
[INFO]
[INFO] -----
[INFO] T E S T S
[INFO] -----
[INFO] Running com.mycompany.app.AppTest
[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.043 s - in com.mycompany.app.AppTest
[INFO]
[INFO] Results:
[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0
[INFO]
```

10. Clean the Project:

- Clean up the target directory by removing files generated during the build process.

mvn clean

11. Run the Project:

- If your project produces a JAR file, you can run it using the following command:

```
java -jar target/my-app-1.0-SNAPSHOT.jar
```

```
[INFO] Nothing to compile - all classes are up to date
[INFO] --- surefire:2.22.1:test (default-test) @ my-app ---
[INFO]
[INFO] T E S T S
[INFO]
[INFO] Running com.mycompany.app.AppTest
[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.043 s - in com.mycompany.app.AppTest
[INFO] Results:
[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0
[INFO]
[INFO] --- jar:3.0.2:jar (default-jar) @ my-app ---
[INFO] Building jar: F:\sem 7\Devops\practical2\my-app\target\my-app-1.0-SNAPSHOT.jar
[INFO]
[INFO] BUILD SUCCESS
[INFO]
[INFO] Total time: 2.802 s
[INFO] Finished at: 2024-08-02T12:15:48+05:30
[INFO]
F:\sem 7\Devops\practical2\my-app>cd target
F:\sem 7\Devops\practical2\my-app\target>java -jar my-app-1.0-SNAPSHOT.jar
Hello World!
F:\sem 7\Devops\practical2\my-app\target>cd
F:\sem 7\Devops\practical2\my-app>cd..
F:\sem 7\Devops\practical2\my-app>
```

- Replace my-app-1.0-SNAPSHOT.jar with the actual name of your JAR file if it's different.

Part 2: Gradle Project

Pre-requisites:

Gradle installed on your system.

- A shell or command prompt ready for executing commands.

Steps:

Create a Directory for the Project:

- Create a directory for your project and navigate to it:

```
mkdir practical3
```

```
cd practical3
```

```
F:\sem 7\Devops\practical2>mkdir practical3
F:\sem 7\Devops\practical2>cd practical3
F:\sem 7\Devops\practical2\practical3>gradle init
```

Initialize the Gradle Project:

- Run the following command to initialize a new Gradle project:

```
gradle init
```

```
F:\sem 7\Devops\practical2\practical3>gradle init
Select type of build to generate:
 1: Application
 2: Library
 3: Gradle plugin
 4: Basic (build structure only)
Enter selection (default: Application) [1..4] 1
Select implementation language:
 1: Java
 2: Kotlin
 3: Groovy
 4: Scala
 5: C++
 6: Swift
Enter selection (default: Java) [1..6] 1
Enter target Java version (min: 7, default: 21): 21
Project name (default: practical3): practical3
Select application structure:
 1: Single application project
 2: Application and library project
Enter selection (default: Single application project) [1..2] 1
Select build script DSL:
 1: Kotlin
 2: Groovy
Enter selection (default: Kotlin) [1..2] 1
Select test framework:
 1: JUnit 4
 2: TestNG
 3: Spock
 4: JUnit Jupiter
Enter selection (default: JUnit Jupiter) [1..4] 1
Generate build using new APIs and behavior (some features may change in the next minor release)? (default: no) [yes, no] no
> Task :init
Learn more about Gradle by exploring our Samples at https://docs.gradle.org/8.9/samples/sample_building_java_applications.html
BUILD SUCCESSFUL in 48s
1 actionable task: 1 executed
F:\sem 7\Devops\practical2\practical3>gradle tasks
```


Follow the prompts:

- Select the type of build: **Application**
- Select implementation language: **Java**
- Enter target Java version: **21**
- Project name: **practical3**
- Select application structure: **Single application project**
- Select build script DSL: **Kotlin**
- Select test framework: **JUnit 4**
- Generate build using new APIs and behavior: **No**

Explore the Generated Project:

- Run the following command to see the tasks available:

```
gradle tasks
```

```
F:\sem 7\Devops\practical2\practical3>gradle tasks

> Task :tasks

Tasks runnable from root project 'practical3'

Application tasks
run - Runs this project as a JVM application

Build tasks
assemble - Assembles the outputs of this project.
build - Assembles and tests this project.
buildDependents - Assembles and tests this project and all projects that depend on it.
buildNeeded - Assembles and tests this project and all projects it depends on.
classes - Assembles main classes.
clean - Deletes the build directory.
jar - Assembles a jar archive containing the classes of the 'main' feature.
testClasses - Assembles test classes.

Build Setup tasks
init - Initializes a new Gradle build.
updateDaemonJvm - Generates or updates the Gradle Daemon JVM criteria.
wrapper - Generates Gradle wrapper files.

Distribution tasks
assembleDist - Assembles the main distributions
distTar - Bundles the project as a distribution.
distZip - Bundles the project as a distribution.
installDist - Installs the project as a distribution as-is.

Documentation tasks
javadoc - Generates Javadoc API documentation for the 'main' feature.

Help tasks
buildEnvironment - Displays all buildscript dependencies declared in root project 'practical3'.
dependencies - Displays all dependencies declared in root project 'practical3'.
dependencyInsight - Displays the insight into a specific dependency in root project 'practical3'.
help - Displays a help message.
javaToolchains - Displays the detected java toolchains.
kotlinDslAccessorsReport - Prints the Kotlin code for accessing the currently available project extensions and conventions.
outgoingVariants - Displays the outgoing variants of root project 'practical3'.
projects - Displays the sub-projects of root project 'practical3'.
properties - Displays the properties of root project 'practical3'.
resolvableConfigurations - Displays the configurations that can be resolved in root project 'practical3'.
tasks - Displays the tasks runnable from root project 'practical3' (some of the displayed tasks may belong to subprojects).

Verification tasks
check - Runs all checks.
test - Runs the test suite.

To see all tasks and more detail, run gradle tasks --all

To see more detail about a task, run gradle help --task <task>

BUILD SUCCESSFUL in 26s
1 actionable task: 1 executed
F:\sem 7\Devops\practical2\practical3>gradle build
```

Build the Project:

- Compile and package the project:

```
gradle build
```

```
F:\sem 7\Devops\practical2\practical3>gradle build

BUILD SUCCESSFUL in 10s
7 actionable tasks: 7 executed
```

Run the Application:

- Run the project using the following command:

```
gradle run
```

You should see the output: **Hello World!**

```
F:\sem 7\Devops\practical2\practical3>gradle run

> Task :app:run
Hello World!

BUILD SUCCESSFUL in 1s
2 actionable tasks: 1 executed, 1 up-to-date
F:\sem 7\Devops\practical2\practical3>
```

Cleaning the Project:

- Clean the build directory:

```
gradle clean
```

```
F:\sem 7\Devops\practical2\practical3>gradle clean

BUILD SUCCESSFUL in 7s
1 actionable task: 1 executed
```