PHP Connect to MySQL

‹ Previous Next ›

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

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

Earlier versions of PHP used the MySQL extension. However, this extension was deprecated in 2012.

Should I Use MySQLi or PDO?

If you need a short answer, it would be "Whatever you like".

Both MySQLi and PDO have their advantages:

PDO will work on 12 different database systems, whereas MySQLi will only work with MySQL databases.

So, if you have to switch your project to use another database, PDO makes the process easy. You only have to change the connection string and a few queries. With MySQLi, you will need to rewrite the entire code - queries included.

Both are object-oriented, but MySQLi also offers a procedural API.

Both support Prepared Statements. Prepared Statements protect from SQL injection, and are very important for web application security.

MySQL Examples in Both MySQLi and PDO Syntax

In this, and in the following chapters we demonstrate three ways of working with PHP and MySQL:

- MySQLi (object-oriented)
- MySQLi (procedural)
- PDO

MySQLi Installation

For Linux and Windows: The MySQLi extension is automatically installed in most cases, when php5 mysql package is installed.

For installation details, go to:
http://php.net/manual/en/mysqli.installation.php

PDO Installation

For installation details, go to: http://php.net/manual/en/pdo.installation.php

Open a Connection to MySQL

Before we can access data in the MySQL database, we need to be able to connect to the server:

Example (MySQLi Object-Oriented)

```
<?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";
?>
```

Note on the object-oriented example above:

$connect_error was broken until PHP 5.2.9 and 5.3.0. If you need to ensure compatibility with PHP versions prior to 5.2.9 and 5.3.0, use the following code instead:

```
// Check connection
if (mysqli_connect_error()) {
  die("Database connection failed: " . mysqli_connect_error());
}
```

Example (MySQLi Procedural)

```
<?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";
?>
```

Example (PDO)

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

try {
  $conn = new PDO("mysql:host=$servername;dbname=myDB", $username, $password);
  // set the PDO error mode to exception
  $conn->setAttribute(PDO::ATTR_ERRMODE, PDO::ERRMODE_EXCEPTION);
  echo "Connected successfully";
} catch(PDOException $e) {
  echo "Connection failed: " . $e->getMessage();
}
?>
```

Note: In the PDO example above we have also **specified a database (myDB)**. PDO require a valid database to connect to. If no database is specified, an exception is thrown.

Tip: A great benefit of PDO is that it has an exception class to handle any problems that may occur in our database queries. If an exception is thrown within the try{ } block, the script stops executing and flows directly to the first catch(){ } block.

Close the Connection

The connection will be closed automatically when the script ends. To close the connection before, use the following:

MySQLi Object-Oriented:

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

MySQLi Procedural:

```
mysqli_close($conn);
```

PDO:

```
$conn = null;
```

‹ Previous Next ›