Working with MySQL

- Creating a User
- Making a Connection
- Listing Databases
- Listing Tables
- Creating a Database
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Creating a User

Create a user in phpMyAdmin, Tools and then to Privileges. Simply add a new user with all rights and a password. Mine is not working and don't know why yet! But I haven't spent enough time researching it.

Connecting to MySQL

- **Mysql_connection()** – takes the HOST, USERNAME and PASSWORD in that order.
- **Die()** – With the function mysql_error() function inside. You can put your own message in the die(): die("No connection for you");

On line 5, there is a test to see if the connection was TRUE if so the $msg will equal "yes".

```
1   <?
2
3   $connection = mysql_connect("localhost", "root", "") or die(mysql_error());
4
5   if ($connection) {
6        $msg = "YES!";
7   }
8
9   ?>
10
11  <HTML>
12  <HEAD>
13  <TITLE>MySQL Connection</TITLE>
14  </HEAD>
15  <BODY>
16
17  <h1><center><? echo "$msg"; ?></h1></center>
18
19  </BODY>
20  </HTML>
```

After a successful connection, break your connection by changing the user name or password to something invalid.   The error message you would see may look something like this:

 Warning: mysql_connect() [function.mysql-connect]: Access denied for user 'root'@'localhost' (using password: YES) in **C:\XAMPP\htdocs\lesson7\db_connect.php** on line **3**
Access denied for user 'root'@'localhost' (using password: YES)

How can you make this message direct and to the point?

MySQL Functions

- **Mysql_list_dbs()** – Used to list the databases on a mySQL server
- **Mysql_num_rows()** – Returns the number of rows
- **Mysql_tablename()** – Returns the name of a table in a database

This script list all of the databases in MySQL running from LocalHost. First a connection is needed on line 2. On line 4 there is a variable created to hold the list of Databases.

This script uses a **while loop** to loop through the databases. Some initial values need to be set and started. The script will use <ul> tag to display the results in an unordered list so the list needs to be started outside of the loop. Then the counter $i needs to be set to 0 on line 8.

On line 10, the while loop will continue until the value of $i is less then the number of rows in the $dbs value.

Line 11 will get the name of the database reflected in the current row of the results. The variable $i is replaced by the value, so going through he first time in the loop the value would be 0 and this name is concatenated to the $db_list. Then 1 is added to the counter or it is incremented by 1 and back through the loop again.

```php
1   <?
2   $connection = @mysql_connect("localhost", "root", "") or die(mysql_error());
3
4   $dbs = @mysql_list_dbs($connection) or die(mysql_error());
5
6   $db_list ="<ul>";
7
8   $i =0;
9
10  while ($i < mysql_num_rows($dbs)){
11      $db_names[$i] = mysql_tablename($dbs,$i);
12
13      $db_list .= "<li>$db_names[$i]";
14
15      $i++;
16  }
17
18  $db_list .="</ul>";
19  ?>
20
21  <HTML>
22  <HEAD>
23   <TITLE>MySQL Databases</TITLE>
24   </HEAD>
25  <BODY>
26   <P><strong>Databases on localhost</strong>:</P>
27
28   <? echo "$db_list"; ?>
29
30   </BODY>
31   </HTML>
```

On line 18 the list is closed and the block of PHP is closed on line 19.

Lines 21 to 31 is nothing new but is needed to display the results to the screen.

This next script is pretty much the same as the one above with the exception of this one will list the tables within each database. This is accomplished by adding a nested while loop within the first loop.

```php
1  <?
2  //connection code
3  $connection = @mysql_connect("localhost","root","") or die(mysql_error());
4
5  //get database list
6  $dbs = @mysql_list_dbs($connection) or die(mysql_error());
7
8  //start first bullet list
9  $db_list ="<ul>";
10 $db_num =0;
11
12 //loop through results of function
13 while ($db_num < mysql_num_rows($dbs)) {
14
15     //get database names and make each a bullet point
16     $db_names[$db_num] = mysql_tablename($dbs,$db_num);
17     $db_list .="<li>$db_names[$db_num]";
18
19     //get table names and start another bullet list
20     $tables = @mysql_list_tables($db_names[$db_num]) or die(mysql_error());
21     $table_list = "<ul>";
22     $table_num = 0;
23
24     //loop through results of function
25     while ($table_num < mysql_num_rows($tables)) {
26         //get table names and make each a bullet point
27         $table_names[$table_num] = mysql_tablename($tables, $table_num);
28         $table_list .= "<li>$table_names[$table_num]";
29         $table_num++;
30     }
31
32     //close inner bullet list and increment number to continue loop
33     $table_list .= "</ul>";
34     $db_list .= "$table_list";
35     $db_num++;
36 }
37
38 //close outer bullet list
39 $db_list .="</ul>";
40 ?>
41
42 <HTML>
43 <HEAD>
44 <TITLE>MySQL Tables</TITLE>
45 </HEAD>
46 <BODY>
47 <P><strong>Databases and tables on localhost</strong>:</P>
48
49 <? echo "$db_list"; ?>
50
51 </BODY>
52 </HTML>
```

Creating a Database

In this next script these two lines are used to create a new database called my_music. Everything else is the same as the first script. The mysql_query() function is used to find the new database created.

$sql = "CREATE DATABASE my_music";

$result = @mysql_query($sql,$connection) or die(mysql_error());

Run the dblist.php script again and you should see the my_music database.

Deleting a Database

There are very few changes to be made, change the CREATE to DROP and your line would look like this one.

$sql = "DROP DATABASE my_music";

Run the dblist.php script again and you should **not** see the my_music database.

Lab 7

1. Recreate the connection script – Research why a new user is denied access.
2. Recreate the listdb.php
3. Recreate the listtables.php
4. Recreating the Create database
5. Recreate the Delete database