EPL342 –Databases

Lab 7
Working with SQL server from PHP

PHP Documentation for SQL Server

- You can find the PHP API for SQL server in the following URL:
    - PHP: SQLSRV – Manual (https://www.php.net/manual/en/book.sqlsrv.php)
- In the department's systems you don't need to install anything to enable the SQLSRV driver
    - In your own PHP enabled server you have to install the correct driver!
        - See Microsoft Drivers for PHP for SQL Server - PHP drivers for SQL Server | Microsoft Docs for detailed instructions (https://docs.microsoft.com/en-us/sql/connect/php/microsoft-php-driver-for-sql-server)

PHP Installation

- In order to use PHP on your own machine you have to setup a web server and install the PHP plugins for your server
  - A useful (complete and open source) installation of everything you need (Web server + PHP) is **XAMPP**
  - Can be found here: XAMPP Installers and Downloads for Apache Friends (https://www.apachefriends.org/index.html)
    - *Essentially you'll be doing a full stack installation and setup*
  - Don't forget the SQLSRV driver
    - It doesn't come with **XAMPP**

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Connecting to SQL server from PHP

- In order to connect to SQL server from PHP first of all you need to write and deploy your PHP files

  - In today's lab supplemental files you can find a skeleton that you can (and should) modify so that you can use it in your project

- In order to deploy your PHP file you just need to copy them to the directory *"public_html"* in your account

  - Also accessible through the *"U:\"* drive in the lab's machines

Deploying your PHP files

- Note that
  - The name of the deployment root directory is EXACTLY public_html
    - You can create subdirectories inside public_html
    - public_html is (must) be located directly under your personal account directory
    - It must have permission set to "*755*" (rwxr-xr-x)
      - Login to a Linux machine and use
        chmod 755 public_html
      - The same goes for ALL subdirectories under public_html
      - Files under public_html should have "*644*" (rw-r--r--) permissions
      - You should also have "*701*" (rwx-----x) permissions on the root directory of your account

Deploying your PHP files

- Just copying your files inside public_html (html, php etc.) makes them available through the department web server
  - E.g. the file *"test.html"* that is directly under the public_html directory can be accessed via the URL:
    www.cs.ucy.ac.cy/~username/test.html (username is your actual username!)
  - If you have a file named *index* (regardless of its extension) then that will be accessed if you request the directory under which it is located!
    - E.g. the file index.php that is directly under the public_html directory can be accessed through the URL: *www.cs.ucy.ac.cy/~username/*

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Using SQL server through PHP

- Download and deploy the supplemental lab files to your public_html directory
  - Files *index.php* and *connect.php* demonstrate how you can pass some information from page to page as well as setup a session
    - index.php → connect.php
    - connect.php gets the passed information and adds it to a session that it creates
  - Files *q1.php*, *q2.php*, and *q3.php* demonstrate how you can call a SQL query, a stored procedure without parameters and a stored procedure with parameters respectively (they utilize the session information)
  - File *dbsample.sql* creates a table with some data as well as the stored procedures used by q2.php and q3.php files
- In the rest of the lab we will study and analyze these files