

ITC 250/CPET 499 Web Systems
Nov. 3, 2016
Managing MySQL Database
Part 3 of 3

MySQL Topics of Discussion

- More Command-Line Interface
- phpMyAdmin
 - config.inc.php file : defineing a connection to the MySQL server
- Exporting and Importing Databases via phpMyAdmin
 - <http://localhost/phpmyadmin>
- Accessing MySQL using PHP Scripts
 - Basic steps
 - Connect MySQL database with PHP scripts
 - Query a database using PHP script
- MySQL Workbench

1. More Command-Line Interface

```
mysql -u root password mypass;      # login into root with mypass
mysql -u root -h;                   # prompt root user to enter mypass
```

Launch an interactive MySQL Command-Line Session

- Login to “mysql” database in the local host (-h 127.0.0.1), prompt for a password (-p)

```
Administrator@LIN-PC c:\xampp
# cd mysql

Administrator@LIN-PC c:\xampp\mysql
# mysql -h 127.0.0.1 -u root mysql -p
Enter password: *****
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 2
Server version: 10.1.16-MariaDB mariadb.org binary distribution

Copyright (c) 2000, 2016, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input
statement.

MariaDB [mysql]>
```

- SHOW TABLES

```
MariaDB [mysql]> SHOW TABLES;
+-----+
| Tables_in_mysql |
+-----+
```

```

| column_stats
| columns_priv
| db
| event
| func
| general_log
| gtid_slave_pos
| help_category
| help_keyword
| help_relation
| help_topic
| host
| index_stats
| innodb_index_stats
| innodb_table_stats
| ndb_binlog_index
| plugin
| proc
| procs_priv
| proxies_priv
| roles_mapping
| servers
| slave_master_info
| slave_relay_log_info
| slave_worker_info
| slow_log
| table_stats
| tables_priv
| time_zone
| time_zone_leap_second
| time_zone_name
| time_zone_transition
| time_zone_transition_type
| user
| userdb
+-----+
35 rows in set (0.02 sec)

MariaDB [mysql]>

```

References

- Chapter 3 Resetting the Root Password – Windows System, <https://dev.mysql.com/doc/mysql-windows-excerpt/5.6/en/resetting-permissions-windows.html>
- 6.1.4 Server Commands Option, <http://dev.mysql.com/doc/refman/5.7/en/server-options.html>

2. phpMyAdmin – config.inc.php file

a. Defining connection to the MySQL server

C:\xampp\phpMyAdmin\config.inc.php

```
...
```

```

/* Authentication type and info */
$cfg['Servers'][$i]['auth_type'] = 'cookie'; //was: 'config'
$cfg['Servers'][$i]['user'] = 'root';
$cfg['Servers'][$i]['password'] = '';
$cfg['Servers'][$i]['extension'] = 'mysqli';
$cfg['Servers'][$i]['AllowNoPassword'] = true;
$cfg['Lang'] = '';

/* Bind to the localhost ipv4 address and tcp */
$cfg['Servers'][$i]['host'] = '127.0.0.1';
$cfg['Servers'][$i]['connect_type'] = 'tcp';

/* User for advanced features */
$cfg['Servers'][$i]['controluser'] = 'pma';
$cfg['Servers'][$i]['controlpass'] = '';
...

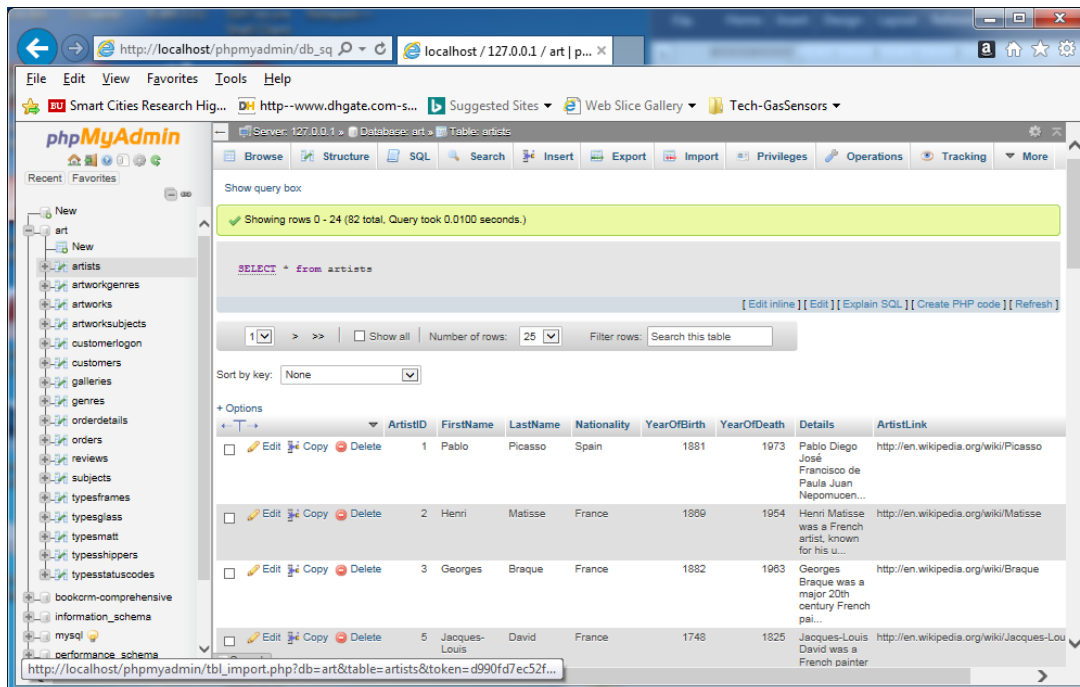
```

3. Importing MySQL Databases: Using Command Line

- Open “art.sql” with notepad or Notepad++
 - This is a phpMyAdmin SQL Dump file
- Login to phpMyAdmin
 - User name: root
 - Enter password: *****
- Import “art.sql”
 - In phpMyAdmin, click on the Database tab.
 - Create a database called “art”
 - Click “Import”, find and chose the “art.sql”, then click “Go”
 - Message: Import has been successfully finished 67 queries executed (art.sql)
- Click “New” to create another database
- Import “travel.sql”
 - In phpMyAdmin, click on the Database tab.
 - Create a database called “travel”
 - Click “Operations” to Rename “travel” as “travels”
 - Click “Import”, find and chose the “travels.sql”, then click “Go”
 - Message: Import has been successfully finished 2867 queries executed (travels.sql)
- Repeat the same process to Import “bookcrm-comprehensive” database,
 - ...
 - Message: Import has been successfully finished 1090 queries executed (bookcrm-comprehensive.sql)

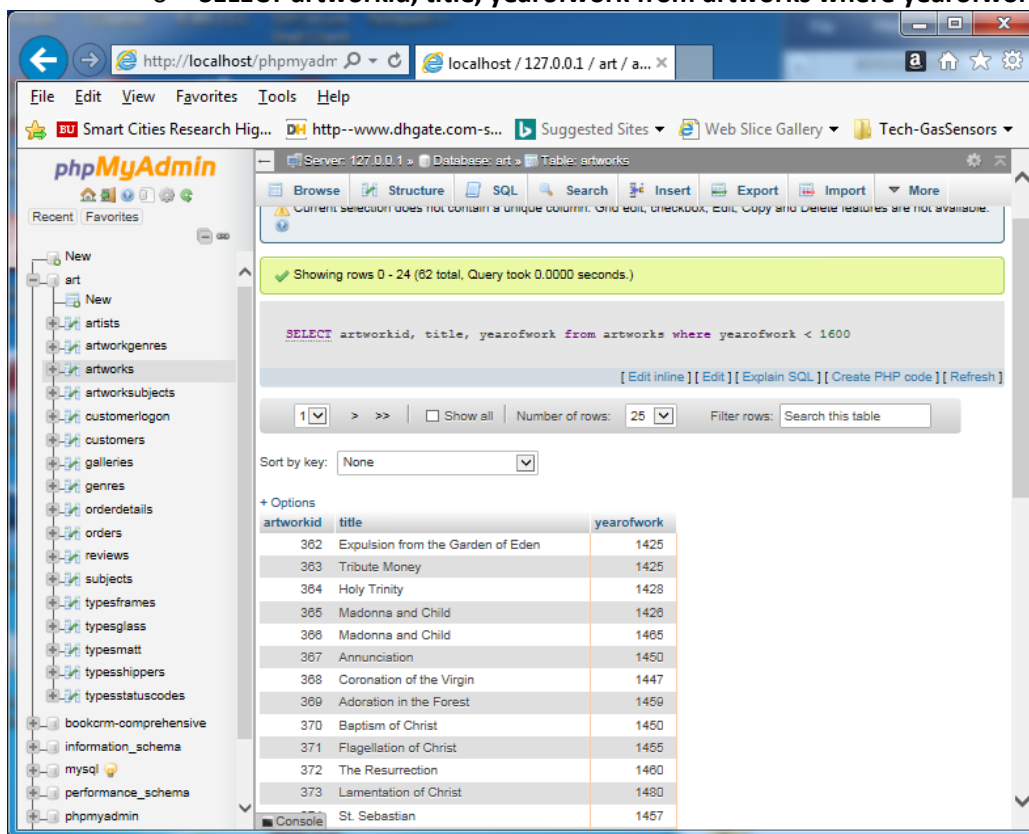
Query art.sql database via phpMyAdmin

- In phpMyAdmin, click on the “art”datasbae
- Click on “SQL”
- Enter the following command
 - SELECT * from artists;



0 Enter the following new query

0 SELECT artworkid, title, yearofwork from artworks where yearofwork < 1600;



4. Accessing MySQL with PHP Scripts for Web-based Application – basic steps

- a) Establish a connection to the MySQL database
- b) Check and handle connection error if exist
- c) Execute the SQL query statements for the needed database operations
- d) Prepare the results in the HTML page format
- e) Free computing resources and close connection

An Example: Connect and disconnect MySQL Database with PHP scripts

- Login to MySQL Database as root user
- Create Database (given a database name – “experiment”)
- Create a Folder in Htdocs (with a database name given above – “experiment”)
- Create database connection file in PHP (for example db_connection.php)
- Include ‘db_connection.php’ in your file
- Create a php file (check_connection.php) to check your database connection, include check_connection.php
- Open browser and go to “http://localhost/phpconnecttest/check_connection.php

PHP-MySQL Database Connection Testing

1. Prepare PHP scripts
2. Save them c:\xampp\htdocs\phpConnectTest
3. Open a browser to run the scrip
http://localhost/phpConnectTest/check_connection.php

```
<?php
/* check_connection.php */
include "db_connect_functions.php";

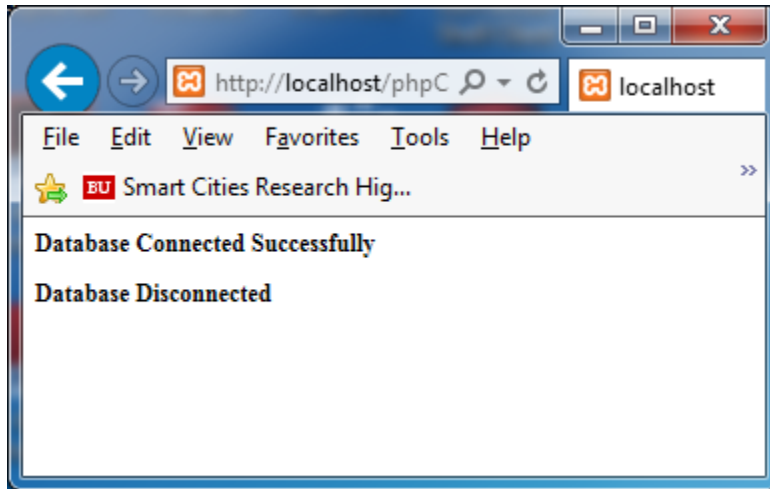
$conn = openConnect();
echo "<p><b>Database Connected Successfully </b></p>";
```

```
closeConnect($conn);
echo "<p><b> Database Disconnected</b></p>";
?>
```

```
<?php
/* db_connect_functions.php */
function openConnect()
{
    $DB_HOST = "localhost";
    $DB_USER = "root";
    $DB_PASSWORD = "yourpass";          // use your root password
    $DB_NAME = "testdb";    // database name

    $connHandler = new mysqli($DB_HOST, $DB_USER, $DB_PASSWORD, $DB_NAME)
        or die("<p> Error connecting to database: " . mysql_error() . "</p>");
    return $connHandler;
}
```

```
function closeConnect($conn)
{
    $conn -> close();
}
?>
```



Query “user” TBALE within mysql Database

Functions for Executing MySQL Statements using PHP Script

- `mysqli_stmt_execute(mysqli_stmt $stmt)`, <http://php.net/manual/en/mysqli-stmt.execute.php>
- **Prepare PHP scripts**
- **Save them c:\xampp\htdocs\phpConnectTest**
- **Open a browser to run the scrip**
- **`http://localhost/phpConnectTest/userTableQuery.php`**

```
<?php
/* rootuser_config.php */
define('DB_HOST', 'localhost');
define('DB_NAME', 'mysql');
define('DB_PASSWORD', 'givenpass');
define('DB_USER' = 'root');
?>
```

```
<?php
/* connectToDB.php */
function connectToDB($DB_HOST, $DB_USER, DB_PASSEORD, DB_NAME)
{
    $connHandler = new mysqli($DB_HOST, $DB_USER, $DB_PASSWORD,
$DB_NAME)
        or die("<p> Error connecting to database: ") . mysqli_error() .
"</p>";
    return $connHandler;
```

```

    }
function closeConnect($conn)
{
    $conn -> close();
}
?>

<?php
/* mysql Database, query "user" Table */
include('rootuser_config.php');
include("connectToDB.php");
$conn = openConnect(DB_HOST, DB_USER, DB_PASSWORD, DB_NAME)
    or die("<p> Error connecting to database: ") . mysql_error() .
"</p>";
echo "<p><b>Database Connected Successfully </b></p><br/>";
/* Ref: http://php.net/manual/en/mysql_stmt_execute.php */
$query = "SELECT Host, User, Password FROM user;";
// $stmt = mysqli_prepare($conn, $query);
// $results = mysqli_stmt_execute($stmt);
$i = 0;
echo "User Table in mysql Database <br>";
echo "Host          User          Password<br/>";
echo "-----<br/>";
if($results = mysqli_query($conn, $query))
{
    while ($row = mysqli_fetch_row($results))
    {
        printf("%s (%s, %s)\n", $row[0], $row[1], $row[2]);
        echo "<br/>";
    }
    mysqli_free_result($results);
}
/* Close connection */
closeConnect($conn);

    echo "<p><b> Database Disconnected</b></p>";

?>

<?php
if(!@mysql_connect('127.0.0.1', 'root', '*your default password*'))
{
    echo "mysql not connected ".mysql_error();
    exit;
}
echo 'great work';
?>

```

Query Results Displayed on Web Browser

