

Acceso a bases de datos con lenguajes de script de servidor

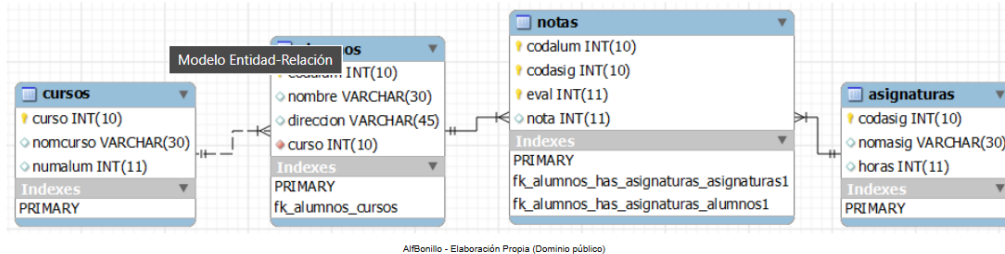
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IAW

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- 1 A partir del modelo E/R mostrado a continuación, correspondiente a una BD de un instituto, debes realizar los formularios php que permitan:



```
DROP DATABASE IF EXISTS instituto;
```

```
CREATE DATABASE instituto;
```

USE instituto;

```
CREATE TABLE cursos (
    curso INT(10) PRIMARY KEY,
    indicador VARCHAR(20),
    formular INT(11)
);
```

```
CREATE TABLE alumnos (
    codsum INT(10) PRIMARY KEY,
    nombre VARCHAR(30),
    direccion VARCHAR(45),
    curso INT(10),
    FOREIGN KEY (curso) REFERENCES cursos(curso)
);
```

```
CREATE TABLE asignaturas (
    codsig INT(10) PRIMARY KEY,
    nomisig VARCHAR(30),
```

```
    horas INT(11)
);
```

```
CREATE TABLE notas (
    codsum INT(10),
    codsig INT(10),
    red INT(11),
    nota INT(11),
    PRIMARY KEY (codsum, codsig),
    FOREIGN KEY (codsum) REFERENCES alumnos(codsum),
    FOREIGN KEY (codsig) REFERENCES asignaturas(codsig)
);
```

```
INSERT INTO cursos (curso, indicador, formular) VALUES
(1, 'Matemáticas', 101),
(2, 'Historia', 102),
(3, 'Ciencias', 103);
```

```
SELECT * FROM cursos;
```

1.1 [Añadir nuevos alumnos \(iaw06_insertaAlumno.php\)](#)

```
<?php
if ($_SERVER["REQUEST_METHOD"] == "POST") {
    $servername = "localhost";
    $username = "root";
    $password = "";
    $dbname = "instituto";

    $conn = new mysqli($servername, $username, $password, $dbname);

    if ($conn->connect_error) {
        die("Connection failed: " . $conn->connect_error);
    }
}
```

```
}

$codsum = $_POST['codsum'];
$nombre = $_POST['nombre'];
$direccion = $_POST['direccion'];
$curso = $_POST['curso'];

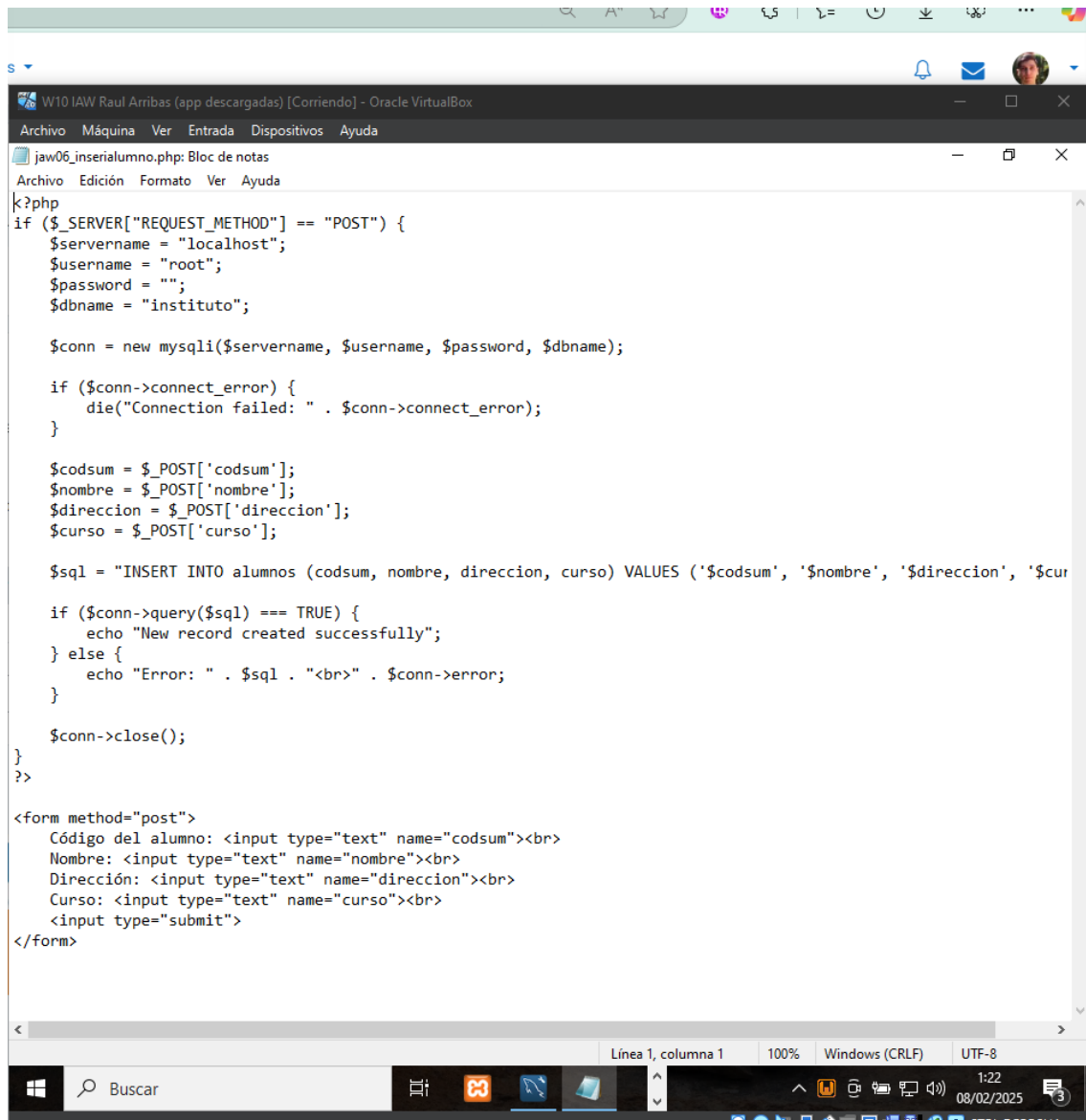
$sql = "INSERT INTO alumnos (codsum, nombre, direccion, curso) VALUES ('$codsum',
'$nombre', '$direccion', '$curso')";

if ($conn->query($sql) === TRUE) {
    echo "New record created successfully";
} else {
    echo "Error: " . $sql . "<br>" . $conn->error;
}

$conn->close();
}
?>

<form method="post">
    Código del alumno: <input type="text" name="codsum"><br>
    Nombre: <input type="text" name="nombre"><br>
    Dirección: <input type="text" name="direccion"><br>
    Curso: <input type="text" name="curso"><br>
    <input type="submit">
</form>
```

Manual de instalación



```
W10 IAW Raul Arribas (app descargadas) [Corriendo] - Oracle VirtualBox
Archivo Máquina Ver Entrada Dispositivos Ayuda

jaw06_inserialumno.php: Bloc de notas
Archivo Edición Formato Ver Ayuda
<?php
if ($_SERVER["REQUEST_METHOD"] == "POST") {
    $servername = "localhost";
    $username = "root";
    $password = "";
    $dbname = "instituto";

    $conn = new mysqli($servername, $username, $password, $dbname);

    if ($conn->connect_error) {
        die("Connection failed: " . $conn->connect_error);
    }

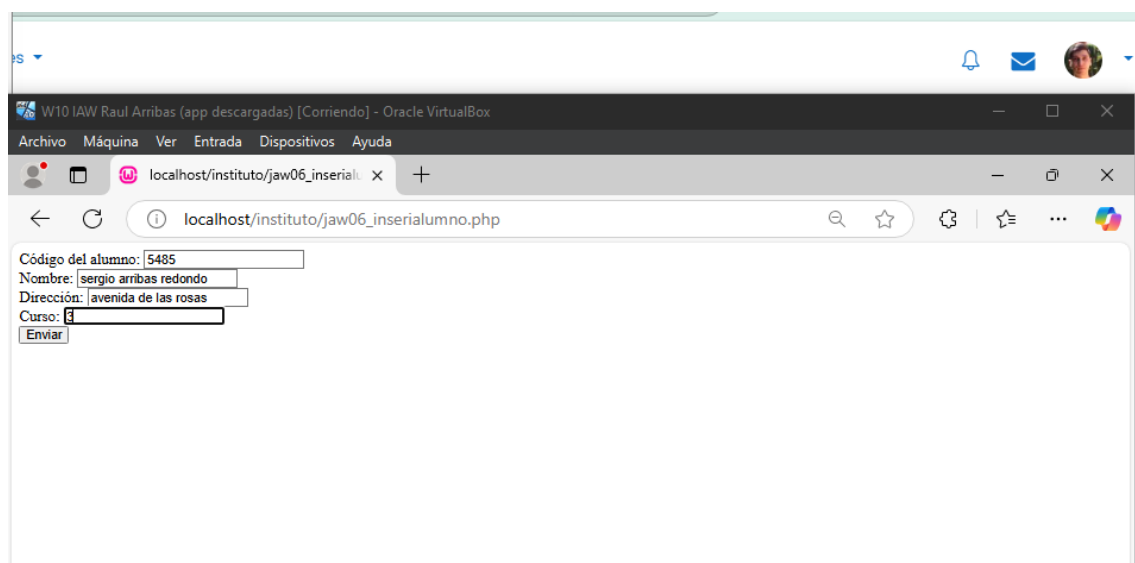
    $codsum = $_POST['codsum'];
    $nombre = $_POST['nombre'];
    $direccion = $_POST['direccion'];
    $curso = $_POST['curso'];

    $sql = "INSERT INTO alumnos (codsum, nombre, direccion, curso) VALUES ('$codsum', '$nombre', '$direccion', '$curso')";

    if ($conn->query($sql) === TRUE) {
        echo "New record created successfully";
    } else {
        echo "Error: " . $sql . "<br>" . $conn->error;
    }

    $conn->close();
}
?>

<form method="post">
    Código del alumno: <input type="text" name="codsum"><br>
    Nombre: <input type="text" name="nombre"><br>
    Dirección: <input type="text" name="direccion"><br>
    Curso: <input type="text" name="curso"><br>
    <input type="submit">
</form>
```



W10 IAW Raul Arribas (app descargadas) [Corriendo] - Oracle VirtualBox

localhost/instituto/jaw06_inserial... x +

localhost/instituto/jaw06_inserialumno.php

Código del alumno: 5485

Nombre: sergio arribas redondo

Dirección: avenida de las rosas

Curso: 3

Enviar

1.2 Añadir nuevos cursos (iaw06_insertaCurso.php)

```
<?php
```

```
if ($_SERVER["REQUEST_METHOD"] == "POST") {
```

```
    $servername = "localhost";
```

```
    $username = "root";
```

```
    $password = "root";
```

```
    $dbname = "instituto";
```

```
    $conn = new mysqli($servername, $username, $password, $dbname);
```

```
    if ($conn->connect_error) {
```

```
        die("Connection failed: " . $conn->connect_error);
```

```
    }
```

```
    $curso = $_POST['curso'];
```

```
    $indicador = $_POST['indicador'];
```

```
    $formular = $_POST['formular'];
```

```
    $sql = "INSERT INTO cursos (curso, indicador, formular) VALUES ('$curso', '$indicador', '$formular')";
```

```
    if ($conn->query($sql) === TRUE) {
```

```
        echo "New record created successfully";
```

```
    } else {
```

```
        echo "Error: " . $sql . "<br>" . $conn->error;
```

```
    }
```

```
    $conn->close();
```

```
}
```

```
?>
```

Manual de instalación

<form method="post">

Curso: <input type="text" name="curso">

Indicador: <input type="text" name="indicador">

Formular: <input type="text" name="formular">

<input type="submit">

</form>

```
k?php
if ($_SERVER["REQUEST_METHOD"] == "POST") {
    $servername = "localhost";
    $username = "root";
    $password = "";
    $dbname = "instituto";

    $conn = new mysqli($servername, $username, $password, $dbname);

    if ($conn->connect_error) {
        die("Connection failed: " . $conn->connect_error);
    }

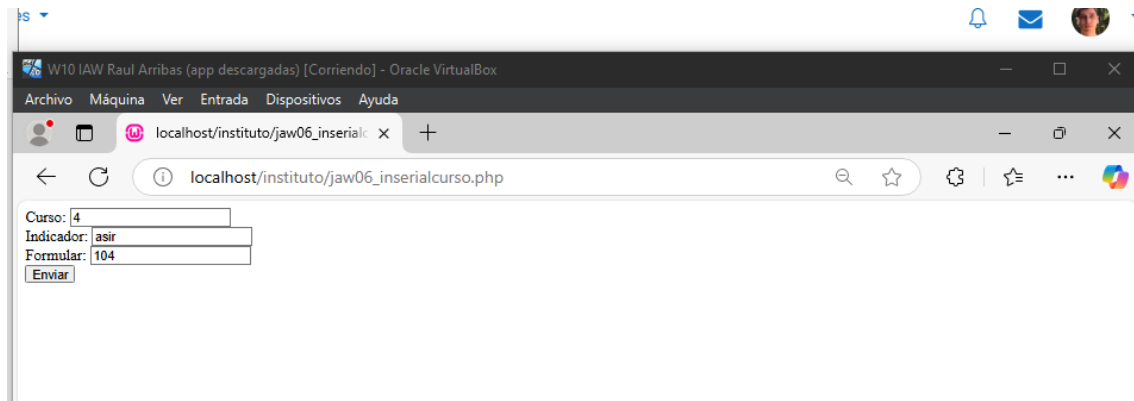
    $curso = $_POST['curso'];
    $indicador = $_POST['indicador'];
    $formular = $_POST['formular'];

    $sql = "INSERT INTO cursos (curso, indicador, formular) VALUES ('$curso', '$indicador', '$formular')";

    if ($conn->query($sql) === TRUE) {
        echo "New record created successfully";
    } else {
        echo "Error: " . $sql . "<br>" . $conn->error;
    }

    $conn->close();
}
?>

<form method="post">
    Curso: <input type="text" name="curso"><br>
    Indicador: <input type="text" name="indicador"><br>
    Formular: <input type="text" name="formular"><br>
    <input type="submit">
</form>
```



1.3 Añadir nuevas asignaturas (iaw06_insertaAsignatura.php)

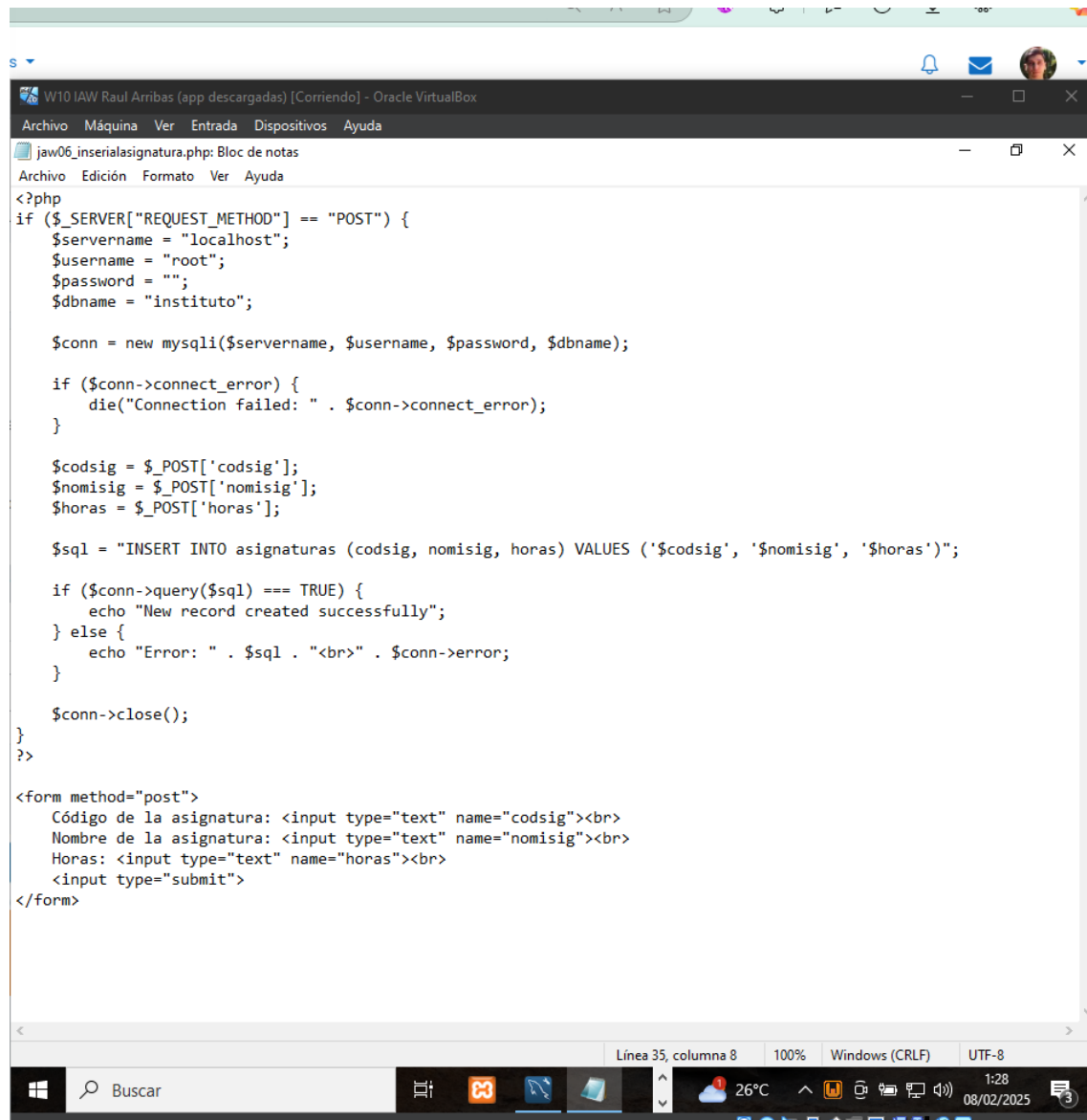
<?php

```
if ($_SERVER["REQUEST_METHOD"] == "POST") {  
    $servername = "localhost";  
    $username = "root";  
    $password = "root";  
    $dbname = "instituto";  
  
    $conn = new mysqli($servername, $username, $password, $dbname);  
  
    if ($conn->connect_error) {  
        die("Connection failed: " . $conn->connect_error);  
    }  
  
    $codsig = $_POST['codsig'];  
    $nomisig = $_POST['nomisig'];  
    $horas = $_POST['horas'];  
  
    $sql = "INSERT INTO asignaturas (codsig, nomisig, horas) VALUES ('$codsig', '$nomisig', '$horas')";  
  
    if ($conn->query($sql) === TRUE) {
```

```
        echo "New record created successfully";
    } else {
        echo "Error: " . $sql . "<br>" . $conn->error;
    }

    $conn->close();
}
?>

<form method="post">
    Código de la asignatura: <input type="text" name="codsig"><br>
    Nombre de la asignatura: <input type="text" name="nomisig"><br>
    Horas: <input type="text" name="horas"><br>
    <input type="submit">
</form>
```



```
<?php
if ($_SERVER["REQUEST_METHOD"] == "POST") {
    $servername = "localhost";
    $username = "root";
    $password = "";
    $dbname = "instituto";

    $conn = new mysqli($servername, $username, $password, $dbname);

    if ($conn->connect_error) {
        die("Connection failed: " . $conn->connect_error);
    }

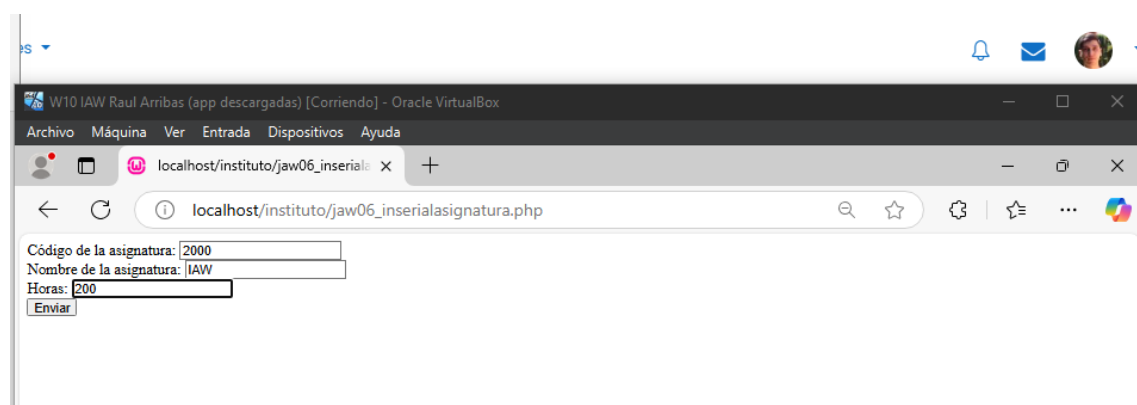
    $codsig = $_POST['codsig'];
    $nomisig = $_POST['nomisig'];
    $horas = $_POST['horas'];

    $sql = "INSERT INTO asignaturas (codsig, nomisig, horas) VALUES ('$codsig', '$nomisig', '$horas')";

    if ($conn->query($sql) === TRUE) {
        echo "New record created successfully";
    } else {
        echo "Error: " . $sql . "<br>" . $conn->error;
    }

    $conn->close();
}
?>

<form method="post">
    Código de la asignatura: <input type="text" name="codsig"><br>
    Nombre de la asignatura: <input type="text" name="nomisig"><br>
    Horas: <input type="text" name="horas"><br>
    <input type="submit">
</form>
```



1.4 Añadir nuevas notas (iaw06_insertaNota.php)

```
<?php
```

```
if ($_SERVER["REQUEST_METHOD"] == "POST") {
```

```
    $servername = "localhost";
```

```
$username = "root";  
$password = "";  
$dbname = "instituto";  
  
$conn = new mysqli($servername, $username, $password, $dbname);  
  
if ($conn->connect_error) {  
    die("Connection failed: " . $conn->connect_error);  
}  
  
$codsum = $_POST['codsum'];  
$codsig = $_POST['codsig'];  
$red = $_POST['red'];  
$nota = $_POST['nota'];  
  
$sql = "INSERT INTO notas (codsum, codsig, red, nota) VALUES ('$codsum', '$codsig', '$red', '$nota')";  
  
if ($conn->query($sql) === TRUE) {  
    echo "New record created successfully";  
} else {  
    echo "Error: " . $sql . "<br>" . $conn->error;  
}  
  
$conn->close();  
}  
?>  
  
<form method="post">  
    Código del alumno: <input type="text" name="codsum"><br>  
    Código de la asignatura: <input type="text" name="codsig"><br>
```

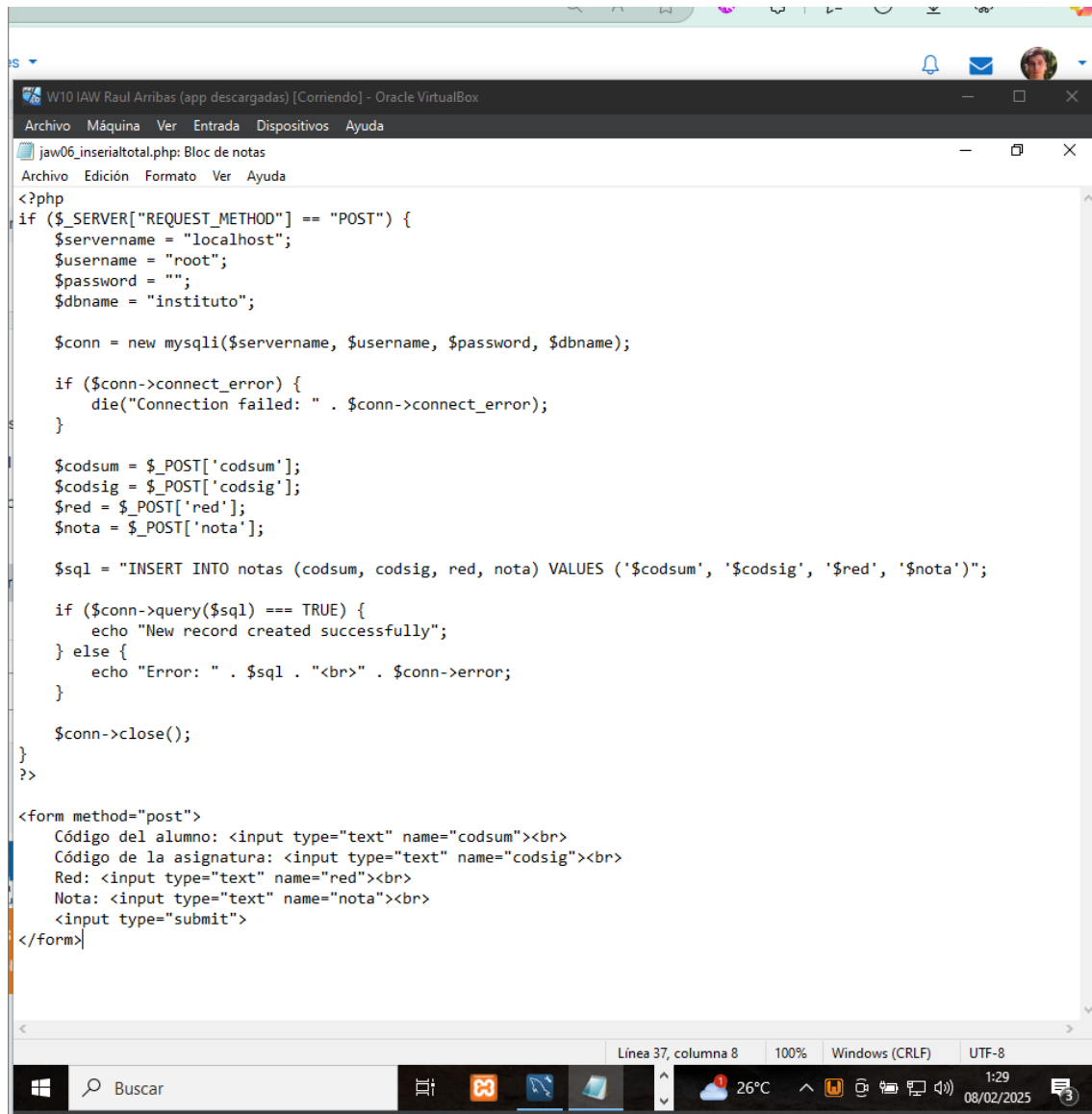
Manual de instalación

Red: <input type="text" name="red">

Nota: <input type="text" name="nota">

<input type="submit">

</form>



```
<?php
if ($_SERVER["REQUEST_METHOD"] == "POST") {
    $servername = "localhost";
    $username = "root";
    $password = "";
    $dbname = "instituto";

    $conn = new mysqli($servername, $username, $password, $dbname);

    if ($conn->connect_error) {
        die("Connection failed: " . $conn->connect_error);
    }

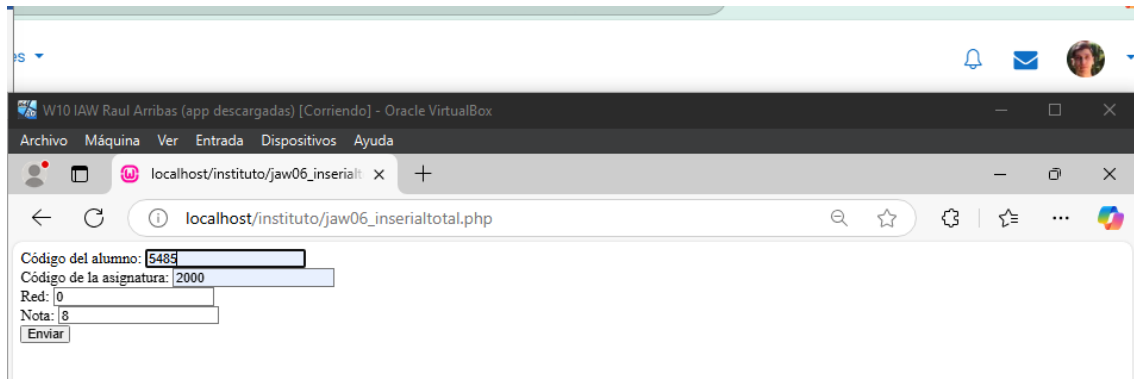
    $codsum = $_POST['codsum'];
    $codsig = $_POST['codsig'];
    $red = $_POST['red'];
    $nota = $_POST['nota'];

    $sql = "INSERT INTO notas (codsum, codsig, red, nota) VALUES ('$codsum', '$codsig', '$red', '$nota')";

    if ($conn->query($sql) === TRUE) {
        echo "New record created successfully";
    } else {
        echo "Error: " . $sql . "<br>" . $conn->error;
    }

    $conn->close();
}
?>

<form method="post">
    Código del alumno: <input type="text" name="codsum"><br>
    Código de la asignatura: <input type="text" name="codsig"><br>
    Red: <input type="text" name="red"><br>
    Nota: <input type="text" name="nota"><br>
    <input type="submit">
</form>
```



- 1.5 Listar, en formato tabla, los contenidos de cualquiera de las tablas presentes en la BD (alumnos, cursos, notas y asignaturas). Llama al archivo iaw06_listado.php

```
<?php
```

```
$servername = "localhost";
```

```
$username = "root";
```

```
$password = "";
```

```
$dbname = "instituto";
```

```
$conn = new mysqli($servername, $username, $password, $dbname);
```

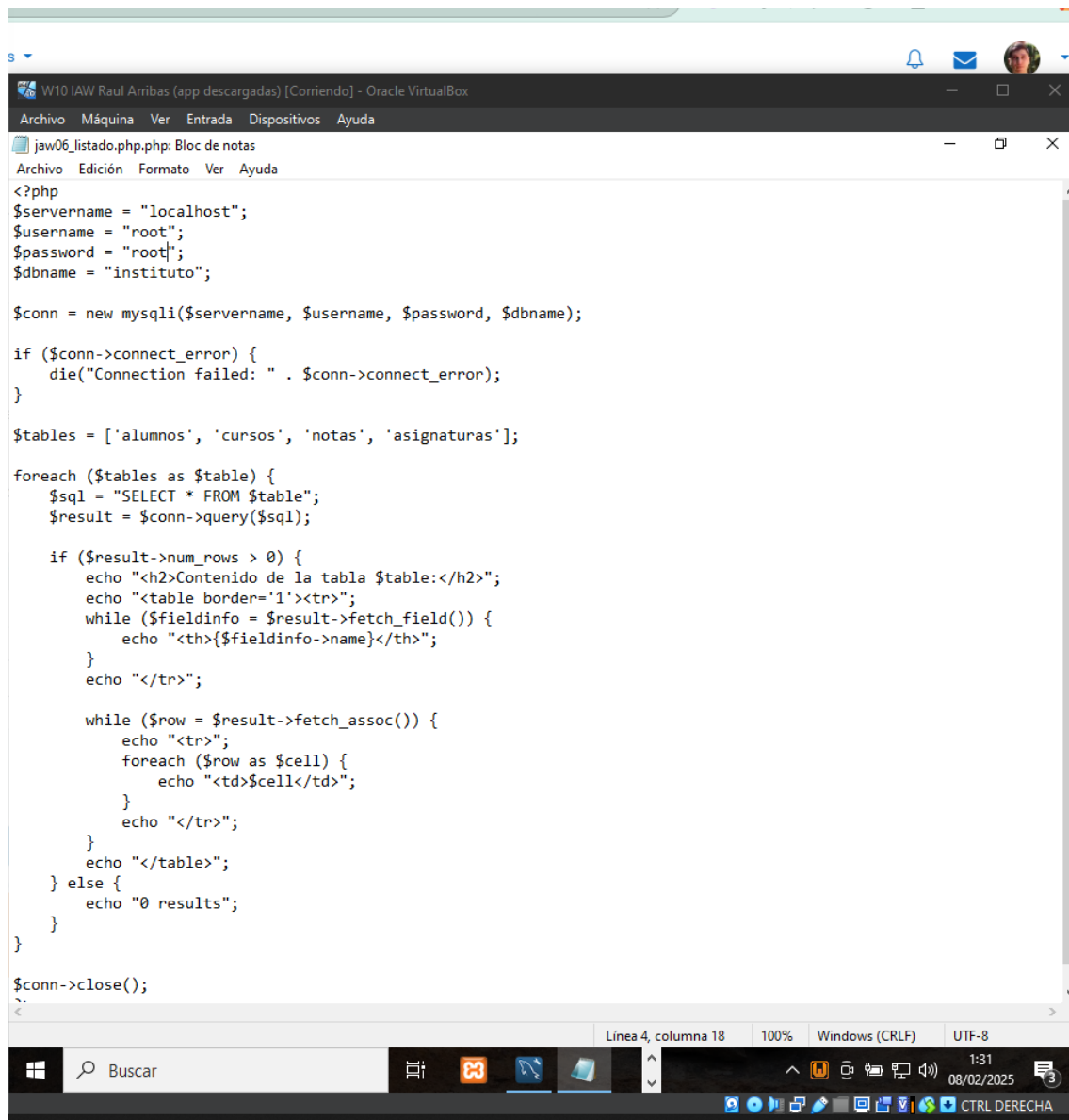
```
if ($conn->connect_error) {
```

```
    die("Connection failed: " . $conn->connect_error);
```

```
}
```

```
$tables = ['alumnos', 'cursos', 'notas', 'asignaturas'];
```

```
foreach ($tables as $table) {  
    $sql = "SELECT * FROM $table";  
    $result = $conn->query($sql);  
  
    if ($result->num_rows > 0) {  
        echo "<h2>Contenido de la tabla $table:</h2>";  
        echo "<table border='1'><tr>";  
        while ($fieldinfo = $result->fetch_field()) {  
            echo "<th>{$fieldinfo->name}</th>";  
        }  
        echo "</tr>";  
  
        while ($row = $result->fetch_assoc()) {  
            echo "<tr>";  
            foreach ($row as $cell) {  
                echo "<td>$cell</td>";  
            }  
            echo "</tr>";  
        }  
        echo "</table>";  
    } else {  
        echo "0 results";  
    }  
}  
  
$conn->close();  
?>
```



The screenshot shows a Windows 10 desktop environment. A Notepad++ window is open, displaying a PHP script. The script connects to a MySQL database on localhost using the 'root' user and password. It then queries a table named 'alumnos' and displays the results in an HTML table format. The status bar at the bottom of the Notepad++ window indicates 'Línea 4, columna 18', '100%', 'Windows (CRLF)', and 'UTF-8'. The Windows taskbar at the bottom shows the Start button, a search bar, and several application icons. The system clock in the bottom right corner shows the time as 1:31 on 08/02/2025.

```
<?php
$servername = "localhost";
$username = "root";
$password = "root";
$dbname = "instituto";

$conn = new mysqli($servername, $username, $password, $dbname);

if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}

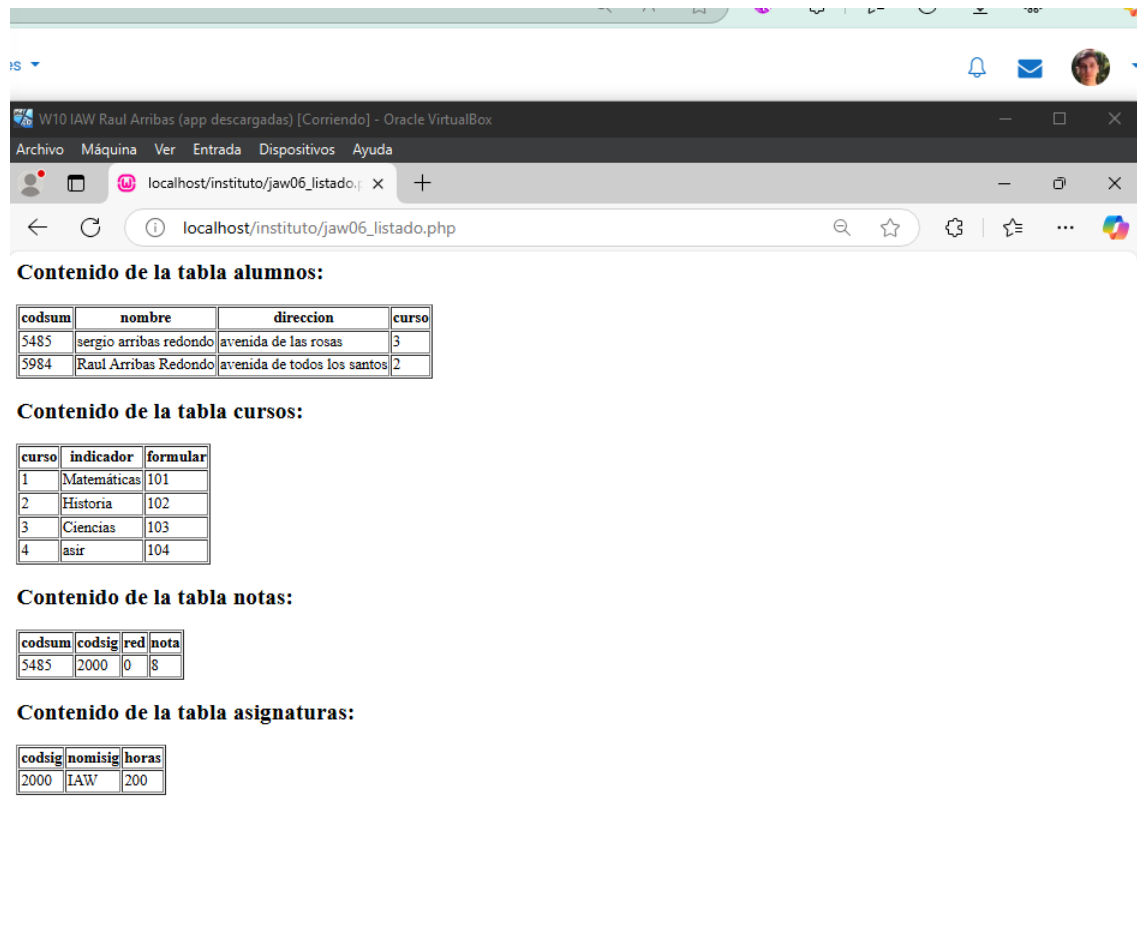
$tables = ['alumnos', 'cursos', 'notas', 'asignaturas'];

foreach ($tables as $table) {
    $sql = "SELECT * FROM $table";
    $result = $conn->query($sql);

    if ($result->num_rows > 0) {
        echo "<h2>Contenido de la tabla $table:</h2>";
        echo "<table border='1'><tr>";
        while ($fieldinfo = $result->fetch_field()) {
            echo "<th>{$fieldinfo->name}</th>";
        }
        echo "</tr>";

        while ($row = $result->fetch_assoc()) {
            echo "<tr>";
            foreach ($row as $cell) {
                echo "<td>$cell</td>";
            }
            echo "</tr>";
        }
        echo "</table>";
    } else {
        echo "0 results";
    }
}

$conn->close();
```



Si queremos actualizar la nota de un alumno, tenemos que crear otro formulario que se llama MODIFICAR NOTA.php

```
<?php
if ($_SERVER["REQUEST_METHOD"] == "POST" && isset($_POST['update'])) {
    $servername = "localhost";
    $username = "root"; // Ajusta según tu configuración
    $password = "root"; // Ajusta según tu configuración
    $dbname = "instituto";

    // Conectar a la base de datos
    $conn = new mysqli($servername, $username, $password, $dbname);

    // Verificar conexión
    if ($conn->connect_error) {
        die("Error de conexión: " . $conn->connect_error);
    }

    // Obtener los datos del formulario
    $codsum = $_POST['codsum'];
    $codsig = $_POST['codsig'];
    $nota = $_POST['nota'];

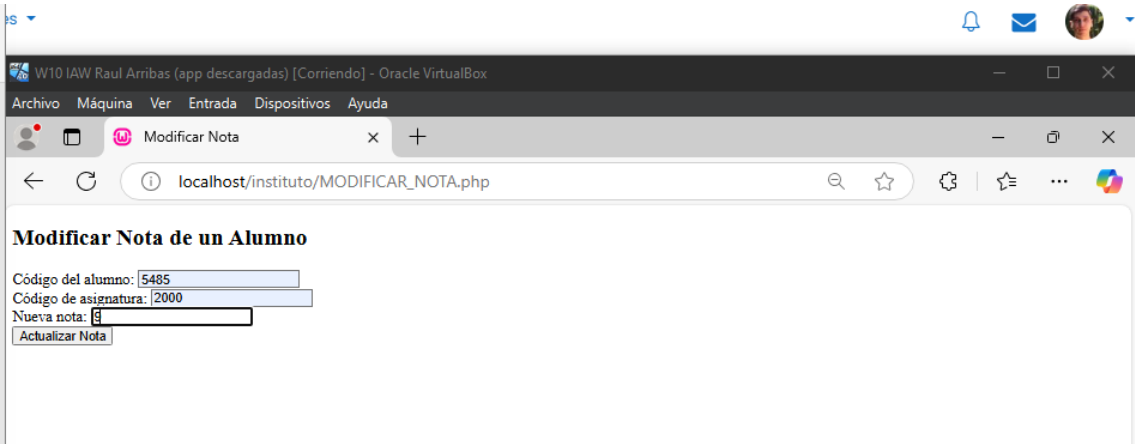
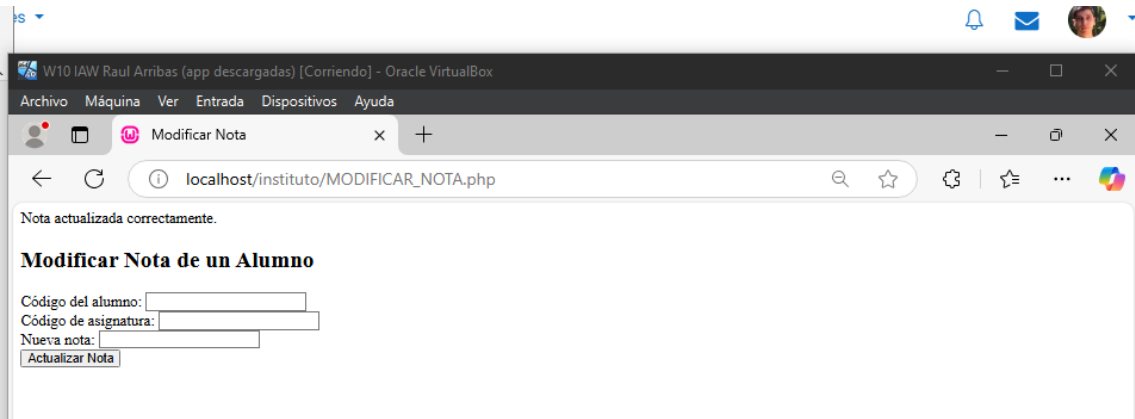
    // Verificar si la nota ya existe en la tabla
    $check_sql = "SELECT * FROM notas WHERE codsum = '$codsum' AND codsig = '$codsig'";
    $result = $conn->query($check_sql);

    if ($result->num_rows > 0) {
        // Si la nota existe, actualizar
        $update_sql = "UPDATE notas SET nota = '$nota' WHERE codsum = '$codsum' AND codsig = '$codsig'";
```

```
if ($conn->query($update_sql) === TRUE) {  
    echo "Nota actualizada correctamente."  
} else {  
    echo "Error al actualizar la nota: " . $conn->error;  
}  
} else {  
    echo "Error: No se encontró una nota para este alumno y asignatura."  
}  
  
// Cerrar la conexión  
$conn->close();  
}  
?>
```

```
<!DOCTYPE html>  
<html lang="es">  
<head>  
    <meta charset="UTF-8">  
    <title>Modificar Nota</title>  
</head>  
<body>  
    <h2>Modificar Nota de un Alumno</h2>  
    <form method="post">  
        Código del alumno: <input type="text" name="codsum" required><br>  
        Código de asignatura: <input type="text" name="codsig" required><br>  
        Nueva nota: <input type="text" name="nota" required><br>  
        <input type="submit" name="update" value="Actualizar Nota">  
    </form>  
</body>  
</html>
```

Manual de instalación



Ahora nos vamos al listado y vemos como la nota es un 9

