

PHP Connect to MySQL

PHP 5 and later can work with a MySQL database using:

- **MySQLi extension** (the "i" stands for improved)
- **PDO (PHP Data Objects)**

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

// Create connection
$conn = new mysqli($servername, $username,
$password);

// Check connection
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}
echo "Connected successfully";
?>
```

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

// Create connection
$conn = mysqli_connect($servername, $username,
$password);

// Check connection
if (!$conn) {
    die("Connection failed: " . mysqli_connect_error());
}
echo "Connected successfully";
?>
```

Create a MySQL Database Using MySQLi

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

// Create connection
$conn = new mysqli($servername, $username,
$password);
// Check connection
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}
```

```
// Create database
$sql = "CREATE DATABASE myDB";
if ($conn->query($sql) === TRUE) {
    echo "Database created successfully";
} else {
    echo "Error creating database: " . $conn->error;
}

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

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

// Create connection
$conn = mysqli_connect($servername, $username,
$password);
// Check connection
if (!$conn) {
    die("Connection failed: " . mysqli_connect_error());
}

// Create database
$sql = "CREATE DATABASE myDB";
if (mysqli_query($conn, $sql)) {
    echo "Database created successfully";
} else {
    echo "Error creating database: " . mysqli_error($conn);
}
```

```
}  
  
mysqli_close($conn);  
?>
```

PHP MySQL Create Table

```
<?php  
$servername = "localhost";  
$username = "username";  
$password = "password";  
$dbname = "myDB";  
  
// Create connection  
$conn = new mysqli($servername, $username,  
$password, $dbname);  
// Check connection  
if ($conn->connect_error) {  
    die("Connection failed: " . $conn->connect_error);  
}
```

```
// sql to create table
$sql = "CREATE TABLE MyGuests (
id INT(6) UNSIGNED AUTO_INCREMENT PRIMARY
KEY,
firstname VARCHAR(30) NOT NULL,
lastname VARCHAR(30) NOT NULL,
email VARCHAR(50),
reg_date TIMESTAMP DEFAULT
CURRENT_TIMESTAMP ON UPDATE
CURRENT_TIMESTAMP
)";

if ($conn->query($sql) === TRUE) {
    echo "Table MyGuests created successfully";
} else {
    echo "Error creating table: " . $conn->error;
}

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

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

// Create connection
$conn = mysqli_connect($servername, $username,
$password, $dbname);
```

```
// Check connection
if (!$conn) {
    die("Connection failed: " . mysqli_connect_error());
}

// sql to create table
$sql = "CREATE TABLE MyGuests (
id INT(6) UNSIGNED AUTO_INCREMENT PRIMARY
KEY,
firstname VARCHAR(30) NOT NULL,
lastname VARCHAR(30) NOT NULL,
email VARCHAR(50),
reg_date TIMESTAMP DEFAULT
CURRENT_TIMESTAMP ON UPDATE
CURRENT_TIMESTAMP
)";

if (mysqli_query($conn, $sql)) {
    echo "Table MyGuests created successfully";
} else {
    echo "Error creating table: " . mysqli_error($conn);
}

mysqli_close($conn);
?>
```

PHP MySQL Insert Data

Insert Data Into MySQL Using MySQLi

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

// Create connection
$conn = new mysqli($servername, $username,
$password, $dbname);
// Check connection
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}

$sql = "INSERT INTO MyGuests (firstname, lastname,
email)
VALUES ('John', 'Doe', 'john@example.com')";

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

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

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

// Create connection
$conn = mysqli_connect($servername, $username,
$password, $dbname);
// Check connection
if (!$conn) {
    die("Connection failed: " . mysqli_connect_error());
}

$sql = "INSERT INTO MyGuests (firstname, lastname,
email)
VALUES ('John', 'Doe', 'john@example.com')";

if (mysqli_query($conn, $sql)) {
    echo "New record created successfully";
} else {
    echo "Error: " . $sql . "<br>" . mysqli_error($conn);
}

mysqli_close($conn);
?>
```

PHP MySQL Insert Multiple Records

Insert Multiple Records Into MySQL Using MySQLi and PDO

Multiple SQL statements must be executed with the **mysqli_multi_query()** function.

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

// Create connection
$conn = new mysqli($servername, $username,
$password, $dbname);
// Check connection
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}

$sql = "INSERT INTO MyGuests (firstname, lastname,
email)
VALUES ('John', 'Doe', 'john@example.com');";
$sql .= "INSERT INTO MyGuests (firstname, lastname,
email)
VALUES ('Mary', 'Moe', 'mary@example.com');";
$sql .= "INSERT INTO MyGuests (firstname, lastname,
email)
VALUES ('Julie', 'Dooley', 'julie@example.com');";
```

```
if ($conn->multi_query($sql) === TRUE) {  
    echo "New records created successfully";  
} else {  
    echo "Error: " . $sql . "<br>" . $conn->error;  
}  
  
$conn->close();  
?>
```

```
<?php  
$servername = "localhost";  
$username = "username";  
$password = "password";  
$dbname = "myDB";  
  
// Create connection  
$conn = mysqli_connect($servername, $username,  
$password, $dbname);  
// Check connection  
if (!$conn) {  
    die("Connection failed: " . mysqli_connect_error());  
}
```

```
$sql = "INSERT INTO MyGuests (firstname, lastname, email)
VALUES ('John', 'Doe', 'john@example.com');";
$sql .= "INSERT INTO MyGuests (firstname, lastname, email)
VALUES ('Mary', 'Moe', 'mary@example.com');";
$sql .= "INSERT INTO MyGuests (firstname, lastname, email)
VALUES ('Julie', 'Dooley', 'julie@example.com')";

if (mysqli_multi_query($conn, $sql)) {
    echo "New records created successfully";
} else {
    echo "Error: " . $sql . "<br>" . mysqli_error($conn);
}

mysqli_close($conn);
?>
```

PHP MySQL Select Data

Example (MySQLi Object-oriented)

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

// Create connection
```

```

$conn = new mysqli($servername, $username,
$password, $dbname);
// Check connection
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}

$sql = "SELECT id, firstname, lastname FROM
MyGuests";
$result = $conn->query($sql);

if ($result->num_rows > 0) {
    // output data of each row
    while ($row = $result->fetch_assoc()) {
        echo "id: " . $row["id"] . " - Name: " .
$row["firstname"] . " " . $row["lastname"] . "<br>";
    }
} else {
    echo "0 results";
}
$conn->close();
?>

```

The function **num_rows()** checks if there are more than zero rows returned.

If there are more than zero rows returned, the function **fetch_assoc()** puts all the results into an associative array that we can loop through.

Example (MySQLi Procedural)

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

// Create connection
$conn = mysqli_connect($servername, $username,
$password, $dbname);
// Check connection
if (!$conn) {
    die("Connection failed: " . mysqli_connect_error());
}

$sql = "SELECT id, firstname, lastname FROM
MyGuests";
$result = mysqli_query($conn, $sql);

if (mysqli_num_rows($result) > 0) {
    // output data of each row
    while($row = mysqli_fetch_assoc($result)) {
        echo "id: " . $row["id"]. " - Name: " .
$row["firstname"]. " " . $row["lastname"]. "<br>";
    }
} else {
    echo "0 results";
}

mysqli_close($conn);
?>
```

You can also put the result in an HTML table:

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

// Create connection
$conn = new mysqli($servername, $username,
$password, $dbname);
// Check connection
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}

$sql = "SELECT id, firstname, lastname FROM
MyGuests";
$result = $conn->query($sql);

if ($result->num_rows > 0) {
    echo
    "<table><tr><th>ID</th><th>Name</th></tr>";
    // output data of each row
    while ($row = $result->fetch_assoc()) {
        echo "<tr><td>" . $row["id"] . "</td><td>" .
        $row["firstname"] . " " . $row["lastname"] .
        "</td></tr>";
    }
    echo "</table>";
} else {
```

```
    echo "o results";  
}  
$conn->close();  
?>
```

PHP MySQL Use The WHERE Clause

```
<?php  
$servername = "localhost";  
$username = "username";  
$password = "password";  
$dbname = "myDB";  
  
// Create connection  
$conn = new mysqli($servername, $username,  
$password, $dbname);  
// Check connection  
if ($conn->connect_error) {  
    die("Connection failed: " . $conn->connect_error);  
}  
  
$sql = "SELECT id, firstname, lastname FROM  
MyGuests WHERE lastname='Doe'";  
$result = $conn->query($sql);  
  
if ($result->num_rows > 0) {  
    // output data of each row  
    while ($row = $result->fetch_assoc()) {  
        echo "id: " . $row["id"] . " - Name: " .  
$row["firstname"] . " " . $row["lastname"] . "<br>";  
    }  
} else {
```

```
    echo "0 results";
}
$conn->close();
?>
```

PHP MySQL Use The ORDER BY Clause

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

// Create connection
$conn = new mysqli($servername, $username,
$password, $dbname);
// Check connection
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}

$sql = "SELECT id, firstname, lastname FROM
MyGuests ORDER BY lastname";
$result = $conn->query($sql);

if ($result->num_rows > 0) {
    // output data of each row
    while ($row = $result->fetch_assoc()) {
        echo "id: " . $row["id"] . " - Name: " .
$row["firstname"] . " " . $row["lastname"] . "<br>";
    }
} else {
    echo "0 results";
}
$conn->close();
```


?>

PHP MySQL Delete Data

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

// Create connection
$conn = new mysqli($servername, $username,
$password, $dbname);
// Check connection
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}

// sql to delete a record
$sql = "DELETE FROM MyGuests WHERE id=3";

if ($conn->query($sql) === TRUE) {
    echo "Record deleted successfully";
} else {
    echo "Error deleting record: " . $conn->error;
}

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

PHP MySQL Update Data

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

// Create connection
$conn = new mysqli($servername, $username,
$password, $dbname);
// Check connection
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}

$sql = "UPDATE MyGuests SET lastname='Doe'
WHERE id=2";

if ($conn->query($sql) === TRUE) {
    echo "Record updated successfully";
} else {
    echo "Error updating record: " . $conn->error;
}

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

PHP MySQL Limit Data Selections

Limit Data Selections From a MySQL Database

MySQL provides a LIMIT clause that is used to specify the number of records to return.