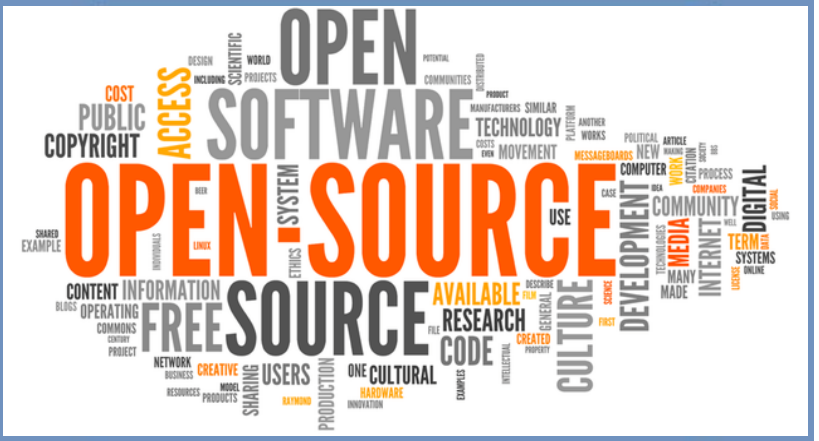
Open Source Software

Van Tham Nguyen

Thuyloi Univerity
175 Tay Son, Dong Da, Ha Noi

PHP MySQL Database



1. MySQL Introduction
2. Các vấn đề về bảo mật và an ninh thông tin khi sử dụng phần mềm nguồn mở
3. Giới thiệu về các phần mềm mã nguồn mở hỗ trợ thiết kế website…

1 MySQL Introduction

What is MySQL?

MySQL is a database system used on the web

MySQL is a database system that runs on a server

MySQL is ideal for both small and large applications

MySQL is very fast, reliable, and easy to use

MySQL uses standard SQL

MySQL compiles on a number of platforms

MySQL is free to download and use

MySQL is developed, distributed, and supported by Oracle Corporation

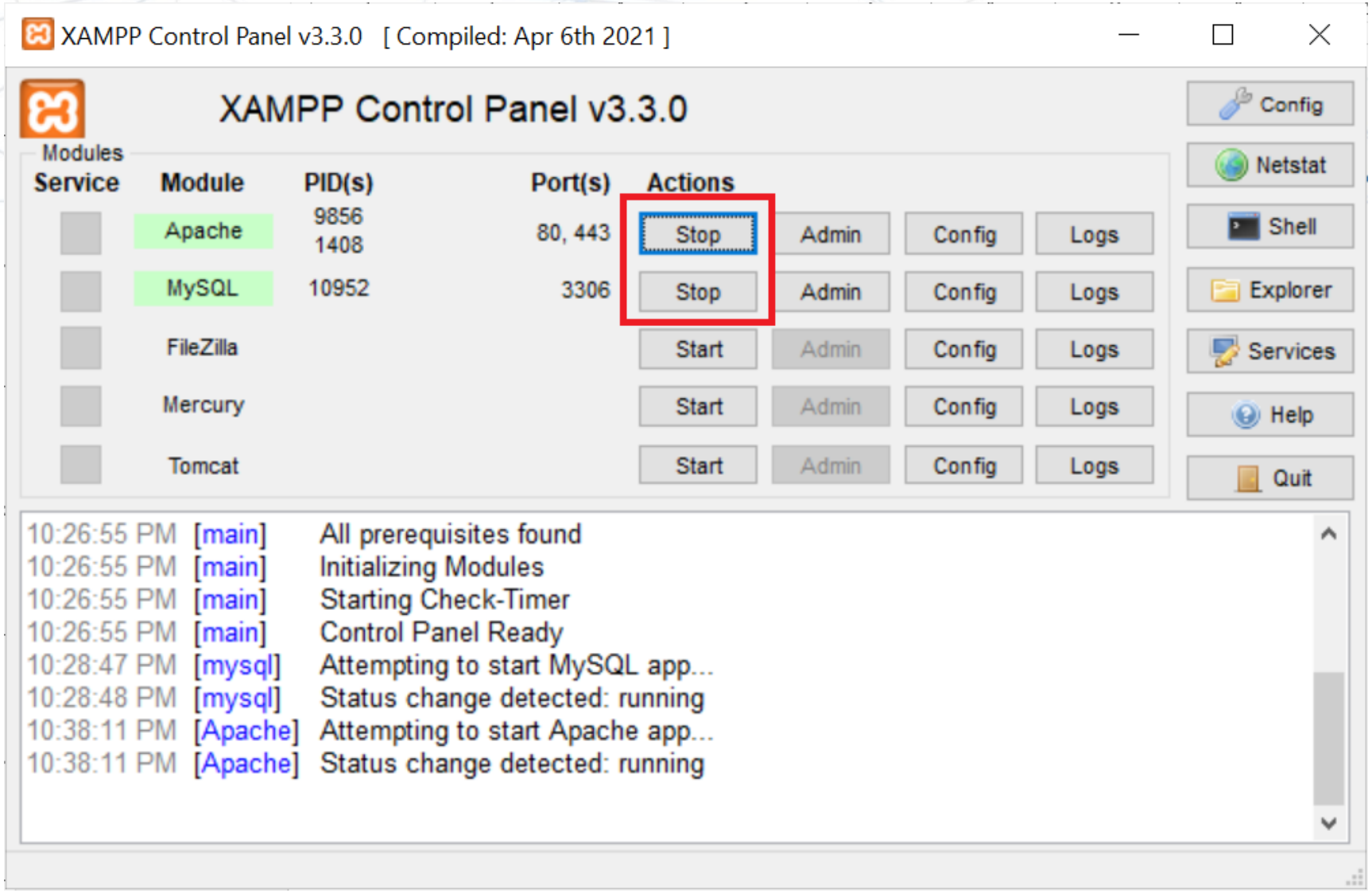
MySQL is named after co-founder Monty Widenius's daughter: My

Using MySQL in XAMPP

Step 1: Start

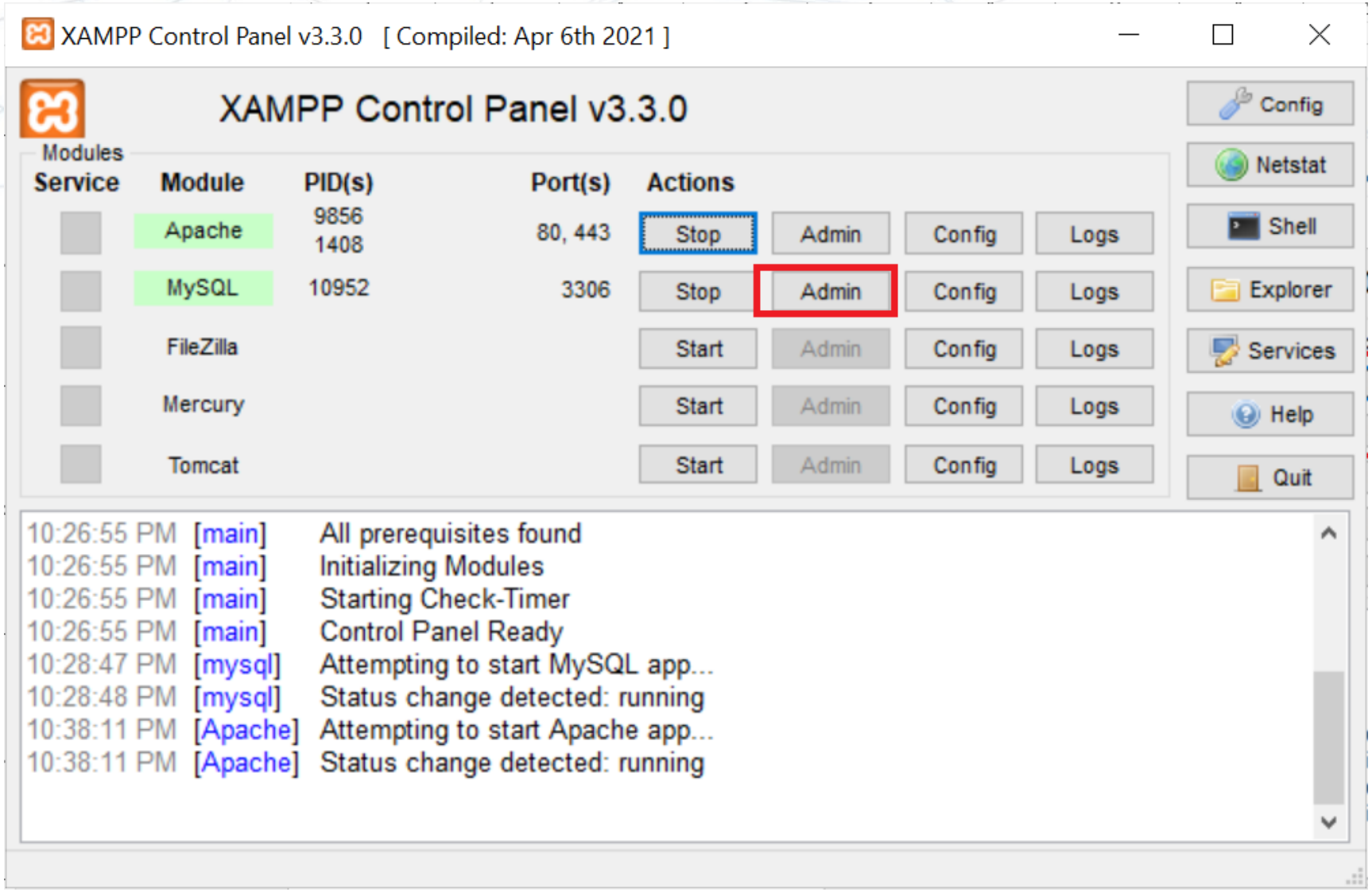
(1) Apache

(2) MySQL



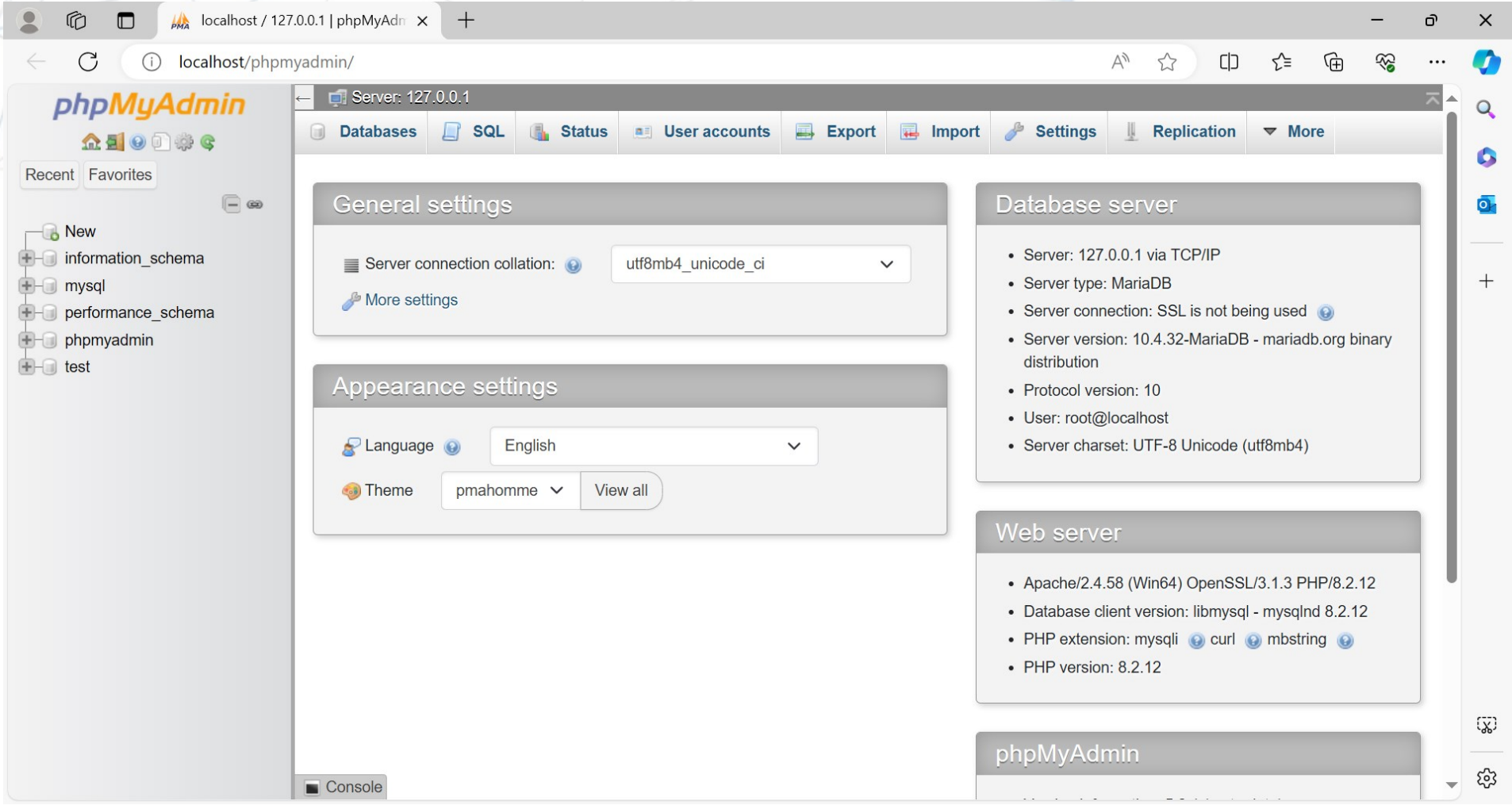
Using MySQL in XAMPP

Step 2: Login MySQL



Using MySQL in XAMPP

Step 3: Create DB



2 Connect to MySQL

Connect to MySQL

PHP 5 and later can work with a MySQL database using:

MySQLi extension (the "i" stands for improved)

PDO (PHP Data Objects)

Earlier versions of PHP used the MySQL extension. However, this extension was deprecated in 2012.

Should I Use MySQLi or PDO?

If you need a short answer, it would be "Whatever you like".

Both MySQLi and PDO have their advantages:

PDO will work on 12 different database systems, whereas MySQLi will only work with MySQL databases.

So, if you have to switch your project to use another database, PDO makes the process easy. You only have to change the connection string and a few queries. With MySQLi, you will need to rewrite the entire code - queries included.

Both are object-oriented, but MySQLi also offers a procedural API.

Both support Prepared Statements. Prepared Statements protect from SQL injection, and are very important for web application security.

Open a Connection to MySQL

```php
<?php
$servername = "localhost";
$username = "username";
$password = "password";

// Create connection
$conn = new mysqli($servername, $username, $password);

// Check connection
if ($conn->connect_error) {
  die("Connection failed: " . $conn->connect_error);
}
echo "Connected successfully";
?>
```

Create a MySQL Database

```php
<?php
$servername = "localhost";
$username = "username";
$password = "password";
// Create connection
$conn = new mysqli($servername, $username, $password);
// Check connection
if ($conn->connect_error) {
  die("Connection failed: " . $conn->connect_error);
}

// Create database
$sql = "CREATE DATABASE myDB";
if ($conn->query($sql) === TRUE) {
  echo "Database created successfully";
} else {
  echo "Error creating database: " . $conn->error;
}
$conn->close();
?>
```

MySQL Create Table

```php
<?php
$servername = "localhost";
$username = "username";
$password = "password";
$dbname = "myDB";

// Create connection
$conn = new mysqli($servername,$username,$password, $dbname);
// Check connection
if ($conn->connect_error) {
  die("Connection failed: " . $conn->connect_error);
}
```

MySQL Create Table

```php
// sql to create table
$sql = "CREATE TABLE MyGuests (
id INT(6) UNSIGNED AUTO_INCREMENT PRIMARY KEY,
firstname VARCHAR(30) NOT NULL,
lastname VARCHAR(30) NOT NULL,
email VARCHAR(50),
reg_date TIMESTAMP DEFAULT CURRENT_TIMESTAMP ON UPDATE CURRENT_TIMESTAMP
)";

if ($conn->query($sql) === TRUE) {
  echo "Table MyGuests created successfully";
} else {
  echo "Error creating table: " . $conn->error;
}

$conn->close();
?>
```

MySQL Insert Data

```php
<?php
$servername = "localhost";
$username = "username";
$password = "password";
$dbname = "myDB";

// Create connection
$conn = new mysqli($servername, $username, $password, $dbname);
// Check connection
if ($conn->connect_error) {
  die("Connection failed: " . $conn->connect_error);
```

MySQL Insert Data

```php
$sql = "INSERT INTO MyGuests (firstname, lastname, email)
VALUES ('John', 'Doe', 'john@example.com')";

if ($conn->query($sql) === TRUE) {
  echo "New record created successfully";
} else {
  echo "Error: " . $sql . "<br>" . $conn->error;
}

$conn->close();
?>
```

MySQL Select Data

```php
<?php
$servername = "localhost";
$username = "username";
$password = "password";
$dbname = "myDB";

// Create connection
$conn = new mysqli($servername, $username, $password, $dbname);
// Check connection
if ($conn->connect_error) {
  die("Connection failed: " . $conn->connect_error);
}
```

MySQL Select Data

```php
$sql = "SELECT id, firstname, lastname FROM MyGuests";
$result = $conn->query($sql);

if ($result->num_rows > 0) {
  // output data of each row
  while($row = $result->fetch_assoc()) {
    echo $row["id"]."-".$row["firstname"]." ". $row["lastname"]."<br>";
  }
}
else {
  echo "0 results";}
$conn->close();
?>
```

Any

Question