

Experiment No. 1.3

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Branch: **MCA - CCD**

Semester: **III**

Subject Name: **DevOps Process Automation Lab**

UID: **22MCC20039**

Section/Group: **MCD-1/ Grp A**

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1. Aim/Overview of the practical:

With an understanding of the theory and techniques that Maven uses to manage a project, we can now develop our own Maven project.

In this application, you have to create a simple adder that computes the sum of two integers. During this process, you will:

- Generate a Maven project using the Maven command-line tool
- Configure the pom.xml file
- Create main and test source code files
- Execute a Maven build
- Execute the resulting JAR file

Code for practical:

- Open git bash and create a directory using `mkdir project`
- Go to project using `cd project`
- Create a maven project using command

```
mvn archetype:generate -DgroupId=ToolsQA -DartifactId=DemoMavenProject -  
DarchetypeArtifactId=maven-archetype-quickstart -DinteractiveMode=false
```

- Import any java project using command

```
git clone https://github.com/mariazevedo88/artigo-boas-praticas-medium.git
```

- Go to this directory using `cd` command

```
PS C:\Users\krish\Downloads\apache-maven-3.9.4-bin\apache-maven-3.9.4\bin\projectMaven> git clone https://github.com/mariazevedo88/artigo-boas-praticas-medium.git
Cloning into 'artigo-boas-praticas-medium'...
remote: Enumerating objects: 195, done.
remote: Counting objects: 100% (40/40), done.
remote: Compressing objects: 100% (33/33), done.
remote: Total 195 (delta 7), reused 11 (delta 0), pack-reused 155
Receiving objects: 100% (195/195), 118.07 KiB | 737.00 KiB/s, done.
Resolving deltas: 100% (58/58), done.
```

- Install java jdk and maven in computer
- Use following commands
- **mvn clean**: Removes build artifacts.

```
PS C:\Users\krish\Downloads\apache-maven-3.9.4-bin\apache-maven-3.9.4\bin\projectMaven\artigo-boas-praticas-medium> mvn validate
[INFO] Scanning for projects...
[INFO]
[INFO] -----< io.github.mariazevedo88:artigo-boas-praticas-medium >-----
[INFO] Building artigo-boas-praticas-medium 1.0.0-SNAPSHOT
[INFO] from pom.xml
[INFO] -----[ jar ]-----
[INFO]
[INFO] BUILD SUCCESS
[INFO]
[INFO] Total time: 0.121 s
[INFO] Finished at: 2023-08-28T13:48:17+05:30
[INFO] -----
```






- **mvn validate**: Validates project configuration.
- **mvn compile**: Compiles source code.
- **mvn test-compile**: Compiles test code.
- **mvn package**: Creates distributable package.
- **mvn verify**: Checks package integrity.

```
PS C:\Users\krish\Downloads\apache-maven-3.9.4-bin\apache-maven-3.9.4\bin\projectMaven\artigo-boas-praticas-medium> mvn clean
[INFO] Scanning for projects...
[INFO]
[INFO] -----< io.github.mariazevedo88:artigo-boas-praticas-medium >-----
[INFO] Building artigo-boas-praticas-medium 1.0.0-SNAPSHOT
[INFO] from pom.xml
[INFO] -----[ jar ]-----
[INFO]
[INFO] --- clean:3.2.0:clean (default-clean) @ artigo-boas-praticas-medium ---
[INFO]
[INFO] BUILD SUCCESS
[INFO]
[INFO] Total time: 0.350 s
[INFO] Finished at: 2023-08-28T13:48:06+05:30
[INFO] -----
```

- **mvn install**: Installs package to local repository.

```
PS C:\Users\krish\Downloads\apache-maven-3.9.4-bin\apache-maven-3.9.4\bin\projectMaven\artigo-boas-praticas-medium> mvn
verify
[INFO] Scanning for projects...
[INFO]
[INFO] -----< io.github.mariazevedo88:artigo-boas-praticas-medium >-----
[INFO] Building artigo-boas-praticas-medium 1.0.0-SNAPSHOT
[INFO] from pom.xml
[INFO] -----[ jar ]-----
[INFO]
[INFO] --- resources:3.3.1:resources (default-resources) @ artigo-boas-praticas-medium ---
[INFO] Copying 3 resources from src\main\resources to target\classes
[INFO]
[INFO] --- compiler:3.6.1:compile (default-compile) @ artigo-boas-praticas-medium ---
[INFO] Nothing to compile - all classes are up to date
[INFO]
[INFO] --- resources:3.3.1:testResources (default-testResources) @ artigo-boas-praticas-medium ---
[INFO] skip non existing resourceDirectory C:\Users\krish\Downloads\apache-maven-3.9.4-bin\apache-maven-3.9.4\bin\projec
tMaven\artigo-boas-praticas-medium\src\test\resources
[INFO]
[INFO] --- compiler:3.6.1:testCompile (default-testCompile) @ artigo-boas-praticas-medium ---
[INFO] No sources to compile
[INFO]
[INFO] --- surefire:3.1.2:test (default-test) @ artigo-boas-praticas-medium ---
[INFO] No tests to run.
[INFO]
[INFO] --- jar:3.3.0:jar (default-jar) @ artigo-boas-praticas-medium ---
[INFO]
[INFO] BUILD SUCCESS
```

- **mvn deploy**: Deploys package to remote repository.

 artigo-boas-praticas-medium.jar	28-Aug-23 2:14 PM	Executable Jar File	109 KB
 maven-archiver	28-Aug-23 2:14 PM	File folder	
 classes	28-Aug-23 1:48 PM	File folder	
 generated-sources	28-Aug-23 1:48 PM	File folder	
 maven-status	28-Aug-23 1:48 PM	File folder	

- Go to target folder and there will be JAR file execute it.

***** **THE END** *****