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Connecting to MySQL from PHP: mysqli and PDO, with a working example

Databases

CODE

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COUNTRY · LANGUAGE

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MozOut International

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PHP has two ways of talking to the database: **mysqli** (MySQL and MariaDB only) and **PDO** (which also serves PostgreSQL and others). For a new project PDO is the safe choice. With both, the host is `localhost`, and the database and user names carry the **account prefix**.

A complete example with PDO

1

Create the database, the user and the privileges in cPanel. See [creating a user and the privileges](#).

2

Create a file `db-test.php` in the site folder with this content (swap the three values for yours):

```
<?php
$dsn =
'mysql:host=localhost;dbname=account_database;charset=utf8mb4';
try {
    $pdo = new PDO($dsn, 'account_user', 'your-password-here',
        [PDO::ATTR_ERRMODE => PDO::ERRMODE_EXCEPTION]);
    $row = $pdo->query('SELECT NOW() AS now_time')-
        >fetch(PDO::FETCH_ASSOC);
    echo 'Connected: ' . $row['now_time'];
} catch (PDOException $e) {
    error_log($e->getMessage());
    echo 'Connection failed.';
}
```

3

Open `db-test.php` in the browser. You should see *Connected* and the date. If you see *Connection failed*, the reason is in the PHP error log. See **where the error log is**.

4

Delete the test file. It has done its job.

The same connection with mysqli, and a safe query

With `mysqli` you connect using `new mysqli('localhost', 'account_user', 'password', 'account_database')` and, right after, `$link->set_charset('utf8mb4')`. With either library, **never glue variables into the SQL text**: use prepared statements, where the value travels separately.

Library	Prepared statement	Notes
PDO	<pre>\$st = \$pdo->prepare('SELECT * FROM customers WHERE email = ?'); \$st->execute([\$email]);</pre>	Works for MySQL, MariaDB and PostgreSQL. You change the DSN.
mysqli	<pre>\$st = \$link->prepare('SELECT * FROM customers WHERE email = ?'); \$st->bind_param('s', \$email); \$st->execute();</pre>	MySQL and MariaDB only.

Three things that cause errors: using the database name *without* the prefix (MariaDB answers *Access denied*); forgetting to link the user to the database in cPanel; and writing the password into code and publishing it in a repository. Keep the details outside the code: see **passwords outside the code**.

Where to keep the connection details

In the example the values sit in the file itself, just for the test. In a real application, put them in a configuration file **outside** `public_html` (in the folder above, which the web server does not serve) and include it with `require`. That way, if PHP ever fails and shows the code instead of running it, the password does not leak. Note also `ERRMODE_EXCEPTION`: it turns an SQL error into an exception you can see, instead of a silence in which nothing happens. And open **one connection per request**, not one per query.

Accents coming out wrong? The connection charset has to be `utf8mb4` , as in the example. See **the question marks in your text**.

The example runs and your application still will not connect? Show us the exact error, without the password, and we will look.

[Open a support ticket](#)

SEE ALSO

[Connecting to your database from Python and Node.js](#)

[Keeping passwords out of your PHP code: .env files and the right permissions](#)

[Error establishing a database connection: the causes, in order](#)



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