

Introduction to SQL

SQL is a standard language for accessing and manipulating databases.

- SQL stands for Structured Query Language
- SQL lets you access and manipulate databases
- SQL became a standard of the American National Standards Institute (ANSI) in 1986, and of the International Organization for Standardization (ISO) in 1987

What Can SQL do?

- SQL can execute queries against a database
- SQL can retrieve data from a database
- SQL can insert records in a database
- SQL can update records in a database
- SQL can delete records from a database
- SQL can create new databases
- SQL can create new tables in a database
- SQL can create stored procedures in a database
- SQL can create views in a database
- SQL can set permissions on tables, procedures, and views

Using SQL in Your Web Site

To build a web site that shows data from a database, you will need:

- An RDBMS database program (i.e. MS Access, SQL Server, MySQL)
- To use a server-side scripting language, like PHP or ASP
- To use SQL to get the data you want
- To use HTML / CSS to style the page

Example:

```
SELECT * FROM Customers;
```

What is the difference between SQL and MySQL?

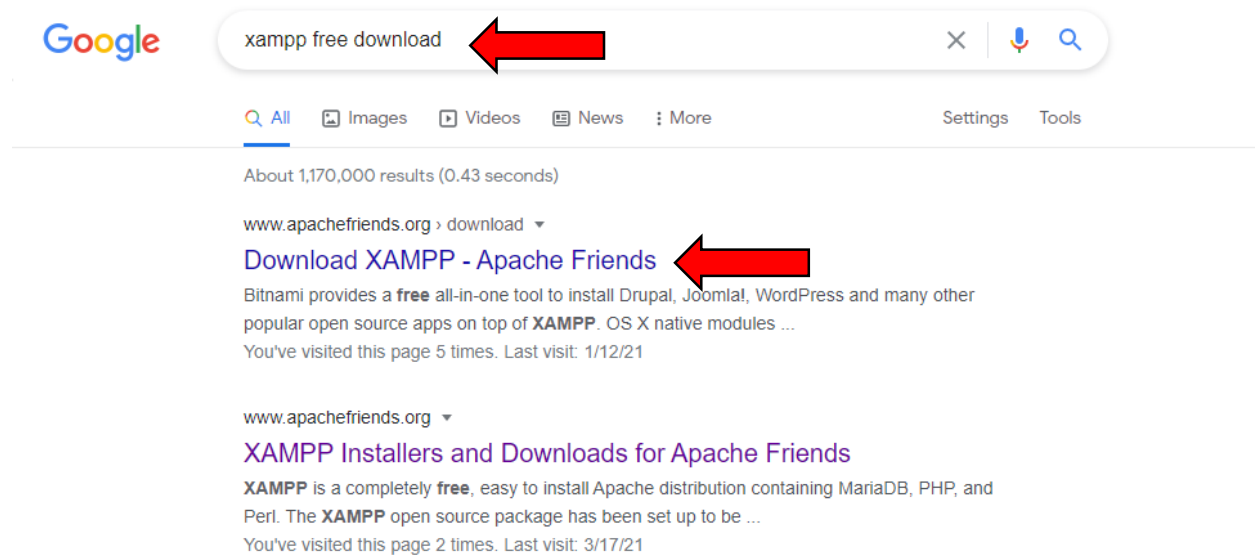
SQL is a query language, whereas MySQL is a relational database that uses SQL to query a database. You can use SQL to access, update, and manipulate the data stored in a database. However, MySQL is a database that stores the existing data in a database in an organized manner.

We will be using “Xampp” server to run our SQL queries.

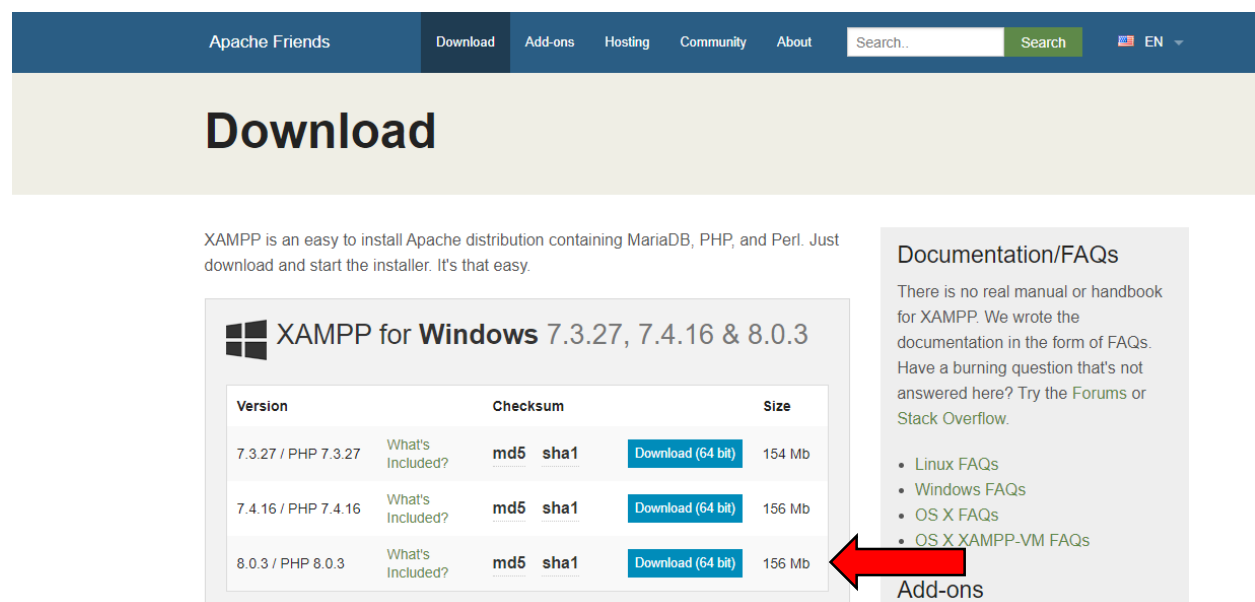
XAMPP is a completely free, easy to install Apache distribution containing MariaDB, PHP, and Perl. The XAMPP open source package has been set up to be incredibly easy to install and to use.

<https://youtu.be/h6DEDM7C37A>

How to install “Xampp” step by step?



A Google search interface showing the query 'xampp free download'. A red arrow points to the search bar. Below the search bar, the results show a link to 'Download XAMPP - Apache Friends' with a red arrow pointing to it. The snippet for this link mentions Bitnami providing a free all-in-one tool to install Drupal, Joomla!, WordPress and many other popular open source apps on top of XAMPP. OS X native modules ... You've visited this page 5 times. Last visit: 1/12/21. Below this, another link 'XAMPP Installers and Downloads for Apache Friends' is shown with a snippet stating XAMPP is a completely free, easy to install Apache distribution containing MariaDB, PHP, and Perl. The XAMPP open source package has been set up to be ... You've visited this page 2 times. Last visit: 3/17/21.



The XAMPP Download page from Apache Friends. The navigation bar includes 'Apache Friends', 'Download', 'Add-ons', 'Hosting', 'Community', 'About', a search bar, and a language selector (EN). The main heading is 'Download'. Below the heading, a text block states: 'XAMPP is an easy to install Apache distribution containing MariaDB, PHP, and Perl. Just download and start the installer. It's that easy.'

XAMPP for Windows 7.3.27, 7.4.16 & 8.0.3

Version	Checksum	Size
7.3.27 / PHP 7.3.27	What's Included? md5 sha1	Download (64 bit) 154 Mb
7.4.16 / PHP 7.4.16	What's Included? md5 sha1	Download (64 bit) 156 Mb
8.0.3 / PHP 8.0.3	What's Included? md5 sha1	Download (64 bit) 156 Mb

A red arrow points to the 'Download (64 bit)' link for version 8.0.3.

Documentation/FAQs

There is no real manual or handbook for XAMPP. We wrote the documentation in the form of FAQs. Have a burning question that's not answered here? Try the Forums or Stack Overflow.

- Linux FAQs
- Windows FAQs
- OS X FAQs
- OS X XAMPP-VM FAQs

Add-ons

[Apache Friends](#)[Download](#)[Add-ons](#)[Hosting](#)[Community](#)[About](#)[Search](#)[EN](#)

Awesome!

Your download will start automatically. If it doesn't, click [here](#).

Reading

Be sure to read the install instructions and FAQs:

- Linux FAQs
- Windows FAQs
- OS X FAQs
- OS X XAMPP-VM FAQs

You can find additional help on our forums or Stack Overflow.

Tell Your Friends about XAMPP

I just got #XAMPP from @ApacheFriends
<https://www.apachefriends.org/#opensource>

[Tweet!](#)

[Twitter](#)[Facebook](#)[Google+](#)


[Add-ons](#)[Community](#)[Mailing List](#)

xampp-windows-x...exe
18.2/157 MB, 1 min left

Show all X

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Today (1)



xampp-windows
-x64-8.0.3-0-VS1
6-installer

Earlier this week (1)

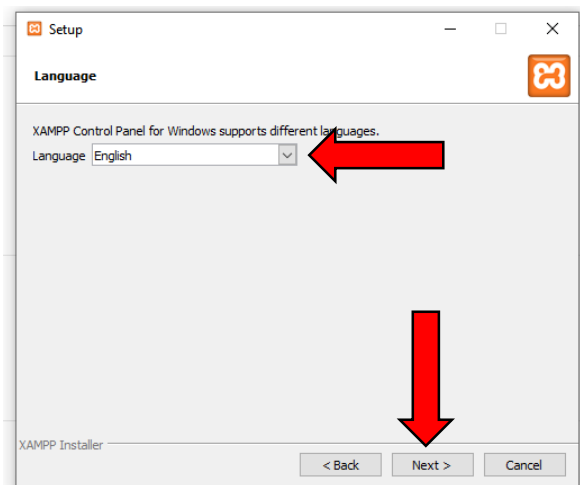
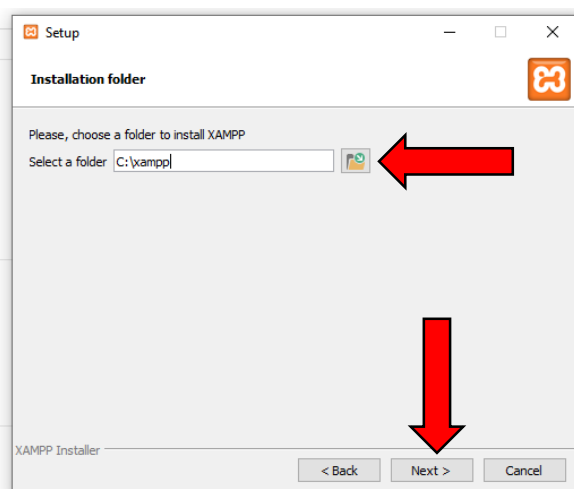
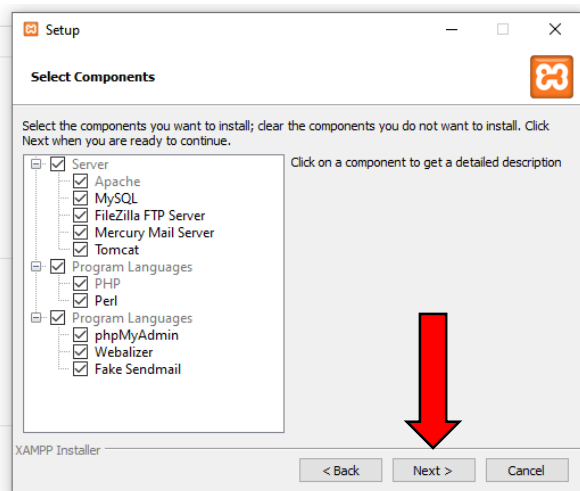
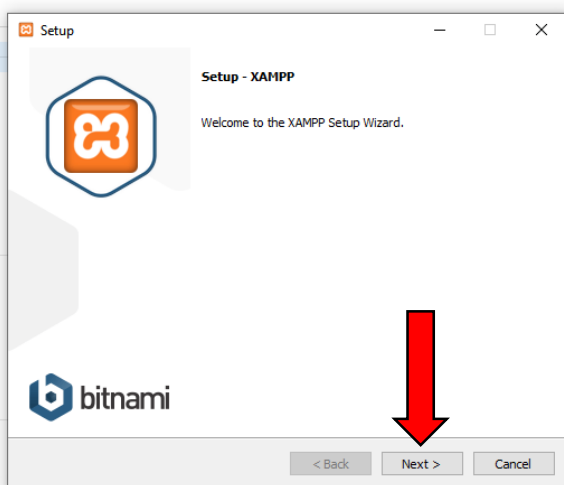
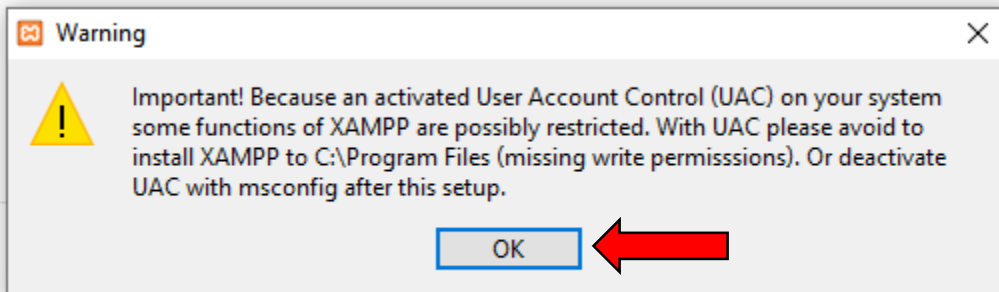
Question

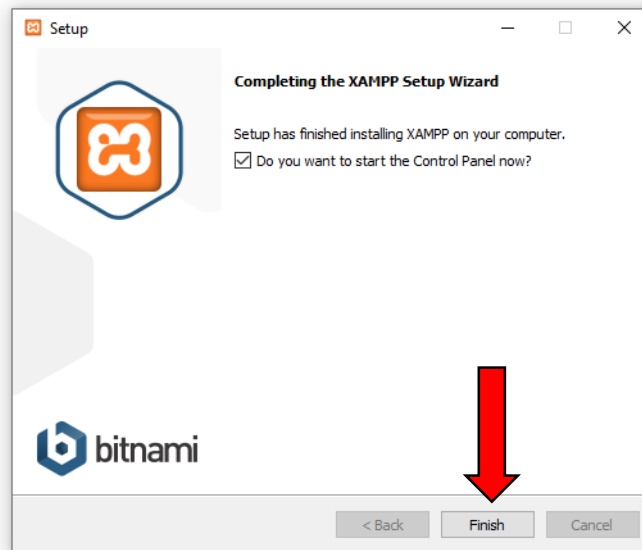
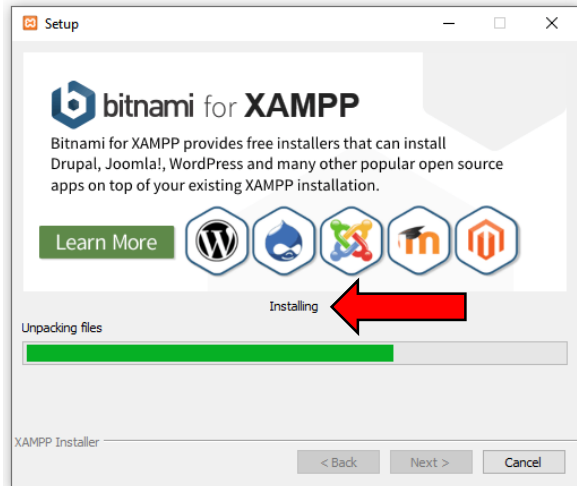
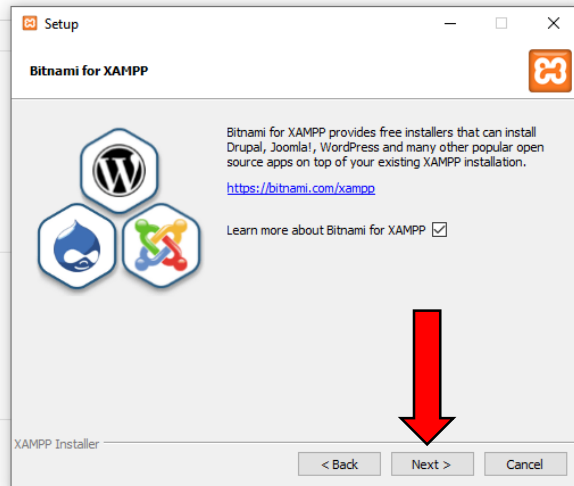
It seems you have an antivirus running. In some cases, this may slow down or interfere the installation of the software. Please visit the following link to learn more about this.

<http://apacheFriends.org/en/faq-xampp-windows.html#antivirus>

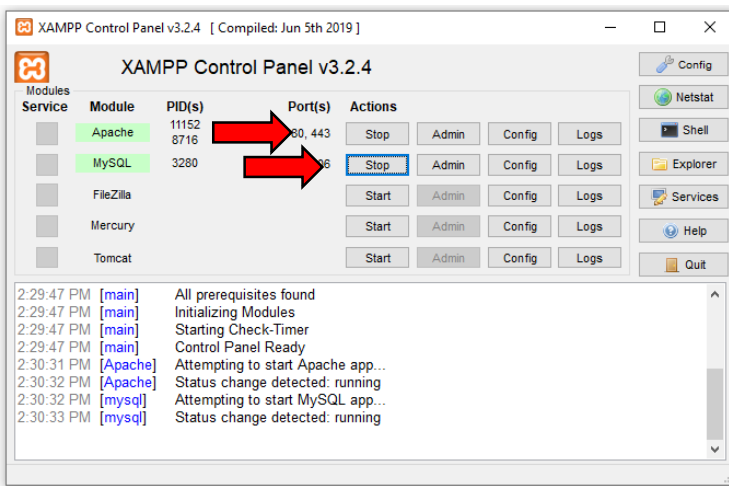
Continue with installation?

[Yes](#)[No](#)

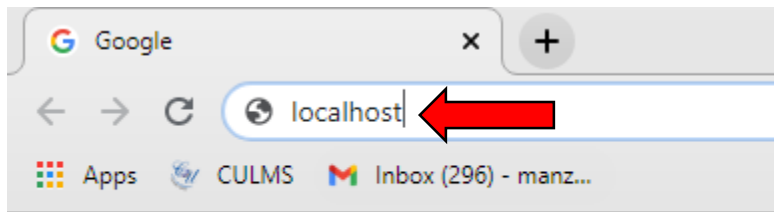




When you are done with the installation process of Xampp. Open the Xampp from your System Search Bar and start Apache and MySQL.



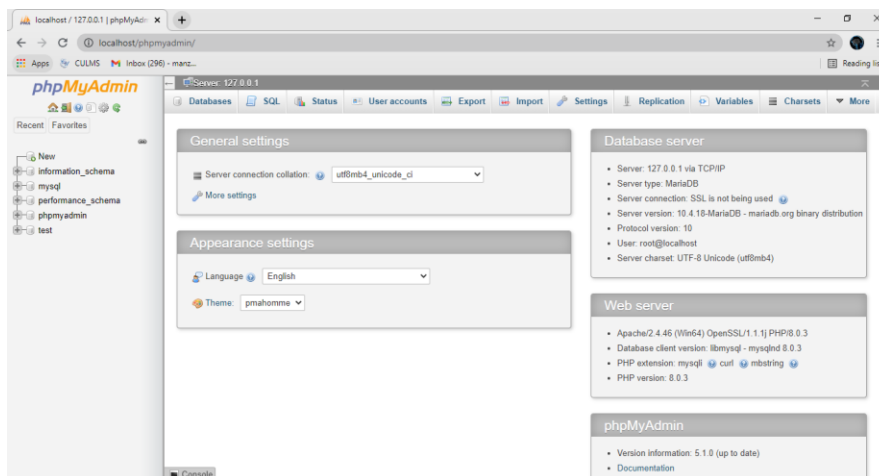
Write “localhost” in your browser search bar.



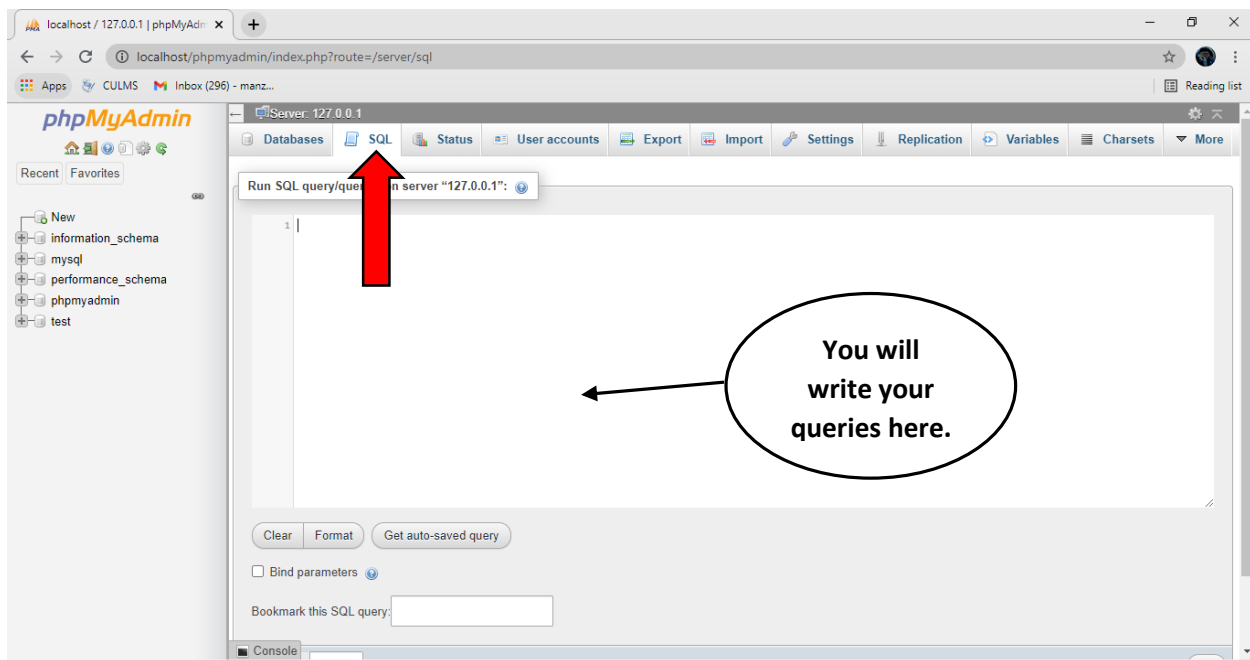
The following window will open and then click on “php MyAdmin”.



Here is your “MySQL Database Interface”.

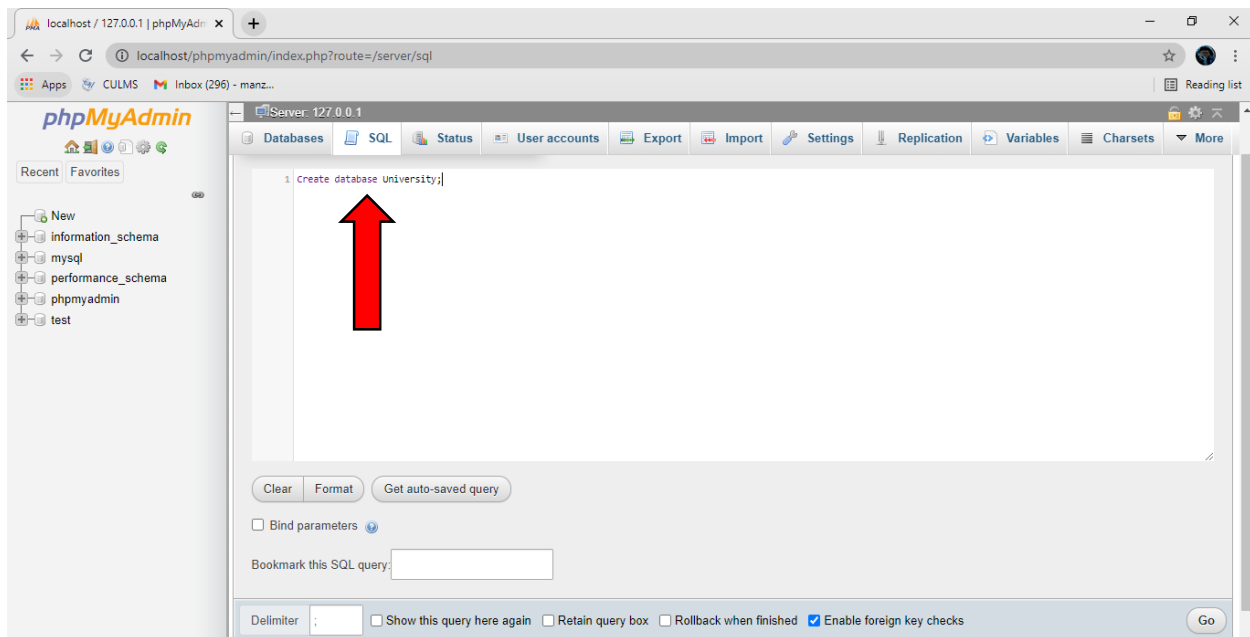


Click on “SQL” to open the interface to write your queries.

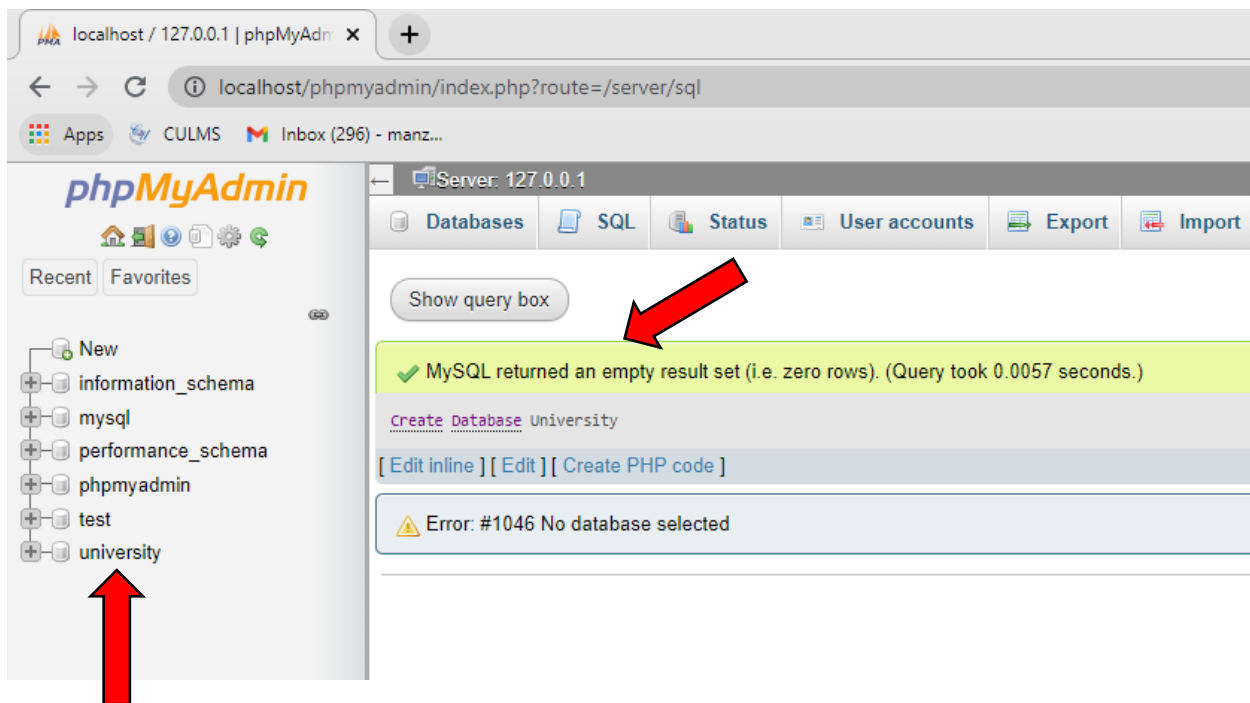


Create your first Database in MySQL.

Query: Create Database University;

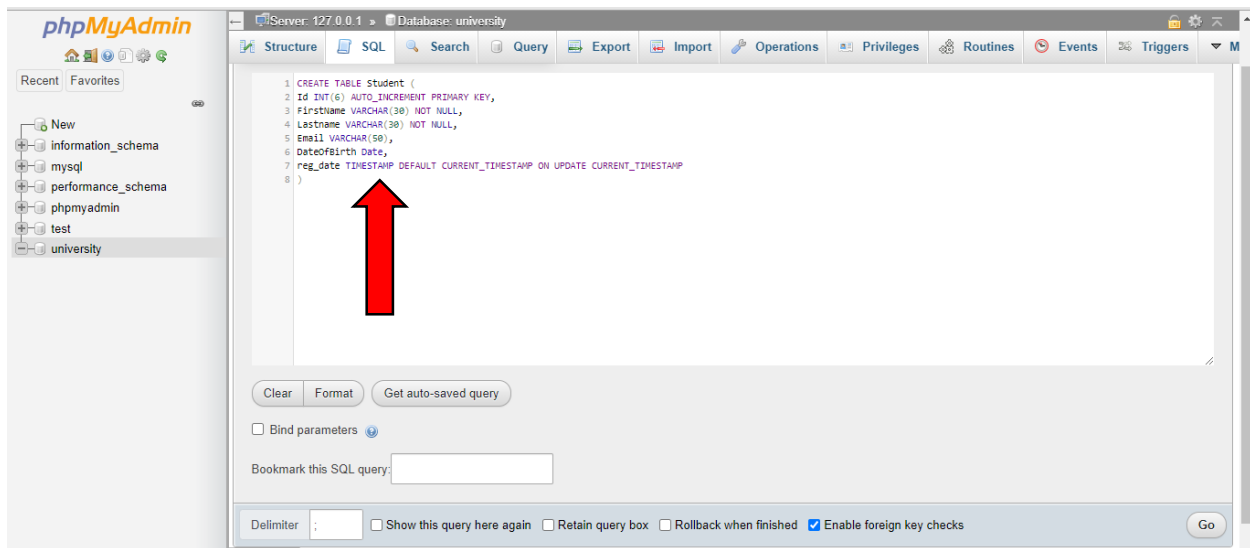


Query Processed:

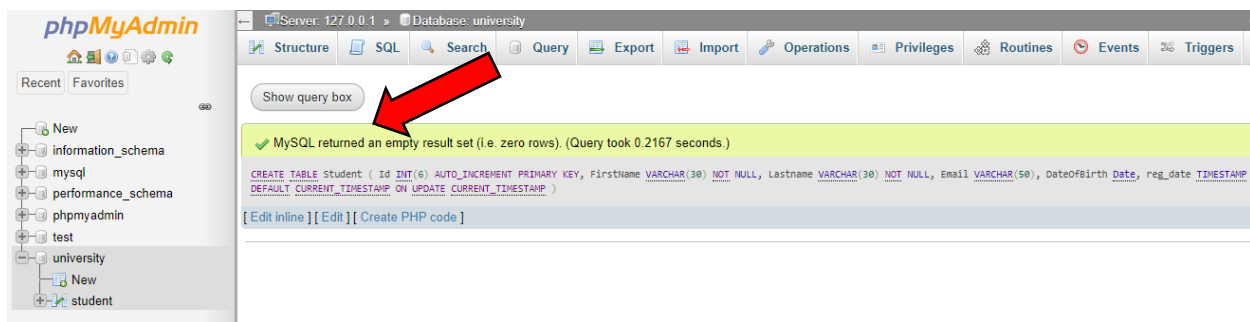


Create a table "student" in "University" database.

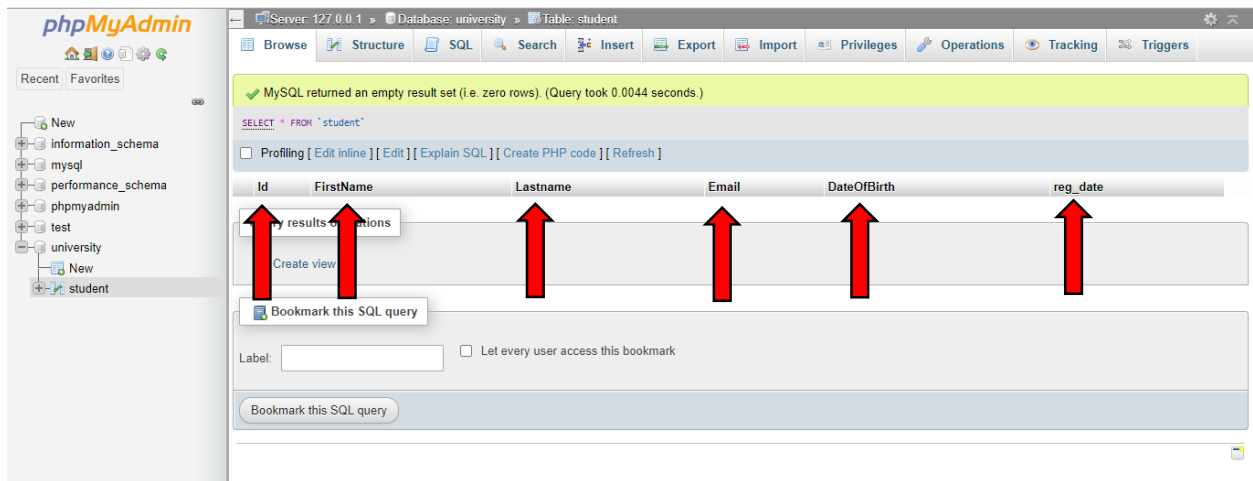
Query: CREATE TABLE student(
Id INT(6) UNSIGNED AUTO_INCREMENT PRIMARY KEY,
Firstname VARCHAR(30) NOT NULL,
Lastname VARCHAR(30) NOT NULL,
Email VARCHAR(50),
DateOfBirth Date,
reg_date TIMESTAMP DEFAULT CURRENT_TIMESTAMP ON UPDATE CURRENT_TIMESTAMP
)



Query Processed:



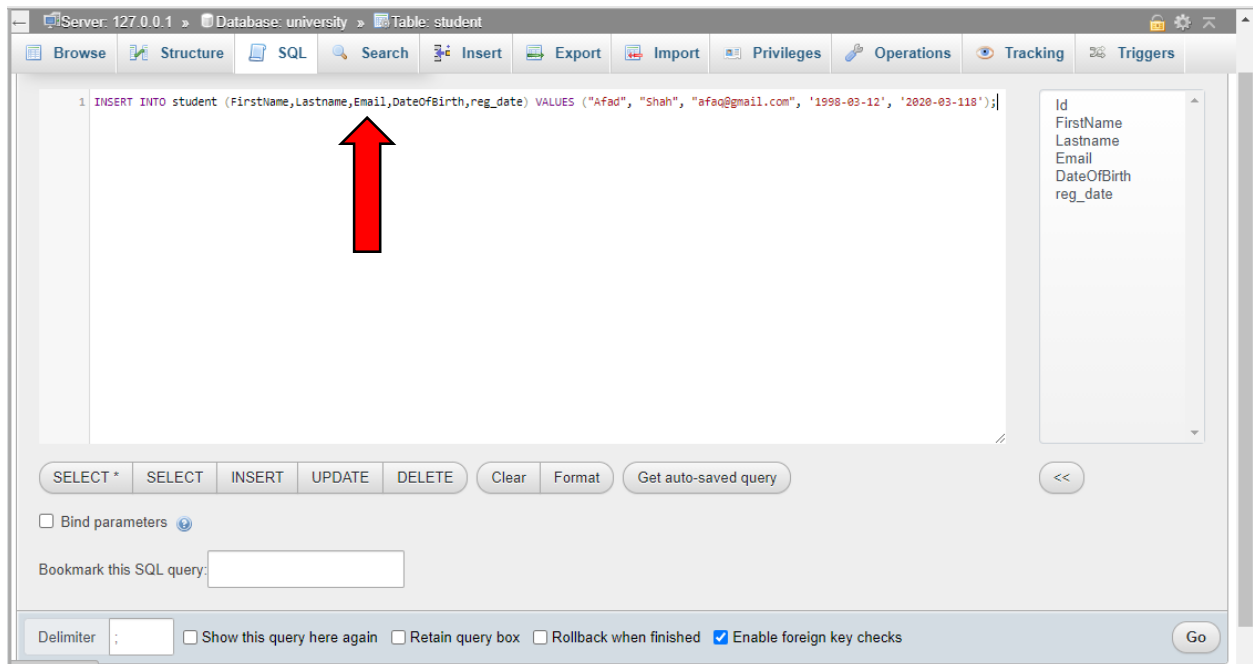
Result:



The screenshot shows the phpMyAdmin interface for the 'student' table in the 'university' database. The table structure is displayed with columns: Id, FirstName, Lastname, Email, DateOfBirth, and reg_date. A message at the top states: "MySQL returned an empty result set (i.e. zero rows). (Query took 0.0044 seconds.)". The SQL query shown is "SELECT * FROM `student`". Red arrows point to each column header in the table structure.

Insert data in "Student" table.

Query: INSERT INTO student (FirstName, Lastname, Email, DateOfBirth, reg_date) VALUES ("Afaq", "Shah", "afaq@gmail.com", '1998-03-12', '2020-03-18');



The screenshot shows the phpMyAdmin interface with the SQL query editor. The query entered is: "INSERT INTO student (FirstName,Lastname,Email,DateOfBirth,reg_date) VALUES ('Afaq', 'Shah', 'afaq@gmail.com', '1998-03-12', '2020-03-18');". A large red arrow points to the query. The right sidebar shows the table structure with columns: Id, FirstName, Lastname, Email, DateOfBirth, and reg_date. The bottom of the interface shows various options like "Bind parameters", "Bookmark this SQL query", and "Delimit" set to ":", along with checkboxes for "Show this query here again", "Retain query box", "Rollback when finished", and "Enable foreign key checks".

Query Processed:

Server: 127.0.0.1 » Database: university » Table: student

1 row inserted.
Inserted row id: 3 (Query took 0.0551 seconds.)

```
INSERT INTO student (FirstName,Lastname,Email,dateOfBirth,reg_date) VALUES ('Afad','Shah','afaq@gmail.com','1998-03-12','2020-03-11')
```

[Edit inline] [Edit] [Create PHP code]

Warning: #1265 Data truncated for column 'reg_date' at row 1

Result:

Server: 127.0.0.1 » Database: university » Table: student

Showing rows 0 - 2 (3 total. Query took 0.0009 seconds.)

```
SELECT * FROM "student"
```

☐ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

				Id	FirstName	Lastname	Email	DateOfBirth	reg_date
<input type="checkbox"/>	Edit	Copy	Delete	1	Fahad	Iqbal	fahad@gmail.com	0000-00-00	0000-00-00 00:00:00
<input type="checkbox"/>	Edit	Copy	Delete	2	Asad	Khan	asad@gmail.com	1998-02-20	2020-03-12 00:00:00
<input type="checkbox"/>	Edit	Copy	Delete	3	Afad	Shah	afaq@gmail.com	1998-03-12	0000-00-00 00:00:00

☐ Check all | With selected: Edit Copy Delete Export

☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

Query results operations

Select all the data from “student” table.

Query: Select * from student;

Server: 127.0.0.1 » Database: university » Table: student

```
1 SELECT * FROM student;
```

Id
FirstName
Lastname
Email
DateOfBirth
reg_date

SELECT * SELECT INSERT UPDATE DELETE Clear Format Get auto-saved query

☐ Bind parameters

Bookmark this SQL query:

Delimiter: ☐ Show this query here again ☐ Retain query box ☐ Rollback when finished ☒ Enable foreign key checks

Go

Console

Result:

The screenshot shows the phpMyAdmin interface. The left sidebar displays a database structure with 'university' selected, and 'student' is highlighted under it. The main panel shows the 'student' table with 3 rows. A red arrow points to the 'Show query box' button at the top. Another red arrow points to the 'student' table in the left sidebar.

Server: 127.0.0.1 » Database: university » Table: student

Buttons: Browse, Structure, SQL, Search, Insert, Export, Import, Privileges, Operations, Tracking, Triggers

Show query box

Showing rows 0 - 2 (3 total, Query took 0.0015 seconds)

SELECT * FROM student

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

+ Options

				Id	FirstName	Lastname	Email	DateOfBirth	reg_date
<input type="checkbox"/>	Edit	Copy	Delete	1	Fahad	Iqbal	fahad@gmail.com	0000-00-00	0000-00-00 00:00:00
<input type="checkbox"/>	Edit	Copy	Delete	2	Asad	Khan	asad@gmail.com	1998-02-20	2020-03-12 00:00:00
<input type="checkbox"/>	Edit	Copy	Delete	3	Afad	Shah	afaq@gmail.com	1998-03-12	0000-00-00 00:00:00

Check all | With selected: Edit | Copy | Delete | Export

Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

THE END