

MySQL Databases with PHP

Website Planning

What is MySQL?

- MySQL is a relational database management system that supports the SQL language.
- SQL stands for "Structured Query Language".
- MySQL has a close relationship to PHP.
- PHP has a number of functions specifically designed to work with MySQL.
- Like PHP it is open source and therefore free.
- MySQL is the "M" in LAMP.

How do I use MySQL?

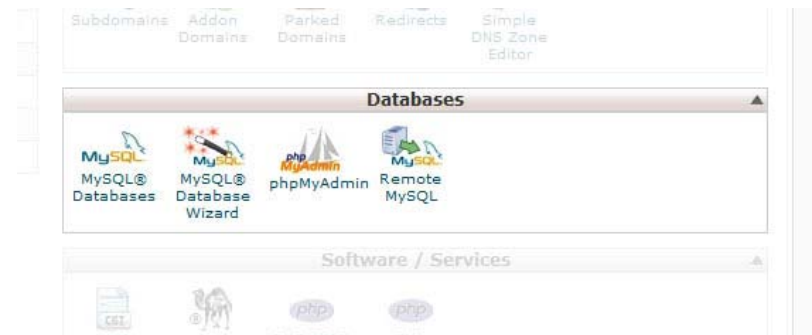
- Like PHP, MySQL can be downloaded and installed on a desktop computer.
- However, also like PHP it usually runs on a web server.
- Most web hosts who provide Linux hosting also provide PHP and MySQL as part of the offering.

What can I do with MySQL?

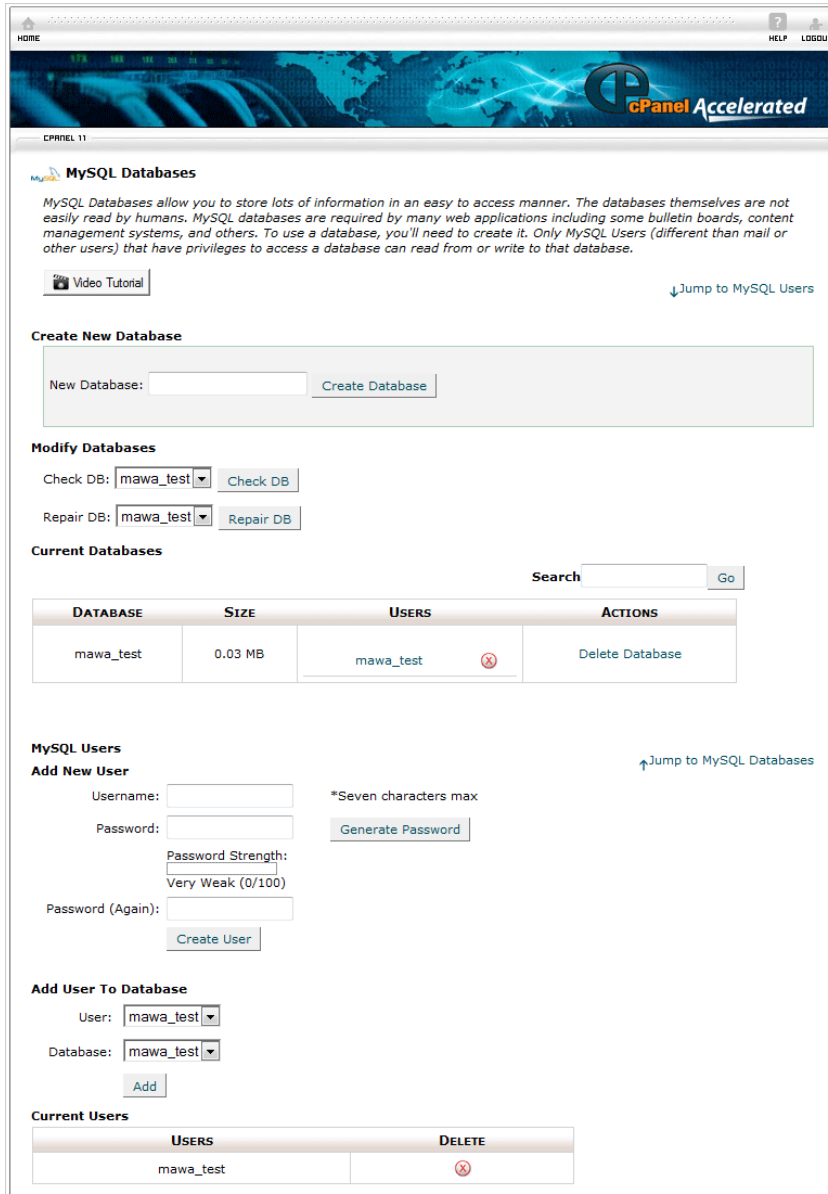
- Almost all web applications that we are familiar with use MySQL. Blog software like Wordpress, bulletin boards like vBulletin, wikis like MediaWiki and content management systems like Joomla all use MySQL to store data.
- However, PHP is required to extract data from MySQL databases and to construct dynamic web pages from it.
- For example, in a content management system, all the content of articles, when they were published, the name of the author and comments written are stored in the database and are extracted and compiled "on the fly" each time the page is requested by a browser.

How do I create a database?

- Databases are created using the control panel provided by your web host.
- In most cases, on a Linux server, that will be cPanel.
- You can use either the main *MySQL Databases* page or the *MySQL Database Wizard* to create a new database.



Create database in cPanel



The screenshot shows the cPanel MySQL Databases interface. At the top, there's a navigation bar with 'HOME', 'HELP', and 'LOGOUT'. Below that is a banner for 'cPanel Accelerated'. The main content area is titled 'MySQL Databases' and includes a video tutorial link and a 'Jump to MySQL Users' link. The 'Create New Database' section features a text input field for 'New Database:' and a 'Create Database' button. Below this is the 'Modify Databases' section with dropdown menus for 'Check DB:' and 'Repair DB:', both set to 'mawa_test', and corresponding 'Check DB' and 'Repair DB' buttons. The 'Current Databases' section has a search bar and a table with columns 'DATABASE', 'SIZE', 'USERS', and 'ACTIONS'. The table contains one entry: 'mawa_test' (0.03 MB) with user 'mawa_test' and a 'Delete Database' action. The 'MySQL Users' section includes an 'Add New User' form with fields for 'Username:', 'Password:', 'Password (Again:)', and a 'Generate Password' button. The 'Add User To Database' section has dropdowns for 'User:' (mawa_test) and 'Database:' (mawa_test) and an 'Add' button. Finally, the 'Current Users' section shows a table with columns 'USERS' and 'DELETE', containing one entry: 'mawa_test' with a delete icon.

Creating a new database is very simple, just enter a name and click "Create Database".

However, to connect to a database, you need to specify a User who is allowed to access the database.

So, to create a user, enter a name and a password and click "Create User". Finally, the user must be added to the database.

Select the user name and the database name from the two drop-down lists and then click "Add".

Your database is now ready to use but before you can add any data, you need to give it some structure...

What is phpMyAdmin?

- Despite its name, phpMyAdmin is an administration tool for working with MySQL databases.
- phpMyAdmin is used to structure your database – to add tables and fields.
- phpMyAdmin can also be used to add data to your database once it is structured.

Enter data with phpMyAdmin

Server: localhost ▶ Database: mawa_test ▶ Table: news







[Browse](#) [Structure](#) [SQL](#) [Search](#) [Insert](#) [Export](#) [Import](#) [Operations](#) [Empty](#) [Drop](#)




i Showing rows 0 - 2 (3 total, Query took 0.0002 sec)

SQL query:
`SELECT *
FROM `news`
LIMIT 0, 30`

Profiling [[Edit](#)] [[Explain SQL](#)] [[Create PHP Code](#)] [[Refresh](#)]

Show : 30 row(s) starting from record # 0
in horizontal mode and repeat headers after 100 cells
Sort by key: None

	item_id	headline	date	markup
<input type="checkbox"/>  	1	Man Eats Database!	30th April 2008	A man ate a database yesterday, doctors are lookin...
<input type="checkbox"/>  	2	Database bites back	1st May 2008	The database has recovered but sadly the man could...
<input type="checkbox"/>  	3	Sadly, database dies anyway	30th April 2008	After hours of work, doctors were unable to save t...

↑ [Check All](#) / [Uncheck All](#) With selected:   

Show : 30 row(s) starting from record # 0
in horizontal mode and repeat headers after 100 cells

Query results operations
[Print view](#) [Print view \(with full texts\)](#) [Export](#) [CREATE VIEW](#)

Link and Query

```
<?php
```

```
# username, password and database name
```

```
$user = "mawa_test";
```

```
$password = "+M/*Pqdi1;4Y";
```

```
$db = "mawa_test";
```

```
# link to the database and test the connection
```

```
$link = mysql_connect("localhost", $user, $password);
```

```
if (!$link) die ("cannot connect to mysql - check ID and Password");
```

```
# select the database once connected
```

```
mysql_select_db($db, $link) or die ("cannot select the database - check Name");
```

```
# build a database query
```

```
$query = "SELECT headline, markup, date FROM news ORDER BY date DESC";
```

```
$result = mysql_query($query);
```

```
mysql_close($link);
```

```
?>
```

Access and Print Array Data

```
<?php
while ($row = (mysql_fetch_array($result)))
{
    $headline = $row["headline"];
    $date = $row["date"];
    $markup = $row["markup"];

    echo "<h2>$headline</h2>\n";
    echo "<p>$date</p>\n";
    echo "<p>$markup</p>\n";
}
?>
```