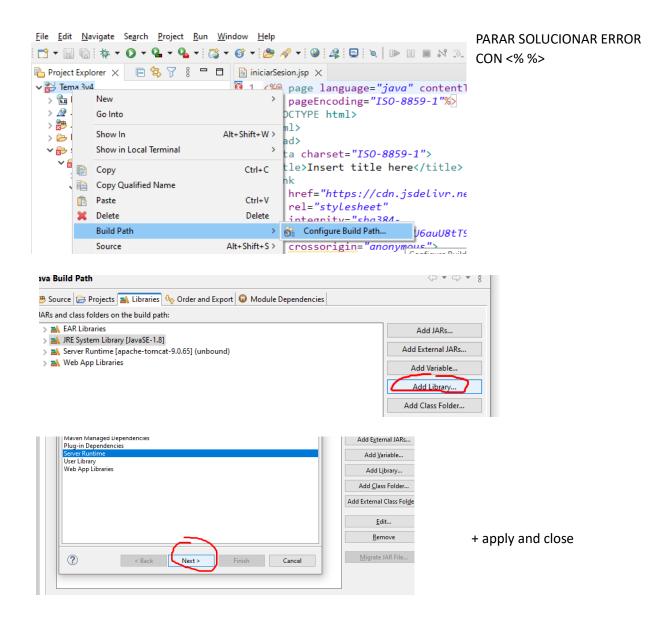
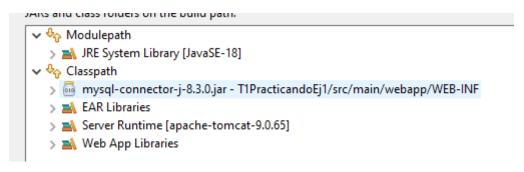
PRIMERO: CREA SERVER TOMCAT



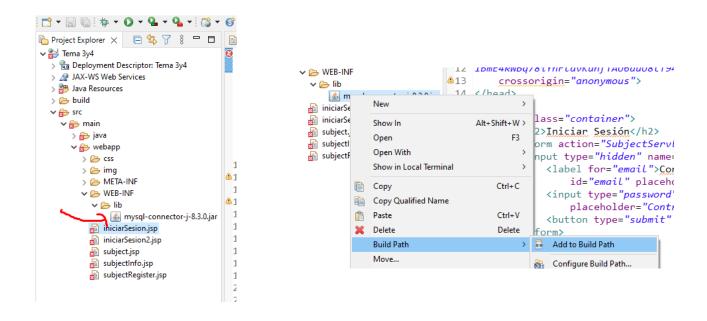
SI TE APARECEN 2 APARTADOS DE LIBRARIES



Lo colocas dentro del Classpath

PARA AÑADIR JAR DE SQL CONNECTION.JAR

Arrastramos el JAR a la carpeta LIB...



MySqlConection.java

```
1 package util;
 3⊕ import java.sql.Connection; []
 7 public class MySqlConexion {
        public static Connection getConexion() {
        Connection con = null;
            Class.forName("com.mysql.cj.jdbc.Driver").newInstance();
String url = "jdbc:mysql://localhost/dbCursos?useSSL=false&useTimezone=true&serverTimezone=UTC";
             String usr = "root";
13
             String psw = "mysql";
             con = DriverManager.getConnection(url,usr,psw);
16
17
18
        } catch (ClassNotFoundException e) {
             // TODO: handle exception
            System.out.println("Error >> Driver no Instalado!!"+e.getMessage());
        }catch (SQLException e) {
20
21
             // TODO: handle exception
             System.out.println("Error >> de conexión con la BD"+e.getMessage());
        }catch (Exception e) {
22
23
24
25
             // TODO: handle exception
             System.out.println("Error >> general: "+ e.getMessage());
28 }
29
```

```
1 package util;
  3⊕ import java.sql.Connection; ...
  7 public class MySqlConexion {
         public static Connection getConexion() {
         Connection con = null;
          try {
   Class.forName("com.mysql.cj.jdbc.Driver").newInstance();
   String url = "jdbc:mysql://localhost/dbCursos?useSSL=false&useTimezone=true&serverTimezone=UTC";
   String usr = "root";
   String psw = "mysql";
   cor = DriverManager.getConnection(url,usr,psw);
%11
         cone DriverManager.getConnection(url,usr,psw);
} catch (ClassNotFoundException e) {
// TODO: handle exception
              System.out.println("Error >> Driver no Instalado!!"+e.getMessage());
         }catch (SQLException e) {
              // TODO: handle exception
              System. out.println("Error >> de conexión con la BD"+e.getMessage());
         }catch (Exception e) {
              // TODO: handle exception
              System.out.println("Error >> general: "+ e.getMessage());
         }
28 }
 try {
     Class.forName("com.mysql.cj.jdbc.Driver").newInstance();
     String url = "jdbc:mysql://localhost/dbCursos?useSSL=false&useTimezone=true&serverTimezone=UTC"; String usr = "root";
     String psw = "mysql *Sin titulo: Bloc de notas
     con = DriverManager
catch (ClassNotFoundE // TODO: handle exc "jdbc:mysql://localhost:3306/?user=root";
     System.out.println(
catch (SQLException e)
// TODO: handle exc
"jdbc:mysql://localhost/dbCursos";
     System.out.println(
```

PARA CREAR LA BASE DE DATOS



PASITOS

- 1. Estructurar del proyecto (carpetas, packages, implementar .JAR, solucionar error)
- 2. MySQL WORKBENCH
- 3. MySqlConexion.java
- 4. Entidades -> atributos + getters&Setters
- 5. Interfaces

```
MySqlConexi...
              Subject.java
1 package interfaces;
 3⊕ import java.util.List; ...
 7
   public interface SubjectInterface {
       public int createSubject(Subject subject);
 9
       public List<Subject> listSubject();
10
11
12
       public Subject getSubject(String id);
13
14
       public int updateSubject(Subject subject);
15
       public int deleteSubject(String id);
16
17 }
18
```

- a. método create retorna int y recibe Entidad
- b. método read(list) retorna List<Entidad>
- c. método update retorna int y recibe Entidad
- d. método delete retorna int y recibe String id
- e. método get retorna Entidad y recibe String id

6. Model

Implementa los métodos del interfaz.

PARA EJECUTAR UN

```
<u>rs = psm.executeQuery();</u>
value = psm.executeUpdate();
```

Primero tienes que llenar la variable PreparedStatement con psm.setString(1,id); psm.setString(1, subject.getCode());

a. Para método create

```
@Override
public int createSubject(Subject subject) {
    // TODO Auto-generated method stub
    int value = 0;
    Connection cn= null;
    PreparedStatement psm=null;
        cn= MySqlConexion.getConexion();
        String sql="INSERT INTO Subject VALUES (null, ?,?,?,?)";
        psm=cn.prepareStatement(sql);
        psm.setString(1, subject.getCode());
        psm.setString(2, subject.getName());
        psm.setString(3, subject.getLevel());
psm.setString(4, subject.getTeacher());
        value=psm.executeUpdate();
    } catch (Exception e) {
        // TODO: handle exception
        e.printStackTrace();
    }finally {
        try {
            if(psm !=null) psm.close();
            if(cn != null) cn.close();
        } catch (Exception e) {
            // TODO: handle exception
            e.printStackTrace();
    return 0;
```

b. Para método list

```
@Override
public List<Subject> listSubject() {
    // TODO Auto-generated method stub
    List<Subject> listSubject = new ArrayList<Subject>();
    Connection cn=null;
    PreparedStatement psm=null;
    ResultSet rs=null;
         cn = MySqlConexion.getConexion();
         String sql="SELECT * FROM Subject";
         psm = cn.prepareStatement(sql);
         rs=psm.executeQuery();
         while (rs.next()) {
             Subject subj = new Subject();
             subj.setId(rs.getString("idSubject"));
             subj.setCode(rs.getString("code"));
subj.setName(rs.getString("name"));
             subj.setLevel(rs.getString("level"));
             subj.setTeacher(rs.getString("teacher"));
             listSubject.add(subj);
    } catch (Exception e) {
         // TODO: handle exception
         e.printStackTrace();
    }finally {
        try {
             if(rs != null) rs.close();
             if(psm != null) psm.close();
             if(cn != null) cn.close();
         } catch (Exception e) {
             e.printStackTrace();
    return listSubject;
```

c. Para método update

```
public int updateSubject(Subject subject) {
     // TODO Auto-generated method stub
     int value = 0;
     Connection cn= null;
     PreparedStatement psm=null;
     try {
          cn= MySqlConexion.getConexion();
          String sql="UPDATE Subject SET code=?,"
+ "name=?,level=?,teacher=? where idSubject=?";
          psm=cn.prepareStatement(sql);
          psm.setString(1, subject.getCode());
psm.setString(2, subject.getName());
psm.setString(3, subject.getLevel());
psm.setString(4, subject.getLevel());
psm.setString(5, subject.getId());
          value=psm.executeUpdate();
     } catch (Exception e) {
          // TODO: handle exception
          e.printStackTrace();
     finally {
          try {
               if(psm !=null) psm.close();
                if(cn != null) cn.close();
          } catch (Exception e) {
                // TODO: handle exception
                e.printStackTrace();
          }
     return 0;
```

d. Para el método delete

```
@Override
public int deleteSubject(String id) {
    // TODO Auto-generated method stub
    System.out.println("id dentro del model: "+id);
    int value = 0;
    Connection cn= null;
    PreparedStatement psm=null;
    try {
        cn= MySqlConexion.getConexion();
        String sql="DELETE FROM Subject where idSubject=?";
        psm=cn.prepareStatement(sql);
        psm.setString(1, id);

        value=psm.executeUpdate();
    } catch (Exception e) {
        // TODO: handle exception
        e.printStackTrace();
    } finally {
        try {
            if(psm !=null) psm.close();
            if(cn != null) cn.close();
        } catch (Exception e) {
            // TODO: handle exception
            e.printStackTrace();
    }
    }
    return 0;
}
```

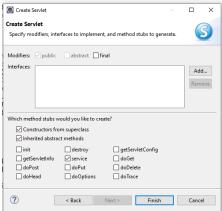
e. Para el método get

```
@Override
public Subject getSubject(String id) {
    // TODO Auto-generated method stub
    Subject subject=null;
    Connection cn=null;
    PreparedStatement psm=null;
    ResultSet rs=null;

try {
        cn = MySqlConexion.getConexion();
        String sql="SELECT * FROM subject where idSubject=?";
        psm = cn.prepareStatement(sql);
        psm = cn.prepareStatement(sql);
        psm = cn.prepareStatement(sql);
        if (rs.next()) {
            subject = new Subject();
            subject = new Subject();
            subject = new Subject();
            subject = setCode(rs.getString("idSubject"));
            subject.setCode(rs.getString("name"));
            subject.setLevel(rs.getString("level"));
            subject.setLevel(rs.getString("level"));
            subject.setLevel(rs.getString("level"));
        } catch (Exception e) {
            // TODO: handle exception
            e.printStackTrace();
        } finally {
            if(rs != null) rs.close();
            if(rs != null) psm.close();
            if(rs != null) psm.close();
            if(r != null) close();
            e.printStackTrace();
        }
    }
    return subject;
```

7. Servlet

CUANDO CREES EL SERVLET tienes q configurar unas cosas:



Así tiene que estar

El servlet interactúa entre *la base de datos (MODEL) y los .jps* mediante el poderoso **String** *type* que recibirá las request y redireccionará el request hacia el método CRUD adecuado.

SERVICE

Los métodos CRUD aquí se identificarán con el type de la sgte forma:

```
C "register" registerSubject
R "list" listSubject
U "edit" editSubject
D "delete" deleteSubject
get "info" getSubject
```

Los métodos los autogeneras con los errores que te saldrán dsps de q hayas acabado con el método service.

Y luego de acabar de implementar cada método, te saldrá un error que autocompletará el nombre del método:

getCurso

```
private void getCurso(HttpServletRequest request, HttpServletResponse response) {
    // TODO Auto-generated method stub
    String idCurso = request.getParameter("id");
    CursoModelo cursoModelo = new CursoModelo();

Curso curso = cursoModelo.getCurso(idCurso);
    System.out.println("El id del curso: " + curso.getIdCurso());

request.setAttribute("data", curso);
    request.getRequestDispatcher("cursoInfo.jsp").forward(request, response);
}

// Unhanded exception type IOException
3 quick fixes available:

Add throws declaration
Journal Surround with try/multi-catch
Journal Surround with try/catch
```

deleteCurso

```
private void deleteSubject(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {
    // TODO Auto-generated method stub
    String id =request.getParameter("id");
    System.out.println("Imprime subject : "+id);
    SubjectModel subjectModel = new SubjectModel();
    int value = subjectModel.deleteSubject(id);

if(value == 0) {
        System.out.println("Entró al list subject");
        listSubject(request,response);
    }else {
        request.setAttribute("mensaje", "Ocurrió un problema");
        request.getRequestDispatcher("subject.jsp");
    }
}
```

editCurso

```
private void editSubject(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {
    // TODO Auto-generated method stub
       //Entradas
      7/Entrauds
String code =request.getParameter("txtCode");
String name =request.getParameter("txtName");
String level =request.getParameter("txtLevel");
String teacher =request.getParameter("txtTeacher");
       String id =request.getParameter("idSubject");
      System.out.println("Imprime code : "+code);
System.out.println("Imprime name : "+name);
System.out.println("Imprime level : "+level);
System.out.println("Imprime teacher : "+teache
System.out.println("Imprime id : "+id);
                                                                            "+teacher);
       //Creamos objeto
Subject subject = new Subject();
subject.setCode(code);
        subject.setName(name);
       subject.setLevel(level);
       subject.setTeacher(teacher);
       subject.setId(id);
       SubjectModel model = new SubjectModel();
       int value = model.updateSubject(subject);
       if(value == 0) {
              System.out.println("Entró al list subject");
listSubject(request,response);
              request.setAttribute("mensaje", "Ocurrió un problema");
request.getRequestDispatcher("subject.jsp");
}
```

listCurso

```
private void listSubject(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {
    // TODO Auto-generated method stub
    SubjectModel subjectModel = new SubjectModel();
    List<Subject> data=subjectModel.listSubject();
    request.setAttribute("data", data);
    request.getRequestDispatcher("subject.jsp").forward(request, response);
}
```

registerCurso

```
private void registerCurso(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {
    // TODO Auto-generated method stub
    String code = request.getParameter("txtCode");
    String name = request.getParameter("txtName");
    String level = request.getParameter("txtLevel");
    String teacher = request.getParameter("txtTeacher");

    Curso curso = new Curso();
    curso.setCode(code);
    curso.setName(name);
    curso.setName(name);
    curso.setTeacher(teacher);

    CursoModelo cursoModelo = new CursoModelo();
    int value = cursoModelo.createCurso(curso);

if(value==0) {
        System.out.println("Ahora se ejecutará listCurso");
        listCurso(request, response);
    } else {
        request.setAttribute("mensaje", "Ocurrió un error");
        request.getRequestDispatcher("curso.jsp").forward(request, response);
    }
}
```

<u>CDNs</u>

JQUERY

Sus CDNs van justo debajo de la etiqueta de cierre del body

Debajo de los CDNs va la validación

```
<script
type="text/javascript"src="https://ajax.googleapis.com/ajax/libs/jquery/3.4.1
/jquery.min.js"></script>

<script src="https://cdnjs.cloudflare.com/ajax/libs/jquery-
validate/1.19.1/jquery.validate.min.js"></script>

<script type="text/javascript"> //VALIDACIO000000000N </script>
```

J VALIDATE

Validación extra al querer REGISTRAR un CURSO

```
$(function(){
    $("form[name='creacion']").validate({
        rules: {
            txtCodigo: {
                required: true,
                minlength: 8
        },
        txtNombre: {
                required: true
        },
        txtNrowle: {
                required: true
        },
        txtProfesor: {
                required: true
        }
    },
    messages: {
        txtCodigo: {
                required: "Ingrese su codigo",
                minlength: "Su codigo debe tener como minimo 8 caracteres"
        },
        txtNombre: "Ingrese su nombre",
        txtNivel: "ingrese su nivel",
        txtProfesor: "Ingrese un docente"
    },
    submitHandler: function(form) {
        form.submit();
    });
};
//script>
```

BOOTSTRAP

Esto va debajo del TITTLE

```
<link
href="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/css/bootstrap.min.css
"rel="stylesheet"<u>integrity</u>="sha384-
1BmE4kWBq78iYhFldvKuhfTAU6auU8tT94WrHftjDbrCEXSU1oBoqyl2QvZ6jIW3"<u>crossorigin</u>=
"anonymous">
```

8. .JSP

iniciarSesion.jsp

```
<form name="inicioSesion" action="SubjectServlet" method="post">
  <input type="hidden" name="type" value="list">
     <!-- Email input -->
    <div class="form-outline mb-4">
       <input type="email" name="email" id="email" class="form-control" />
<label class="form-label" for="form2Example1">Correo</label>
     </div>
    <!-- Password input -->
     <div class="form-outline mb-4">
       <input type="password" name="password" id="password" class="form-control" />
       <label class="form-label" for="form2Example2">Contraseña</label>
     </div>
     <!-- 2 column grid layout for <pre>inline styling -->
    <div class="row mb-4">
       <div class="col d-flex justify-content-center">
         <!-- Checkbox -->
<div class="form-check">
           <input class="form-check-input" type="checkbox" value="" id="form2Example31" checked />
<label class="form-check-label" for="form2Example31"> Recordar mi cuenta </label>
       </div>
       <div class="col">
         <!-- Simple link -->
<a href="#!">¿Recuperar contraseña?</a>
       </div>
     </div>
     <!-- Submit button -->
     <button type="submit" class="btn btn-primary btn-block mb-4">Iniciar Sesión</button>
  </form>
```

Y para la validación...

subject.jsp

```
| Charles | Char
```

LAS LINES DE LAS ETIQUETAS BUTTON DICE:

subjectInfo.jsp

```
17⊕ ⟨div class="container min-vh-100 d-flex justify-content-center align-items-center">
   18
   20⊖ <div class="col-6">
   21⊜
                        <form action="SubjectServlet" method="post">
   22⊝
   23
                                                         Subject subject = (Subject) request.getAttribute("data");
                      <input type="hidden" name="type" value="edit">
<input type="hidden" name="idSubject" value="<%=subject.getId()%>">
   25
26
   27
                      28⊖
   29
@30
                        </div>
   31
                       32∈
   33
   34
35
                        </div>

<
   36<sup>©</sup>
37
   38
39
                       40<sup>9</sup>
   42
43
                        </div>

<br/>

   44
   45
   46 <but
47 </form>
   48 </div>
49 </div>
   50
52 </html>
```

Esto es importante (lo de aquí abajo)

subjectRegister.jsp

```
| Mysscomeconians | Subjectines | Subjectine
```