

# LABORATORIO 3 - PBT - 2021-1

## CLASES DE EQUIVALENCIA

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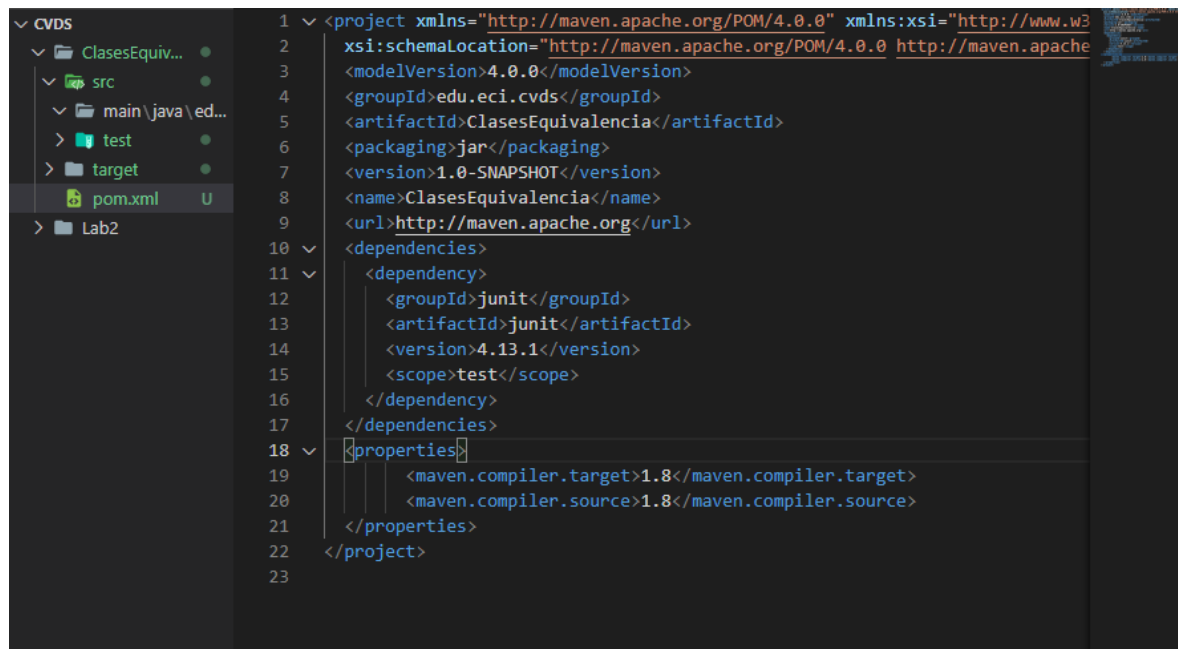
### Actualizar y crear dependencias en el proyecto

- Busque en internet el [repositorio central de maven](https://repo1.maven.org/maven2/).

The screenshot shows the Maven Central Repository website. The main content area displays the 'Central Repository' with the URL <https://repo1.maven.org/maven2/> and a note that it contains 6,174,999 indexed jars. Below this is a table titled 'Published Jars by Year' showing the number of jars published each year from 2010 to 2021. The number of jars increases significantly over time, with 2021 having 141,048 jars and 2010 having 86,191 jars. The page also features a sidebar with 'Popular Categories' and a right sidebar with 'Indexed Repositories' and 'Popular Tags'.

Year	Published Jars
2021	141,048
2020	1,435,600
2019	1,228,004
2018	927,345
2017	711,942
2016	542,136
2015	364,268
2014	230,321
2013	170,816
2012	126,711
2011	106,285
2010	86,191

- Busque el artefacto **JUnit** y entre a la versión más nueva
- Ingrese a la pestaña de Maven y haga clic en el texto de la dependencia para copiarlo al portapapeles.
- Edite el archivo **pom.xml** y realice las siguientes actualizaciones:
  - Agregue la dependencia copiada a la sección de dependencias.
  - Hay que cambiar la versión del compilador de Java a la versión 8, para ello, agregue la sección **properties** antes de la sección de dependencias:
  - ```
<properties>    <maven.compiler.target>1.8</maven.compiler.target>    <maven.compiler.source>1.8</maven.compiler.source>  </properties>
```



## COMPILAR Y EJECUTAR

- Ejecute los comandos necesarios de Maven, para compilar el proyecto y verificar que el proyecto se creó correctamente y los cambios realizados al archivo pom no generan inconvenientes.

The screenshot shows an IDE with a project named 'CVDS'. The file explorer on the left shows the project structure: 'src' (containing 'main' and 'test' folders) and 'target'. The 'pom.xml' file is selected. The main editor displays the content of 'pom.xml' with line numbers 1 through 23. The XML content is as follows:

```
1 <project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3
2   xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 http://maven.apache
3   <modelVersion>4.0.0</modelVersion>
4   <groupId>edu.eci.cvds</groupId>
5   <artifactId>ClasesEquivalencia</artifactId>
6   <packaging>jar</packaging>
7   <version>1.0-SNAPSHOT</version>
8   <name>ClasesEquivalencia</name>
9   <url>http://maven.apache.org</url>
10  <dependencies>
11    <dependency>
12      <groupId>junit</groupId>
13      <artifactId>junit</artifactId>
14      <version>4.13.1</version>
15      <scope>test</scope>
16    </dependency>
17  </dependencies>
18  <properties>
19    <maven.compiler.target>1.8</maven.compiler.target>
20    <maven.compiler.source>1.8</maven.compiler.source>
21  </properties>
22 </project>
23
```

Below the editor, the 'TERMINAL' tab is active, showing the output of a Maven build. The output includes the command '2: cmd', the execution of 'edu.eci.cvds.AppTest', test results (1 test run, 0 failures, 0 errors, 0 skipped, 0.075 sec), and build logs indicating a successful build of 'ClasesEquivalencia-1.0-SNAPSHOT.jar'.

```
-----
Running edu.eci.cvds.AppTest
Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.075 sec

Results :

Tests run: 1, Failures: 0, Errors: 0, Skipped: 0

[INFO]
[INFO] --- maven-jar-plugin:2.4:jar (default-jar) @ ClasesEquivalencia ---
[WARNING] JAR will be empty - no content was marked for inclusion!
[INFO] Building jar: C:\Users\dmeji\Desktop\CVDS\ClasesEquivalencia\target\ClasesEquivalencia-1.0-SNAPSHOT.jar
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 12.696 s
[INFO] Finished at: 2021-02-04T07:58:03-05:00
[INFO] -----
```

Busque el comando requerido para ejecutar las pruebas unitarias de un proyecto desde Maven y ejecútelo sobre el proyecto. Se debe ejecutar la clase AppTest con resultado exitoso

```
C:\Users\dmeji\Desktop\CVDS\ClasesEquivalencia>mvn surefire:test
[INFO] Scanning for projects...
[INFO] -----< edu.eci.cvds:ClasesEquivalencia >-----
[INFO] Building ClasesEquivalencia 1.0-SNAPSHOT
[INFO] -----[ jar ]-----
[INFO] --- maven-surefire-plugin:2.12.4:test (default-cli) @ ClasesEquivalencia ---
[INFO] Surefire report directory: C:\Users\dmeji\Desktop\CVDS\ClasesEquivalencia\target\surefire-reports

-----
T E S T S
-----

Running edu.eci.cvds.AppTest
Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.214 sec

Results :

Tests run: 1, Failures: 0, Errors: 0, Skipped: 0

[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 9.612 s
[INFO] Finished at: 2021-02-04T08:17:15-05:00
[INFO] -----
```

## EJECUTAR LAS PRUEBAS

- Para correr las pruebas utilice

\$ mvn package

```

C:\Users\dmeji\Desktop\CVDS\ClasesEquivalencia>mvn package
[INFO] Scanning for projects...
[INFO] -----< edu.eci.cvds:ClasesEquivalencia >-----
[INFO] Building ClasesEquivalencia 1.0-SNAPSHOT
[INFO] -----[ jar ]-----
[INFO] --- maven-resources-plugin:2.6:resources (default-resources) @ ClasesEquivalencia ---
[WARNING] Using platform encoding (Cp1252 actually) to copy filtered resources, i.e. build is platform dependent!
[INFO] skip non existing resourceDirectory C:\Users\dmeji\Desktop\CVDS\ClasesEquivalencia\src\main\resources
[INFO] --- maven-compiler-plugin:3.1:compile (default-compile) @ ClasesEquivalencia ---
[INFO] Changes detected - recompiling the module!
[WARNING] File encoding has not been set, using platform encoding Cp1252, i.e. build is platform dependent!
[INFO] Compiling 5 source files to C:\Users\dmeji\Desktop\CVDS\ClasesEquivalencia\target\classes
[INFO] --- maven-resources-plugin:2.6:testResources (default-testResources) @ ClasesEquivalencia ---
[WARNING] Using platform encoding (Cp1252 actually) to copy filtered resources, i.e. build is platform dependent!
[INFO] skip non existing resourceDirectory C:\Users\dmeji\Desktop\CVDS\ClasesEquivalencia\src\test\resources
[INFO] --- maven-compiler-plugin:3.1:testCompile (default-testCompile) @ ClasesEquivalencia ---
[INFO] Changes detected - recompiling the module!
[WARNING] File encoding has not been set, using platform encoding Cp1252, i.e. build is platform dependent!
[INFO] Compiling 2 source files to C:\Users\dmeji\Desktop\CVDS\ClasesEquivalencia\target\test-classes
[INFO] --- maven-surefire-plugin:2.12.4:test (default-test) @ ClasesEquivalencia ---
[INFO] Surefire report directory: C:\Users\dmeji\Desktop\CVDS\ClasesEquivalencia\target\surefire-reports

-----
T E S T S
-----

Running edu.eci.cvds.tdd.AppTest
Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.051 sec
Running edu.eci.cvds.tdd.registry.RegistryTest
Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.366 sec

Results :

Tests run: 2, Failures: 0, Errors: 0, Skipped: 0

[INFO] --- maven-jar-plugin:2.4:jar (default-jar) @ ClasesEquivalencia ---
[INFO] Building jar: C:\Users\dmeji\Desktop\CVDS\ClasesEquivalencia\target\ClasesEquivalencia-1.0-SNAPSHOT.jar
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 5.225 s
[INFO] Finished at: 2021-02-04T08:27:50-05:00
[INFO] -----

```

- También puede utilizar:

\$ mvn test

```

C:\Users\dmeji\Desktop\CVDS\ClasesEquivalencia>mvn test
[INFO] Scanning for projects...
[INFO] -----< edu.eci.cvds:ClasesEquivalencia >-----
[INFO] Building ClasesEquivalencia 1.0-SNAPSHOT
[INFO] -----[ jar ]-----
[INFO] --- maven-resources-plugin:2.6:resources (default-resources) @ ClasesEquivalencia ---
[WARNING] Using platform encoding (Cp1252 actually) to copy filtered resources, i.e. build is platform dependent!
[INFO] skip non existing resourceDirectory C:\Users\dmeji\Desktop\CVDS\ClasesEquivalencia\src\main\resources
[INFO] --- maven-compiler-plugin:3.1:compile (default-compile) @ ClasesEquivalencia ---
[INFO] Nothing to compile - all classes are up to date
[INFO] --- maven-resources-plugin:2.6:testResources (default-testResources) @ ClasesEquivalencia ---
[WARNING] Using platform encoding (Cp1252 actually) to copy filtered resources, i.e. build is platform dependent!
[INFO] skip non existing resourceDirectory C:\Users\dmeji\Desktop\CVDS\ClasesEquivalencia\src\test\resources
[INFO] --- maven-compiler-plugin:3.1:testCompile (default-testCompile) @ ClasesEquivalencia ---
[INFO] Changes detected - recompiling the module!
[WARNING] File encoding has not been set, using platform encoding Cp1252, i.e. build is platform dependent!
[INFO] Compiling 2 source files to C:\Users\dmeji\Desktop\CVDS\ClasesEquivalencia\target\test-classes
[INFO] --- maven-surefire-plugin:2.12.4:test (default-test) @ ClasesEquivalencia ---
[INFO] Surefire report directory: C:\Users\dmeji\Desktop\CVDS\ClasesEquivalencia\target\surefire-reports

-----
T E S T S
-----
Running edu.eci.cvds.tdd.AppTest
Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.054 sec
Running edu.eci.cvds.tdd.registry.RegistryTest
Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.031 sec

Results :

Tests run: 2, Failures: 0, Errors: 0, Skipped: 0

[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 3.644 s
[INFO] Finished at: 2021-02-04T08:28:19-05:00
[INFO] -----

```

Revise cual es la diferencia.

Package compila el proyecto y la ejecuta las pruebas y en mvn test ejecuta solo las pruebas.

## EJERCICIO "DESCUENTO DE TARIFAS"

### IMPLEMENTACIÓN DE LAS PRUEBAS

Ejecute el comando de Maven para las fases de compilación y pruebas. Verifique el resultado exitoso de todas las pruebas y el reporte generado.

```
C:\Users\dmeji\Desktop\CVDS\ClasesEquivalencia>mvn test
[INFO] Scanning for projects...
[INFO]
[INFO] -----< edu.eci.cvds:ClasesEquivalencia >-----
[INFO] Building ClasesEquivalencia 1.0-SNAPSHOT
[INFO] -----[ jar ]-----
[INFO]
[INFO] --- maven-resources-plugin:2.6:resources (default-resources) @ ClasesEquivalencia ---
[WARNING] Using platform encoding (Cp1252 actually) to copy filtered resources, i.e. build is platform dependent!
[INFO] skip non existing resourceDirectory C:\Users\dmeji\Desktop\CVDS\ClasesEquivalencia\src\main\resources
[INFO]
[INFO] --- maven-compiler-plugin:3.1:compile (default-compile) @ ClasesEquivalencia ---
[INFO] Nothing to compile - all classes are up to date
[INFO]
[INFO] --- maven-resources-plugin:2.6:testResources (default-testResources) @ ClasesEquivalencia ---
[WARNING] Using platform encoding (Cp1252 actually) to copy filtered resources, i.e. build is platform dependent!
[INFO] skip non existing resourceDirectory C:\Users\dmeji\Desktop\CVDS\ClasesEquivalencia\src\test\resources
[INFO]
[INFO] --- maven-compiler-plugin:3.1:testCompile (default-testCompile) @ ClasesEquivalencia ---
[INFO] Changes detected - recompiling the module!
[WARNING] File encoding has not been set, using platform encoding Cp1252, i.e. build is platform dependent!
[INFO] Compiling 2 source files to C:\Users\dmeji\Desktop\CVDS\ClasesEquivalencia\target\test-classes
[INFO]
[INFO] --- maven-surefire-plugin:2.12.4:test (default-test) @ ClasesEquivalencia ---
[INFO] Surefire report directory: C:\Users\dmeji\Desktop\CVDS\ClasesEquivalencia\target\surefire-reports

-----
T E S T S
-----
Running edu.eci.cvds.tdd.AppTest
Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.051 sec
Running edu.eci.cvds.tdd.registry.RegistryTest
Tests run: 5, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.043 sec

Results :

Tests run: 6, Failures: 0, Errors: 0, Skipped: 0
```

|                                             |          |          |   |
|---------------------------------------------|----------|----------|---|
| Java Test Report ✕                          |          |          |   |
| All 11                                      | Failed 5 | Passed 6 | ↺ |
| edu.eci.cvds.tdd.aerodescuentos.TarifasTest |          |          |   |
| > validarDiasAntelacionNegativos            | Failed   | 0.01s    | 📄 |
| > validarTarifaBase                         | Passed   | 0s       | 📄 |
| > validarDiasAntelacionSuperior             | Failed   | 0s       | 📄 |
| > validarEdadNegativa                       | Failed   | 0s       | 📄 |
| > validarTarifaNegativa                     | Failed   | 0s       | 📄 |
| > validarMayorDeEdad                        | Passed   | 0s       | 📄 |
| > validarAdultoMayor                        | Passed   | 0s       | 📄 |
| > validarDiasAntelacion                     | Passed   | 0s       | 📄 |
| > validarEdadImposible                      | Failed   | 0s       | 📄 |
| > validarSinDescuentoDiasAntelacion         | Passed   | 0s       | 📄 |
| > validarMenorDeEdad                        | Passed   | 0s       | 📄 |

Las pruebas fallan ya que el jar no tiene implementada la clase Excepción en donde se podrían validar los distintos errores expuestos anteriormente. Si se llegase a implementar todas las pruebas expuestas pasarían.