

MySQL and phpMyAdmin

Introduction to MySQL

MySQL is a fast, easy-to-use relational database being used for many small and big businesses.

MySQL offers the following benefits:

- ❖ MySQL is open-source. So it's free to use.
- ❖ MySQL is powerful. It can handle a large subset of the functionality of the most expensive and powerful database packages.
- ❖ MySQL uses a standard form of the well-known SQL data language.
- ❖ MySQL works on many operating systems and with many languages including PHP, PERL, C, C++, JAVA, Python, and many more.

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Introduction to MySQL

- ❖ MySQL is fast and efficient and works well even with large data sets.
- ❖ MySQL is usually mentioned in the same breath as PHP and the two compliment each other especially in the realm of web development.
- ❖ MySQL supports large databases, up to 50 million rows or more in a table. The default file size limit for a table is 4GB, but you can increase this to a theoretical limit of 8 million terabytes (TB).
- ❖ MySQL is customizable. The open-source GPL license allows programmers to modify the MySQL software to fit their own specific environments.

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High profile projects

- ❖ Alcatel-Lucent
- ❖ Uber
- ❖ US Navy
- ❖ NASA
- ❖ McGraw-Hill Education
- ❖ Square
- ❖ UC Riverside
- ❖ Tesla
- ❖ YouTube
- ❖ Netflix
- ❖ Spotify

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MySQL Installation

Installation of MySQL can be handled in multiple ways:

- ❖ Browse to the MySQL website and choose the Downloads menu option. Select MySQL Community Edition. Then select MySQL Community Server. Finally pick the version number of MySQL which is required along with the platform you will be running it on.
- ❖ Another option, especially for personal development, is to use an all-in-one framework. Several exist including XAMPP, MAMP, WAMP, etc. Let's look at XAMPP.

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Introduction to XAMPP

Short for Cross-Platform (X), Apache, MySQL, PHP, and Perl, XAMPP is an easy-to-install and easy-to-use software solution that mirrors remote installations of the Apache web server, the MySQL database, and the server-side technology PHP on your local machine. If you desire a simple installation with almost zero setup time, XAMPP is for you. I like to use XAMPP because it's the quickest way to get the MySQL database and the MySQL Management tool phpMyAdmin up and running with very little effort.



To download the latest release of XAMPP, simply visit the following website: <https://www.apachefriends.org/index.html>

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Introduction to XAMPP

XAMPP is a cross-platform initiative aimed at delivering the web server Apache, the database MySQL, the server-side technology PHP, and the programming language Perl to developers regardless of operating system. Although other software solutions such as MAMP (which is meant to work only with Mac OS X) or IIS (which works only with Windows server-based operating systems) are meant to work with specific platforms, XAMPP, as the name implies (X meaning cross-platform), can be installed and configured to work with Windows, Linux, Solaris (Unix), and Mac, making it much more flexible and preferable to those who are unsure where their applications will end up.

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Current XAMPP version

As of this lecture, XAMPP's current version is 7.2.6 and comes with the following software:

- ❖ Apache 2.4.33 + OpenSSL 1.1.0
- ❖ MariaDB (open source fork of MySQL) 10.1.33
- ❖ PHP 7.2.6
- ❖ phpMyAdmin 4.8.1
- ❖ Perl 7.0.56
- ❖ FileZilla FTP Server 0.9.41
- ❖ Mercury Mail Transport System 4.63

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Introduction to phpMyAdmin

- ❖ phpMyAdmin is a free software tool written in PHP, intended to handle the administration of MySQL over the Web.
- ❖ phpMyAdmin supports a wide range of operations on MySQL and MariaDB.
- ❖ Frequently used operations (managing databases, tables, columns, relations, indexes, users, permissions, etc) can be performed via the GUI, while you still have the ability to directly execute any SQL statement.
- ❖ phpMyAdmin can be installed as a stand-alone product or packaged with an all-in-one like XAMPP, MAMP, WAMP, etc.

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Key features of phpMyAdmin

- ❖ Intuitive web interface
- ❖ Support for most MySQL features including:
 - ❖ Browse and drop databases, tables, views, fields and indexes
 - ❖ Create, copy, drop, rename and alter databases, tables, fields and indexes
 - ❖ Maintenance tasks for databases and tables and server configuration
 - ❖ Execute, edit and bookmark any SQL-statement, even batch-queries
 - ❖ Manage MySQL user accounts and privileges
 - ❖ Manage stored procedures and triggers
- ❖ Import data from CSV and SQL
- ❖ Export data to various formats: CSV, SQL, XML, PDF, Spreadsheet, Word, and others
- ❖ Creating graphics of your layouts in various formats