LAB GOALS

- Creating a MySQL database
- PHP interaction with MySQL

Step 1: Start with creating a simple database using **phpmyadmin**. To do so, first make sure your development environment is running (e.g., WAMP, LAMP, XAMPP, XAMPP lite, etc). Then point your browser to [http://localhost/phpmyadmin](http://localhost/phpmyadmin) you should see the phpmyadmin interface:

Using the phpmyadmin GUI, create the following:

A. Create a new database called MyDB
B. Create a new table named my_friends, with 5 fields: (fname, lastname, email, phone, city)
C. Using the GUI, Insert three records in the my_friends table. (two of them should live in South Bend, one in Mishawaka)
D. Using the GUI, Display the content of the my_friends table.
E. Using SQL statements, create a new user account (“LabUser”) for this lab. The user will also get some privileges to define and manipulated the my_friends database.
Create new database
MySQL localhost

Database MyDB has been created.

No tables found in database.

Create new table on database MyDB
Name: Fr_friends  Number of fields: 5
One more records should also be added....

The SQL code for INSERTing the above records is as follows:

```
INSERT INTO `my_friends` (`fname`, `lname`, `email`, `phone`, `city`) VALUES
('Sue', 'Jackson', 'sjackson@iusb.edu', '574-555-1234', 'South Bend'),
('Tom', 'Thompson', 'tthompson@yahoo.com', '574-444-8765', 'Mishawaka'),
('May', 'Flowers', 'mflowers@gmail.com', '574-777-0123', 'South Bend');
```
CREATE USER 'LabUser'@'localhost' IDENTIFIED BY 'Pass123Word';

GRANT
  SELECT , INSERT , UPDATE , DELETE , CREATE, ALTER
ON
  'MyDB' . *
TO
  'LabUser'@'localhost';

Verify the privileges for this user by clicking the "SERVER" and then "Privileges".

By clicking the "EDIT" icon above, you will see the following:
Step 2: Start with a simple PHP file (Lab16.php) similar to figure below.

```php
<?php

// Lab 16

echo ('Step 1: Make a connection to MySQL Server and database<br>');
$con = mysqli_connect("localhost","LabUser","Pass123Word", "MyDB");
echo("<hr>");

//---------------------------------------------------------

echo ('Step 2: Check for Connection Errors<br>');
if (mysqli_connect_errno($con))
{
    echo "Failed to connect to MySQL: " . mysqli_connect_error();
}
else
    echo "Successful Connection to MySQL";
echo("<hr>");

//---------------------------------------------------------

echo ('Step 7: Close the connection to the MySQL server/database<br>');
mysqli_close($con);
echo("<hr>");
?>
```

---

**Step 1: Make a connection to MySQL Server and database**

**Step 2: Check for Connection Errors**

**Successful Connection to MySQL**
Step 3: Run the above program. If the program indicates a “Successful Connection to MySQL”, then your connection to the database is good to go. Our next step is to execute some Data Manipulation statement in SQL. We start by retrieving some data from the database using the SELECT statement. Add the code below, between step 2 and 7, and then run the program again.

```php
//----------------------------------------
echo("Step 3: SELECT records in the my_friends table <br />");
$sql="SELECT * FROM my_friends";
echo($sql . "<br />");
$result = mysqli_query($con,$sql);
while($row = mysqli_fetch_array($result)) {
    echo $row['fname'] . " ". $row['lname'] . " ".
        $row['email'] . " ". $row['phone'] . " ".
        $row['city'];
    echo "<br />";
}
echo("<hr>");
```

Step 1: Make a connection to MySQL Server and database

Step 2: Check for Connection Errors
Successful Connection to MySQL

Step 3: SELECT records in the my_friends table
SELECT * FROM my_friends
Sue Jackson sjackson@usb.edu 574-555-1234 South Bend
Tom Thompson tthompson@yahoo.com 574-444-8765 Mishawaka
May Flowers mflowers@gmail.com 574-777-0123 South Bend

Step 7: Close the connection to the MySQL server/database
Step 4: Now add the following code between step 3 and 7, and run the program again. You should see a new record added to the table.

```php
// Step 4: INSERT a record in my_friends table
$sql="INSERT INTO `my_friends`
VALUES
('Ali', 'Fisheye', 'afisheye@iusb.edu', '574-555-6543', 'Chicago');";
```

---

```php
// Step 4.1: SELECT records in the my_friends table
$sql="SELECT * FROM my_friends";
$result = mysqli_query($con,$sql);
while($row = mysqli_fetch_array($result)) {
    echo "<br />
}
```

---

---

Step 1: Make a connection to MySQL Server and database

Step 2: Check for Connection Errors
Successful Connection to MySQL

Step 3: SELECT records in the my_friends table
SELECT * FROM my_friends
Sue Jackson sjackson@iusb.edu 574-555-1234 South Bend
Tom Thompson thompson@yahoo.com 574-444-8765 Mishawaka
May Flowers mflowers@gmail.com 574-777-0123 South Bend

Step 4: INSERT a record in my_friends table
INSERT INTO `my_friends` ('fname', 'lname', 'email', 'phone', 'city') VALUES
('Ali', 'Fisheye', 'afisheye@iusb.edu', '574-555-6543', 'Chicago');

Step 4.1: SELECT records in the my_friends table
SELECT * FROM my_friends
Sue Jackson sjackson@iusb.edu 574-555-1234 South Bend
Tom Thompson thompson@yahoo.com 574-444-8765 Mishawaka
May Flowers mflowers@gmail.com 574-777-0123 South Bend
Ali Fisheye afisheye@iusb.edu 574-555-6543 Chicago

Step 7: Close the connection to the MySQL server/database
Step 5: Now add the following code between step 4.1 and 7, and run the program again. You should see all the records with City = “SOUTH BEND” change to “DETROIT”. You should also note that the record with “Ali Fisheye” is now duplicated. This is because we don’t have a primary key for this table, so multiple identical records can be inserted in our table.

```php
// Step 5: Update a record in my_friends table
$sql = "UPDATE my_friends
    SET city = 'Detroit'
    WHERE city = 'South Bend';"
echo($sql . "<br />);
mysqli_query($con, $sql);

// Step 5.1: SELECT records in the my_friends table
$sql = "SELECT * FROM my_friends"
echo($sql . "<br />);
$result = mysqli_query($con,$sql);
while($row = mysqli_fetch_array($result)) {
    echo "<br />
}
```

Step 1: Make a connection to MySQL server and database
Step 2: Check for Connection Errors
Successful Connection to MySQL

Step 3: SELECT records in the my_friends table
SELECT * FROM my_friends
Sue Jackson jackson@usab.edu 574-555-1234 South Bend
Tom Thompson thompson@yahoo.com 574-444-8765 Mishawaka
May Flowers mflowers@gmail.com 574-777-0123 South Bend
Ali Fisheye fisheye@usab.edu 574-555-6543 Chicago

Step 4.1: SELECT records in the my_friends table
SELECT * FROM my_friends
Sue Jackson jackson@usab.edu 574-555-1234 South Bend
Tom Thompson thompson@yahoo.com 574-444-8765 Mishawaka
May Flowers mflowers@gmail.com 574-777-0123 South Bend
Ali Fisheye fisheye@usab.edu 574-555-6543 Chicago

Step 5.1: SELECT records in the my_friends table
UPDATE my_friends SET city = 'Detroit' WHERE city = 'South Bend';

Step 7: Close the connection to the MYSQL server/database
Step 6: Now add the following code between step 5.1 and 7, and run the program again. You should see all the records with City = "Chicago" deleted from the table.

```
Փ Step 6: Delete a record from my_friends table <br />
 حيات ($sql="DELETE FROM my_friends WHERE city = 'Chicago';
 hayat ($sql . "<br />");
 $sql = "SELECT * FROM my_friends"
 hayat ($sql . "<br />");
 $result = mysql_query($con, $sql);
 while($row = mysql_fetch_array($result)) {
  hayat (<br />");
 } hayat (<hr>);
```

```
Փ Step 6.1: SELECT records in the my_friends table
 hayat ($sql = "SELECT * FROM my_friends"
 hayat ($sql . "<br />");
 $result = mysql_query($con, $sql);
 while($row = mysql_fetch_array($result)) {
  hayat (<br />");
 } hayat (<hr>);
```

Step 6: Make a connection to MySQL Server and database

Step 2: Check for Connection Errors
Successful Connection to MySQL

Step 3: SELECT records in the my_friends table
```
 hayat ("SELECT * FROM my_friends"
 hayat ("WHERE city = 'Detroit';"
 hayat ("WHERE city = 'South Bend';"
 hayat ("WHERE city = 'Chicago';";)
```

Step 4: SELECT records in the my_friends table
```
 hayat ("SELECT * FROM my_friends"
 hayat ("WHERE city = 'Detroit';"
 hayat ("WHERE city = 'South Bend';"
 hayat ("WHERE city = 'Chicago';";)
```

Step 5: Update a record in my_friends table
```
 hayat ("UPDATE my_friends SET city = 'Detroit' WHERE city = 'South Bend';"
 hayat ("UPDATE my_friends SET city = 'Chicago' WHERE city = 'Chicago';"
```

Step 6: Delete a record from my_friends table
```
 hayat ("DELETE FROM my_friends WHERE city = 'Chicago';"
```

Step 7: Close the connection to the MySQL server/database