



LABORATORIO N° 05

Desarrollo de aplicaciones Web: Patrón DAO



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CURSO:
Desarrollo de aplicaciones Web
5 - C24 - Sección A - B

DESARROLLO DE APPLICACIONES WEB: PATRON DAO

I. Capacidades

- Implementar aplicaciones web bajo el patrón DAO

II. Seguridad

- En este laboratorio está prohibida la manipulación del hardware, conexiones eléctricas o de red. Así como la ingesta de alimentos y bebidas.
- Ubicar maletines y/o mochilas en lugar destinado para tal fin.
- Dejar la mesa de trabajo y la silla utilizada limpias y ordenadas.

III. Fundamento teórico

- Revise el material de la semana correspondiente antes del desarrollo del laboratorio.

IV. Normas empleadas

- *No aplica*

V. Recursos

- En este laboratorio, cada estudiante trabajará con una computadora con Windows 10.
- La instalación del software requerido se realizará en el equipo virtual.

VI. Metodología para el desarrollo de la tarea

- El desarrollo del laboratorio es individual

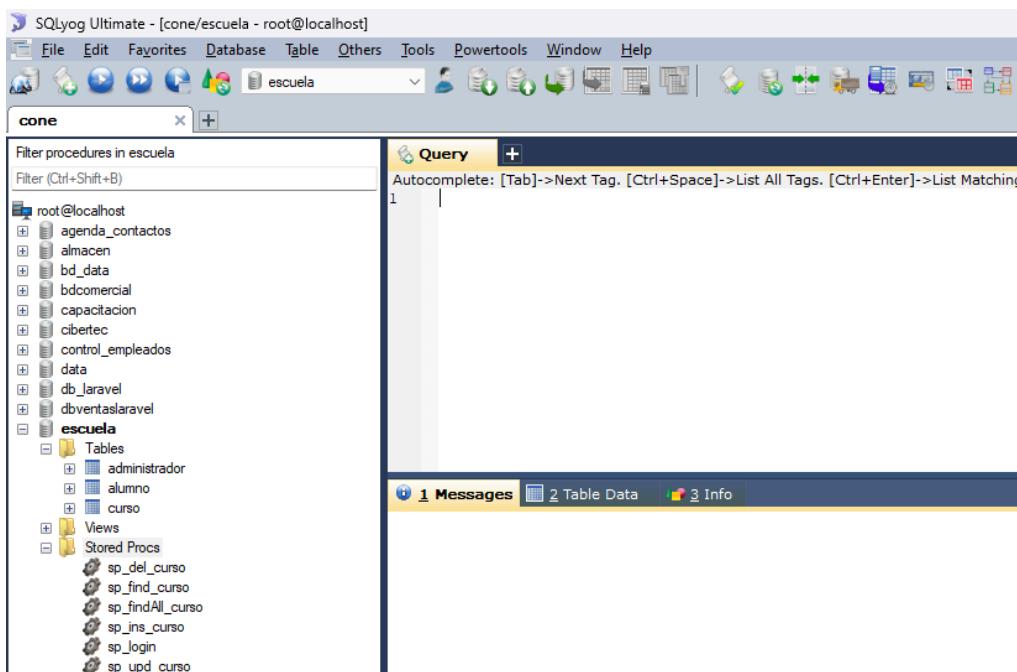
VII. Procedimiento

APLICACIÓN 02

CREANDO LA BASE DE DATOS

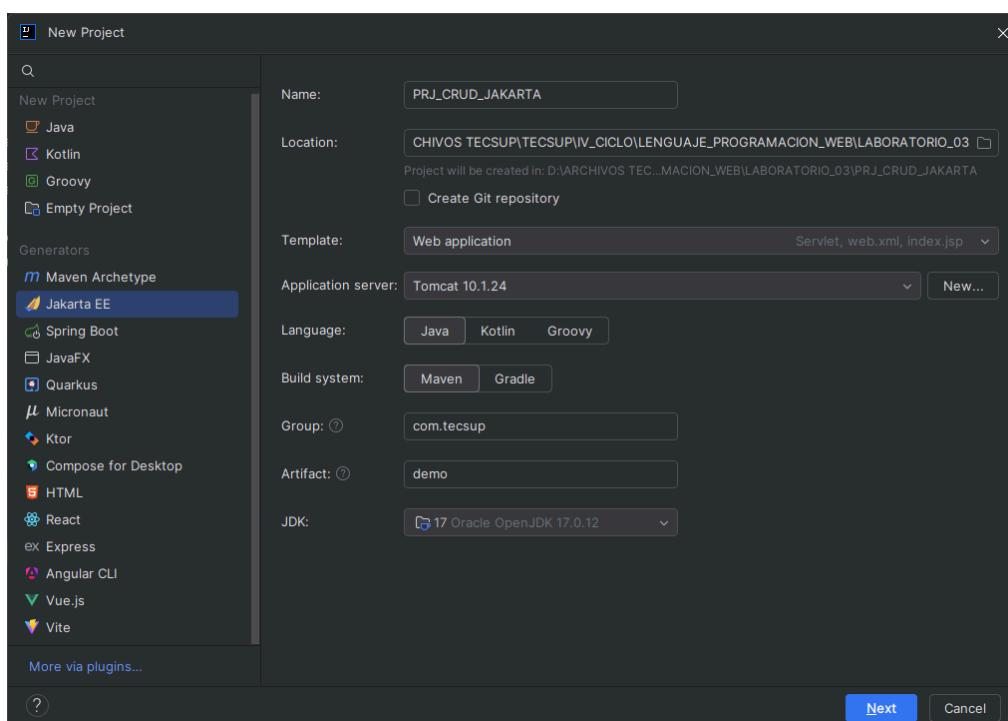
1.- Configurar BD

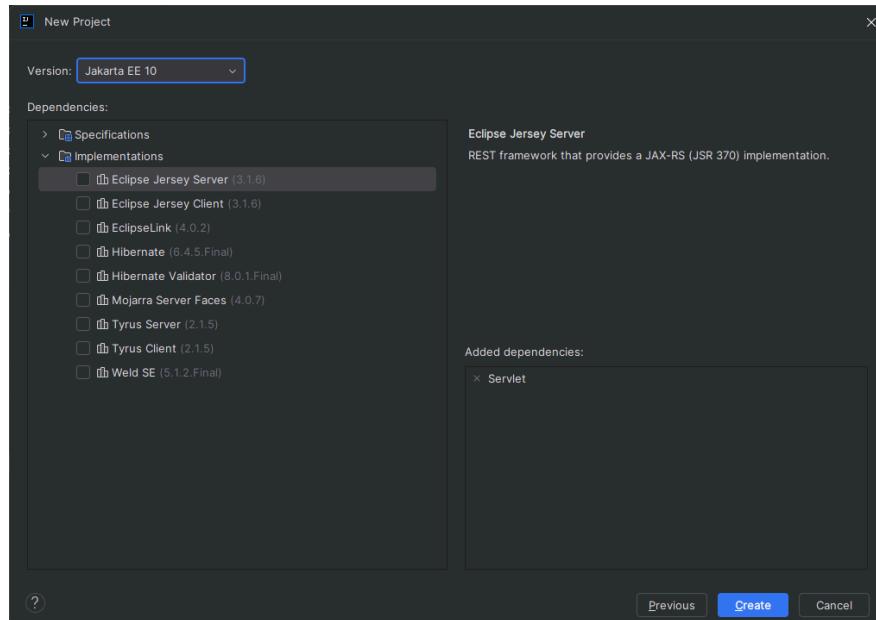
- Ejecutar el XAMP
- Abrir el MySQL
- Abrir el archivo **escuela.sql** y **escuela_sp.sql**
- Copiar el código en la Query y ejecute.



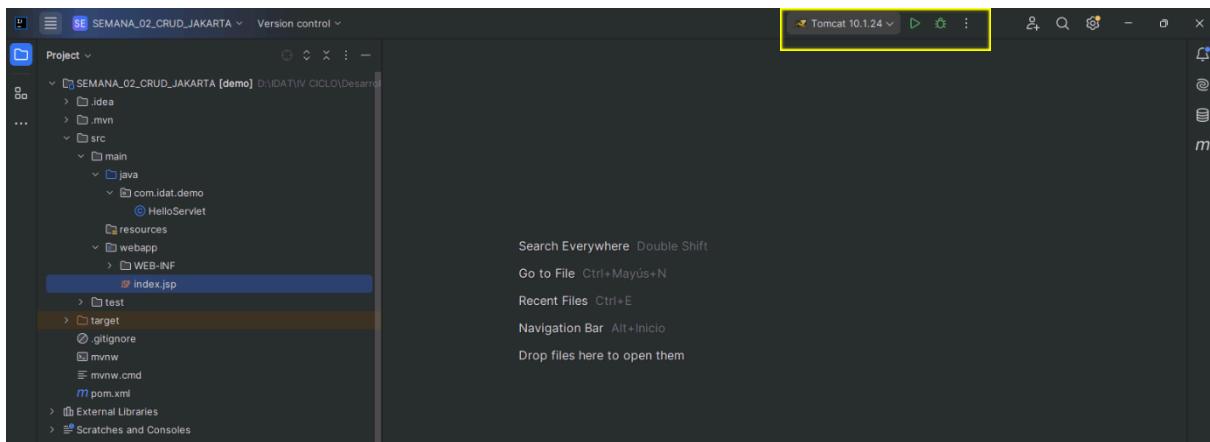
CREANDO EL PROYECTO JAKARTA

1.- Crear el siguiente proyecto.





Ejecute la aplicación



3.- Configurar dependencias: <https://mvnrepository.com/>

Rank	Nombre	Uso
1.	Conector MySQL/J com.mysql > connector-mysql-j	788 usos
2.	Conector MySQL Java mysql > connector-mysql-java	7,826 usos

This artifact was moved to:
com.mysql > mysql-connector-j

Version	Vulnerabilities	Repository	Usages	Date
8.0.33		Central	248	Apr 18, 2023
8.0.32		Central	141	Jan 19, 2023
8.0.31		Central	176	Oct 18, 2022

- Copiar la dependencia

This artifact was moved to:
com.mysql > mysql-connector-j

MySQL Connector/J artifacts moved to reverse-DNS compliant Maven 2+ coordinates.

```
<!-- https://mvnrepository.com/artifact/mysql/mysql-connector-java -->
<dependency>
    <groupId>mysql</groupId>
    <artifactId>mysql-connector-java</artifactId>
    <version>8.0.33</version>
</dependency>
```

- Pegar

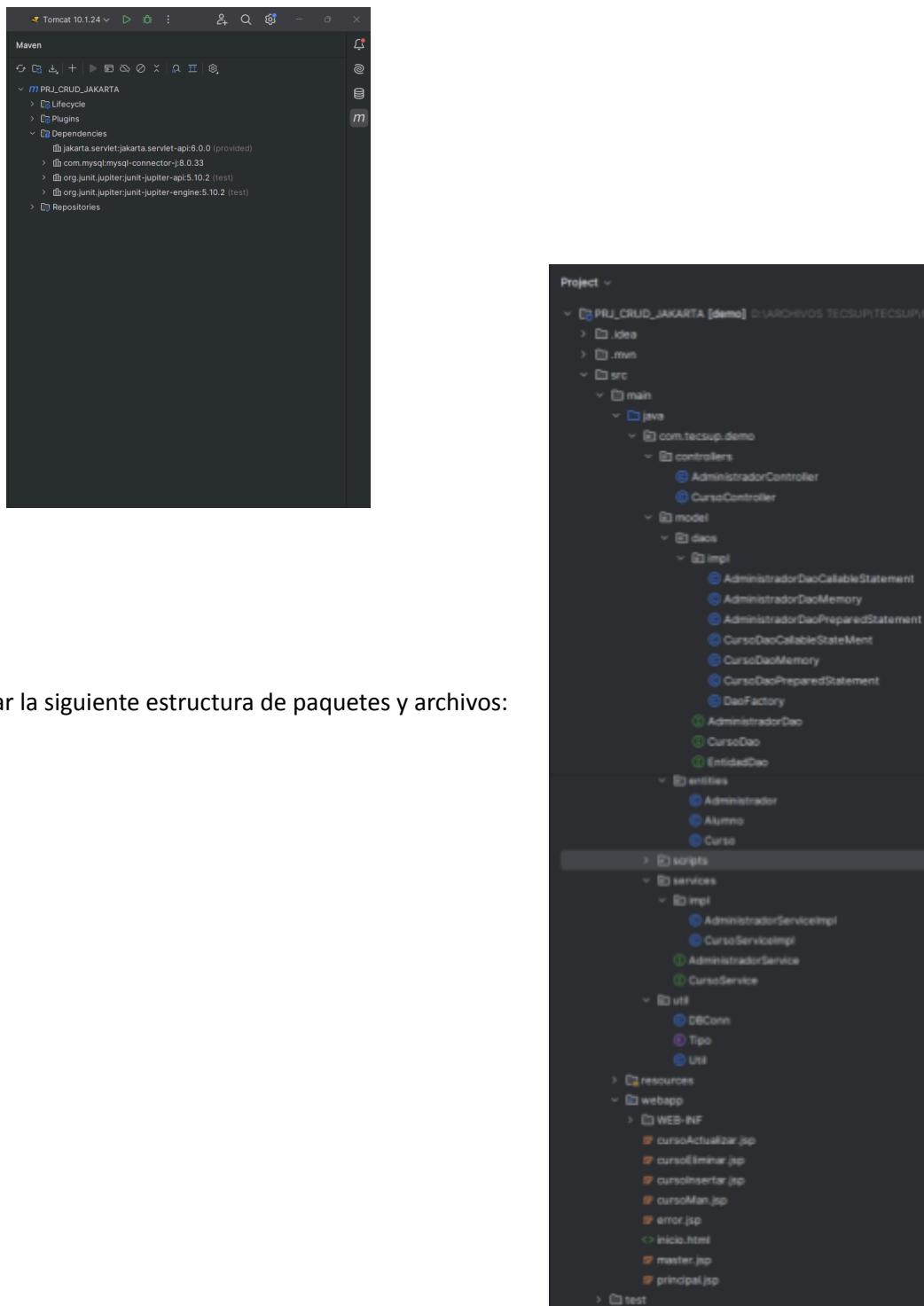
```

<dependency>
    <groupId>jakarta.servlet</groupId>
    <artifactId>jakarta.servlet-api</artifactId>
    <version>6.0.0</version>
    <scope>provided</scope>
</dependency>

<dependency>
    <groupId>mysql</groupId>
    <artifactId>mysql-connector-java</artifactId>
    <version>8.0.33</version>
</dependency>

```

Abrir la ventana Maven y actualizar para ver la dependencia

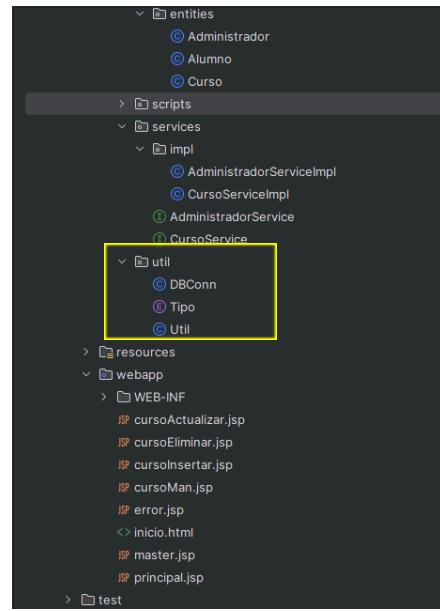


5.- Crear La conexión

En la carpeta **útil** codificar lo siguiente:

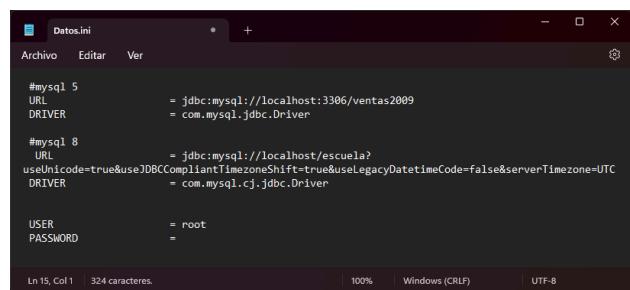
Java Class DBConn

```
DBConn.java x
1 package com.tecsup.demo.util;
2 import java.io.FileInputStream;
3 import java.io.IOException;
4 import java.sql.Connection;
5 import java.sql.DriverManager;
6 import java.sql.SQLException;
7 import java.util.PropertyResourceBundle;
8
9 public class DBConn { 2 usages
10
11     private static String driver= null; 2 usages
12     private static String usuario = null; 2 usages
13     private static String password = null; 2 usages
14     private static String url = null; 2 usages
15     static PropertyResourceBundle properties; 5 usages
16
17     static{
18         try{
19             properties = new PropertyResourceBundle(new FileInputStream(Util.RUTA));
20             url= properties.getString( key: "URL");
21             driver= properties.getString( key: "DRIVER");
22             usuario= properties.getString( key: "USER");
23             password= properties.getString( key: "PASSWORD");
24
25             Class.forName(driver);
26
27         } catch(IOException e){
28             System.out.println("Error:"+e);
29         }catch (ClassNotFoundException e) {
30             System.out.println(e);
31         }
32     }
33 }
```



Java Class Util

```
Util.java x
1 package com.tecsup.demo.util;
2
3 import java.util.ResourceBundle;
4
5 public class Util { 6 usages
6
7     public static Tipo opc ; 3 usages
8     public static final String ERROR1; 2 usages
9     public static final String ERROR2; 1 usage
10
11     static {
12         ResourceBundle properties = ResourceBundle.getBundle( basename: "config");
13         opc = Tipo.valueOf(properties.getString( key: "opc"));
14         ERROR1 = properties.getString( key: "error1");
15         ERROR2 = properties.getString( key: "error2");
16     }
17     public static final String RUTA= "c:/tecsup/Datos.ini"; 1 usage
18 }
```



Enum Tipo

```
Tipo.java x
1 package com.tecsup.demo.util;
2
3 public enum Tipo { 2 usages
4     MEM, PST, CST no usages
5 }
```

```
config.properties x
1 #componentes
2 opc = CST
3
4 #errores
5 error1 = Error de base de datos
6 error2 = Error de lectura de archivo
7
```

Click derecho en resources New / File
Escribir el nombre config.properties

6.- Crear clases para las entidades

Escriba el siguiente código

The screenshot shows a Java code editor and a database management interface side-by-side.

Java Code (Administrador.java):

```

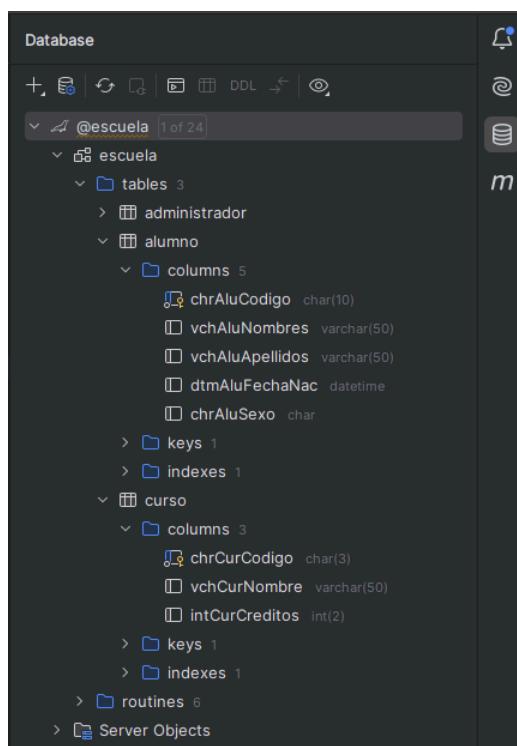
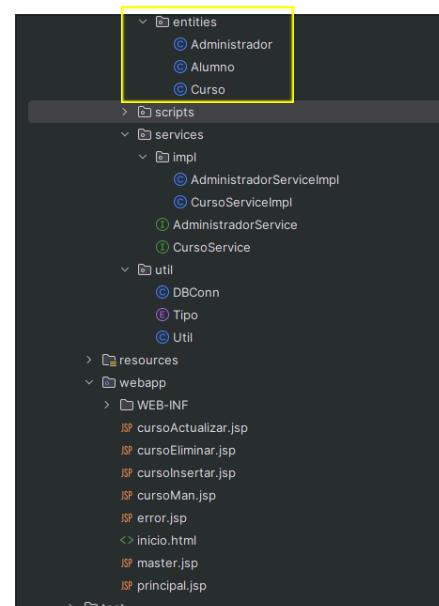
1 package com.tecsup.demo.model.entities;
2
3 import java.io.Serializable;
4
5 public class Administrador implements Serializable {
6     private String codigo; 3 usages
7     private String login; 3 usages
8     private String password; 3 usages
9     private String nombres; 3 usages
10    private String apellidos; 3 usages
11
12    public Administrador() { 2 usages
13    }
14
15    public String getCodigo() { return codigo; }
16
17    public void setCodigo(String codigo) { this.codigo = codigo; }
18
19    public String getLogin() { return login; }
20
21    public void setLogin(String login) { this.login = login; }
22
23    public String getPassword() { return password; }
24
25    public void setPassword(String password) { this.password = password; }
26
27    public String getNombres() { return nombres; }
28
29    public void setNombres(String nombres) { this.nombres = nombres; }
30
31    public String getApellidos() { return apellidos; }
32
33    public void setApellidos(String apellidos) { this.apellidos = apellidos; }
34
35    @Override
36    public String toString() {
37        return "Administrador" +
38            ", codigo='" + codigo + "'\n" +
39            ", login='" + login + "'\n" +
40            ", password='" + password + "'\n" +
41            ", nombres='" + nombres + "'\n" +
42            ", apellidos='" + apellidos + "'\n" +
43            '}';
44    }
45}

```

Database Browser:

- Database: @escuela (1 of 22)
- Tables:
 - administrador (1 row)
 - alumno (1 row)
 - curso (1 row)
- columns:
 - administrador:
 - chrAdminCodigo char(3)
 - chrAdminLogin char(10)
 - chrAdminPassword char(10)
 - vchAdminNombres varchar(50)
 - vchAdminApellidos varchar(50)
- keys (1)
- indexes (1)
- routines (0)
- Server Objects (322)
- collations (322)
- users (4)

Repita para la entidad curso.



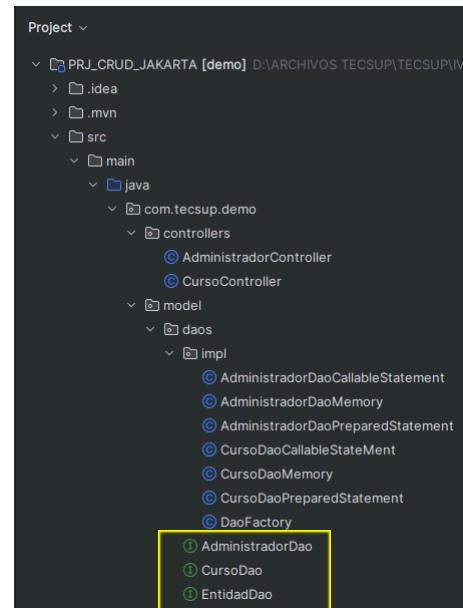
7.- Interfaces

- Escriba el siguiente código EntidadDao

```

1 package com.tecsup.demo.model.daos;
2
3 import java.util.List;
4
5 public interface EntidadDao<T, V> { no usages
6     public void create(T t); no usages
7     public T find(V id); no usages
8     public List<T> findAll(); no usages
9     public void update(T t); no usages
10    public void delete(V id); no usages
11 }
12

```



Interface genérica, T tipo V valor que corresponde

- Codificar en la Interface CursoDao

```

1 package com.tecsup.demo.model.daos;
2
3 import com.tecsup.demo.model.entities.Curso;
4
5 import java.util.List;
6
7 public interface CursoDao extends EntidadDao<Curso, String>{ no usages
8
9     public List<Curso> findByRangeCreditos(int min, int max); no usages
10    public List<Curso> findByNombre(String nombre); no usages
11 }
12

```

Creando dos requerimientos funcionales a parte del mantenimiento.

- Codificando en la interface AdministradorDao

```

1 package com.tecsup.demo.model.daos;
2
3 import com.tecsup.demo.model.entities.Administrador;
4
5 public interface AdministradorDao { no usages
6
7     public Administrador validar(String user, String password); no usages
8 }

```

8.- Implementando al Administrador (Impl)

- Codificar en la Clase AdministradorDaoCallableStatement

```

1 package com.tecsup.demo.model.daos.Impl;
2
3 import com.tecsup.demo.model.daos.AdministradorDao;
4 import com.tecsup.demo.model.entities.Administrador;
5 import com.tecsup.demo.util.DBConn;
6
7 import java.sql.CallableStatement;
8 import java.sql.Connection;
9 import java.sql.ResultSet;
10 import java.sql.SQLException;
11
12 public class AdministradorDaoCallableStatement implements AdministradorDao { no usages
13
14     private Connection con; no usages
15     private ResultSet rs; 7 usages
16     private CallableStatement cst; 4 usages
17
18     @Override no usages
19     public Administrador validar(String user, String password) {
20         Administrador administrador = null;
21
22         try(Connection con = DBConn.getConnection()) {
23             cst = con.prepareCall("call sp_login(?,?)");
24             cst.setString( parameterIndex: 1, user);
25             cst.setString( parameterIndex: 2, password);
26             rs = cst.executeQuery();
27
28             if(rs.next()) {
29                 administrador = new Administrador();
30                 administrador.setCodigo(rs.getString( columnIndex: 1));
31                 administrador.setLogin(rs.getString( columnIndex: 2));
32                 administrador.setPassword(rs.getString( columnIndex: 3));
33                 administrador.setNombres(rs.getString( columnIndex: 4));
34                 administrador.setApellidos(rs.getString( columnIndex: 5));
35             }
36         } catch (SQLException e) {
37             e.printStackTrace();
38             System.out.println(e.getMessage());
39         }
40
41         return administrador;
42     }
43 }

```

Project ▾

- PRJ_CRUD_JAKARTA [demo] D:\ARCHIVOS TECSUP\TECSUPIV_...
- > .idea
- > .mvn
- > src
 - > main
 - > java
 - > com.tecsup.demo
 - > controllers
 - AdministradorController
 - CursoController
 - > model
 - > daos
 - > impl
 - AdministradorDaoCallableStatement
 - AdministradorDaoMemory
 - AdministradorDaoPreparedStatement
 - CursoDaoCallableStatement
 - CursoDaoMemory
 - CursoDaoPreparedStatement
 - DaoFactory
 - AdministradorDao
 - CursoDao
 - EntidadDao

9.- Implementando al Curso (Impl)

- Configurar la Clase **CursoDaoCallableStateMent**
 - Al lado del **CursoDao**, presionar las teclas **Control + Barra**

```

1 package com.tecsup.demo.model.daos.Impl;
2
3 public class CursoDaoCallableStateMent implements CursoDao { no usages
4
5 }
6
7

```

- Click en el signo > del foco, seleccione “**Implement methods**”

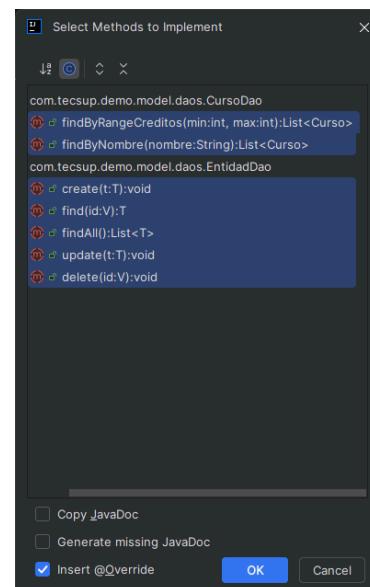
```

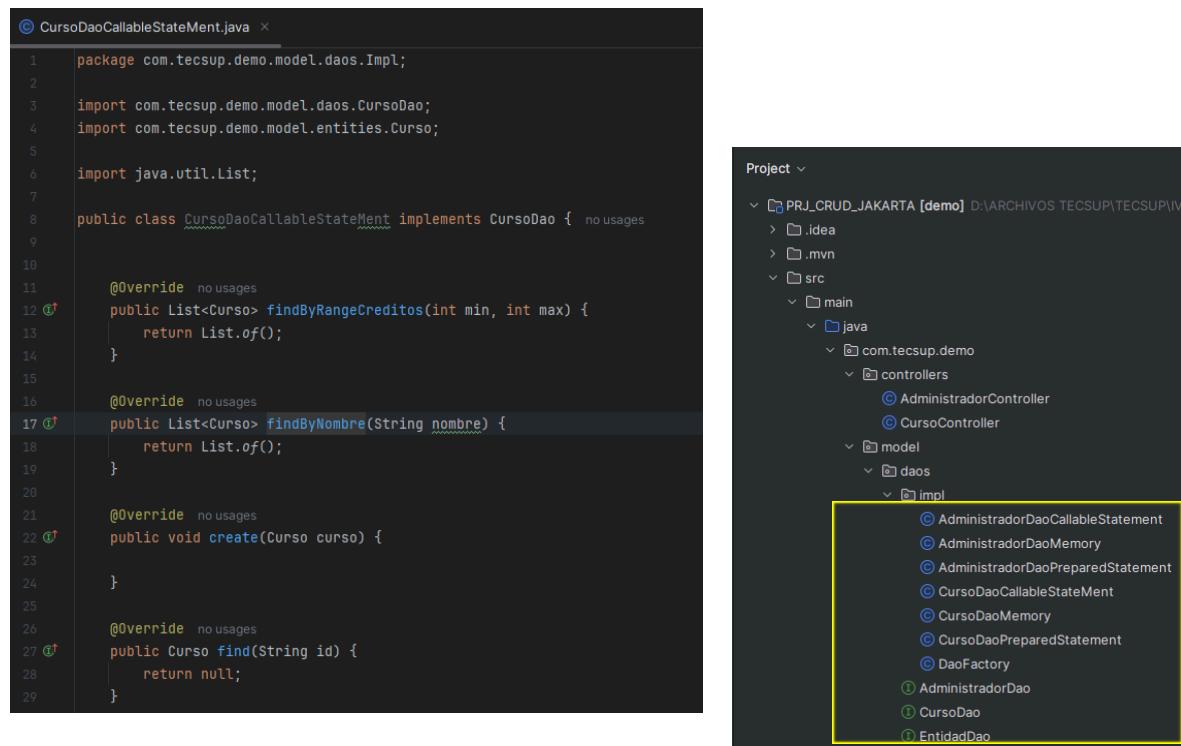
1 package com.tecsup.demo.model.daos.Impl;
2
3 import com.tecsup.demo.model.daos.CursoDao;
4
5 public class CursoDaoCallableStateMent implements CursoDao { no usages
6
7
8
9

```

Context menu options (highlighted): Create interface 'CursoDao', Implement methods, Make 'CursoDaoCallableStateMent' abstract, Add Maven dependency..., Create subclass, Create test, Replace constructor with factory method, Seal class, Unimplement Interface.

- Seleccione todos los métodos, click en el botón **OK**





The screenshot shows an IDE interface with two main panes. The left pane displays the code for `CursoDaoCallableStateMent.java`. The right pane shows the project structure under `Project`, with a yellow box highlighting the `impl` package which contains several DAO classes.

```
CursoDaoCallableStateMent.java:
```

```
1 package com.tecsup.demo.model.daos.Impl;
2
3 import com.tecsup.demo.model.daos.CursoDao;
4 import com.tecsup.demo.model.entities.Curso;
5
6 import java.util.List;
7
8 public class CursoDaoCallableStateMent implements CursoDao { no usages
9
10
11     @Override no usages
12     public List<Curso> findByRangeCreditos(int min, int max) {
13         return List.of();
14     }
15
16     @Override no usages
17     public List<Curso> findByNombre(String nombre) {
18         return List.of();
19     }
20
21     @Override no usages
22     public void create(Curso curso) {
23     }
24
25     @Override no usages
26     public Curso find(String id) {
27         return null;
28     }
29 }
```

```
Project:
```

```
PRJ_CRUD_JAKARTA [demo] D:\ARCHIVOS TECSUP\TECSUP\IV.
  .idea
  .mvn
  src
    main
      java
        com.tecsup.demo
          controllers
            AdministradorController
            CursoController
          model
            daos
              impl
                AdministradorDaoCallableStatement
                AdministradorDaoMemory
                AdministradorDaoPreparedStatement
                CursoDaoCallableStateMent
                CursoDaoMemory
                CursoDaoPreparedStatement
                DaoFactory
                AdministradorDao
                CursoDao
                EntidadDao
```

Implemente las siguientes clases **CursoDaoMemory** y **CursoDaoPreparedStatement**.

Codificar en cada implementación del Curso

CursoDaoCallableStateMent

```
CursoDaoCallableStateMent.java ×

1 package com.tecsup.demo.model.daos.Impl;
2
3 import com.tecsup.demo.model.daos.CursoDao;
4 import com.tecsup.demo.model.entities.Curso;
5 import com.tecsup.demo.util.DBConn;
6 import java.sql.CallableStatement;
7 import java.sql.Connection;
8 import java.sql.ResultSet;
9 import java.sql.SQLException;
10 import java.util.ArrayList;
11 import java.util.List;
12
13 public class CursoDaoCallableStateMent implements CursoDao { no usages
14     private Connection con; no usages
15     private ResultSet rs; 10 usages
16     private CallableStatement cst; no usages
17
18     @Override no usages
19     public List<Curso> findAll() {
20         List<Curso> cursos = new ArrayList<>();
21         try(Connection con = DBConn.getConnection();
22             CallableStatement cst = con.prepareCall("call sp_findAll_curso()")){
23             rs = cst.executeQuery();
24             while(rs.next()){
25                 cursos.add(new Curso(rs.getString( columnLabel: "chrCurCodigo"), rs.getString( columnLabel: "vchCurNombre"),
26                                     rs.getInt( columnLabel: "intCurCreditos")));
27             }
28         }catch(SQLException e){
29             System.out.println("Error en la consulta");
30         }
31     }
32     return cursos;
33 }
34
35     @Override no usages
36     public void create(Curso curso) {
37         try(Connection con = DBConn.getConnection();
38             CallableStatement cst = con.prepareCall("call sp_ins_curso(?, ?, ?)")){
39             cst.setString( parameterIndex: 1, curso.getCodigo());
40             cst.setString( parameterIndex: 2, curso.getNombre());
41             cst.setInt( parameterIndex: 3, curso.getCreditos());
42             cst.executeUpdate();
43         }catch(SQLException e){
44             System.out.println("Error en la inserción");
45         }
46     }
47
48 }
49
50     @Override no usages
51     public Curso find(String id) {
52         Curso curso = null;
53         try(Connection con = DBConn.getConnection();
54             CallableStatement cst = con.prepareCall("call sp_find_curso(?))")){
55             cst.setString( parameterIndex: 1, id);
56             rs = cst.executeQuery();
57             if(rs.next()){
58                 curso = new Curso(rs.getString( columnLabel: "chrCurCodigo"), rs.getString( columnLabel: "vchCurNombre"),
59                                   rs.getInt( columnLabel: "intCurCreditos"));
56             }
57         }catch(SQLException e){
58             System.out.println("Error en la consulta");
59         }
60     }
61     return curso;
62 }
```

```

66
67     @Override no usages
68     public void update(Curso curso) {
69         try(Connection con = DBConn.getConnection();
70             CallableStatement cst = con.prepareCall( sql: "{call sp_upd_curso(?, ?, ?)}")){
71             cst.setString( parameterIndex: 1, curso.getCodigo());
72             cst.setString( parameterIndex: 2, curso.getNombre());
73             cst.setInt( parameterIndex: 3, curso.getCreditos());
74             cst.executeUpdate();
75         }catch(SQLException e){
76             System.out.println("Error en la actualización");
77         }
78     }
79
80     @Override no usages
81     public void delete(String id) {
82         try(Connection con = DBConn.getConnection();
83             CallableStatement cst = con.prepareCall( sql: "{call sp_del_curso(?)}")){
84             cst.setString( parameterIndex: 1, id);
85             cst.executeUpdate();
86         }catch(SQLException e){
87             System.out.println("Error en la eliminación");
88         }
89     }
90
91     @Override no usages
92     >     public List<Curso> findByRangeCreditos(int min, int max) { return List.of(); }
93
94     @Override no usages
95     >     public List<Curso> findByNombre(String nombre) { return List.of(); }
96
97     >
98 }
```

DaoFactory

```

① DaoFactory.java ×
1 package com.tecsup.demo.model.daos.Impl;
2 import com.tecsup.demo.model.daos.AdministradorDao;
3 import com.tecsup.demo.model.daos.CursoDao;
4 import com.tecsup.demo.util.Tipo;
5
6 public class DaoFactory { no usages
7
8     @
9     public static AdministradorDao getAdministradorDao(Tipo tipo){ no usages
10        switch (tipo){
11            case MEM:
12                return new AdministradorDaoMemory();
13            case PST:
14                return new AdministradorDaoPreparedStatement();
15            case CST:
16                return new AdministradorDaoCallableStatement();
17            default:
18                return null;
19        }
20    }
21    @
22    public static CursoDao getCursoDao(Tipo tipo){ no usages
23        switch (tipo){
24            case MEM:
25                return new CursoDaoMemory();
26            case PST:
27                return new CursoDaoPreparedStatement();
28            case CST:
29                return new CursoDaoCallableStatement();
30            default:
31                return null;
32        }
33    }
34 }
```

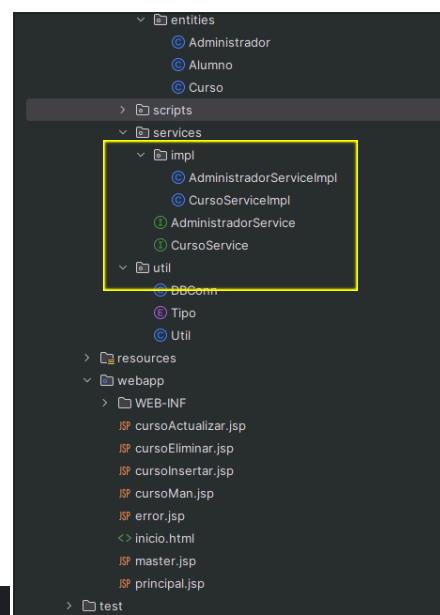
10.- Services

- Codificar en la interface “**AdministradorService**”

```

1 package com.tecsup.demo.service;
2
3 import com.tecsup.demo.model.entities.Administrador;
4
5 public interface AdministradorService {
6     public Administrador validar(String u, String p);
7 }

```



- Codificar en la interface “**CursoService**”

```

1 package com.tecsup.demo.service;
2
3 import com.tecsup.demo.model.entities.Curso;
4
5 import java.util.List;
6
7 public interface CursoService {
8     public void grabar(Curso curso);
9     public Curso buscar(String id);
10    public List<Curso> listar();
11    public void actualizar(Curso curso);
12    public void borrar(String id);
13    public List<Curso> filterByCreditos(int min, int max);
14 }

```

- Implementar la clase “**AdministradorServiceImpl**”

```

1 package com.tecsup.demo.services.Impl;
2
3 import com.tecsup.demo.model.daos.AdministradorDao;
4 import com.tecsup.demo.model.daos.impl.DaoFactory;
5 import com.tecsup.demo.model.entities.Administrador;
6 import com.tecsup.demo.services.AdministradorService;
7 import com.tecsup.demo.util.Util;
8
9 public class AdministradorServiceImpl implements AdministradorService {
10
11     private AdministradorDao dao;
12
13     public AdministradorServiceImpl() {
14         dao = DaoFactory.getAdministradorDao(Util.opc);
15     }
16
17     @Override
18     public Administrador validar(String u, String p) {
19         return dao.validar(u, p);
20     }
21 }

```

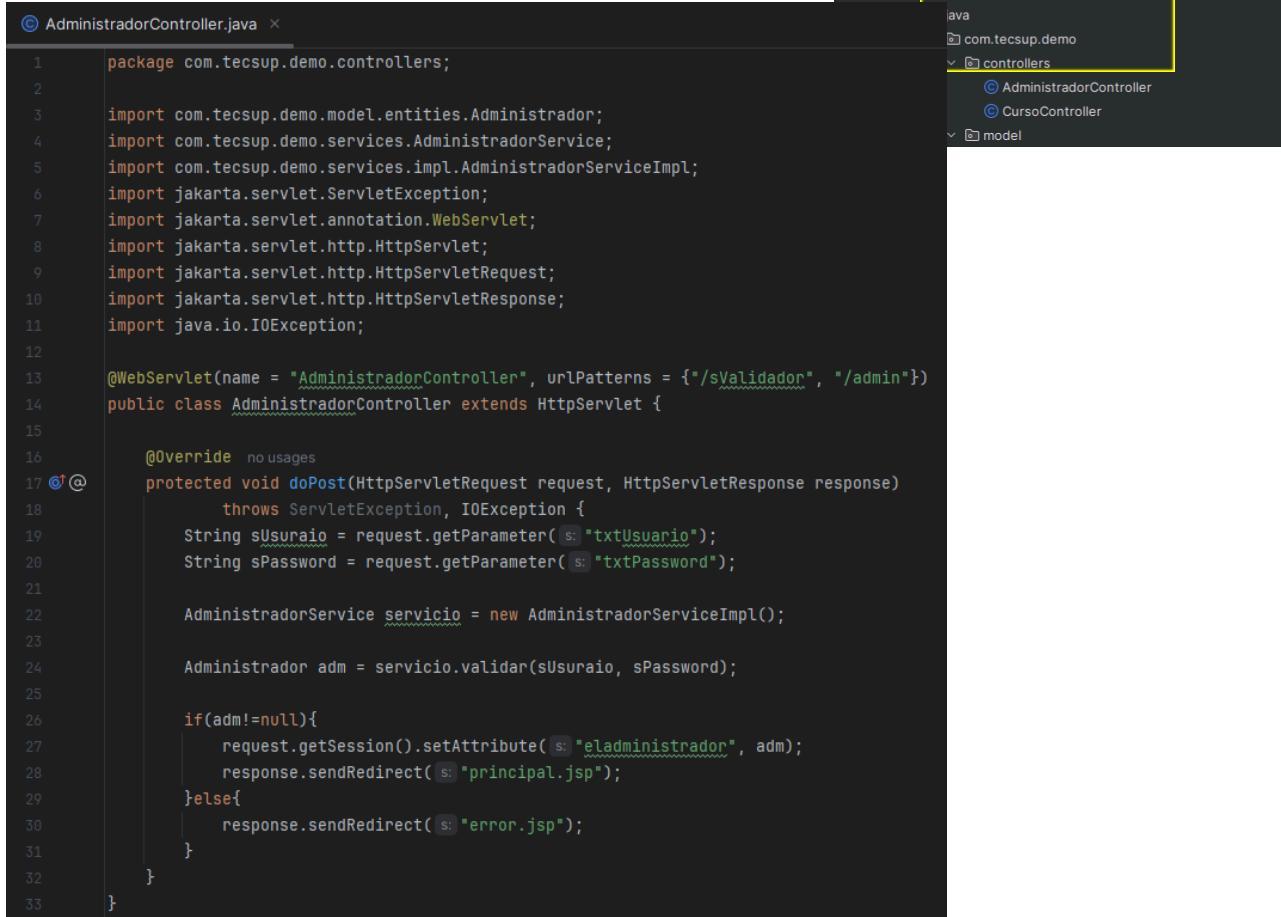
CursoServiceImpl

- Implementar la clase “**CursoServiceImpl**”

```
⑥ CursoServiceImpl.java ×
1  package com.tecsup.demo.services.Impl;
2
3  import com.tecsup.demo.model.daos.CursoDao;
4  import com.tecsup.demo.model.daos.impl.DaoFactory;
5  import com.tecsup.demo.model.entities.Curso;
6  import com.tecsup.demo.services.CursoService;
7  import com.tecsup.demo.util.Util;
8
9  import java.util.List;
10
11 public class CursoServiceImpl implements CursoService {
12
13     private CursoDao dao; 7 usages
14     public CursoServiceImpl() { no usages
15         dao = DaoFactory.getCursoDao(Util.opc);
16     }
17
18     @Override no usages
19     ⚡ public void grabar(Curso curso) {
20         dao.create(curso);
21     }
22
23     @Override no usages
24     ⚡ public Curso buscar(String id) {
25         return dao.find(id);
26     }
27
28     @Override no usages
29     ⚡ public List<Curso> listar() {
30         return dao.findAll();
31     }
32
33     @Override no usages
34     ⚡ public void actualizar(Curso curso) {
35         dao.update(curso);
36     }
37
38     @Override no usages
39     ⚡ public void borrar(String id) {
40         dao.delete(id);
41     }
42
43     @Override no usages
44     ⚡ public List<Curso> filterByCreditos(int min, int max) {
45         return dao.findByRangeCreditos(min, max);
46     }
47 }
```

11.- Controlador

- Codificar en el controlador “**AdministradorController**”.



The screenshot shows a Java code editor and a project navigation window. The code editor displays `AdministradorController.java` with the following content:

```

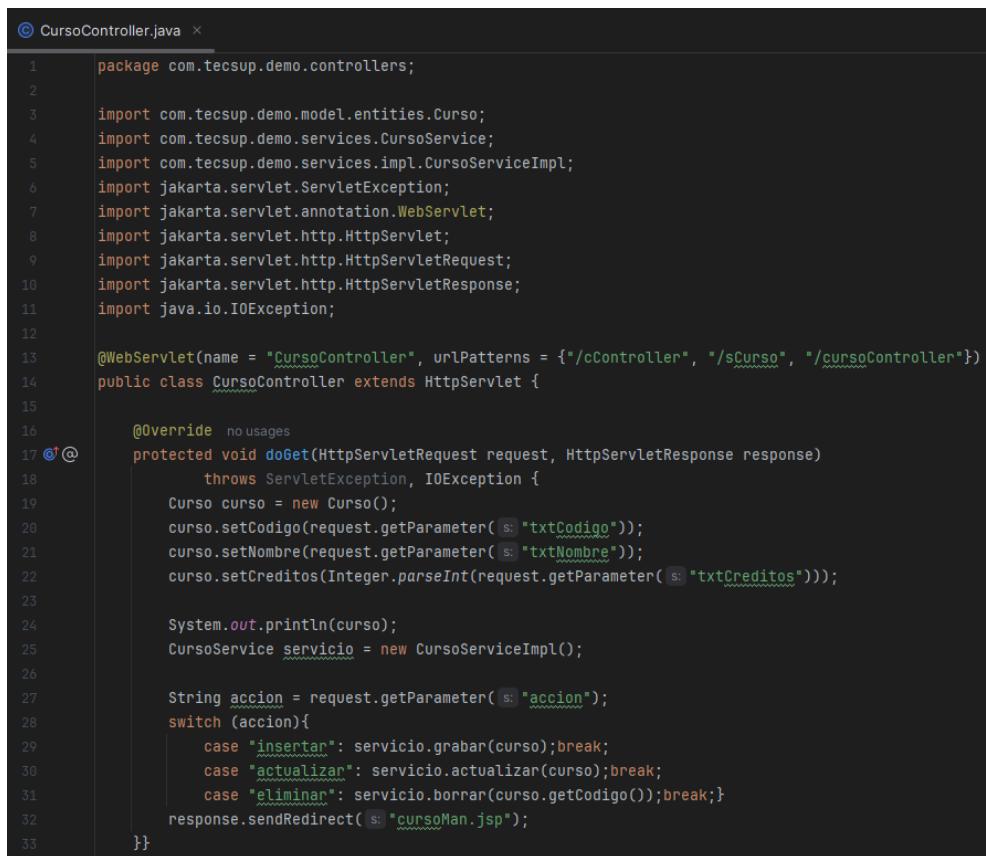
1 package com.tecsup.demo.controllers;
2
3 import com.tecsup.demo.model.entities.Administrador;
4 import com.tecsup.demo.services.AdministradorService;
5 import com.tecsup.demo.services.impl.AdministradorServiceImpl;
6 import jakarta.servlet.ServletException;
7 import jakarta.servlet.annotation.WebServlet;
8 import jakarta.servlet.http.HttpServlet;
9 import jakarta.servlet.http.HttpServletRequest;
10 import jakarta.servlet.http.HttpServletResponse;
11 import java.io.IOException;
12
13 @WebServlet(name = "AdministradorController", urlPatterns = {"/sValidador", "/admin"})
14 public class AdministradorController extends HttpServlet {
15
16     @Override no usages
17     protected void doPost(HttpServletRequest request, HttpServletResponse response)
18         throws ServletException, IOException {
19         String sUsraio = request.getParameter("txtUsuario");
20         String sPassword = request.getParameter("txtPassword");
21
22         AdministradorService servicio = new AdministradorServiceImpl();
23
24         Administrador adm = servicio.validar(sUsraio, sPassword);
25
26         if(adm!=null){
27             request.getSession().setAttribute("eladministrador", adm);
28             response.sendRedirect("principal.jsp");
29         }else{
30             response.sendRedirect("error.jsp");
31         }
32     }
33 }

```

The project navigation window on the right shows the following structure:

- PRJ_CRUD_JAKARTA [demo] D:\ARCHIVOS TECSUP\TECSUP\IV...
- .idea
- .mvn
- src
 - main
 - java
 - com.tecsup.demo
 - controllers
 - AdministradorController
 - CursoController
 - model

- Codificar en el controlador “**CursoController**”.



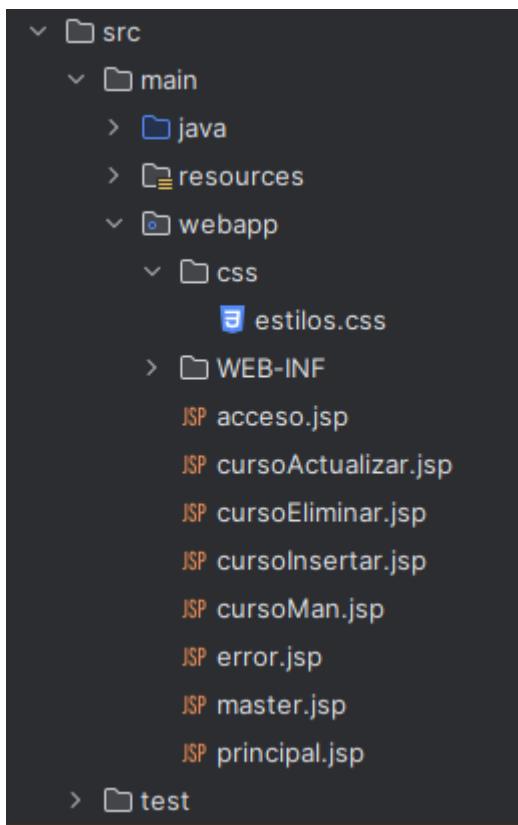
The screenshot shows the code for `CursoController.java`:

```

1 package com.tecsup.demo.controllers;
2
3 import com.tecsup.demo.model.entities.Curso;
4 import com.tecsup.demo.services.CursoService;
5 import com.tecsup.demo.services.impl.CursoServiceImpl;
6 import jakarta.servlet.ServletException;
7 import jakarta.servlet.annotation.WebServlet;
8 import jakarta.servlet.http.HttpServlet;
9 import jakarta.servlet.http.HttpServletRequest;
10 import jakarta.servlet.http.HttpServletResponse;
11 import java.io.IOException;
12
13 @WebServlet(name = "CursoController", urlPatterns = {"/cController", "/sCurso", "/cursoController"})
14 public class CursoController extends HttpServlet {
15
16     @Override no usages
17     protected void doGet(HttpServletRequest request, HttpServletResponse response)
18         throws ServletException, IOException {
19         Curso curso = new Curso();
20         curso.setCodigo(request.getParameter("txtCodigo"));
21         curso.setNombre(request.getParameter("txtNombre"));
22         curso.setCreditos(Integer.parseInt(request.getParameter("txtCreditos")));
23
24         System.out.println(curso);
25         CursoService servicio = new CursoServiceImpl();
26
27         String accion = request.getParameter("accion");
28         switch (accion){
29             case "insertar": servicio.grabar(curso);break;
30             case "actualizar": servicio.actualizar(curso);break;
31             case "eliminar": servicio.borrar(curso.getCodigo());break;
32         }
33     }

```

12.- Vista



```
JSP acceso.jsp ×
1  <link href="//maxcdn.bootstrapcdn.com/bootstrap/4.1.1/css/bootstrap.min.css" rel="stylesheet" id="bootstrap-css">
2  <script src="//maxcdn.bootstrapcdn.com/bootstrap/4.1.1/js/bootstrap.min.js"></script>
3  <script src="//cdnjs.cloudflare.com/ajax/libs/jquery/3.2.1/jquery.min.js"></script>
4  <!-- Include the above in your HEAD tag -->
5
6  <!DOCTYPE html>
7  <html>
8  <head>
9      <title>Login Page</title>
10     <!-- Bootstrap 4 CDN -->
11     <link rel="stylesheet" href="https://stackpath.bootstrapcdn.com/bootstrap/4.1.3/css/bootstrap.min.css">
12
13     <!-- Fontawesome CDN -->
14     <link rel="stylesheet" href="https://use.fontawesome.com/releases/v5.3.1/css/all.css">
15
16     <!-- Custom styles -->
17     <link rel="stylesheet" type="text/css" href="css/estilos.css">
18
19 </head>
20 <body>
21 <div class="container">
22     <div class="d-flex justify-content-center h-100">
23         <div class="card">
24             <div class="card-header">
25                 <h3>Sign In</h3>
26                 <div class="d-flex justify-content-end social_icon">
27                     <span><i class="fab fa-facebook-square"></i></span>
28                     <span><i class="fab fa-google-plus-square"></i></span>
29                     <span><i class="fab fa-twitter-square"></i></span>
30                 </div>
31             </div>
32         </div>
```

```

31     </div>
32     <div class="card-body">
33         <form action="sValidador" method="post">
34             <div class="input-group form-group">
35                 <div class="input-group-prepend">
36                     <span class="input-group-text"><i class="fas fa-user"></i></span>
37                 </div>
38                 <input type="text" class="form-control" placeholder="username" name="txtUsuario">
39             </div>
40             <div class="input-group form-group">
41                 <div class="input-group-prepend">
42                     <span class="input-group-text"><i class="fas fa-key"></i></span>
43                 </div>
44                 <input type="password" class="form-control" placeholder="password" name="txtPassword">
45             </div>
46             <div class="row align-items-center remember">
47                 <input type="checkbox">Remember Me
48             </div>
49             <div class="form-group">
50                 <input type="submit" value="Login" class="btn float-right login_btn">
51             </div>
52         </form>
53     </div>
54 </div>
55 </div>
56 </body>
57 </html>

```

JSP master.jsp ×

```

1  <%@ page contentType="text/html;charset=UTF-8" language="java" %>
2  <html>
3      <head>
4          <title>Title</title>
5          <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/css/bootstrap.min.css" rel="stylesheet">
6      </head>
7      <body>
8
9          <nav class="navbar bg-primary navbar-expand-lg fixed-top">
10             <div class="container">
11                 <a class="navbar-brand link-warning fs-3" href="#">#>Stack</a>
12                 <button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-bs-target="#navbarScroll"
13                     aria-controls="navbarScroll" aria-expanded="false" aria-label="Toggle navigation">
14                     <span class="navbar-toggler-icon"></span>
15                 </button>
16                 <div class="collapse navbar-collapse" id="navbarScroll">
17                     <ul class="navbar-nav mx-auto my-2 my-lg-0 navbar-nav-scroll " style="--bs-scroll-height: 100px;">
18                         <li class="nav-item">
19                             <a class="nav-link link-light" aria-current="page" href="#">/>Inicio</a>
20                         </li>
21
22                         <li class="nav-item dropdown">
23                             <a class="nav-link link-light dropdown-toggle" href="#"># role="button" data-bs-toggle="dropdown"
24                                 aria-expanded="false">
25                                 Gestión Cursos
26                             </a>
27                             <ul class="dropdown-menu ">
28                                 <li><a class="dropdown-item" href="#">cursoMan.jsp>Cursos</a></li>
29                                 <li><a class="dropdown-item" href="#">#>Credito</a></li>
30                             </ul>
31                         </li>

```

```

52
53
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65
66
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```

```

32
33     <li class="nav-item dropdown">
34         <a class="nav-link dropdown-toggle link-light" href="#" role="button" data-bs-toggle="dropdown"
35             aria-expanded="false">
36             Gestión Docente
37         </a>
38         <ul class="dropdown-menu">
39             <li><a class="dropdown-item" href="#">Docentes</a></li>
40             <li><a class="dropdown-item" href="#">Especialidad</a></li>
41
42         </ul>
43     </li>
44
45
46     <li class="nav-item dropdown">
47         <a class="nav-link dropdown-toggle link-light" href="#" role="button" data-bs-toggle="dropdown"
48             aria-expanded="false">
49             Gestión Alumnos
50         </a>
51         <ul class="dropdown-menu">
52             <li><a class="dropdown-item" href="#">Alumnos</a></li>
53             <li><a class="dropdown-item" href="#">Apoderado</a></li>
54         </ul>
55     </li>
56 </ul>
57
58     <form class="d-flex" role="search">
59         <input class="form-control me-2" type="search" placeholder="Buscar" aria-label="Search">
60         <button class="btn btn-outline-light" type="submit">Búsqueda</button>
61     </form>
62 </div>
63 </div>
64 </nav>
65 <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/js/bootstrap.bundle.min.js" ></script>
66 </body>
67 </html>

```

JSP error.jsp ×

```

1  <%@ page contentType="text/html; charset=UTF-8" language="java" %>
2  <html>
3  <head>
4      <title>Error de ingreso</title>
5  </head>
6  <body>
7
8      <h1>::::::::::sistema intranet :::::::</h1>
9      <h1>::::::::::error de credenciales!!!!!!! :::::::</h1>
10 </body>
11 </html>

```

JSP principal.jsp ×

```

1  <%@ page import="com.tecsup.demo.model.entities.Administrador" %>
2  <%@page contentType="text/html" pageEncoding="UTF-8"%>
3  <!DOCTYPE html>
4  <html>
5
6      HttpSession misesion = request.getSession();
7      if(misesion.getAttribute("eladministrador")==null){
8          response.sendRedirect("error.jsp");
9      }else{
10          Administrador adm = (Administrador)misesion.getAttribute("eladministrador");
11          String nombre = adm.getNombres() + " " + adm.getApellidos();
12      }
13 <head>
14     <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
15     <title>Intranet</title>
16 </head>
17 <body>
18     <jsp:include page="master.jsp" />
19
20     <h2><a href="cursoMan.jsp">Mantenimiento de cursos</a> </h2>
21
22 </body>
23 <% } %>
24 </html>

```

```

JSP cursoMan.jsp ×
1  <%@ page import="com.tecsup.demo.model.entities.Administrador" %>
2  <%@ page import="com.tecsup.demo.services.CursoService" %>
3  <%@ page import="com.tecsup.demo.services.impl.CursoServiceImpl" %>
4  <%@ page import="com.tecsup.demo.model.entities.Curso" %>
5  <%@page contentType="text/html" pageEncoding="UTF-8"%>
6  <!DOCTYPE html>
7  <html>
8  <%
9      HttpSession misesion = request.getSession();
10     if(misesion.getAttribute("eladministrador")==null){
11         response.sendRedirect("error.jsp");
12     }else{
13         Administrador adm = (Administrador)misesion.getAttribute("eladministrador");
14         String nombre = adm.getNombres() + " " + adm.getApellidos();
15         CursoService servicio = new CursoServiceImpl();
16     }
17     <head>
18         <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
19         <title>Mantenimiento de Cursos! <%=nombre %></title>
20     </head>
21     <body>
22
23     <div class="container" style="margin-top:70px ;">
24         <div class="row mt-5">
25
26             <jsp:include page="master.jsp" />
27
28             <h1>Mantenimiento de Cursos!</h1>
29             <div style="padding: 10px;">
30                 <button class="btn btn-danger"><a class="nav-link link-light" aria-current="page"
31                         href="cursoInsertar.jsp"> Nuevo Curso</a></button>
32             </div>
33
34             <table class="table table-dark table-hover">
35                 <tr align="center">
36                     <th>CODIGO</th>
37                     <th>NOMBRE</th>
38                     <th>CREDITOS</th>
39                     <th>ACCIONES</th>
40                 </tr>
41                 <% for (Curso curso : servicio.listar()) { %>
42                 <tr>
43                     <td><%=curso.getCodigo() %></td>
44                     <td><%=curso.getNombre() %></td>
45                     <td><%=curso.getCreditos() %></td>
46                     <td><a class="btn btn-warning" href="cursoEliminar.jsp?id=<%=curso.getCodigo() %>">
47                         <i class="fa-solid fa-trash"></i>Borrar</a>
48                     <a class="btn btn-danger" href="cursoActualizar.jsp?id=<%=curso.getCodigo() %>">
49                         <i class="fa-solid fa-pencil"></i>Actualizar</a></td>
50                 </tr>
51                 <% } %>
52             </table>
53         </div></div></body>
54     <% } %>
55   </html>

```

```

JSP cursoInsertar.jsp ×
1  <%@ page import="com.tecsup.demo.model.entities.Administrador" %>
2  <%@page contentType="text/html" pageEncoding="UTF-8"%>
3  <!DOCTYPE html>
4  <html>
5
6  <%
7      HttpSession misesion = request.getSession();
8      if(misesion.getAttribute("eladministrador")==null){
9          response.sendRedirect("error.jsp");
10     }else{
11         Administrador adm = (Administrador)misesion.getAttribute("eladministrador");
12         String nombre = adm.getNombres() + " " + adm.getApellidos();
13     }
14     <head>
15         <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
16         <title>Nuevo Curso</title>
17     </head>
18     <body>
19         <jsp:include page="master.jsp" />

```

```

21 <div class="container p-4" style="margin-top:70px ;">
22   <div class="row">
23     <div class="col-md-4 mx-auto">
24       <div class="card text-center">
25         <div class="card-header">
26           <h3 class="text-uppercase">CREAR CURSO</h3>
27         </div>
28         <div class="card-body">
29           <form action="Controller">
30             <div class="input-group mt-2">
31               <label class="input-group-text">Código:</label>
32               <input class="form-control" type="text" name="txtCodigo" id="nomcli" placeholder="Código"
33               autofocus required>
34             </div>
35             <div class="input-group mt-2">
36               <label class="input-group-text">Nombres:</label>
37               <input class="form-control" type="text" name="txtNombre" id="speccli" placeholder="Nombres"
38               required>
39             </div>
40             <div class="input-group mt-2">
41               <label class="input-group-text">Creditos</label>
42               <input class="form-control" type="text" name="txtCreditos" id="nrodnicli"
43               placeholder="Creditos" required>
44             </div>
45
46             <div class="form-group mt-4 d-grid gap-2">
47               <input name="accion" type="hidden" value="insertar"/><br/>
48               <input class="btn btn-success" type="submit" value="Insertar"/>
49             </div>
50           </form>
51         </div>
52       </div>
53     </div>
54   </div>
55 <% } %>
56 </body>
57 </html>

```

JSP cursoActualizar.jsp ×

```

1 <%@ page import="com.tecsup.demo.model.entities.Administrador" %>
2 <%@ page import="com.tecsup.demo.model.entities.Curso" %>
3 <%@ page import="com.tecsup.demo.services.CursoService" %>
4 <%@ page import="com.tecsup.demo.services.impl.CursoServiceImpl" %>
5 <%@page contentType="text/html" pageEncoding="UTF-8"%>
6 <!DOCTYPE html>
7 <html>
8 <%
9   HttpSession misesion = request.getSession();
10  if(misesion.getAttribute("eladministrador")==null){
11    response.sendRedirect("error.jsp");
12  }else{
13    Administrador adm = (Administrador)misesion.getAttribute("eladministrador");
14    String nombre = adm.getNombres() + " " + adm.getApellidos();
15    String sid= request.getParameter("id");
16    CursoService servicio = new CursoServiceImpl();
17    Curso curso = servicio.buscar(sid);
18  }%>
19 <head>
20   <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
21   <title>Curso Actualizar - <%=nombre %></title>
22 </head>
23 <body>
24   <jsp:include page="master.jsp" />

```

```

26 <div class="container p-4" style="margin-top:70px ;">
27   <div class="row">
28     <div class="col-md-4 mx-auto">
29       <div class="card text-center">
30         <div class="card-header">
31           <h3 class="text-uppercase">ACTUALIZAR CLIENTE</h3>
32         </div>
33         <div class="card-body">
34           <form action="cController">
35             <div class="input-group mt-2">
36               <label class="input-group-text">Código</label>
37               <input class="form-control" type="text" name="txtCodigo" id="nomcli" placeholder="Código"
38                 value="<%=curso.getCodigo() %>" readonly>
39             </div>
40
41             <div class="input-group mt-2">
42               <label class="input-group-text">Nombre</label>
43               <input class="form-control" type="text" name="txtNombre" id="apecli" placeholder="Apellidos"
44                 value="<%=curso.getNombre() %>" autofocus required>
45             </div>
46
47             <div class="input-group mt-2">
48               <label class="input-group-text">Crédito</label>
49               <input class="form-control" type="text" name="txtCreditos" id="txtCreditos"
50                 value="<%=curso.getCreditos() %>" placeholder="Creditos" required>
51             </div>
52
53             <div class="form-group mt-4 d-grid gap-2">
54               <input name="accion" type="hidden" value="actualizar"/><br/>
55               <input class="btn btn-success" type="submit" value="actualizar"/>
56             </div>
57           </form>
58         </div>
59       </div>
60     </div>
61   </div>
62 </body>
63 <% } %>
64 </html>

```

```

JSP cursoEliminar.jsp ×
1  <%@ page import="com.tecsup.demo.model.entities.Administrador" %>
2  <%@ page import="com.tecsup.demo.services.CursoService" %>
3  <%@ page import="com.tecsup.demo.services.impl.CursoServiceImpl" %>
4  <%@ page import="com.tecsup.demo.model.entities.Curso" %>
5  <%@page contentType="text/html" pageEncoding="UTF-8"%>
6  <!DOCTYPE html>
7  <html>
8  <%
9    HttpSession misesion = request.getSession();
10   if(misesion.getAttribute("eladministrador")==null){
11     response.sendRedirect("error.jsp");
12   }else{
13     Administrador adm = (Administrador)misesion.getAttribute("eladministrador");
14     String nombre = adm.getNombres() + " " + adm.getApellidos();
15     String sid= request.getParameter("id");
16     CursoService servicio = new CursoServiceImpl();
17     Curso curso = servicio.buscar(sid);
18   }%
19   <head>
20     <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
21     <title>Distrito Eliminar - <%=nombre %> </title>
22   </head>
23   <body>
24     <jsp:include page="master.jsp" />

```

```

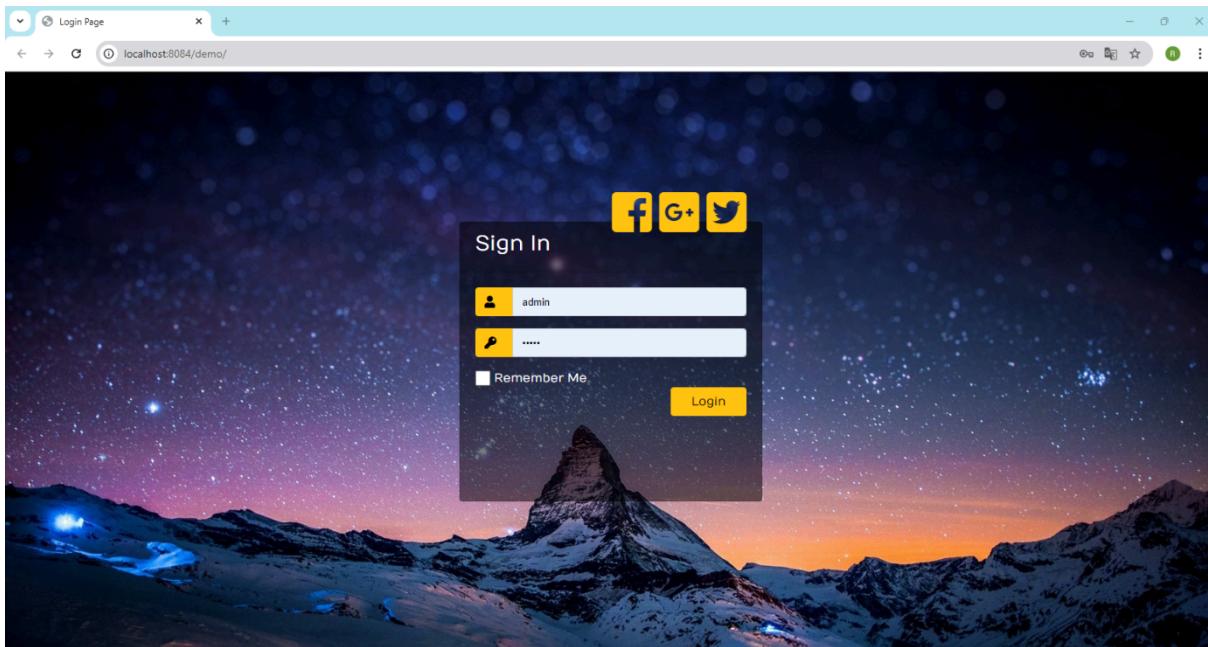
25 <div class="container p-4" style="margin-top:70px ;">
26     <div class="row">
27         <div class="col-md-4 mx-auto">
28             <div class="card text-center">
29                 <div class="card-header">
30                     <h3 class="text-uppercase">ACTUALIZAR CLIENTE</h3>
31                 </div>
32                 <div class="card-body">
33                     <form action="cController">
34                         <div class="input-group mt-2">
35                             <label class="input-group-text">Código</label>
36                             <input class="form-control" type="text" name="txtCodigo"
37                                 value="<%curso.getCodigo() %>" readonly>
38                         </div>
39
40                         <div class="input-group mt-2">
41                             <label class="input-group-text">Nombre</label>
42                             <input class="form-control" type="text" name="txtNombre"
43                                 value="<%curso.getNombre() %>" readonly>
44                         </div>
45
46                         <div class="input-group mt-2">
47                             <label class="input-group-text">Credito</label>
48                             <input class="form-control" type="text" name="txtCreditos" id="txtCreditos"
49                                 value="<%curso.getCreditos() %>" readonly>
50                         </div>
51
52
53                         <div class="form-group mt-4 d-grid gap-2">
54                             <input name="accion" type="hidden" value="eliminar"/><br/>
55                             <input class="btn btn-success" type="submit" value="eliminar"/>
56                         </div>
57                     </form>
58                 </div>
59             </div>
60         </div>
61     </div>
62 </body>
63 <% } %>

```

```

<!-- web.xml -->
1  <?xml version="1.0" encoding="UTF-8"?>
2  <web-app xmlns="https://jakarta.ee/xml/ns/jakartaee"
3      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
4      xsi:schemaLocation="https://jakarta.ee/xml/ns/jakartaee https://jakarta.ee/xml/ns/jakartaee/web-app_6_0.xsd"
5      version="6.0">
6
7      <welcome-file-list>
8          <welcome-file>acceso.jsp</welcome-file>
9      </welcome-file-list>
10
11  </web-app>

```

EJECUCION DE LA APLICACIÓN

Intranet

localhost:8084/demo/principal.jsp

Stack

Inicio Gestión Cursos Gestión Docente Gestión Alumnos

Buscar Búsqueda

Cursos
Credito

Mantenimiento de Cursos Ed.

localhost:8084/demo/cursoMan.jsp

Stack

Inicio Gestión Cursos Gestión Docente Gestión Alumnos

Buscar Búsqueda

Mantenimiento de Cursos!

Nuevo Curso

CODIGO	NOMBRE	CREDITOS	AACCIONES
c01	HTML 5	5	Borrar Actualizar
c02	CSS 3	5	Borrar Actualizar
c03	JavaScript	5	Borrar Actualizar
c04	demo	5	Borrar Actualizar

Nuevo Curso

localhost:8084/demo/cursoInsertar.jsp

Stack

Inicio Gestión Cursos Gestión Docente Gestión Alumnos

Buscar Búsqueda

CREAR CURSO

Código:	Código
Nombres:	Nombres
Creditos:	Creditos

Insertar