

A MySQL Tutorial For Beginners

Written and edited by Tizag.com staff

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PHP / MySQL Tutorial

MySQL is currently the most popular open source database server in existence. On top of that, it is very commonly used in conjunction with PHP scripts to create powerful and dynamic server-side applications.

MySQL has been criticized in the past for not supporting all the features of other popular and more expensive DataBase Management Systems. However, MySQL continues to improve with each release (currently version 5), and it has become widely popular with individuals and businesses of many different sizes.

What is a Database?

A database is a structure that comes in two flavors: a flat database and a relational database. A relational database is much more oriented to the human mind and is often preferred over the gabble-de-gook flat database that are just stored on hard drives like a text file. MySQL is a relational database.

In a relational structured database there are tables that store data. The columns define which kinds of information will be stored in the table. An individual column must be created for each type of data you wish to store (i.e. Age, Weight, Height).

On the other hand, a row contains the actual values for these specified columns. Each row will have 1 value for each and every column. For example a table with columns (Name, Age, Weight-lbs) could have a row with the values (Bob, 65, 165). If all this relational database talk is too confusing, don't despair. We will talk about and show a few examples in the coming lessons.

Why Use a Database?

Databases are most useful when it comes to storing information that fits into logical categories. For example, say that you wanted to store information of all the employees in a company. With a database you can group different parts of your business into separate tables to help store your information logically. Example tables might be: Employees, Supervisors, and Customers. Each table would then contain columns specific to these three areas. To help store information related to each employee, the Employees table might have the following columns: Hire, Date, Position, Age, and Salary.

Learn MySQL

Before you begin this tutorial you should have a basic knowledge of the information covered in our [PHP](#) and [HTML](#) tutorials.

This tutorial focuses heavily on using MySQL in a PHP environment. It is aimed at teaching those who have web hosts with PHP and MySQL already installed. If you are unsure, please contact your web host.

MySQL Setup Guide

The easiest way to experiment with MySQL and PHP is to purchase some space on a shared web host.

Although you can set up MySQL manually on your home PC, it can be rather difficult for a beginner to do, and would require more than a few lessons! If you think you've got what it takes, or you're just mentally unstable, head on over to MySQL.com for more information on installing MySQL yourself.

Setting Up MySQL in CPanel

There are many different types of control panels that your shared hosting provider may have. This tutorial assumes that you are using the most popular, [CPanel](#).

First, find the link that allows you to administer MySQL. Within CPanel the icon is labeled *MySQL Databases*. Once there, you will need to do the following before you can start using MySQL.

- ∴ Create a new database
- ∴ Create a new user with password
- ∴ Assign the user to the database

If you have problems with this steps, seek help from your web hosting provider or ask a question in the [Tizag Forums](#).

Helpful Tool - phpMyAdmin!

Also supplied by most hosting services is [phpMyAdmin](#) (you can also install it anywhere you want, as it's open source and free). This tool will allow you to view all the MySQL database, tables, and entries, as well as perform SQL queries remotely through a web browser.

Although we will be teaching how to create databases, tables and all other MySQL tasks through PHP, we encourage you to learn about phpMyAdmin. It's easy-to-use interface will allow you to do many common MySQL tasks quickly and easily, saving you many beginner headaches and helping you understand what's going on in a more visual manner.

MySQL Admin

This lesson covers the different options you have available to you for administering your MySQL service after it is successfully installed. If you already have that base covered feel free to skip on to the next lesson.

MySQL Command Line

If you are an old-school programmer that has no need for a graphical user interface, then you can simply use any command line interface to execute MySQL queries.

Those of you with MySQL installed on your Microsoft Windows operating system can reach the command line by going to the Start Menu and choosing "**Run...**". Type the keyword "**cmd**" into the text field and press **Enter** to launch Window's command line interface.

MySQL GUI

With so many free MySQL administration tools available, many developers favor these free Graphical User Interfaces over the command line. The most popular options include:

- ∴ [phpMyAdmin](#) - A popular web interface that is included with almost every type of Shared, Virtual or Dedicated hosting solution.
- ∴ [MySQL Administrator](#) - A powerful tool developed by the folks at MySQL.com.
- ∴ [Navicat](#) - A purchasable MySQL admin tool for Windows, Mac and Linux.

MySQL phpMyAdmin

As previously mentioned, the very popular [phpMyAdmin](#) tool should come with your web hosting plan.

MySQL Administrator

This tool comes from the creators of MySQL, so you can be assured they have a solid understanding of database optimization and stability for power users. There are currently two versions of MySQL Administrator: 1.0 and 1.1. MySQL.com recommends you use 1.1 if your MySQL installation is 4.0, 4.1 or 5.0. Read more about the [MySQL Administrator](#) on MySQL.com's web site.

MySQL Navicat

Navicat comes with a 30-day trial so you can play around and see if you feel like dropping the cash for this MySQL administration product. A brief overview of their product [Navicat Admin](#) can be found on their website. The cost of this product is around \$100.

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