

# Comp 5120/6120 Project: Populating and Querying Database with SQL

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## Overview

- Activate your MySQL accounts
- Components of the term project
  1. Implement the interface
    - Fundamentals of PHP
    - Upload your PHP Files to Server
  2. Populate the database
  3. Execute the SQL queries
- Materials to Turn In

## MySQL account

- The website to apply for MySQL account  
[http://www.auburn.edu/oit/help\\_support/webpages/common\\_topics.php#request\\_mysql](http://www.auburn.edu/oit/help_support/webpages/common_topics.php#request_mysql)
- Use SSH tool to access mallard.duc.auburn.edu
- Connect to your MySQL  
`mysql -h web7 -u <username> -p`

## Components of the Project

- Implement a SQL input interface (30 points)
- Populate with all the given data (20 points)
- Write the correct SQL statements for the 20 given queries (50 points)

## How to implement the interface

- Implement an interface using PHP
- A simplest example, only with a text area to accept a SQL statement.

The screenshot shows a web form titled "Database Query Form by Guangyu Zou". Below the title is a horizontal line. Underneath the line, the text "Please Input SQL Statement Here" is displayed above a large, empty text input area. At the bottom of the form, there are two buttons: "Submit" and "Clear".

## Interface

- **Interface Requirements:**
  - Your interface should not accept SQL Drop statement.
  - For any other SQL statement, your interface should not only accept it, but also return the execution result.
    - A select statement will return the query result (including the attribute title for each column) and the number of rows found.
    - A create/delete/update/insert statement will display "Table Created/Updated", " X Row Inserted" or " X Row(s) Deleted" messages on your interface, where X is the number of rows affected.
  - An error message should be displayed if an incorrect SQL statement was submitted.

## Fundamental of PHP

- Connecting to MySQL

```
<?
    mysql_connect("web7", "gzzoooi", "*****");
    mysql_select_db("gzzoooidb");
?>
```

## Fundamental of PHP

- Post

```
<form method= "post" action="index.php">
<TEXTAREA name="sql_statement" rows=8 cols=80></TEXTAREA>
<INPUT type=submit value="Submit">
</form>

<?
    $sql = trim($_POST['sql_statement']);
?>
```

## Fundamental of PHP

- Get

```
<form method= "get" action="index.php">  
<TEXTAREA name="sql_statement" rows=8 cols=80></TEXTAREA>  
<INPUT type=submit value="Submit">  
</form>
```

```
<?  
    $sql = trim($_GET['sql_statement']);  
?>
```

## Fundamental of PHP

- Execute query

```
$result = mysql_query($sql);  
while($array = mysql_fetch_array($result ))  
{  
    for ($i = 0; $i < $num_fields; $i++)  
    {  
        echo $array[$i];  
    }  
}
```

## Tutorial of PHP

- <http://php.net/manual/en/tutorial.php>
- <http://www.w3schools.com/php/default.asp>

## Uploading PHP Files to Server

- WinSCP to log into mallard.auburn.edu
- Login by your userID and password
  - ./public\_html/
- Change the permission of the PHP file
  - chmod 644 index.php
- How to test?
  - [www.auburn.edu/~userID/fileName.php](http://www.auburn.edu/~userID/fileName.php)
  - <http://www.auburn.edu/~gzz0001/index.php>

## Populating the Database

- Database for an online bookstore
  - Create statement
    - Suppliers, Books, Subjects, OrderDetails, Customers, Orders, Employees, Shippers
  - Insert statement based on the data in project handout

## Execution of SQL Queries

- Please refer to the handout for the queries.
- Write the correct SQL statements for the 20 queries.
- Execute them through your interface

## Materials to Turn In (Checklist)

- The URL to access your interface at auburn.edu
  - <http://www.auburn.edu/~gzz0001/index.php>
- Your code to implement the interface.
- The SQL statements to create and populate the bookstore database.
- The SQL statement and the corresponding result for each given query.

## Thank you!

- Project details
  - [http://www.eng.auburn.edu/~weishinn/Comp6120/Term%20project\\_Fall2011.pdf](http://www.eng.auburn.edu/~weishinn/Comp6120/Term%20project_Fall2011.pdf)
- Homework 2
  - <http://www.eng.auburn.edu/~weishinn/Comp6120/COMP%205.6120%20HW2.pdf>
- Please start it early!