

PHP MySQL

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

PHP Connect to MySQL

- **MySQLi extension** (the "i" stands for improved)
- **PDO (PHP Data Objects)**

MySQLi vs. PDO

- PDO will work on 12 different database systems, where as MySQLi will only work with MySQL databases.
 - 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.

Connecting To MySQL Server

Using MySQLi

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

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

echo "Connected successfully";
?>
```

Using PDO

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

try {
    $conn = new PDO("mysql:host=$servername;dbname=$dbname",
$username, $password);
    // set the PDO error mode to exception
    $conn->setAttribute(PDO::ATTR_ERRMODE, PDO::ERRMODE_EXCEPTION);

catch(PDOException $e)
    {
    echo $e->getMessage();
    }

?>
```

SAVE this file as `dbconfig.php` for later use

Example:

```
<html>
  <head>
    <meta charset="UTF-8">
    <title></title>
  </head>
  <body>
    <?php
      $user = $_POST['user'];
      $password = $_POST['password'];
      $database_connection = mysqli_connect("localhost", "root", "", "test");
      if ($database_connection) {
        $sql = "SELECT * FROM user where user_name='" . $user . "' and password ='" . $password . "'";
        $result = mysqli_query($database_connection, $sql);
        if (mysqli_num_rows($result) == 1) {
          echo "Login successful";
          exit();
        } else {
          echo "Login not successful";
          exit();
        }
      } else {
        echo 'Connection Error';
      }
      mysqli_close($database_connection);
    ?>
  </body>
</html>
```

Executing MySQL Query (CREATE)

```
<?php
Include "dbconfig.php"; //connect to the database and return $conn

try{
    $query = "CREATE TABLE `student` (
                ID int(11) NOT NULL,
                name varchar(120),
                password varchar(120)
            )";
    $stmt = $conn->prepare($query);
    if ($stmt->execute() //
        {
            echo "Table Created successfully";
        }
    }
catch (Exception $ex)
{
    echo $ex->getMessage();
}
```

Executing MySQL Query (INSERT)

```
<?php
Include "dbconfig.php"; //connect to the database and return $conn

try{
    $query = "INSERT INTO student(id,name,password) VALUES
              (:stid,:stname,:stpassword)";
    $stmt = $conn->prepare($query);
    $stmt->bindParam(':stid', "100");
    $stmt->bindParam(':stname', "Ali" );
    $stmt->bindParam(':stpassword', "AL1211@#1d%" );
    if ($stmt->execute()) //
        {
            echo "record added successfully";
        }
    }
catch (Exception $ex)
    {
        echo $ex->getMessage();
    }
?>
```


Executing MySQL Query (UPDATE)

```
<?php
Include "dbconfig.php"; //connect to the database and return $conn

try{
    $query = "UPDATE student set name=:stname WHERE id=:stid";
    $stmt = $conn->prepare($query);
    $stmt->bindParam(':stid', "100");
    $stmt->bindParam(':stname', "Mohamed" );
    if ($stmt->execute() //
        {
            echo "record updated successfully";
        }
    }
catch (Exception $ex)
    {
        echo $ex->getMessage();
    }
?>
```

Executing MySQL Query (DELETE)

```
<?php
Include "dbconfig.php"; //connect to the database and return $conn

try{
    $query = "DELETE FROM student WHERE id=:stid";
    $stmt = $conn->prepare($query);
    $stmt->bindParam(':stid', "100");
    if ($stmt->execute() //
        {
            echo "record Deleted Successfully";
        }
    }
catch (Exception $ex)
    {
        echo $ex->getMessage();
    }
?>
```

Executing MySQL Query (SELECT)

```
<?php
Include "dbconfig.php"; //connect to the database and return $conn

try{
    $query = "SELECT * FROM student WHERE id=:stid";
    $stmt = $conn->prepare($query);
    $stmt->bindParam(':stid', "100");
    $stmt->execute();
    while($row=$stmt->fetch(PDO::FETCH_ASSOC))
    {
        echo "ID: ".$row['id']."<br>";
        echo "NAME: ".$row['name']."<br>";
    }
}
catch (Exception $ex)
{
    echo $ex->getMessage();
}
?>
```

Thanks!