



NOVA SCHOOL OF  
SCIENCE & TECHNOLOGY

# **MDE**

## **TP1 – Class 0**

### **Software Installation**

(to prepare at home)

**2024 - 2025**

- ☐ XAMPP installation, components:

- MySQL installation
  - Apache (optional)

- ☐ Installing MySQL Workbench

- ☐ Setting phpMyAdmin



# XAMPP

Installation

# DOWNLOAD XAMPP



☐ Download from:

<https://www.apachefriends.org/download.html>

☐ Execute the installer.



## Download

XAMPP is an easy to install Apache distribution containing MariaDB, PHP, and Perl. Just download and start the installer. It's that easy.

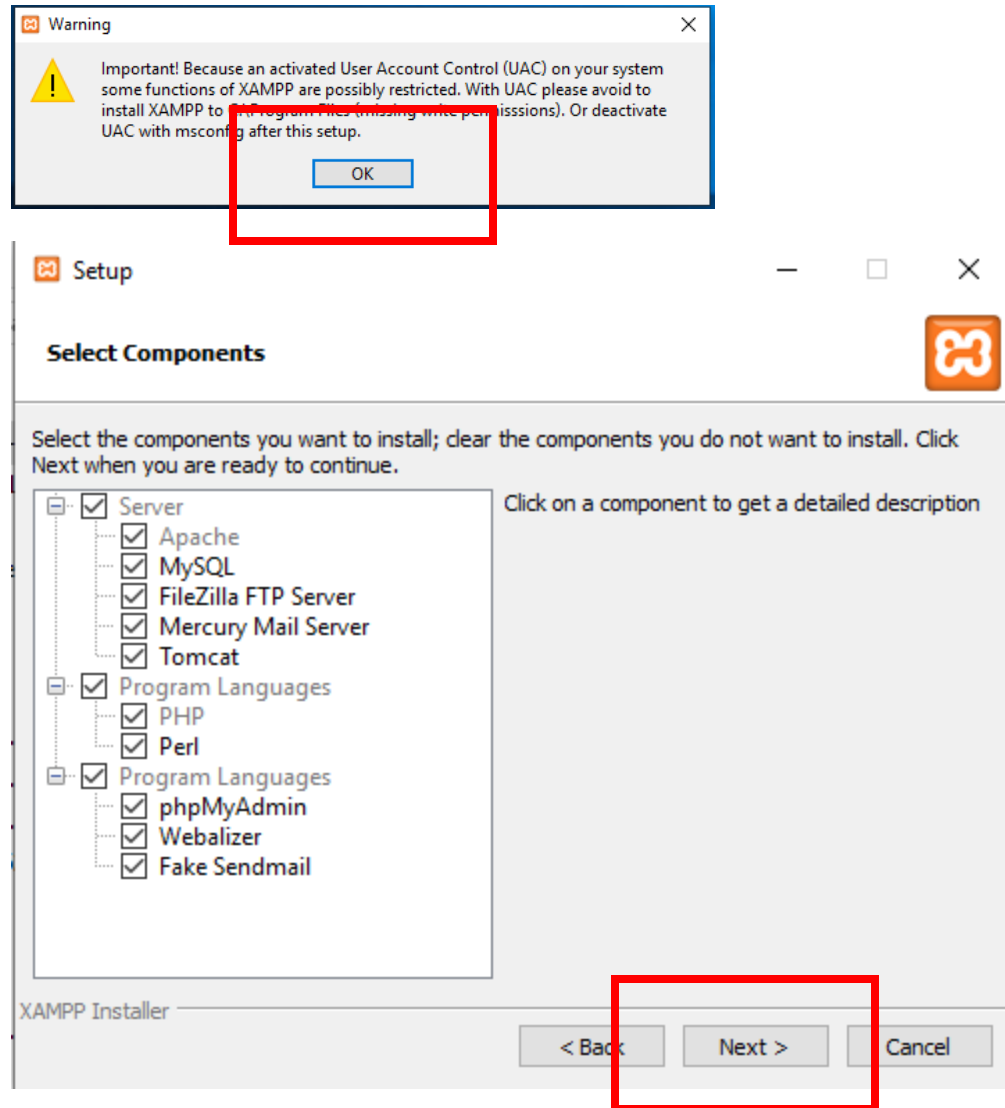
### XAMPP for Windows 8.0.25, 8.1.12 & 8.2.0

Version		Checksum			Size
8.0.25 / PHP 8.0.25	<a href="#">What's Included?</a>	<a href="#">md5</a>	<a href="#">sha1</a>	<a href="#">Download (64 bit)</a>	143 Mb
8.1.12 / PHP 8.1.12	<a href="#">What's Included?</a>	<a href="#">md5</a>	<a href="#">sha1</a>	<a href="#">Download (64 bit)</a>	147 Mb
8.2.0 / PHP 8.2.0	<a href="#">What's Included?</a>	<a href="#">md5</a>	<a href="#">sha1</a>	<a href="#">Download (64 bit)</a>	148 Mb

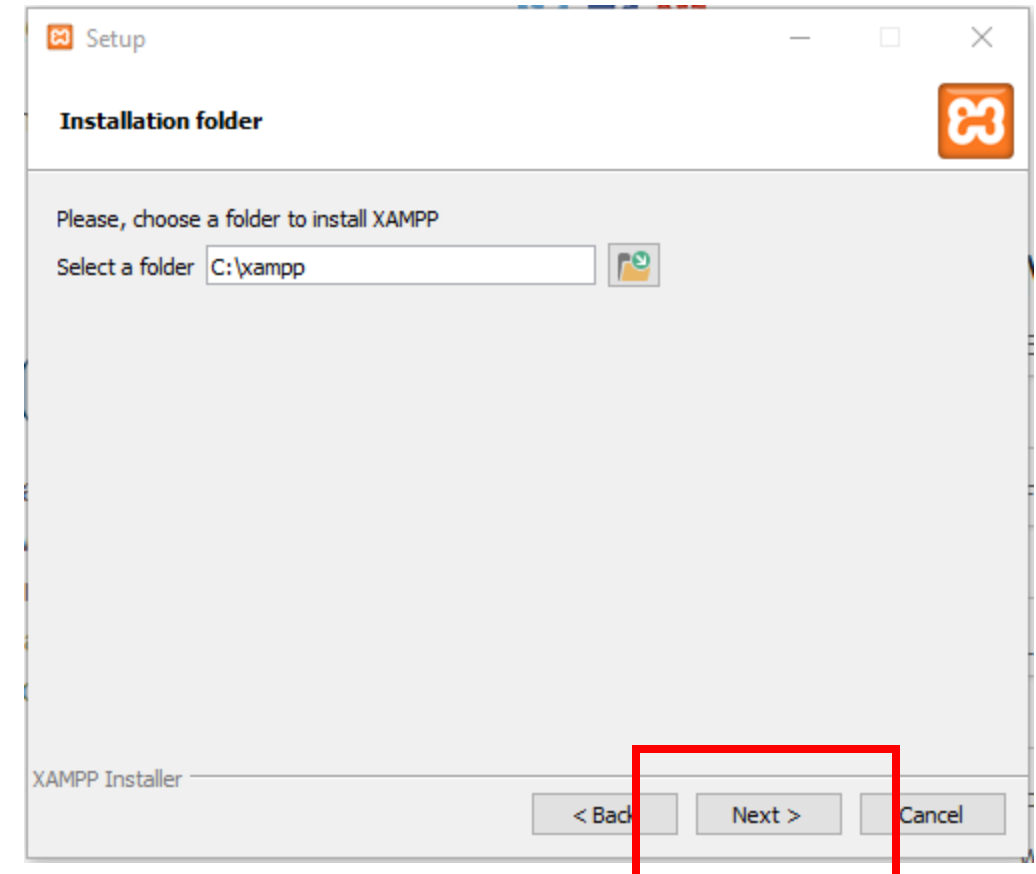
PS: Next slides might be slightly distinct depending on XAMPP version.

# XAMPP INSTALLATION

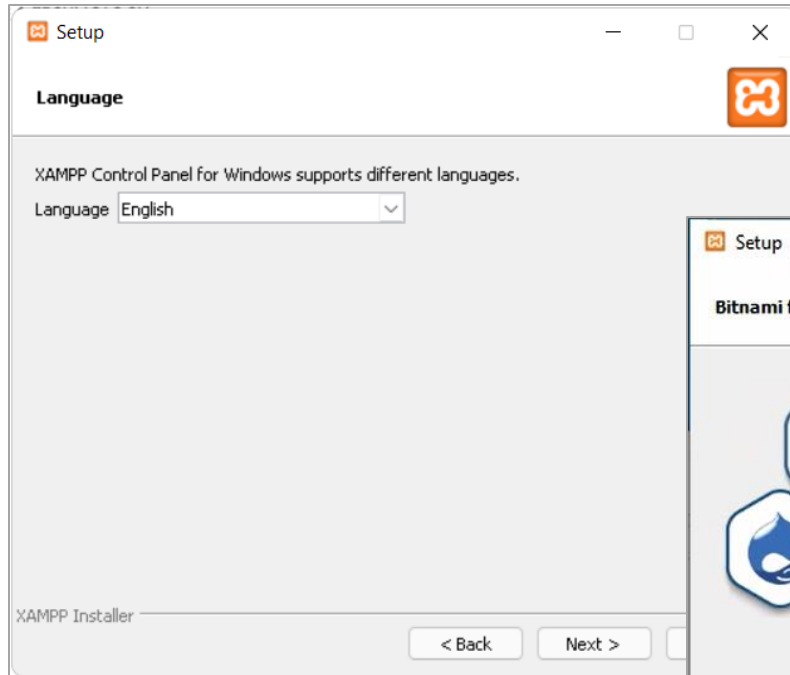
Leave all options by default



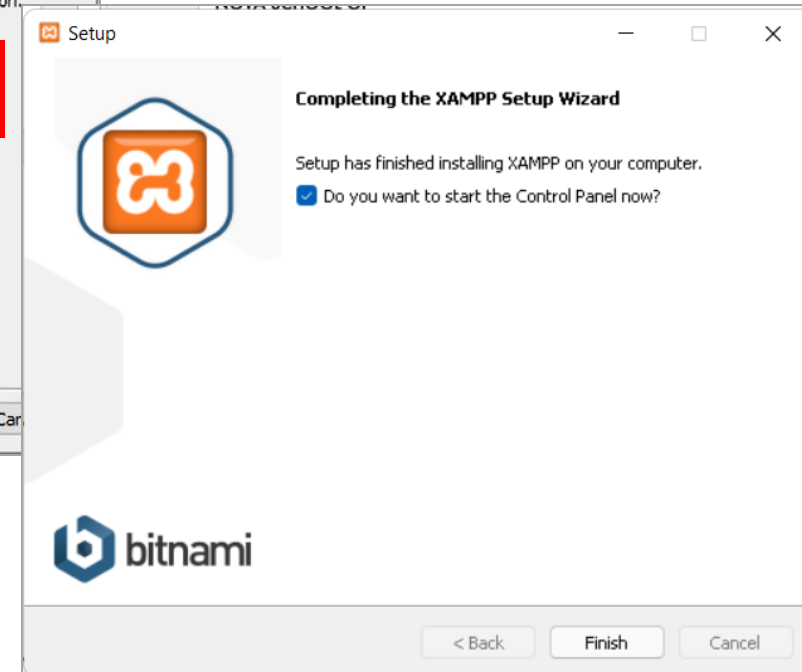
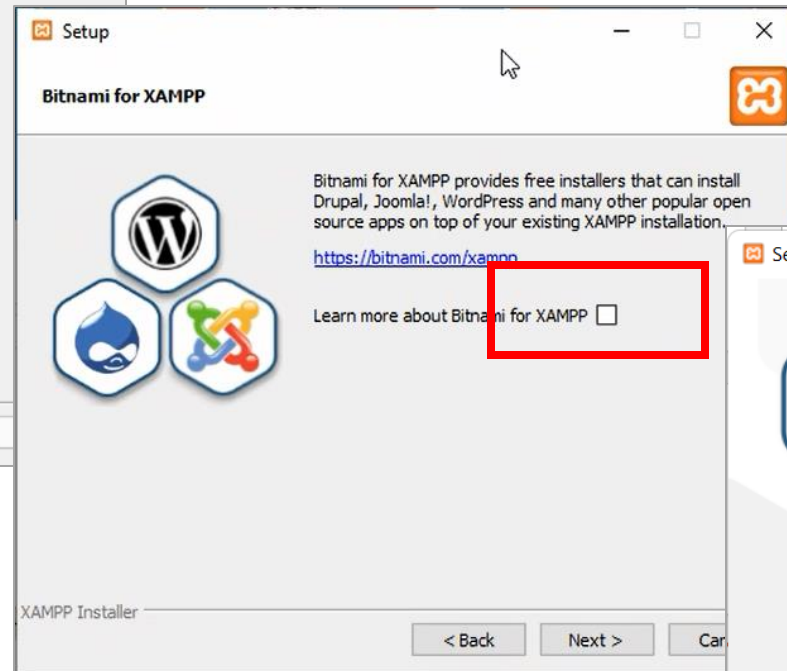
- Set the install folder `c:\xampp`



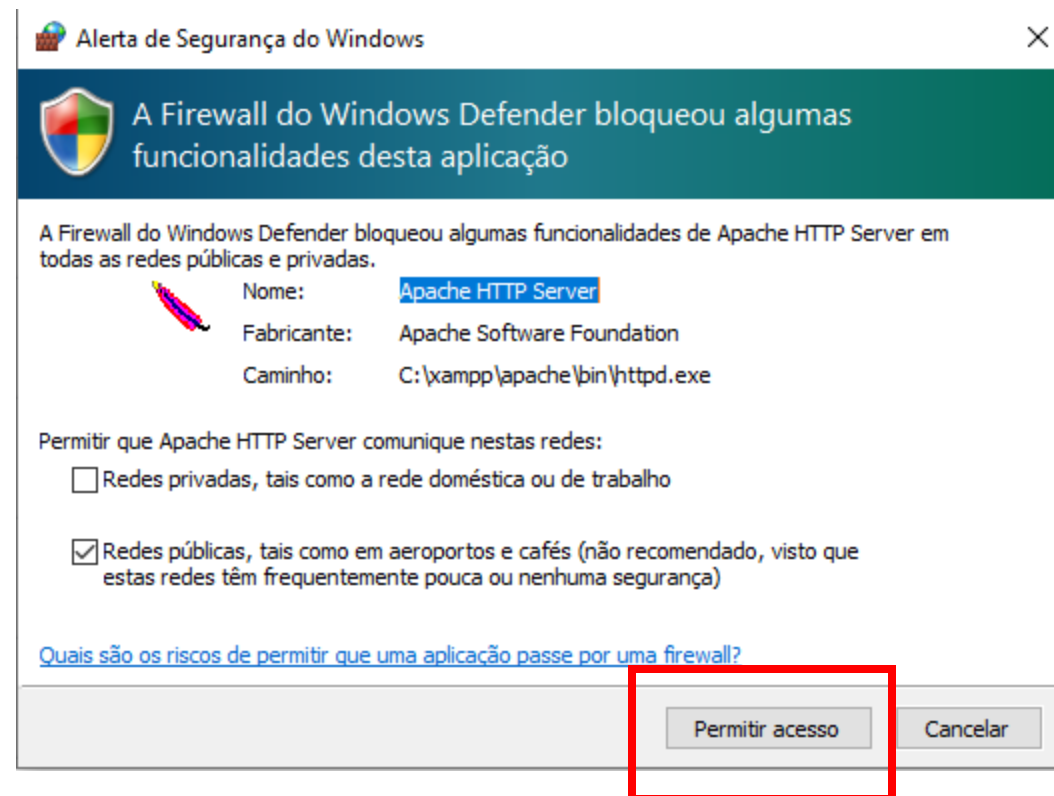
# XAMPP INSTALLATION



Uncheck the option



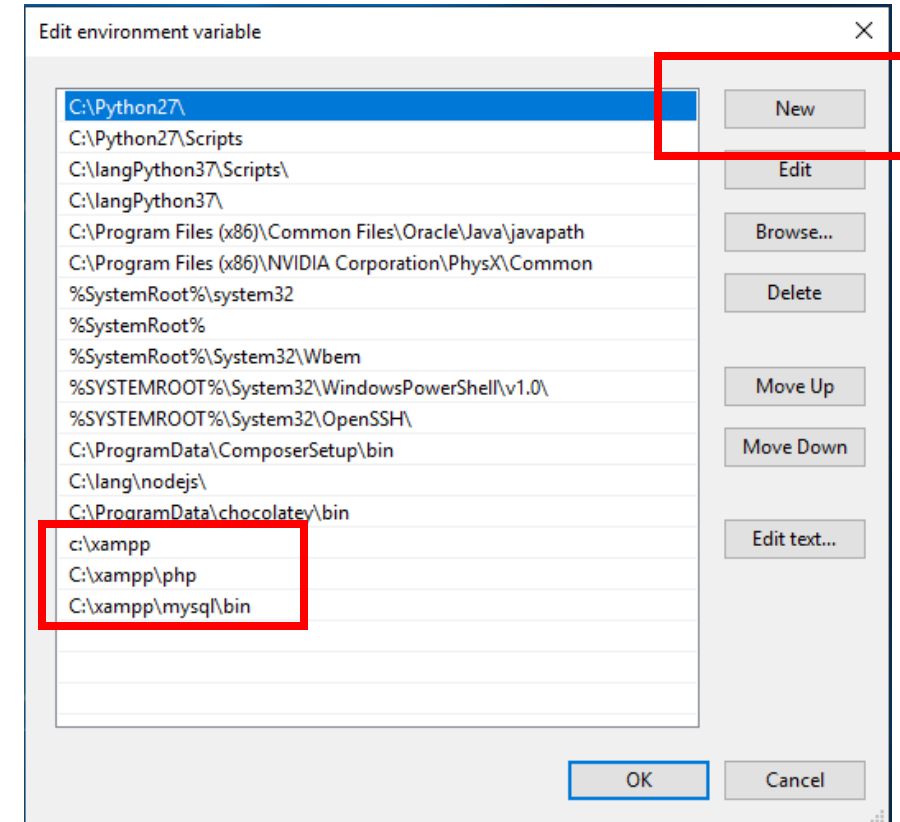
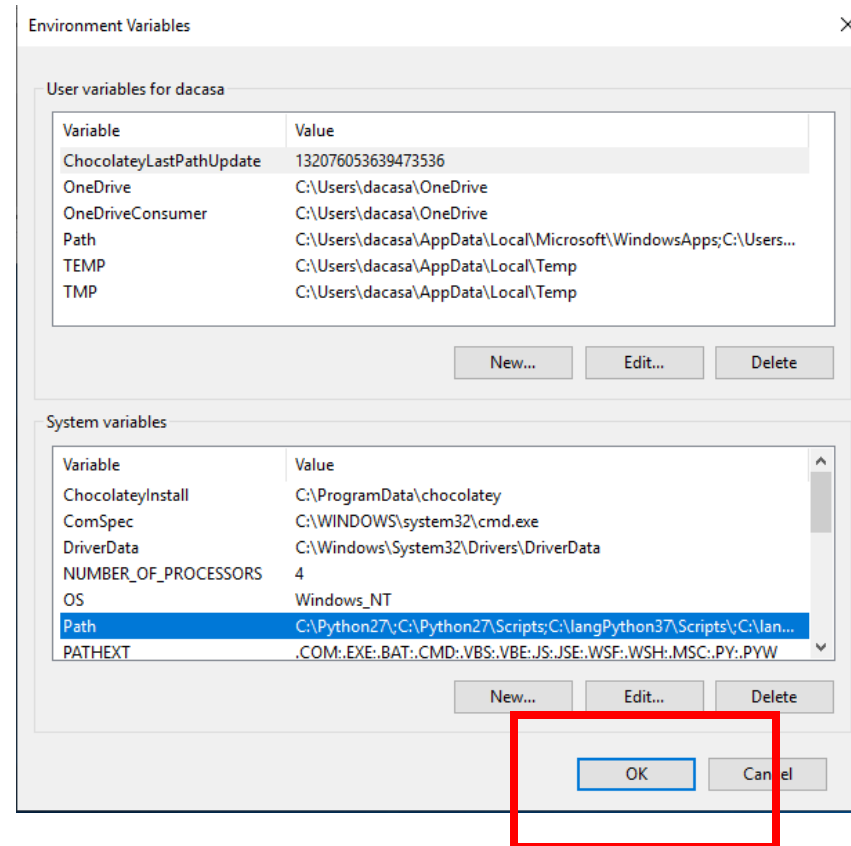
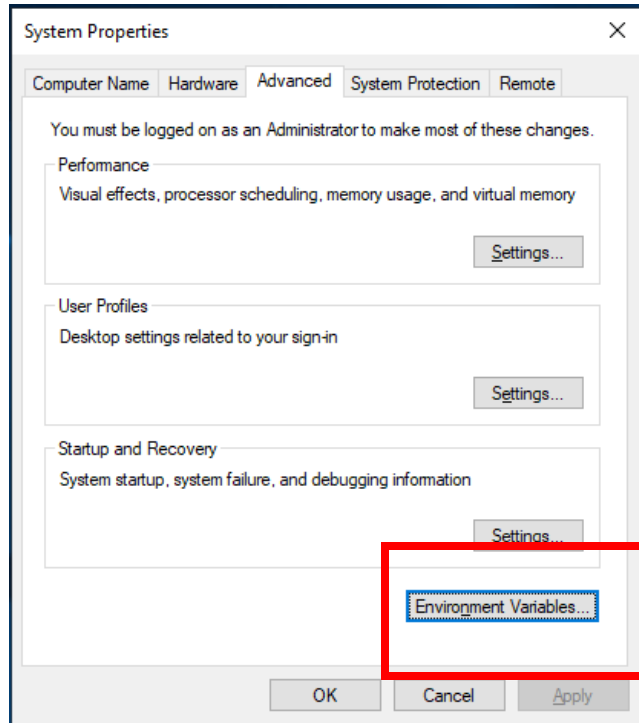
**Allow in Firewall If it appears**



# SOME CONFIGURATIONS

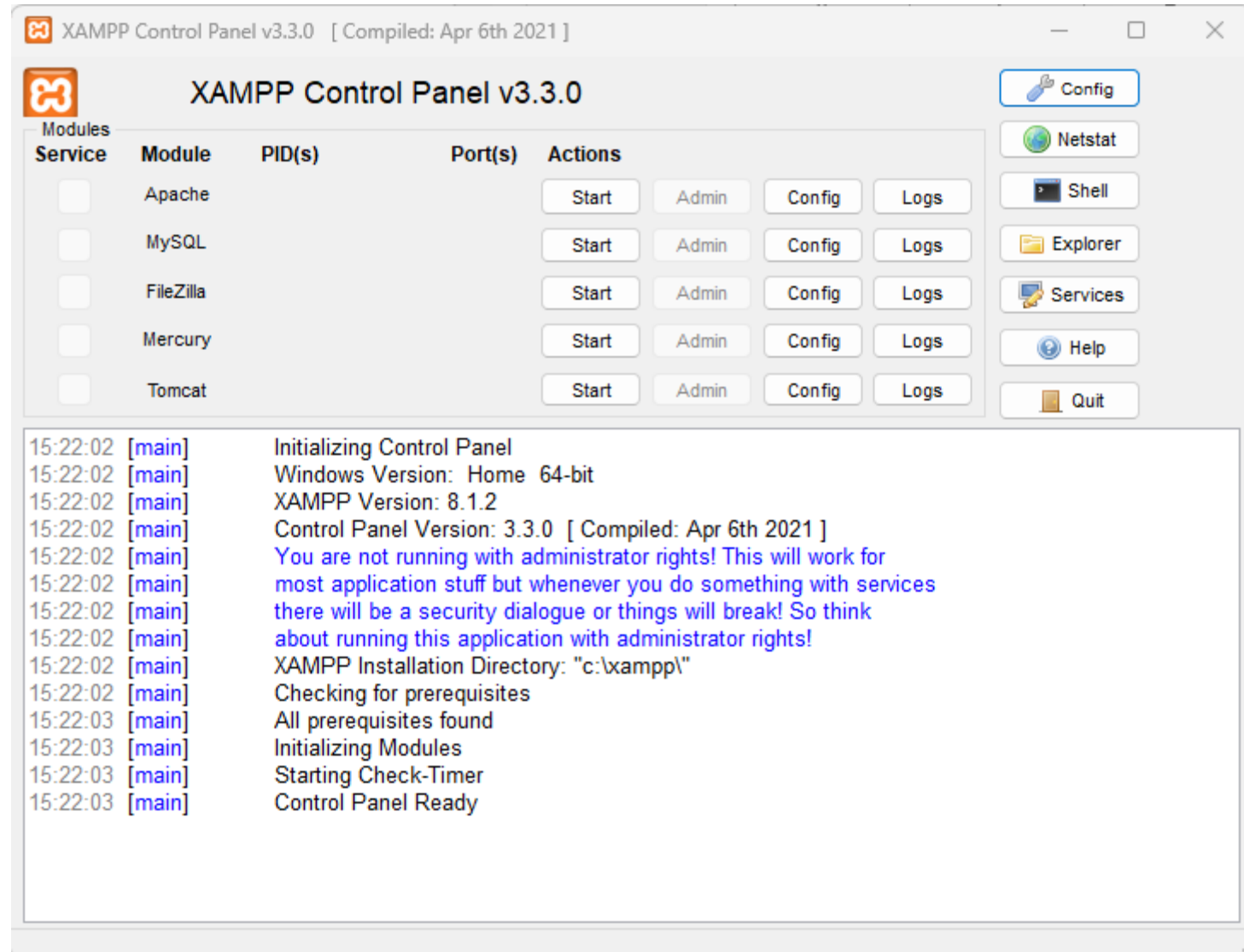


Not mandatory, but helpful sometimes





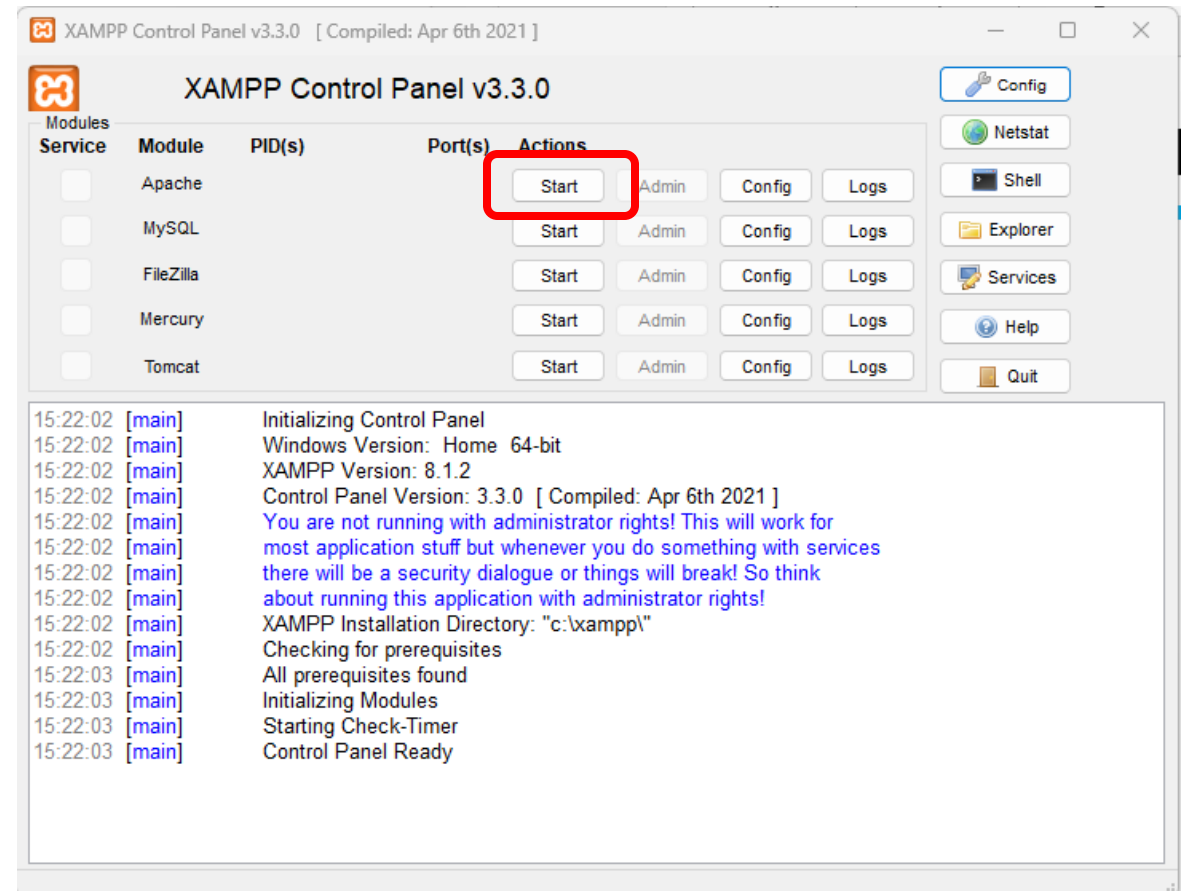
# XAMPP APPLICATION



# XAMPP APPLICATION – START Apache



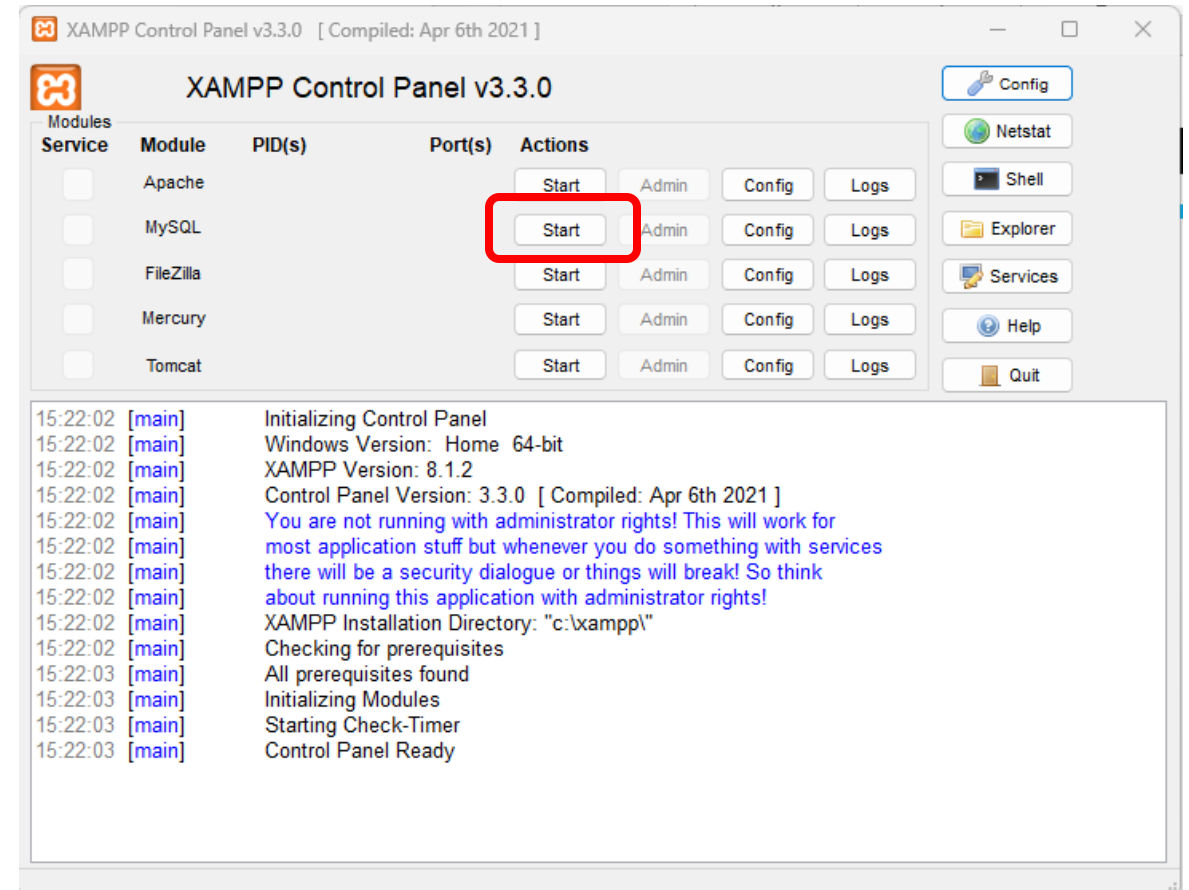
- ❑ Press the Apache start “button”
- ❑ Let firewall allow access if dialog appears



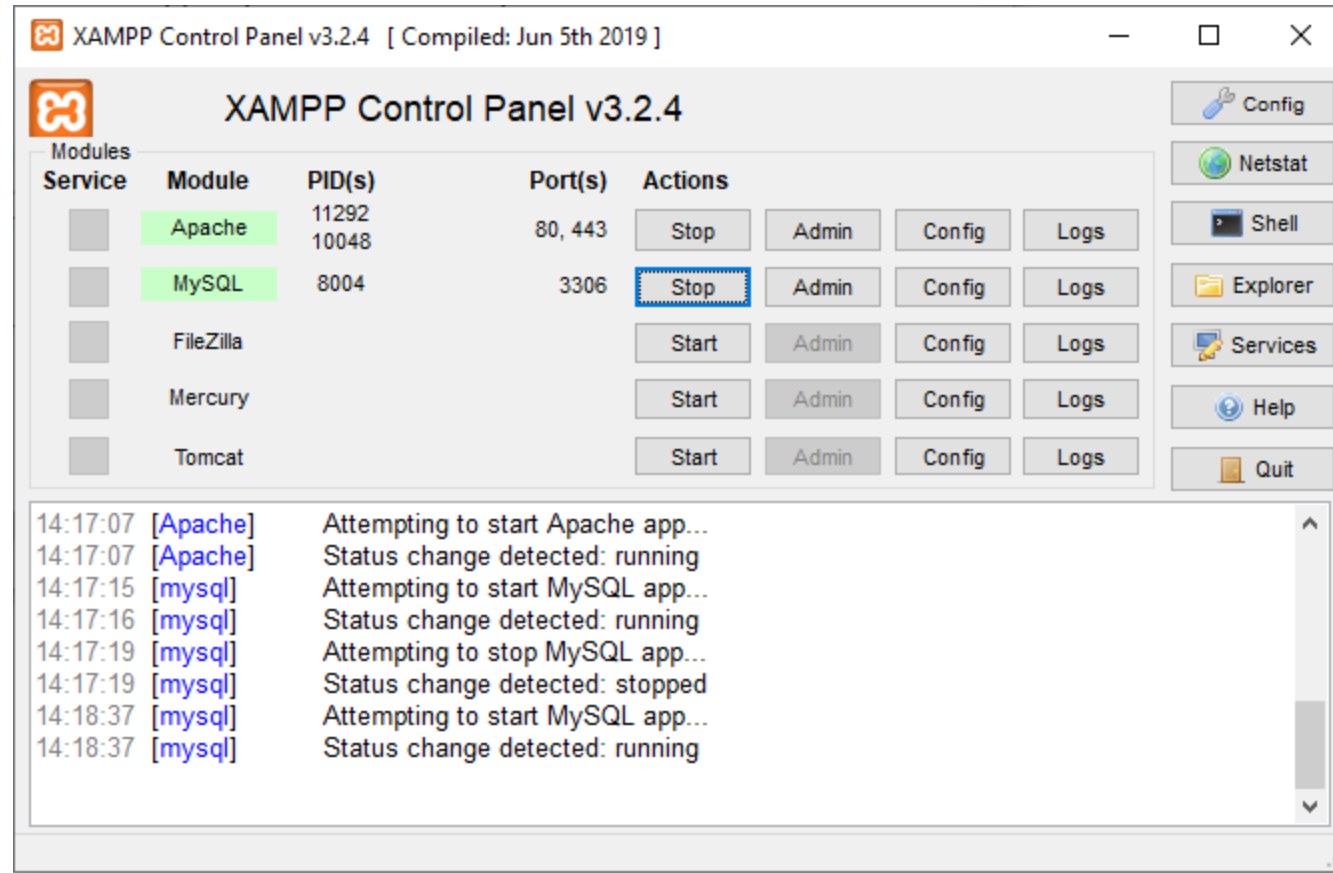
# XAMPP APPLICATION – START MySQL



- ❑ Press MySQL start “button”
- ❑ Let firewall allow access if dialog appears



# XAMPP APPLICATION – Apache + MySQL Running

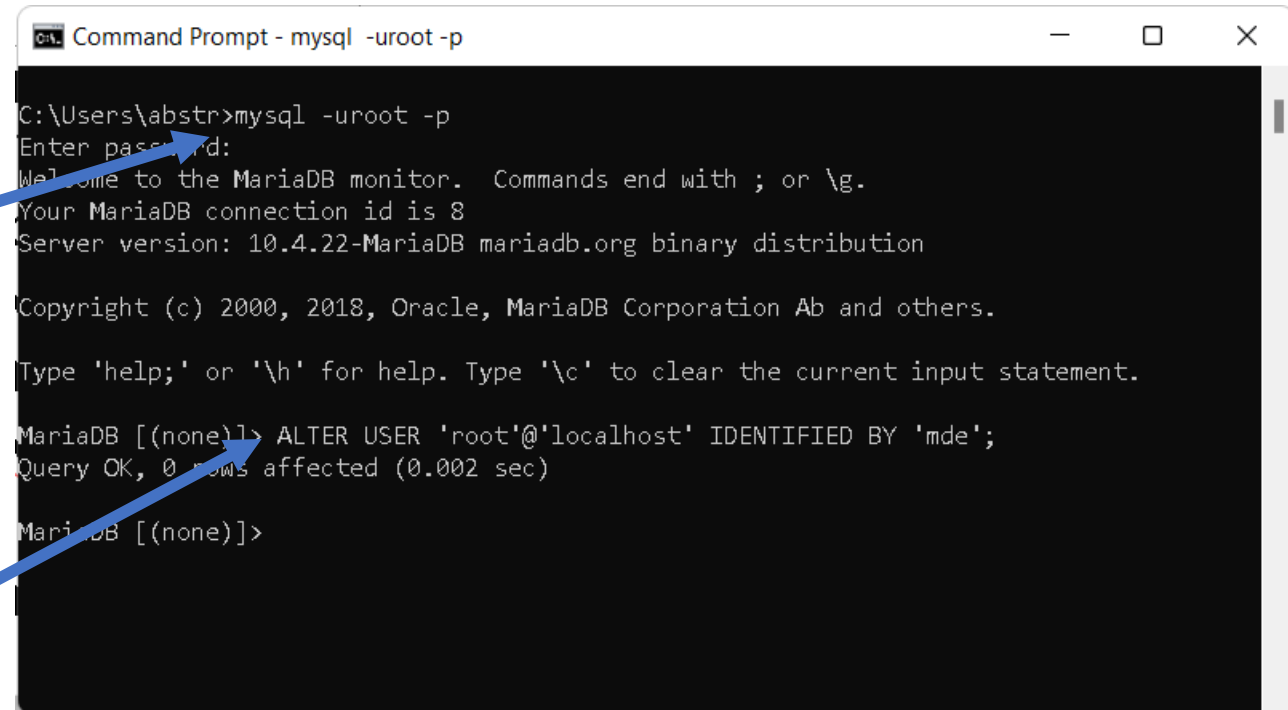


# MySQL: ROOT CONFIGURATION



At first time, mySQL is set without password:

- Open a console: `cmd.exe`
- `mysql -uroot -p`
- (press enter when asked for password, because it was not set yet)
- `ALTER USER 'root'@'localhost' IDENTIFIED BY 'mde';`



```
Command Prompt - mysql -uroot -p

C:\Users\abstr>mysql -uroot -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 8
Server version: 10.4.22-MariaDB mariadb.org binary distribution

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]> ALTER USER 'root'@'localhost' IDENTIFIED BY 'mde';
Query OK, 0 rows affected (0.002 sec)

MariaDB [(none)]>
```

Don't mistake or forget the password **ever!**  
Due to security concerns, the recovery process is very complex.

See here:

<https://dev.mysql.com/doc/mysql-windows-excerpt/5.7/en/resetting-permissions-windows.html>

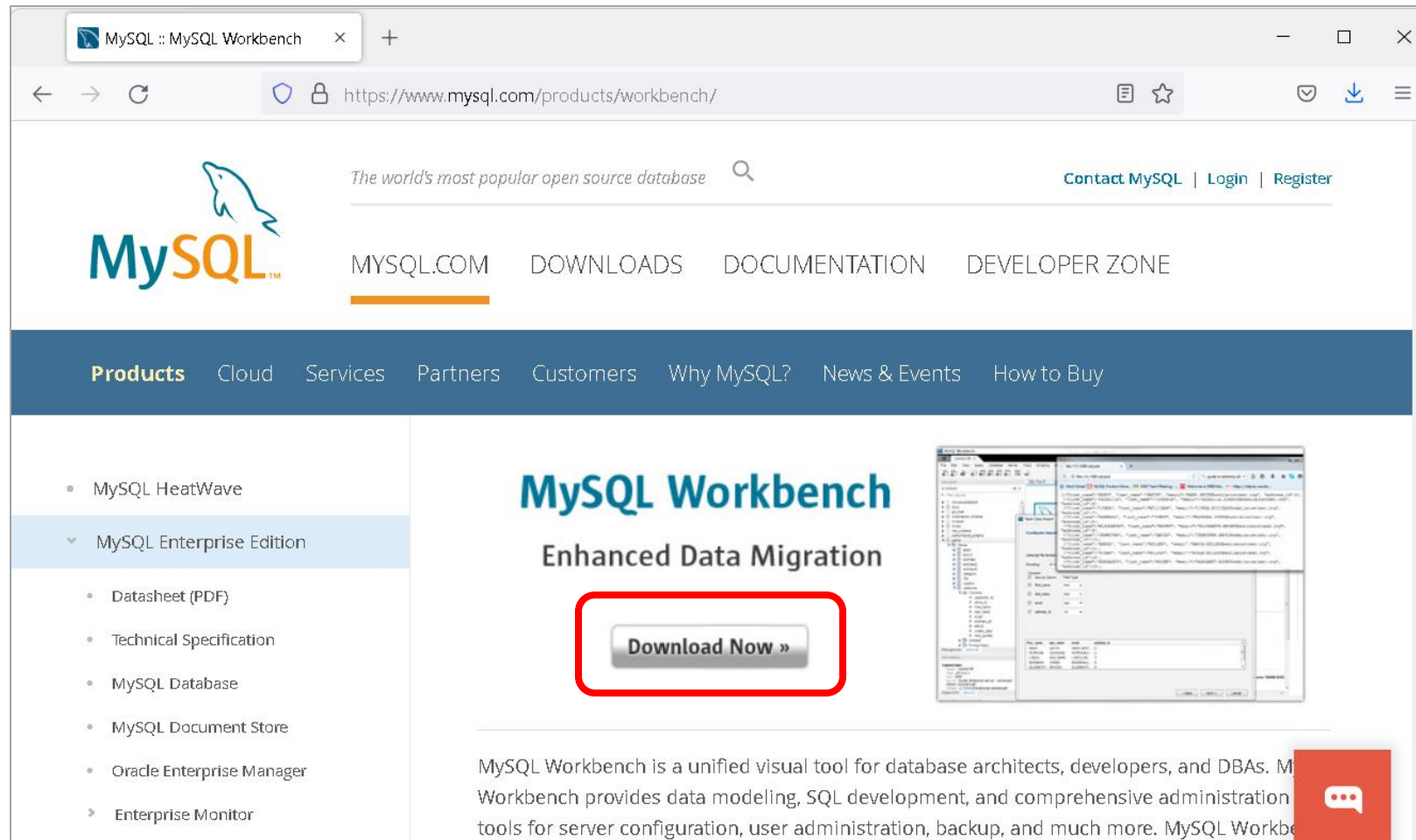


# MySQL Workbench

Installation

# MySQL Workbench INSTALLATION

<https://www.mysql.com/products/workbench/>



The screenshot shows the MySQL website's product page for MySQL Workbench. The browser's address bar displays the URL <https://www.mysql.com/products/workbench/>. The page features the MySQL logo and navigation links such as 'MySQL.COM', 'DOWNLOADS', 'DOCUMENTATION', and 'DEVELOPER ZONE'. A dark blue horizontal bar contains links for 'Products', 'Cloud', 'Services', 'Partners', 'Customers', 'Why MySQL?', 'News & Events', and 'How to Buy'. On the left, a sidebar lists products, with 'MySQL Enterprise Edition' expanded to show options like 'Datasheet (PDF)', 'Technical Specification', 'MySQL Database', 'MySQL Document Store', 'Oracle Enterprise Manager', and 'Enterprise Monitor'. The main content area is titled 'MySQL Workbench Enhanced Data Migration' and features a 'Download Now »' button, which is highlighted with a red rectangle. To the right of the button is a screenshot of the MySQL Workbench application interface. Below this, a paragraph describes MySQL Workbench as a unified visual tool for database architects, developers, and DBAs, listing its capabilities in data modeling, SQL development, and administration. A red speech bubble icon is visible in the bottom right corner of the page.

MySQL :: MySQL Workbench

<https://www.mysql.com/products/workbench/>

The world's most popular open source database

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- MySQL HeatWave
- MySQL Enterprise Edition
  - Datasheet (PDF)
  - Technical Specification
  - MySQL Database
  - MySQL Document Store
  - Oracle Enterprise Manager
  - Enterprise Monitor

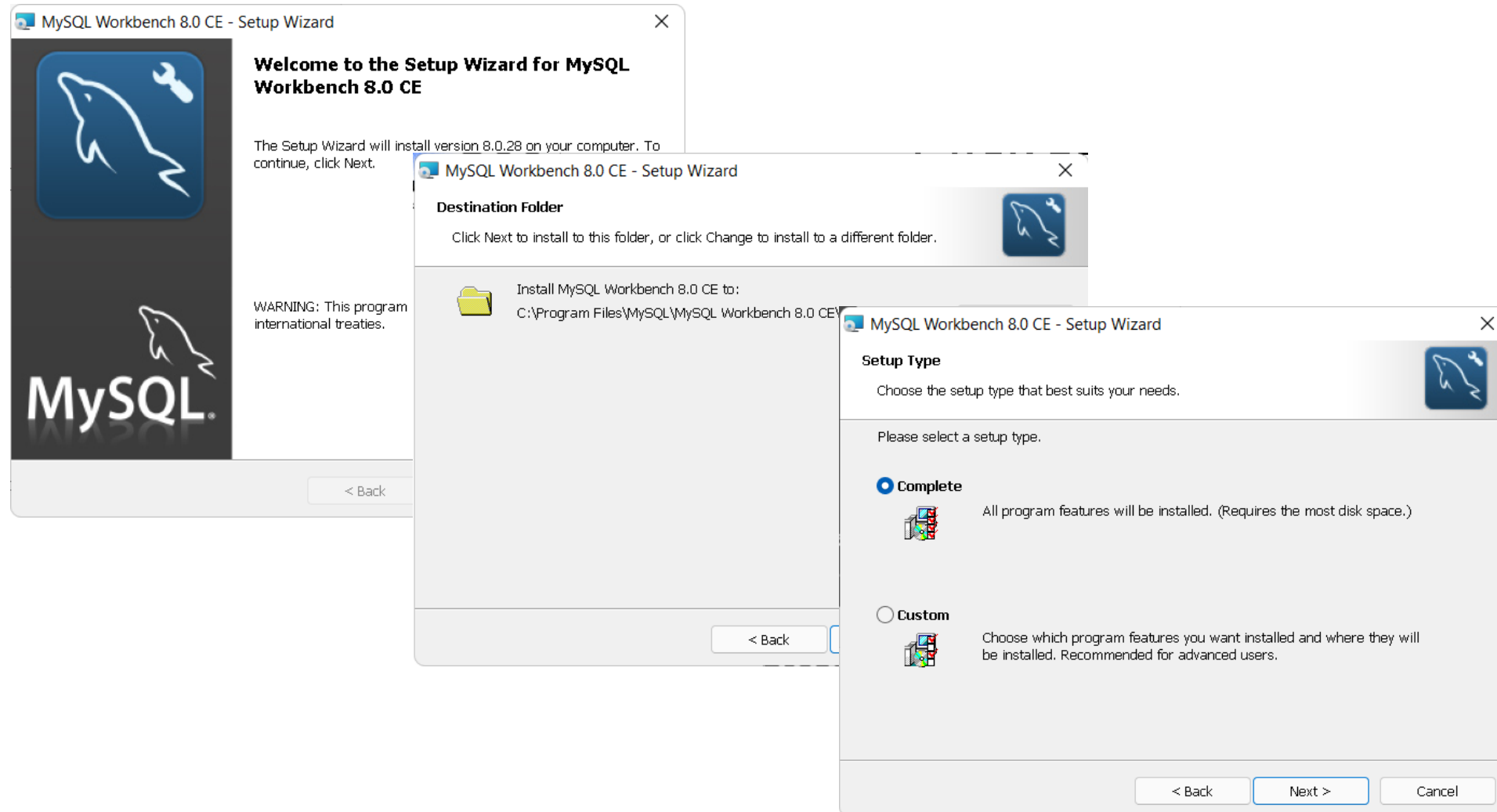
## MySQL Workbench

### Enhanced Data Migration

[Download Now »](#)

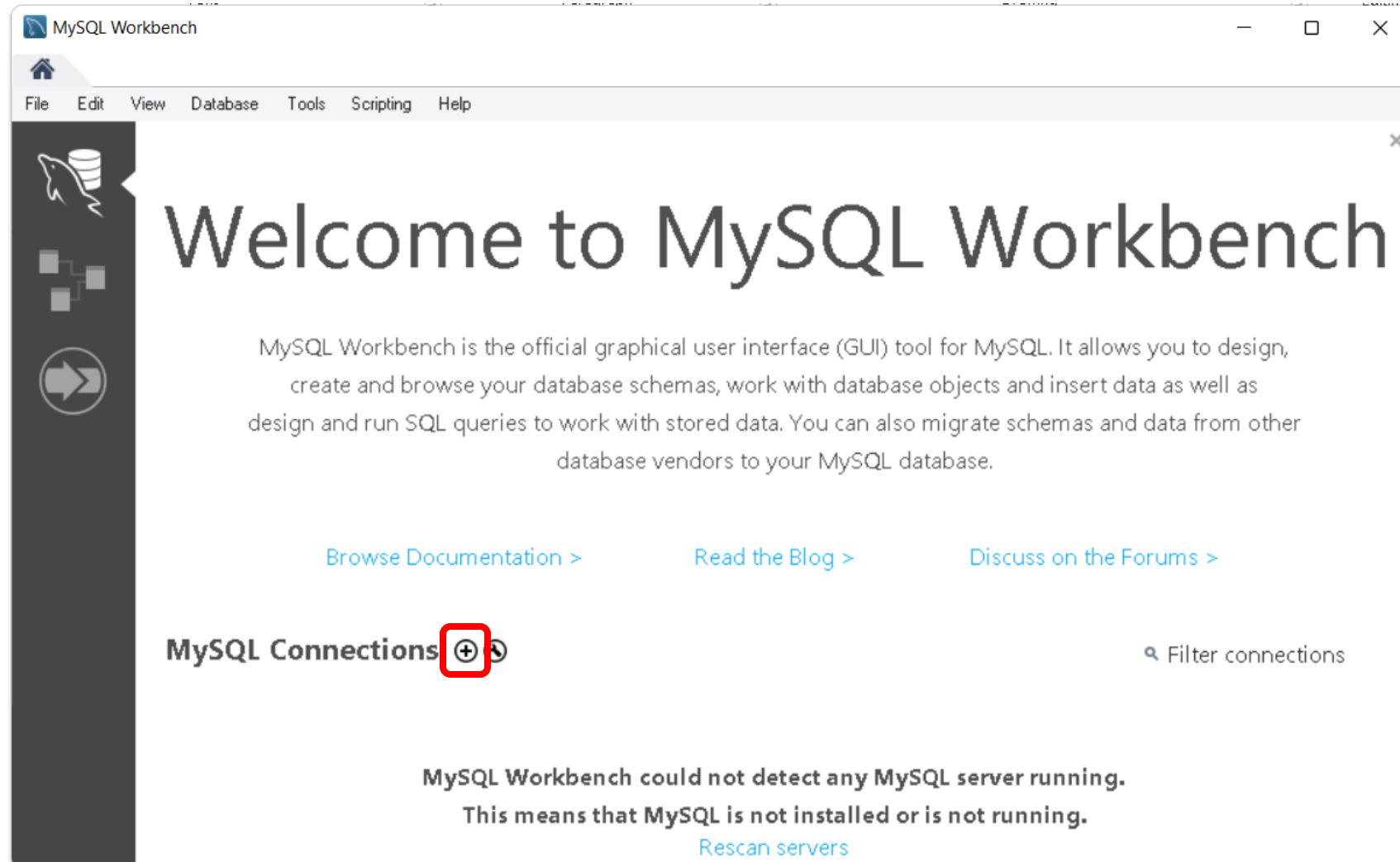
MySQL Workbench is a unified visual tool for database architects, developers, and DBAs. MySQL Workbench provides data modeling, SQL development, and comprehensive administration tools for server configuration, user administration, backup, and much more. MySQL Workbench

# MySQL Workbench INSTALLATION

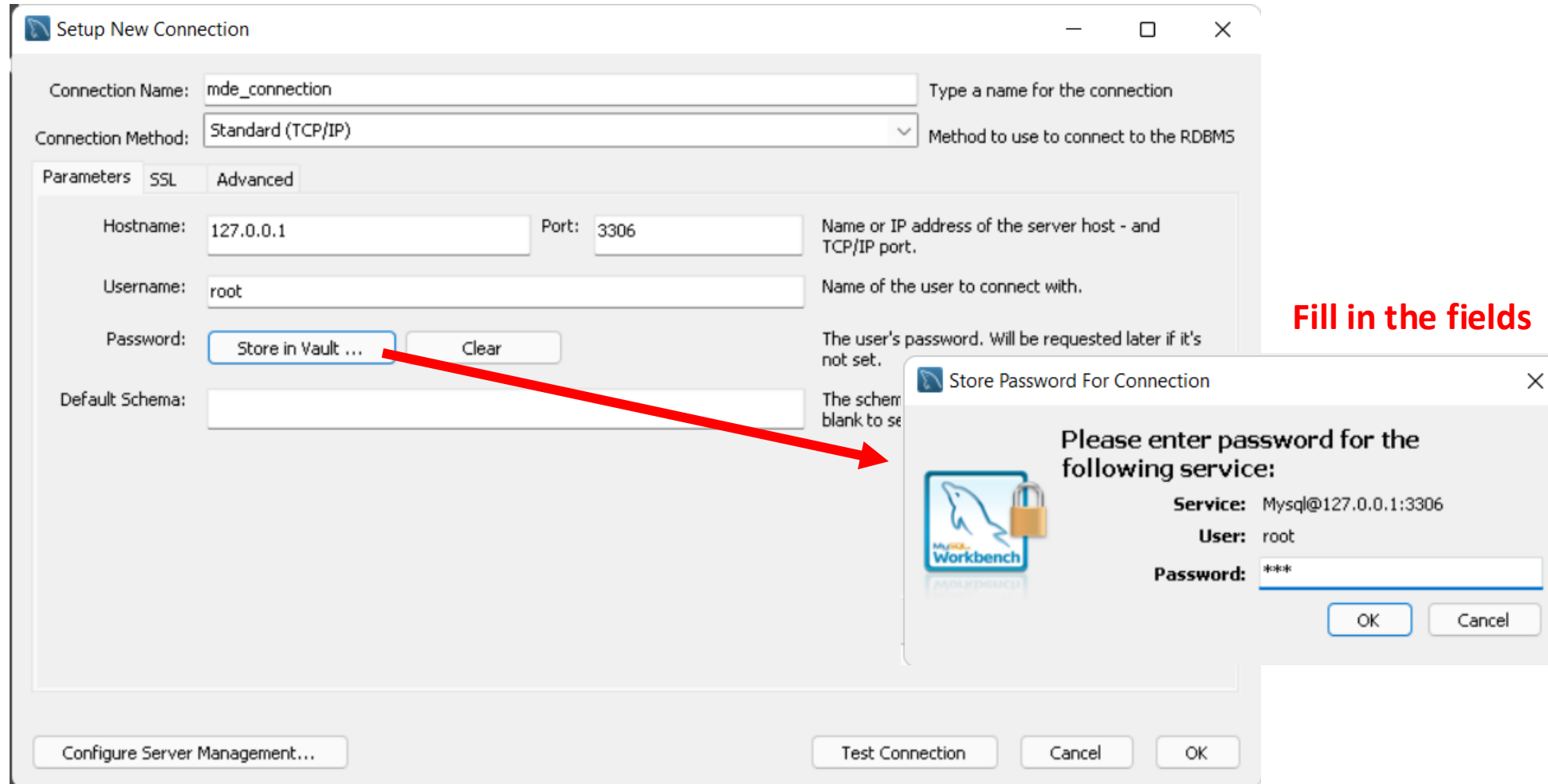




# MySQL Workbench: CREATE CONNECTION



# MySQL Workbench: CREATE CONNECTION



The image shows the 'Setup New Connection' dialog box in MySQL Workbench. The 'Connection Name' is 'mde\_connection', 'Connection Method' is 'Standard (TCP/IP)', 'Hostname' is '127.0.0.1', 'Port' is '3306', 'Username' is 'root', and 'Password' is '\*\*\*'. A red arrow points from the 'Store in Vault ...' button to the 'Store Password For Connection' dialog box. The 'Store Password For Connection' dialog box shows the service 'Mysql@127.0.0.1:3306', user 'root', and password '\*\*\*'. The text 'Fill in the fields' is written in red next to the password field in the 'Store Password For Connection' dialog box. The text 'mde' is written in red next to the password field in the 'Store Password For Connection' dialog box.

Setup New Connection

Connection Name: mde\_connection Type a name for the connection

Connection Method: Standard (TCP/IP) Method to use to connect to the RDBMS

Parameters SSL Advanced

Hostname: 127.0.0.1 Port: 3306 Name or IP address of the server host - and TCP/IP port.

Username: root Name of the user to connect with.

Password: Store in Vault ... Clear The user's password. Will be requested later if it's not set.

Default Schema: The schema to use. Blank to select the default schema.

Store Password For Connection

Please enter password for the following service:

Service: Mysql@127.0.0.1:3306

User: root

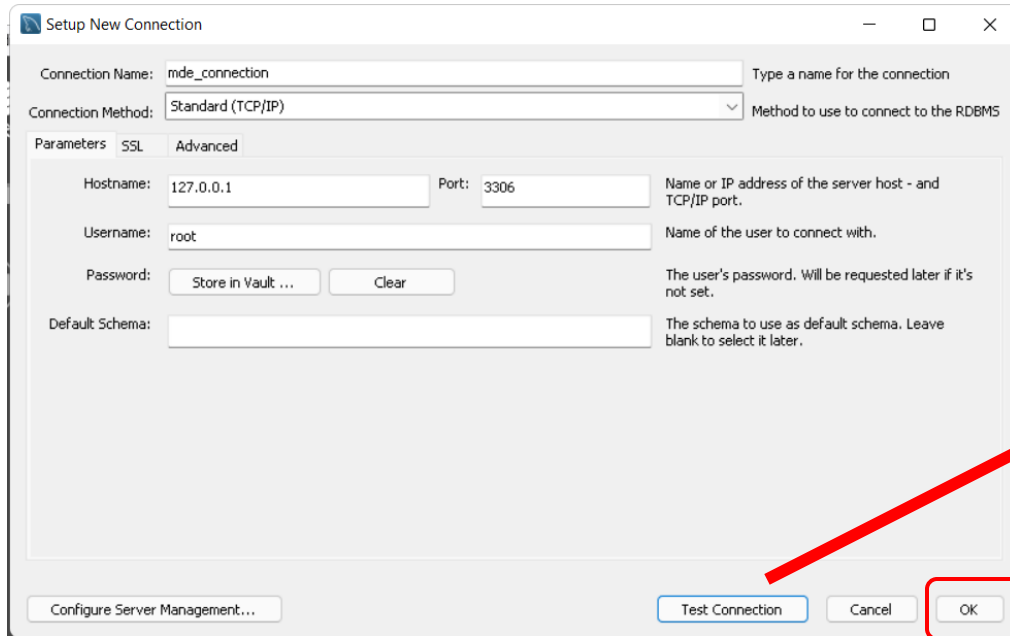
Password: \*\*\*

OK Cancel

Fill in the fields

mde

# MySQL Workbench: TESTING CONNECTION



Setup New Connection

Connection Name: mde\_connection

Connection Method: Standard (TCP/IP)

Parameters

Hostname: 127.0.0.1 Port: 3306

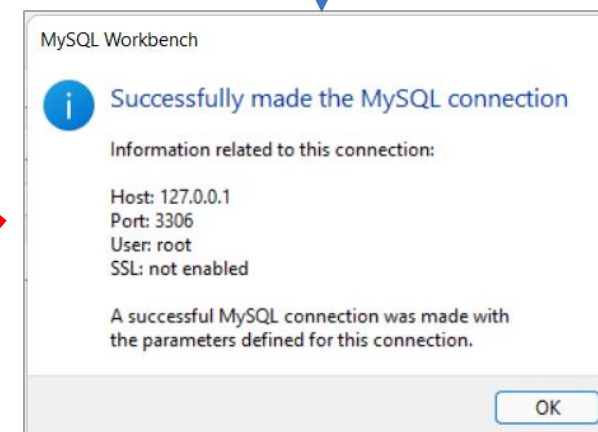
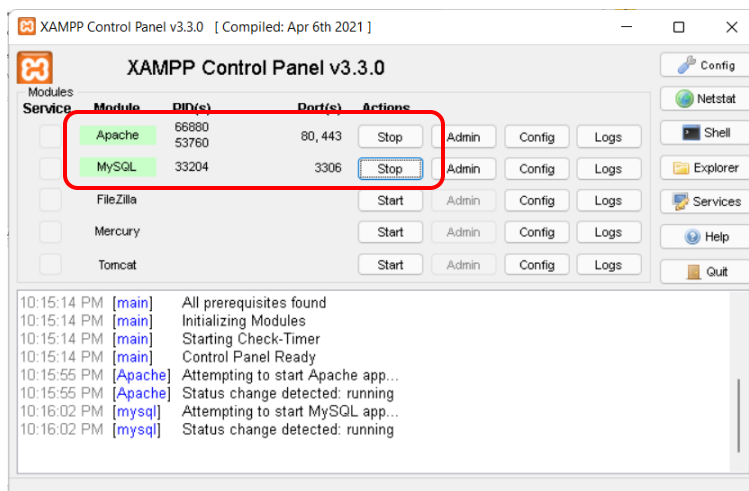
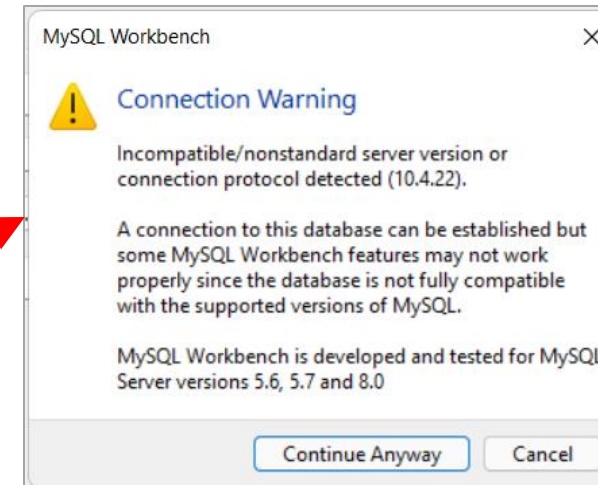
Username: root

Password: [Store in Vault ...] [Clear]

Default Schema:

Test Connection

OK



# MySQL Workbench: 1<sup>st</sup> TRY



- Write each SQL statement shown in the Query1 window.
- Press CTRL+Enter at each line to execute.
- See the results appearing below.
- Statements:
  - Show databases;
  - Use mysql;
  - Show tables;
  - Describe user;
  - select user, host, password from user;

The screenshot shows the MySQL Workbench interface. The 'Query 1' window contains the following SQL statements:

```
1
2 • show databases;
3 • use mysql;
4 • show tables;
5 • describe user;
6 • select user, host, password from user;
```

The 'Result Grid' shows the results of the query:

User	Host	Password
root	localhost	*4678A62DABE08F2C1BE97016F71AF2436684...
root	127.0.0.1	
root	:::1	
pma	localhost	

The 'Output' window shows the execution log:

#	Time	Action	Message	Duration / Fetch
✓ 1	22:35:28	show databases	5 row(s) returned	0.000 sec / 0.000 sec
✓ 2	22:35:41	use mysql	0 row(s) affected	0.000 sec
✓ 3	22:35:49	show tables	31 row(s) returned	0.015 sec / 0.000 sec
✓ 4	22:36:00	describe user	47 row(s) returned	0.015 sec / 0.000 sec
✓ 5	22:36:23	select user, host, password from user LIMIT 0, 1000	4 row(s) returned	0.015 sec / 0.000 sec

# MySQL Workbench: 1<sup>st</sup> EXAMPLE



MySQL Workbench

mde\_connection - Warning - n... x

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

phpmyadmin

test

Tables

Views

Stored Procedures

Functions

Administration Schemas

Information

No object selected

Object Info Session

Query 1 x

Limit to 1000 rows

```
1
2 • use test;
3 • create table customers(
4     id integer,
5     name varchar(128),
6     address varchar(256),
7     city varchar(32),
8     postal_code varchar(32),
9     email varchar(32)
10 );
11
12 • insert into test.customers(id, name, address, city, postal_code, email)
13 values(1, 'Antonio', 'Rua de cima, 32 , 2esq', 'Almada', '2800-001', 'antonio@eggmail.com');
14
15 • select id, name, city from customers;
16 • select * from customers where id=1;
17
```

SQLAdditions

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

Context Help Snippets

Output

Action Output

#	Time	Action	Message	Duration / Fetch
✓ 1	22:38:22	use test	0 row(s) affected	0.000 sec
✓ 2	22:38:31	select * from customers where id=1 LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec



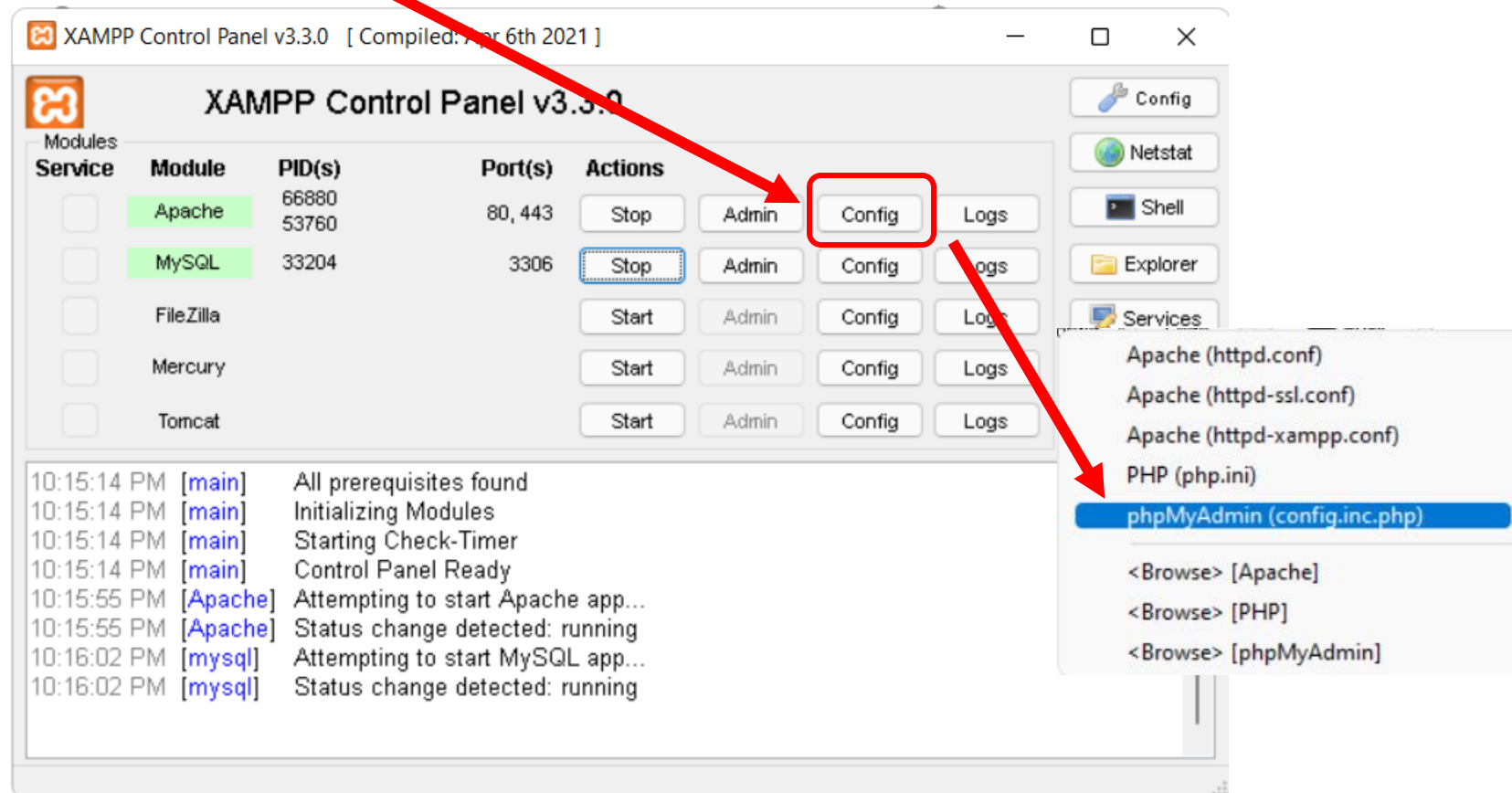
# phpMyAdmin

Configuration

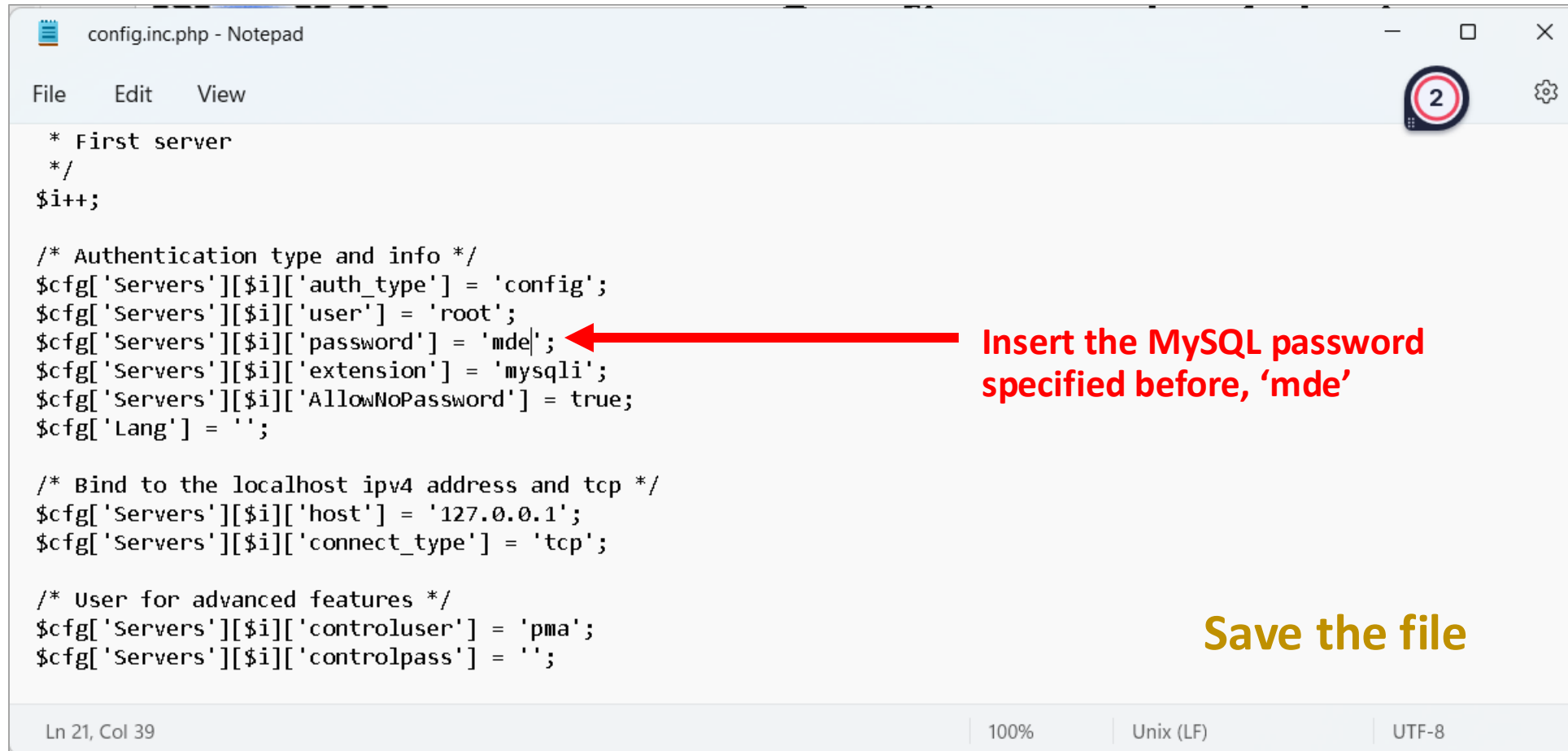
# phpMyAdmin CONFIGURATION

- There is another way to interact with mySQL, through a Web Interface.

Press button config



# phpMyAdmin CONFIGURATION: Setting the password



```
config.inc.php - Notepad
File Edit View
* First server
*/
$i++;

/* Authentication type and info */
$config['Servers'][$i]['auth_type'] = 'config';
$config['Servers'][$i]['user'] = 'root';
$config['Servers'][$i]['password'] = 'mde';
$config['Servers'][$i]['extension'] = 'mysqli';
$config['Servers'][$i]['AllowNoPassword'] = true;
$config['Lang'] = '';

/* Bind to the localhost ipv4 address and tcp */
$config['Servers'][$i]['host'] = '127.0.0.1';
$config['Servers'][$i]['connect_type'] = 'tcp';

/* User for advanced features */
$config['Servers'][$i]['controluser'] = 'pma';
$config['Servers'][$i]['controlpass'] = '';

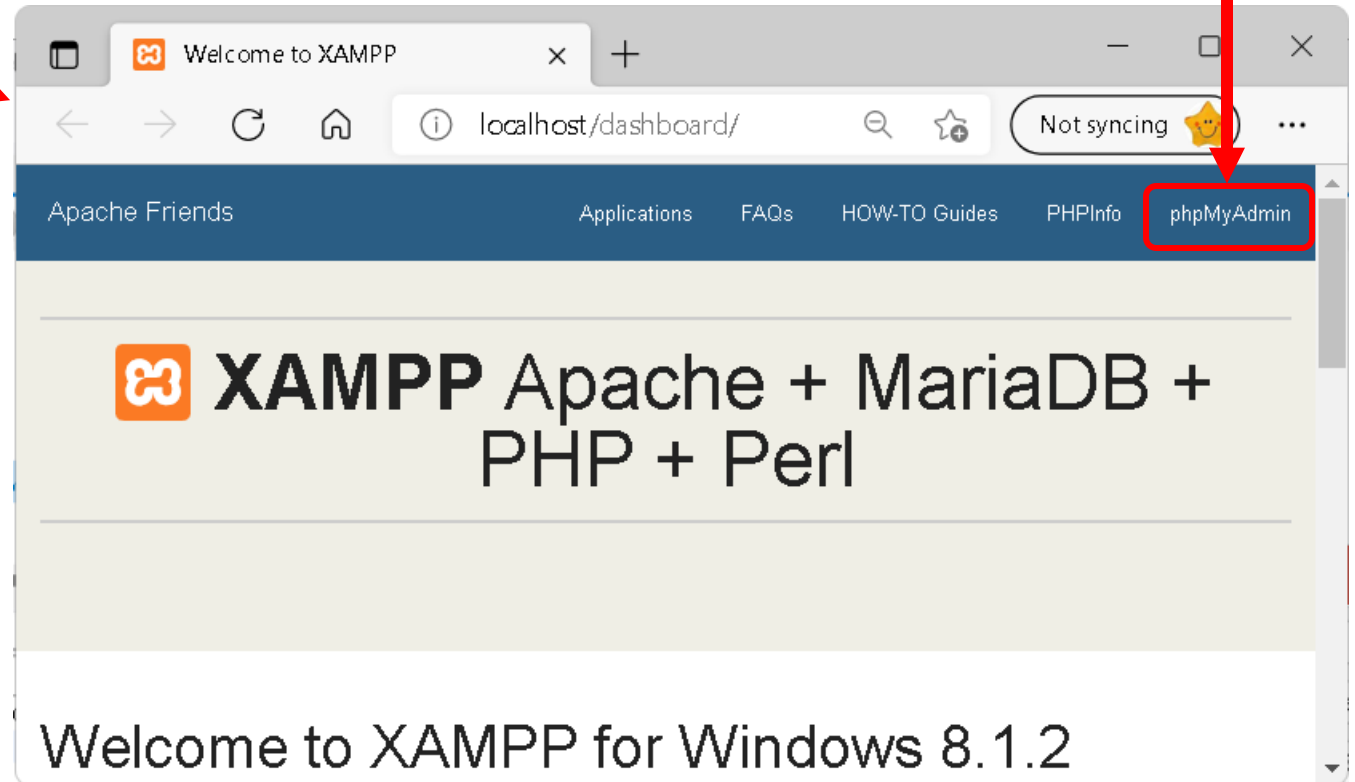
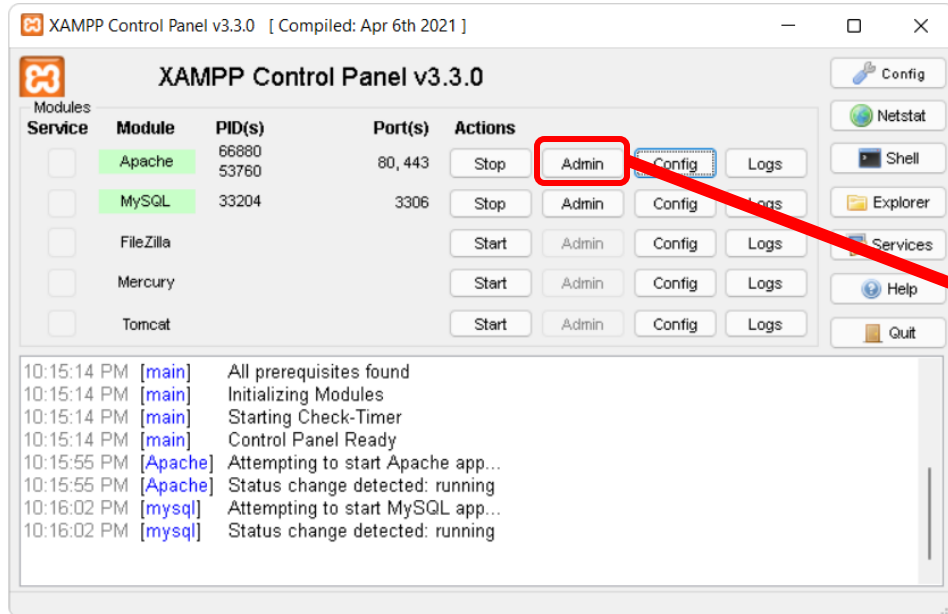
Ln 21, Col 39 | 100% | Unix (LF) | UTF-8
```

Insert the MySQL password specified before, 'mde'

Save the file



# phpMyAdmin: RUN



# phpMyAdmin INTERFACE



The screenshot displays the phpMyAdmin web interface in a browser window. The address bar shows the URL: `localhost/phpmyadmin/index.php?route=/database/sql&db=mysql`. The interface includes a sidebar on the left with a tree view of databases and schemas, including `information_schema`, `mysql`, `performance_schema`, `phpmyadmin`, and `test`. The main panel is titled "Run SQL query/queries on database mysql:" and contains a text area with the following SQL query:

```
1 use mysql;
2 select user, host, password from user;
```

Below the query area are buttons for "Clear", "Format", and "Get auto-saved query". There is a checkbox for "Bind parameters" and a "Bookmark this SQL query:" field. At the bottom of the query area, there are options for "Delimiter" (set to semicolon), "Show this query here again", "Retain query box", "Rollback when finished", and "Enable foreign key checks". A "Go" button is located at the bottom right of this section.

Below the query area, there are two green status messages:

- ✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0004 seconds.)
- ✓ Showing rows 0 - 3 (4 total, Query took 0.0025 seconds.)

Below the status messages, there are links for "[ Edit inline ]", "[ Edit ]", and "[ Create PHP code ]". There is also a checkbox for "Profiling" and links for "[ Edit inline ]", "[ Edit ]", "[ Explain SQL ]", "[ Create PHP code ]", and "[ Refresh ]".

At the bottom, there is a table with the following data:

User	Host	Password
root	localhost	*4678A62DABE08F2C1BE97016F71AF243668477A8
root	127.0.0.1	
root	:::1	
prma	localhost	

Below the table, there are options for "Show all", "Number of rows" (set to 25), and "Filter rows" (with a search box).

- ❑ If you arrived successfully at this slide, then success.
- ❑ Feel free to explore the many online tutorials regarding MySQL, e.g.:
  - <https://www.mysqltutorial.org/>
  - <https://www.w3schools.com/MySQL/default.asp>
  - <https://www.tutorialspoint.com/mysql/index.htm>
- ❑ See you next class.