

Introduction to PHP and MySQL

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XAMPP Control Panel

1. Ensure that **Apache and MySQL is running** in the XAMPP Control Panel. If Apache or MySQL says port already in use, change the ports in the config settings.



Create a Database

2. Access phpMyAdmin: Open your web browser and go to <http://localhost/phpmyadmin/>
3. Create a New Database: Click on the Databases tab, enter a name for your database (e.g., **guestbook**) and click Create.

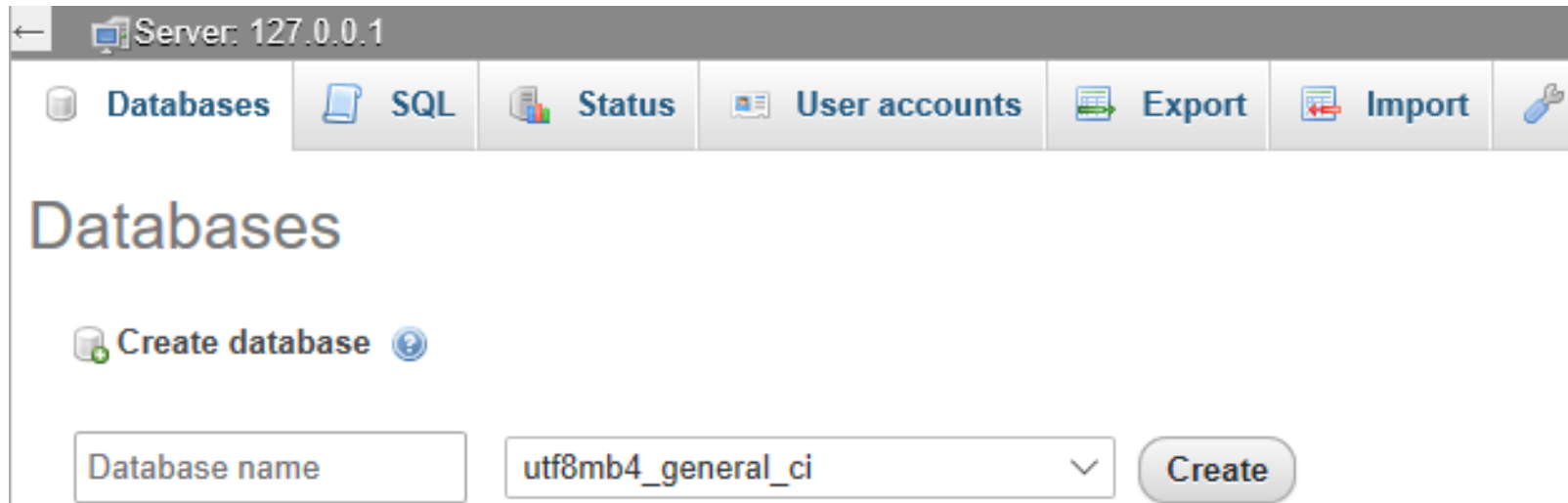


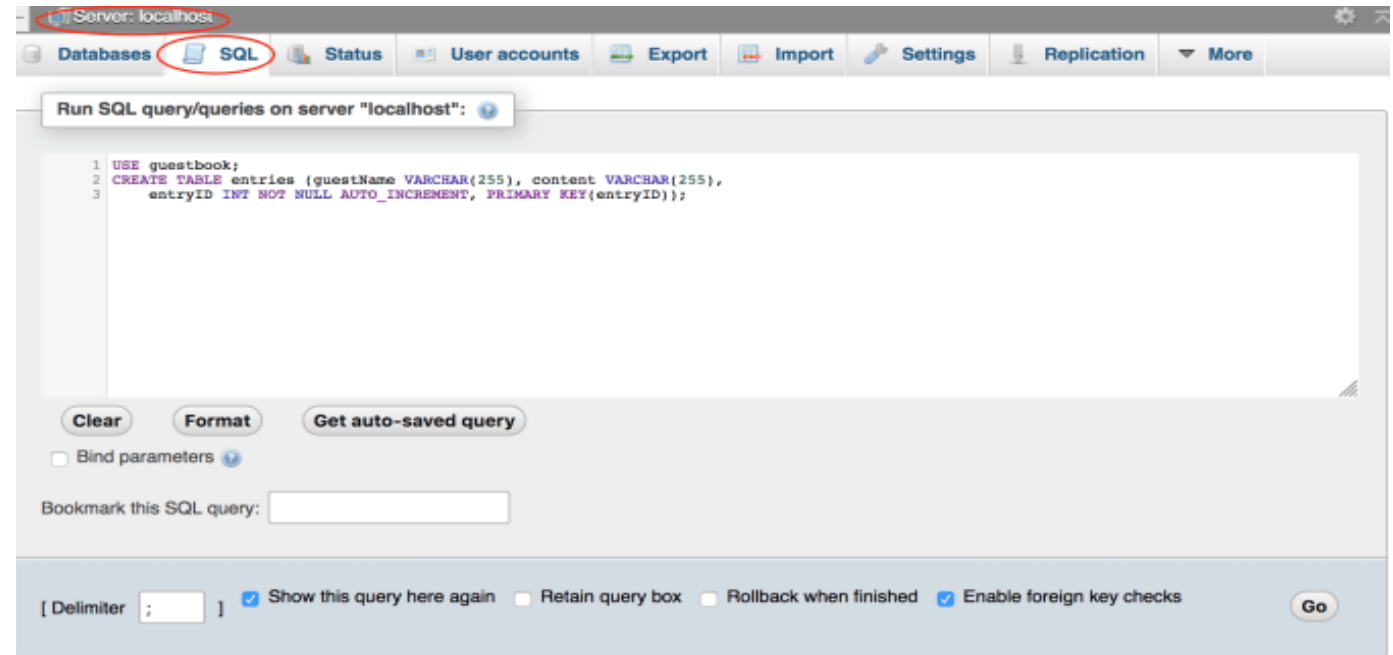
Table Creation

4. On the phpMyAdmin screen, choose the SQL tab. Enter the following code.

USE guestbook;

CREATE TABLE entries (guestName VARCHAR(255), content VARCHAR(255), entryID INT NOT NULL AUTO_INCREMENT, PRIMARY KEY(entryID));

- If you have already selected the guestbook database (on the left panel), you **do not need** to include **USE guestbook** in your SQL query.
- To run the command, simply click the **Go** button. Or
- Mac users may hit **Control+Enter** to run.
- For Windows users, press **Control + Enter** to run.



Test DB connection

- **Navigate** to C:/xampp/htdocs on your computer.
- Create a **new folder** (e.g., **dbtest**) to hold your PHP files.
- Open your code editor and create a **new PHP file** named **connect.php**.

Add the following code:

- Open your browser and go to
- <http://localhost/dbtest/connect.php>
- If configured correctly, you should see the message: Connected successfully!

```
<?php
$servername = "localhost";
$username = "root"; // Default username for XAMPP
$password = ""; // Default password is empty in XAMPP
$dbname = "guestuser"; // Replace with your database
//name

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

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

XAMPP Control Panel

1. Set User Privileges (Optional): Go to the User Accounts tab in phpMyAdmin. Add or configure a user for secure access (e.g., username test_user with password password123).

PHP+MySQL CRUD Operations

CRUD

CRUD stands for

1. Create
2. Read
3. Update
4. Delete

which are the four basic operations that are performed on data in a database. These operations form the foundation of many web and software applications, allowing for the management of data effectively.

CRUD via PHP

1. Go to the Databases tab.
2. Enter a database name (e.g., **crud_demo**) and click Create.
3. Select your database (crud_demo) from the left-hand menu. Click New to create a table **users**, **by SQL**, with the following fields:
 - id (Primary Key, INT, Auto Increment)
 - name (VARCHAR, length: 100)
 - email (VARCHAR, length: 100)
 - phone (VARCHAR, length: 15)

Set Up the Project Directory

4. Navigate to C:/xampp/htdocs/ on your computer.
5. Create a folder named crud_project.
6. Inside the folder, create the following files:
 - index.php (for displaying all records)
 - create.php (for adding a new record)
 - update.php (for editing a record)
 - delete.php (for deleting a record)
 - db_config.php (for database connection).

db_config.php

```
1 <?php
2 $servername = "localhost";
3 $username = "root"; // Default username for XAMPP
4 $password = ""; // Default password is empty in XAMPP
5 $database = "crud_demo";
6
7 // Create connection
8 $conn = new mysqli($servername, $username, $password, $database);
9
10 // Check connection
11 if ($conn->connect_error) {
12     die("Connection failed: " . $conn->connect_error);
13 }
14 ?>
```

create.php

```
1 <?php
2 include "db_config.php";
3
4 if ($_SERVER["REQUEST_METHOD"] == "POST") {
5     $name = $_POST["name"];
6     $email = $_POST["email"];
7     $phone = $_POST["phone"];
8
9     $sql = "INSERT INTO users (name, email, phone) VALUES ('$name', '$email', '$phone')";
10    if ($conn->query($sql) === true) {
11        header("Location: index.php"); // Redirect to index after insertion
12    } else {
13        echo "Error: " . $sql . "<br>" . $conn->error;
14    }
15 }
16 ?>
17
18 <form method="post" action="create.php">
19     Name: <input type="text" name="name" required><br>
20     Email: <input type="email" name="email" required><br>
21     Phone: <input type="text" name="phone" required><br>
22     <button type="submit">Add User</button>
23 </form>
```

index.php

```
1 <?php
2 include "db_config.php";
3 $result = $conn->query("SELECT * FROM users");
4 ?>
5
6 <a href="create.php">Add New User</a><br><br>
7
8 <table border="1">
9     <tr>
10         <th>ID</th>
11         <th>Name</th>
12         <th>Email</th>
13         <th>Phone</th>
14         <th>Actions</th>
15     </tr>
16     <?php while ($row = $result->fetch_assoc()) { ?>
17         <tr>
18             <td><?php echo $row["id"]; ?></td>
19             <td><?php echo $row["name"]; ?></td>
20             <td><?php echo $row["email"]; ?></td>
21             <td><?php echo $row["phone"]; ?></td>
22             <td>
23                 <a href="update.php?id=<?php echo $row["id"]; ?>">Edit</a>
24                 <a href="delete.php?id=<?php echo $row["id"]; ?>">Delete</a>
25             </td>
26         </tr>
27     <?php } ?>
28 </table>
```

update.php

```
1  <?php
2  include "db_config.php";
3
4  if ($_GET["id"]) {
5      $id = $_GET["id"];
6      $result = $conn->query("SELECT * FROM users WHERE id=$id");
7      $row = $result->fetch_assoc();
8  }
9
10 if ($_SERVER["REQUEST_METHOD"] == "POST") {
11     $id = $_POST["id"];
12     $name = $_POST["name"];
13     $email = $_POST["email"];
14     $phone = $_POST["phone"];
15
16     $sql = "UPDATE users SET name='$name', email='$email', phone='$phone' WHERE id=$id";
17     if ($conn->query($sql) === true) {
18         header("Location: index.php");
19     } else {
20         echo "Error updating record: " . $conn->error;
21     }
22 }
23 ?>
24
```

update.php (Cont.)

```
25 <form method="post" action="update.php">
26     <input type="hidden" name="id" value="<?php echo $row["id"]; ?>">
27     Name: <input type="text" name="name" value="<?php echo $row[
28         "name"
29     ]; ?>" required><br>
30     Email: <input type="email" name="email" value="<?php echo $row[
31         "email"
32     ]; ?>" required><br>
33     Phone: <input type="text" name="phone" value="<?php echo $row[
34         "phone"
35     ]; ?>" required><br>
36     <button type="submit">Update User</button>
37 </form>
```

delete.php

```
1 <?php
2 include "db_config.php";
3
4 if ($_GET["id"]) {
5     $id = $_GET["id"];
6     $sql = "DELETE FROM users WHERE id=$id";
7     if ($conn->query($sql) === true) {
8         header("Location: index.php");
9     } else {
10         echo "Error deleting record: " . $conn->error;
11     }
12 }
13 ?>
```


Thank you