

# PHP MySQL Database

With PHP, you can connect to and manipulate databases. MySQL is the most popular database system used with PHP.

## 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

The data in a MySQL database are stored in tables. A table is a collection of related data, and it consists of columns and rows.

Databases are useful for storing information categorically. A company may have a database with the following tables:

- Employees
- Products
- Customers
- Orders

## PHP + MySQL Database System

- PHP combined with MySQL are cross-platform (you can develop in Windows and serve on a Unix platform)

## Database Queries

A query is a question or a request.

We can query a database for specific information and have a recordset returned.

Look at the following query (using standard SQL):

```
SELECT LastName FROM Employees
```

# Create Connection using PHP with MySQL Database

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

$dbname = "myDB";

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

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

## PHP MySQL Insert Data

### Insert Data Into MySQL Using MySQLi

After a database and a table have been created, we can start adding data in them.

Here are some syntax rules to follow:

- The SQL query must be quoted in PHP
- String values inside the SQL query must be quoted
- Numeric values must not be quoted
- The word NULL must not be quoted

The INSERT INTO statement is used to add new records to a MySQL table:

```
INSERT INTO table_name (column1, column2, column3,...)
VALUES (value1, value2, value3,...)
```

In the previous chapter we created an empty table named "MyGuests" with five columns: "id", "firstname", "lastname", "email" and "reg\_date". Now, let us fill the table with data.

Note: If a column is AUTO\_INCREMENT (like the "id" column) or TIMESTAMP with default update of current\_timestamp (like the "reg\_date" column), it is no need to be specified in the SQL query; MySQL will automatically add the value.

The following examples add a new record to the "MyGuests" table:

## Example

```
<?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);
}

$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();
?>
```

## PHP MySQL Select Data

### Select Data From a MySQL Database

The SELECT statement is used to select data from one or more tables:

```
SELECT column_name(s) FROM table_name
```

or we can use the \* character to select ALL columns from a table:

```
SELECT * FROM table_name
```

## Select Data With MySQLi

The following example selects the id, firstname and lastname columns from the MyGuests table and displays it on the page:

### Example.

```
<?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);
}

$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 "id: " . $row["id"]. " - Name: " . $row["firstname"]. " " . $row["lastname"]. "<br>";
    }
} else {
    echo "0 results";
}
$conn->close();
?>
```