PHP and MySQL

1. Install WAMP

WAMP stands for Windows, Apache, MySQL, and PHP. We need to install WAMP to be able to develop our small web application on a Windows computer. If you have a MacOS computer or Linux, you must install XAMPP. This document is written based on WAMP. Apache is a well-known web server. MySQL is a database server and PHP is a server scripting language. Follow the steps below to install WAMP.

1. Download WAMP from: https://sourceforge.net/projects/wampserver/
2. Install it on your computer. Follow the install wizard windows and accept all default settings
3. When you finished installing WAMP, make sure that it is running. Read the document *instructions_for_use.pdf* to know how to use WAMP.
4. Test WAMP by opening a browser and type localhost in the address bar. You should see the default page of WampServer
5. WAMP is installed by default in *C:|wamp64|www.* If you have changed the installation location while you were installing WAMP, it is installed at your selected path. Go to that path and create a new folder and rename it your project (recommended to choose a short name without space in it). I chose *saeedDB,* so the path will be:
   C:\wamp64\www\saeedDB
   This folder will be the place where all our HTML and PHP files of the web app project are going to be stored.
6. Once you stored your HTML and PHP files in your web App folder (e.g. C:\wamp64\www\saeedDB), to access your web app, in the browser address bar type localhost/YourWebAppName (e.g. localhost/SaeedDB)
7. I have prepared some HTMLs and PHPs for you as examples of the tutorial. You must copy SaeedDB folder into the folder *C:|wamp64|www* then open a browser (Chrome, FireFox, etc.) and type *localhost/saeedDB* in the address bar of the browser. Make sure WAMP is running (WAMP icon in the notification area (beside your computer clock) must be green)
   NOTE: if you simply double click on index.html or any other HTML file in the folder **SaeedDB,** the PHP codes are not run, and you just simply see the code inside the file. You must open a browser and type **localhost/SaeedDB** to run the WebApp. PHP is run by the Web Server NOT by the browser! That is why when you double-click on the index.html and you open it in the browser, then when you click on some of the hyperlinks (e.g. Create a Database) you see the code of the .php file and the file is not executed.

2. Connecting to MySQL Database

In this tutorial, I will show you how to connect to MySQL database server using PDO object. PDO stands for PHP Data Object, which is a PHP extension that defines a lightweight and consistent interface for accessing a database in PHP. There are different ways to connect to a database using PHP. We choose PDO but if you interested to know what other methods are, read more here: https://www.w3schools.com/php/php_mysql_connect.asp

Review the PHP code of *connect.php* to learn how to connect to a database using PDO. To perform any action on a database you must make a connection to the database first. That is why you see at the beginning of all PHP codes; we make a connection first.

3. Inserting data into a table

Review the files *insertData.html* and */php/insertIntoValues.php* to learn how to insert data into your database.

4. Updating a row in a table

Review the files *updateRecord.html* and */php/updateRecord.php* to learn how to update a record of a table.

5. Deleting a row from a table

Review the files *deleteRecord.html* and */php/updateRecord.php* to learn how to update a record of a table.

6. SELECT query retrieval

Review the files *selectQuery.html* and */php/ selectAllQuery.php* and *selectLikeQuery.php* and *selectWhereQuery.php* to learn how to update a record of a table.

7. For further Studies:
    - https://phpdelusions.net/pdo
    - https://www.w3schools.com/php/php_mysql_intro.asp
    - https://www.mysqltutorial.org/php-mysql/
    - https://coursesweb.net/php-mysql/pdo-introduction-connection-database