

Web Development and Web Design

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Lab 3. Go into Web Dev with MySQL.

1. Create new directory **Project3** inside **web_dev** at your laptop. All tasks must be synhronized with **web_dev/Project3** at your **GitHub Pages**. Subdirectory **Project3** must be inside root directory of your web server for web access from your browser or local network.
2. Try next examples at your local server with PHP and MySQL:

simple_SQL_query.html

```
<html>
<body>
<form action="SQL_query_result.php" method="post">
  MySQL_server: <input type="text" name="DB" value="localhost"><br>
  MySQL_user: <input type="text" name="DBuser"><br>
  MySQL_password: <input type="text" name="DBpass"><br>
  <input type="submit" value="Run SQL query">
</form>
</body>
</html>
```

SQL_query_result.php

```
<html>
<body>
Demo connection to DataBase using MySQLi in procedural style:<br>
<?php
    $servername = $_POST["DB"]; // localhost by default
    $username = $_POST["DBuser"];
    $password = $_POST["DBpass"];
    $conn = mysqli_connect($servername, $username, $password);
    if (!$conn) { // Check connection
        die("Connection failed: " . mysqli_connect_error());
    }
    echo "Connected successfully";
?>
</body>
</html>
```

3. Create **set of new *.html** pages with simple forms with complimentary ***.php** pages for CRUD working with MySQL using previous sample #2:

home (*this and next html pages existing from previous Project 2*)

form (...)

cookies (...)

sessions (...)

date/time (...)

database

Connect

Create **HTML** web form with 3 inputs fields for **username**, **password**, **servername**. Create separated **PHP** page for connecting with web form. Write code in MySQLi Object-Oriented style. Add username, password, servername as **Session** variables. Read more at

https://www.w3schools.com/php/php_mysql_connect.asp

Create DataBase

Create other html page with form for 1 input field for new **DB name**. Use username, password, servername from current **Session**. Provide diagnostic for errors. More at

https://www.w3schools.com/php/php_mysql_create.asp

Create Table

Create new page with form for creating new table MyGuests with 5 fields - autoincrement primary key, firstname, lastname, email and current date. Read more at

https://www.w3schools.com/php/php_mysql_create_table.asp

Create Data

After a database and a table have been created, we can start adding data in them. Create web form for **new** guest with firstname, lastname, email. Pay attention to difference - **5** fields in table but only **3** passed from web form. More at

https://www.w3schools.com/php/php_mysql_insert.asp

Read Data

Create page for search by form with only **firstname**. In the PHP use empty (show **all** or ***** in SQL syntax) by default.

Selects the **id**, **firstname**, **lastname**, **email** and **time of registration** columns from the **MyGuests** table and displays it on the answer generated by PHP page. More at: https://www.w3schools.com/php/php_mysql_select.asp

Update Data

Create page for **update** information about guest using web form with next fields:

ID for search inside of existing records

new name for updating **firstname**.

Connected PHP page must show result like "Record updated successfully" or "Error updating record:".

Let's look at the sample "MyGuests" table before update:

id	firstname	lastname	email	reg_date
1	John	Doe	jo@lpnu.ua	2019-03-22 14:26:15
2	Mary	Moe	ma@lpnu.ua	2019-03-23 10:22:30

After the record is updated, the table will look like this:

id	firstname	lastname	email	reg_date
1	John	Doe	jo@lpnu.ua	2019-03-22 14:26:15
2	Marichka	Moe	ma@lpnu.ua	2019-03-23 10:22:30

Read more at

https://www.w3schools.com/php/php_mysql_update.asp

Delete Data

Create page for delete record about guest using **ID**.

Notice the WHERE clause in the DELETE syntax. If you omit the WHERE clause, all records will be deleted! Check for passing ID from web form. Show result. More at:

https://www.w3schools.com/php/php_mysql_delete.asp

phpinfo (*this html page existing from previous Project 2*)

Questions:

1. Should I Use MySQLi or PDO?
 2. MySQLi offers a procedural or object-oriented API.
 3. What is CRUD
4. Add **README.md** into **Project3** with next text:

Course "Web Development and Web Design"

Project 3

Author: <your_first_name> <your_second_name>

and check public accessibility from desktop and mobile browsers to

<your_login>.github.io/web_dev/Project3.

Note that PHP and MySQL are running on the local server only!
From the GitHub Pages we can see only static HTML pages.

Bonus: transfer your Project #3 to any free web hosting with PHP/MySQL support. Add a link to this server at the front of your Project #3 at GitHub Pages with screenshots.

Read more about DataBases:

SQL is a standard language for storing, manipulating and retrieving data in databases. The SQL tutorial from **w3school** will teach you how to use SQL in: **MySQL, SQL Server, MS Access, Oracle, Sybase, Informix, Postgres, DB2** ... and other database systems.

<https://www.w3schools.com/sql/default.asp>

Official tutorial with links to last stable version. MySQL Workbench, PHPMyAdmin

<https://downloads.mysql.com/docs/mysql-tutorial-excerpt-5.5-en.pdf>

MySQL Tools for developers/DevOps:	MySQL Workbench	PHPMyAdmin
Database Design & Modeling	visual design	no
DB Administration & Migration	yes	yes
SQL Development	yes	yes
GUI / user access	desktop	online