

# Tarea 8

## Programación Avanzada

## Postgrado IIMAS

Fabián Romero

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**Problema 1** En una base de datos postgres cree una base de datos que se llame “pavanzada” y que pertenezca al usuario “progavanz”, opcionalmente puede llevar la contraseña “hola”. A continuación cree dos tablas con el archivo adjunto pavanzada.sql desde la interfase de consola psql utilizando el comando `\i`(consulte la documentación). Ahora con un proyecto roo cree una aplicación web de altas, bajas y modificaciones de las dos tablas. El proyecto roo debe de ser mandado al ayudante

**Postgres** Copiamos el archivo enviado a /tmp

Una vez instalado postgres y como usuario postgres se corren los siguientes comandos

```
postgres@fabian:~$ createuser --password
Enter name of role to add: progavanz
Shall the new role be a superuser? (y/n) y
Password: (hola)

postgres@fabian:~$ psql
psql (9.1.10)
Type "help" for help.

postgres=# create database pavanzada;
CREATE DATABASE
postgres=# grant all privileges on database
postgres=# pavanzada to progavanz;
GRANT

postgres@fabian:~$ psql pavanzada </tmp/pavanzada.sql
SET
SET
SET
SET
SET
SET
CREATE EXTENSION
COMMENT
SET
SET
SET
```

```
CREATE TABLE
ALTER TABLE
CREATE SEQUENCE
ALTER TABLE
ALTER SEQUENCE
CREATE TABLE
ALTER TABLE
CREATE SEQUENCE
ALTER TABLE
ALTER SEQUENCE
ALTER TABLE
ALTER TABLE
    setval
-----
          32
(1 row)

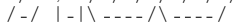
    setval
-----
          1
(1 row)

ALTER TABLE
ALTER TABLE
ALTER TABLE
```

Aquí tenemos creada entonces la base de datos “pavanzada” que pertenece al usuario “progavanz” y con la contraseña “hola”

**roo** Una vez instalada spring tool suite, creamos un directorio y corremos roo en el.

```
mkdir ~/workspace/maestria/programacion-avanzada/tarea8
cd ~/workspace/maestria/programacion-avanzada/tarea8
roo
```



```
1.2.4.RELEASE [rev 75337cf]
```

Welcome to Spring Roo. For assistance press TAB or **type "hint"** then hit ENTER.

## Creamos el proyecto

```

root> mvn project --topLevelPackage mx.unam.mcc.pa --projectName problema1
Created ROOT/pom.xml
Created SRC_MAIN_RESOURCES
Created SRC_MAIN_RESOURCES/log4j.properties
Created SPRING_CONFIG_ROOT
Created SPRING_CONFIG_ROOT/applicationContext.xml

```

Establecemos el uso de datos

```

roo> persistence setup --database POSTGRES --provider OPENJPA
Created SPRING_CONFIG_ROOT/database.properties
Please update your database details in
src/main/resources/META-INF/spring/database.properties.

```

En este momento nos solicita establecer correctamente el archivo `database.properties` que lo establecemos así:

```
database.driverClassName=org.postgresql.Driver
database.url=jdbc\:postgresql\://localhost\:5432/pavanzada
database.username=progavanz
database.password=hola
```

Probamos la conexión. Pero como no tiene todavía los drivers de Postgres nos pide instalarlos

```
roo> database introspect --schema public
Located add-ons that may offer this JDBC driver
2 found, sorted by rank; T = trusted developer; R = Roo 1.2 compatible
ID T R DESCRIPTION
-----
01 Y Y 9.1.0.901-1.0001 Postgres #jdbcdriver...
02 Y Y 9.1.0.901-0001 Postgres #jdbcdriver...

JDBC driver not available for 'org.postgresql.Driver'
roo> addon install bundle --bundleSymbolicName
addon install bundle --bundleSymbolicName
required --bundleSymbolicName: The bundle symbolic name for the add-on of interest;
no default value
```

Lo instalamos tal como lo sugiere:

```
roo> addon install id --searchResultId 01
Target resource(s):

    Spring Roo - Wrapping - postgresql-jdbc4 (9.1.0.901-1.0001)

Deploying... done.

Successfully installed add-on: Spring Roo - Wrapping - postgresql-jdbc4
[version: 9.1.0.901-1.0001]
```

Y probamos de nuevo la conexión

```
roo> database introspect --schema public
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<!--WARNING: DO NOT EDIT THIS FILE. THIS FILE IS MANAGED BY SPRING ROO.-->
<database name="deprecated">
  <option key="moduleName" value=""/>
  <option key="activeRecord" value="false"/>
  <option key="repository" value="false"/>
  <option key="service" value="false"/>
  <option key="includeNonPortableAttributes" value="true"/>
  <option key="disableVersionFields" value="true"/>
  <option key="disableGeneratedIdentifiers" value="true"/>
  <option key="testAutomatically" value="false"/>
  <table alias="public" name="estado">
    <column name="id" primaryKey="true" required="true" scale="0"
      size="10" type="4,serial"/>
    <column name="pais" primaryKey="false" required="false" scale="0"
      size="100" type="12,varchar"/>
    <column name="estado" primaryKey="false" required="false" scale="0"
      size="100" type="12,varchar"/>
    <foreign-key foreignTable="usuario" name="usuario_id_est_fkey"
      onDelete="none" onUpdate="none">
      <option key="foreignSchemaName" value="public"/>
      <option key="exported" value="true"/>
      <reference foreign="id_est" local="id"/>
    </foreign-key>
    <unique name="estado.pkey">
      <unique-column name="id"/>
    </unique>
  </table>
  <table alias="public" name="usuario">
    <column name="id" primaryKey="true" required="true" scale="0"
      size="10" type="4,serial"/>
    <column name="nombre" primaryKey="false" required="false"
      scale="0" size="100" type="12,varchar"/>
    <column name="apellidos" primaryKey="false" required="false"
      scale="0" size="200" type="12,varchar"/>
    <column name="id_est" primaryKey="false" required="false"
      scale="0" size="10" type="4,int4"/>
    <foreign-key foreignTable="estado" name="usuario_id_est_fkey"
      onDelete="none" onUpdate="none">
      <option key="foreignSchemaName" value="public"/>
      <option key="exported" value="false"/>
```

```

        <reference foreign="id" local="id_est"/>
    </foreign-key>
    <unique name="usuario-pkey">
        <unique-column name="id"/>
    </unique>
</table>
</database>

```

Como ya esta conectando correctamente, procedemos a crear el modelo en base a la estructura de la base de datos

```

roo> database reverse engineer --schema public
Created SRC_MAIN_RESOURCES/dbre.xml
Updated ROOT/pom.xml
Updated SRC_MAIN_RESOURCES/META-INF/persistence.xml
Created SRC_MAIN_JAVA/mx/unam/mcc/pa
Created SRC_MAIN_JAVA/mx/unam/mcc/pa/Estado.java
Created SRC_MAIN_JAVA/mx/unam/mcc/pa/Usuario.java
Updated SRC_MAIN_JAVA/mx/unam/mcc/pa/Estado.java
Updated SRC_MAIN_JAVA/mx/unam/mcc/pa/Usuario.java
Created SRC_MAIN_JAVA/mx/unam/mcc/pa/Estado_Roo_Configurable.aj
Created SRC_MAIN_JAVA/mx/unam/mcc/pa/Estado_Roo_Jpa_ActiveRecord.aj
Created SRC_MAIN_JAVA/mx/unam/mcc/pa/Estado_Roo_DbManaged.aj
Created SRC_MAIN_JAVA/mx/unam/mcc/pa/Estado_Roo_ToString.aj
Created SRC_MAIN_JAVA/mx/unam/mcc/pa/Estado_Roo_Jpa_Entity.aj
Created SRC_MAIN_JAVA/mx/unam/mcc/pa/Usuario_Roo_Configurable.aj
Created SRC_MAIN_JAVA/mx/unam/mcc/pa/Usuario_Roo_Jpa_ActiveRecord.aj
Created SRC_MAIN_JAVA/mx/unam/mcc/pa/Usuario_Roo_DbManaged.aj
Created SRC_MAIN_JAVA/mx/unam/mcc/pa/Usuario_Roo_ToString.aj
Created SRC_MAIN_JAVA/mx/unam/mcc/pa/Usuario_Roo_Jpa_Entity.aj

```

Inicializamos una aplicación web.

```

roo> web mvc setup
Created ROOT/src/main/webapp/WEB-INF/spring
Created ROOT/src/main/webapp/WEB-INF/spring/webmvc-config.xml
Created ROOT/src/main/webapp/WEB-INF/web.xml
Updated ROOT/src/main/webapp/WEB-INF/spring/webmvc-config.xml
Created ROOT/src/main/webapp/images
Created ROOT/src/main/webapp/images/add.png
Created ROOT/src/main/webapp/images/banner-graphic.png
Created ROOT/src/main/webapp/images/create.png
Created ROOT/src/main/webapp/images/delete.png
Created ROOT/src/main/webapp/images/favicon.ico
Created ROOT/src/main/webapp/images/list.png
Created ROOT/src/main/webapp/images/resultset_first.png
Created ROOT/src/main/webapp/images/resultset_last.png
Created ROOT/src/main/webapp/images/resultset_next.png
Created ROOT/src/main/webapp/images/resultset_previous.png
Created ROOT/src/main/webapp/images/show.png
Created ROOT/src/main/webapp/images/springsource-logo.png
Created ROOT/src/main/webapp/images/update.png
Created ROOT/src/main/webapp/styles
Created ROOT/src/main/webapp/styles/alt.css
Created ROOT/src/main/webapp/styles/standard.css
Created ROOT/src/main/webapp/WEB-INF/classes
Created ROOT/src/main/webapp/WEB-INF/classes/alt.properties
Created ROOT/src/main/webapp/WEB-INF/classes/standard.properties
Created ROOT/src/main/webapp/WEB-INF/layouts
Created ROOT/src/main/webapp/WEB-INF/layouts/default.jspx
Created ROOT/src/main/webapp/WEB-INF/layouts/layouts.xml
Created ROOT/src/main/webapp/WEB-INF/views
Created ROOT/src/main/webapp/WEB-INF/views/header.jspx
Created ROOT/src/main/webapp/WEB-INF/views/menu.jspx
Created ROOT/src/main/webapp/WEB-INF/views/footer.jspx
Created ROOT/src/main/webapp/WEB-INF/views/views.xml
Created ROOT/src/main/webapp/WEB-INF/views/dataAccessFailure.jspx
Created ROOT/src/main/webapp/WEB-INF/views/index-template.jspx
Created ROOT/src/main/webapp/WEB-INF/views/index.jspx
Created ROOT/src/main/webapp/WEB-INF/views/resourceNotFound.jspx
Created ROOT/src/main/webapp/WEB-INF/views/uncheckedException.jspx
Created ROOT/src/main/webapp/WEB-INF/tags/form

```

```

Created ROOT/src/main/webapp/WEB-INF/tags/form/create.tagx
Created ROOT/src/main/webapp/WEB-INF/tags/form/dependency.tagx
Created ROOT/src/main/webapp/WEB-INF/tags/form/find.tagx
Created ROOT/src/main/webapp/WEB-INF/tags/form/list.tagx
Created ROOT/src/main/webapp/WEB-INF/tags/form/show.tagx
Created ROOT/src/main/webapp/WEB-INF/tags/form/update.tagx
Created ROOT/src/main/webapp/WEB-INF/tags/form/fields
Created ROOT/src/main/webapp/WEB-INF/tags/form/fields/checkbox.tagx
Created ROOT/src/main/webapp/WEB-INF/tags/form/fields/column.tagx
Created ROOT/src/main/webapp/WEB-INF/tags/form/fields/datetime.tagx
Created ROOT/src/main/webapp/WEB-INF/tags/form/fields/display.tagx
Created ROOT/src/main/webapp/WEB-INF/tags/form/fields/editor.tagx
Created ROOT/src/main/webapp/WEB-INF/tags/form/fields/input.tagx
Created ROOT/src/main/webapp/WEB-INF/tags/form/fields/reference.tagx
Created ROOT/src/main/webapp/WEB-INF/tags/form/fields/select.tagx
Created ROOT/src/main/webapp/WEB-INF/tags/form/fields/simple.tagx
Created ROOT/src/main/webapp/WEB-INF/tags/form/fields/table.tagx
Created ROOT/src/main/webapp/WEB-INF/tags/form/fields/textarea.tagx
Created ROOT/src/main/webapp/WEB-INF/tags/menu
Created ROOT/src/main/webapp/WEB-INF/tags/menu/category.tagx
Created ROOT/src/main/webapp/WEB-INF/tags/menu/item.tagx
Created ROOT/src/main/webapp/WEB-INF/tags/menu/menu.tagx
Created ROOT/src/main/webapp/WEB-INF/tags/util
Created ROOT/src/main/webapp/WEB-INF/tags/util/language.tagx
Created ROOT/src/main/webapp/WEB-INF/tags/util/load-scripts.tagx
Created ROOT/src/main/webapp/WEB-INF/tags/util/pagination.tagx
Created ROOT/src/main/webapp/WEB-INF/tags/util/panel.tagx
Created ROOT/src/main/webapp/WEB-INF/tags/util/placeholder.tagx
Created ROOT/src/main/webapp/WEB-INF/tags/util/theme.tagx
Created ROOT/src/main/webapp/WEB-INF/i18n
Created ROOT/src/main/webapp/WEB-INF/i18n/messages.properties
Created ROOT/src/main/webapp/images/en.png
Updated ROOT/src/main/webapp/WEB-INF/i18n/application.properties
Updated ROOT/src/main/webapp/WEB-INF/web.xml
Updated ROOT/pom.xml [added dependencies ...]
Updated SRC_MAIN.WEBAPP/WEB-INF/views/footer.jspx

```

Agregamos también el Scaffolding correspondiente al modelo que creamos.

```

roo> web mvc all --package ~.web
Created SRC_MAIN.JAVA/mx/unam/mcc/pa/web
Created SRC_MAIN.JAVA/mx/unam/mcc/pa/web/UsuarioController.java
Created SRC_MAIN.JAVA/mx/unam/mcc/pa/web/EstadoController.java
Updated SRC_MAIN.WEBAPP/WEB-INF/spring/webmvc-config.xml
Created SRC_MAIN.WEBAPP/WEB-INF/views/estados
Created SRC_MAIN.WEBAPP/WEB-INF/views/estados/views.xml
Updated SRC_MAIN.WEBAPP/WEB-INF/views/estados/views.xml
Updated SRC_MAIN.WEBAPP/WEB-INF/i18n/application.properties
Created SRC_MAIN.WEBAPP/WEB-INF/views/usuarios
Created SRC_MAIN.WEBAPP/WEB-INF/views/usuarios/views.xml
Updated SRC_MAIN.WEBAPP/WEB-INF/views/usuarios/views.xml
Updated SRC_MAIN.WEBAPP/WEB-INF/i18n/application.properties
Created SRC_MAIN.JAVA/mx/unam/mcc/pa/web/EstadoController_Roo_Controller.aj
Created SRC_MAIN.WEBAPP/WEB-INF/views/estados/list.jspx
Created SRC_MAIN.WEBAPP/WEB-INF/views/estados/show.jspx
Created SRC_MAIN.WEBAPP/WEB-INF/views/estados/create.jspx
Updated SRC_MAIN.WEBAPP/WEB-INF/views/menu.jspx
Created SRC_MAIN.WEBAPP/WEB-INF/views/estados/update.jspx
Created SRC_MAIN.JAVA/mx/unam/mcc/pa/web/UsuarioController_Roo_Controller.aj
Created SRC_MAIN.WEBAPP/WEB-INF/views/usuarios/list.jspx
Created SRC_MAIN.WEBAPP/WEB-INF/views/usuarios/show.jspx
Created SRC_MAIN.WEBAPP/WEB-INF/views/usuarios/create.jspx
Created SRC_MAIN.WEBAPP/WEB-INF/views/usuarios/update.jspx

```

Corremos las pruebas

```

roo> perform tests
[INFO] --- aspectj-maven-plugin:1.4:compile (default) @ problema1 ---
[INFO] No modifications found skipping aspectJ compile
[INFO]
[INFO] --- aspectj-maven-plugin:1.4:test-compile (default) @ problema1 ---
[WARNING] No sources found skipping aspectJ compile
[INFO]

```

```

[INFO] --- maven-resources-plugin:2.6:resources (default-resources) @ problemal ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] Copying 5 resources
[INFO] --- maven-compiler-plugin:2.5.1:compile (default-compile) @ problemal ---
[INFO] Nothing to compile - all classes are up to date
[INFO] --- openjpa-maven-plugin:2.2.2:enhance (enhancer) @ problemal ---
[INFO] --- maven-resources-plugin:2.6:testResources @ problemal ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] skip non existing resourceDirectory
/home/fabian/workspace/maestria/programacion-avanzada/tarea8/src/test/resources
[INFO] --- maven-compiler-plugin:2.5.1:testCompile @ problemal ---
[INFO] No sources to compile
[INFO] --- maven-surefire-plugin:2.12:test (default-test) @ problemal ---
[INFO] No tests to run.
[INFO] Surefire report directory:
/home/fabian/workspace/maestria/programacion-avanzada/tarea8/target/surefire-reports
roo>

=====
T E S T S
=====

roo>
Results :
roo>
Tests run: 0, Failures: 0, Errors: 0, Skipped: 0
roo>
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 2.508s
[INFO] Finished at: Sat Nov 23 22:31:29 CST 2013
[INFO] Final Memory: 14M/304M
[INFO] -----

```

Salimos de roo y probamos la aplicación:

```

fabian@fabian-HP:~/workspace/maestria/programacion-avanzada/tarea8$ mvn jetty:run
[INFO] Scanning for projects...
[INFO]
[INFO] -----
[INFO] Building problemal 0.1.0.BUILD-SNAPSHOT
[INFO] -----
[INFO]
[INFO] >>> jetty-maven-plugin:8.1.4.v20120524:run (default-cli) @ problemal >>>
[INFO] --- aspectj-maven-plugin:1.4:compile (default) @ problemal ---
[INFO] No modifications found skipping aspectJ compile
[INFO] --- aspectj-maven-plugin:1.4:test-compile (default) @ problemal ---
[WARNING] No sources found skipping aspectJ compile
[INFO] --- maven-resources-plugin:2.6:resources (default-resources) @ problemal ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] Copying 5 resources
[INFO] --- maven-compiler-plugin:2.5.1:compile (default-compile) @ problemal ---
[INFO] Nothing to compile - all classes are up to date
[INFO] --- openjpa-maven-plugin:2.2.2:enhance (enhancer) @ problemal ---
[INFO] --- maven-resources-plugin:2.6:testResources @ problemal ---
[INFO] --- maven-compiler-plugin:2.5.1:testCompile @ problemal ---
[INFO] No sources to compile
[INFO] <<< jetty-maven-plugin:8.1.4.v20120524:run (default-cli) @ problemal <<<
[INFO] --- jetty-maven-plugin:8.1.4.v20120524:run (default-cli) @ problemal ---
[INFO] Configuring Jetty for project: problemal
[INFO] Reload Mechanic: automatic
[INFO] Classes = /home/fabian/workspace/maestria/programacion-avanzada/tarea8/

```

```

target/classes
[INFO] Context path = /problema1
[INFO] Tmp directory = /home/fabian/workspace/maestria/programacion-avanzada/
tarea8/target/tmp
[INFO] Web defaults = org/eclipse/jetty/webapp/webdefault.xml
[INFO] Web overrides = none
[INFO] web.xml file = file:/home/fabian/workspace/maestria/programacion-avanzada/
tarea8/src/main/webapp/WEB-INF/web.xml
[INFO] Webapp directory = /home/fabian/workspace/maestria/programacion-avanzada/
tarea8/src/main/webapp
2013-11-23 22:31:48.120:INFO:oejs.Server:jetty -8.1.4.v20120524
2013-11-23 22:31:48.960:INFO:oejpw.PlusConfiguration:No Transaction manager found
- if your webapp requires one, please configure one.
2013-11-23 22:31:50.760:INFO:/problema1:No Spring WebApplicationInitializer
types detected on classpath
2013-11-23 22:31:51:INFO:oejsh.ContextHandler:started o.m.j.p.JettyWebAppContext
{/problema1, file:/home/fabian/workspace/maestria/programacion-avanzada/tarea8/src/
main/webapp/}, file:/home/fabian/workspace/maestria/programacion-avanzada/tarea8/
src/main/webapp/
2013-11-23 22:31:51:INFO:oejsh.ContextHandler:started o.m.j.p.JettyWebAppContext
{/problema1, file:/home/fabian/workspace/maestria/programacion-avanzada/tarea8/src/
main/webapp/}, file:/home/fabian/workspace/maestria/programacion-avanzada/tarea8/
/main/webapp/
2013-11-23 22:31:51:INFO:oejsh.ContextHandler:started o.m.j.p.JettyWebAppContext
{/problema1, file:/home/fabian/workspace/maestria/programacion-avanzada/tarea8/src/
main/webapp/}, file:/home/fabian/workspace/maestria/programacion-avanzada/tarea8/
/main/webapp/
2013-11-23 22:31:51:INFO:/problema1:Initializing Spring root WebApplicationContext
2013-11-23 22:31:51:INFO:oejsh.ContextHandler:started o.m.j.p.JettyWebAppContext
{/problema1, file:/home/fabian/workspace/maestria/programacion-avanzada/tarea8/
main/webapp/}, file:/home/fabian/workspace/maestria/programacion-avanzada/tarea8/
src/main/webapp/
2013-11-23 22:31:51.738:INFO:/problema1:Initializing Spring FrameworkServlet
'problema1'
2013-11-23 22:31:52.474:INFO:oejs.AbstractConnector:
Started SelectChannelConnector@0.0.0.0:8080
[INFO] Started Jetty Server

```

voilà

