PHP Tutorial 6(a)
Using PHP with MySQL

Objectives

After completing this tutorial, the student should have learned;

- The basic in calling MySQL from PHP
- How to display data from MySQL using PHP
- How to insert data into MySQL using PHP

Material Preparation

1. *Download* "Tutorial PHP – Material" from elearning.
2. *Extract (unzip)* the file into a folder.
3. Login to gmm-student server using **WS_FTP**. Create a directory name **tutorialphp** in the **public_html** directory
4. All your lab exercises for this tutorial should be uploaded to the directory **tutorialphp** in the gmm-student server.

Important Links and Name

Web site => ~~http://gmm-student.fsksm.utm.my/~yourlogin/~~
MySQL management, phpMyAdmin is ready at ~~http://gmm-student.fsksm.utm.my/phpMyAdmin/~~
Host name is gmm-student.fsksm.utm.my

Connecting MySQL to PHP

In general, all communications between PHP and MySQL include all the steps as below;

1. **Establish a connection from a PHP program to the server MySQL**. This process is equivalent to login in to the MySQL. This can be done using WS_FTP or putty.

2. **Sending query** (e.g. select * from …) The PHP program plays a role in preparing and sending the instruction only, the processing part and SQL statement execution is performed by MySQL

3. **Accessing the result of a query**. This process usually involves looping due to the number of the query result is more than one. Nevertheless, the query that update data (e.g. insert into …, update ….) generally does not need looping.

4. **Closing the connection from MySQL.**

Establishing a connection to MySQL

This part of code will make a connection from a PHP page to the MySQL. For effective use, this code should be saved into a library file, since it will be used multiple times in different PHP pages. In order to do this, you can include this file in every PHP pages using require_once command.

Now, you can start creating a library file to connect to MySQL:

1. Copy the code below into a TextPad and save it as dbconn.php. Edit the part that has been highlighted.

```
<?php
    // login to MySQL Server from PHP
    $conn = mysql_connect("localhost","username","password");

    // If login failed, terminate the page (using functin 'die')
    if (!$conn) die("Error when connecting  to MySQL: ". mysql_error() );
```

```
      // Login was successful. Then choose a database to work with
      $selected = mysql_select_db("dbasename",$conn);

      // If required database cannot be used, terminate the page
      if (!$selected) die ("Cannot use database: " . mysql_error() );
  ?>
```

Code 1: *library* `dbconn.php` – making a connection to MySQL

2. Then upload the file into gmm-student server using WS_FTP. After that execute it in a web browser.

Creating table Student in MySQL

In this part, you are going to create a table Student in MySQL.

1. Copy the code below into a TextPad and save it as create_student.php. Edit the part that has been highlighted.

```
<?php
$con = mysql_connect("localhost","username","password");
if (!$con)
  {
  die('Could not connect: ' . mysql_error());
  }

echo "<br />Connection to database established!";

/* Create database is not allowed in comp_server!!!
   One db per person only!!!
if (mysql_query("CREATE DATABASE my_db",$con))
  {
  echo "<br />Database my_db created";
  }
else
  {
  die('<br />Error creating database: ' . mysql_error());
  }
*/

// Create table in my_db database
mysql_select_db("dbasename ", $con);

$sql = "CREATE TABLE Student
        (
              name varchar(100),
              ic varchar(12),
              matric varchar(8) not null,

              primary key (matric),
              unique (ic)
        )";

if (mysql_query($sql,$con))
{
  echo "<br />Table Student created";
}
else
{
  die('<br />Error creating table: ' . mysql_error());
}

mysql_close($con);
?>
```

Code 2: `create_student.php`

3. Then upload the file into gmm-student server using WS_FTP. After that execute it in a web browser. You can now log in to your phpMyAdmin and check whether a table Student is created or not.

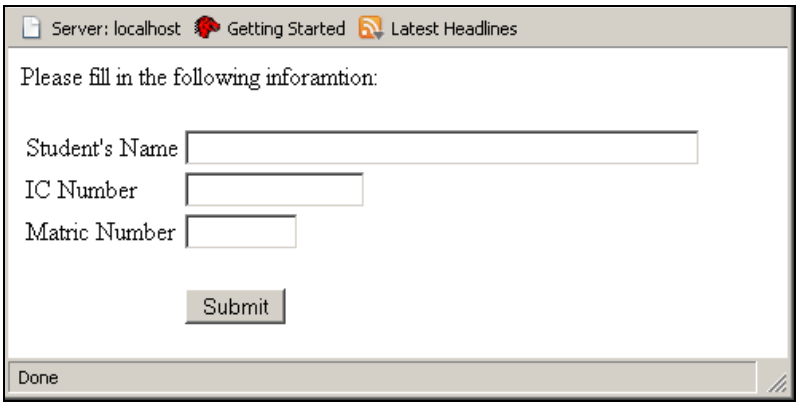
Inserting data into MySQL

This is the part where you are going to create a PHP code to insert data into table Student from the web browser. This part makes use of two files, one for creating a form for the data insertion into the table Student, and the other one is to process the data obtained from the form.

1. Copy the code below into a TextPad and save it as student_form.php. Pay attention to the part that has been highlighted.

```
<HTML>
<HEAD><TITLE>Inserting Data Into table Student</TITLE></HEAD>
<BODY>

Please fill in the following information:<br><br>

<FORM name="form1" method="POST" action="insert_student.php" >
<TABLE border="0">
        <TR>
         <TD>Student's Name</TD>
         <TD><INPUT type="text" name="studentName" size="50"></TD>
    </TR>
    <TR>
                <TD>IC Number</TD>
                <TD><INPUT type="text" name="studentIC" size="15"></TD>
        </TR>
        <TR>
                <TD>Matric Number</TD>
                <TD><INPUT type="" name="studentMatric" size="8" style="text-transform:uppercase;"></TD>
        </TR>
        <TR>
                <TD></TD><TD align="left"><BR><INPUT type="submit" name="button1" value="Submit"></TD>
        </TR>
</TABLE>
</FORM>
</BODY>
</HTML>
```

Code 3: `student_form.php`

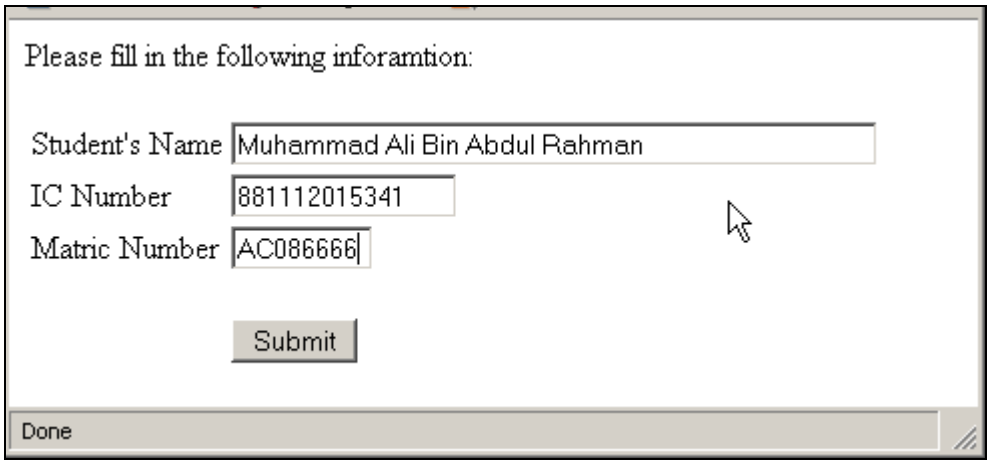


Output 1: Output for `student_form.php`

```
<HTML>
       <HEAD><TITLE>Insert Student</TITLE></HEAD>
       <BODY>

         <?php
            $studentName = $_POST["studentName"];
            $studentIC = ???
            $studentMatric = ???

            $studentMatric = strtoupper($studentMatric);  // convert matric to uppercase

            require_once ("dbconn.php");

            $sql = "insert into Student(name, ic, matric) " .  // don't forget this dot
                   "values(????)" ;

            $query = mysql_query( $sql );

            if (!$query) die("SQL query error encountered: ".mysql_error() );

            mysql_close($conn);
          ?>

          <B> Insertion was successfull</B>
          <BR><BR>
          <a href="view_student.php">Click here to list the table</a>

       </BODY>
</HTML>
```

Code 4: `insert_student.php`

1. Copy the code above into a TextPad and save it as insert_student.php. Complete the part that has been highlighted.
2. Then upload both files into the server using WS_FTP.
3. View the file student_form.php in a web browser. Input data using the keyboard and click Submit. You should something like Output below.
4. Yo can now check the content of your table Student in PHPmyAdmin.



Output: Inserting data into `student_form.php`

Output: After clicking the Submit button

Reading data from MySQL

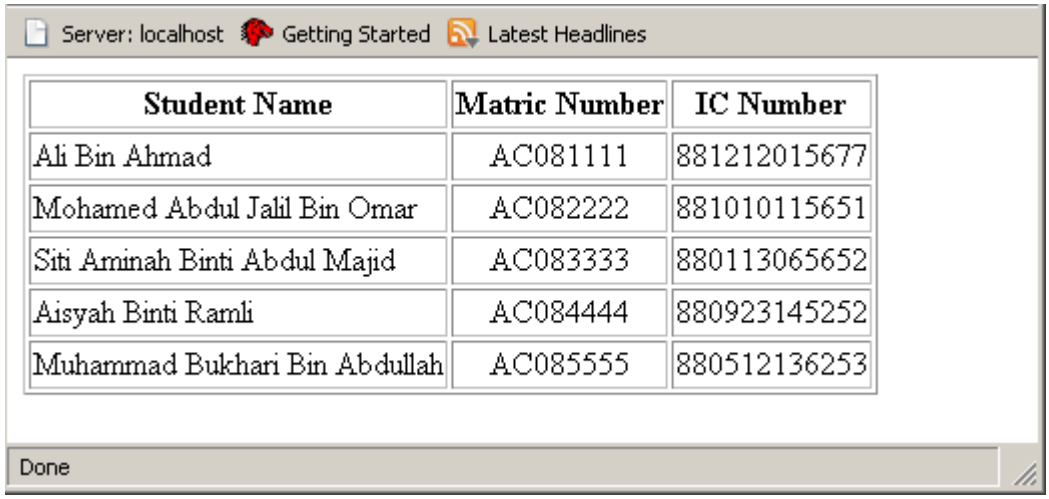
In this part you are going to preapare a PHP code that can access the table Student and display its content in the web browser.

1. Copy the code below into a TextPad and save it as view_student.php. Complete the part that has been highlighted.

```
<HTML>
       <HEAD><TITLE>Student List</TITLE><HEAD>
       <BODY>
       <TABLE BORDER="1">
          <TR><TH>Student Name</TH><TH>Matric Number</TH><TH>IC Number</TH></TR>
         <?php
            require_once ("dbconn.php"); //this is how you call the library file

            $query = mysql_query("select … from …..");//complete the statement

            if (!$query) die("SQL query error encountered :".mysql_error() );

            while ($record = mysql_fetch_array($query))
            {
              echo "<TR align=center>\n";
              echo "<TD align=left>", $record["name"], "</TD>",
                   "<TD>",????    "</TD>", //display the matric number here
                   "<TD>",????  "</TD>\n"; //display the ic number here
              echo "</TR>\n";
            }

            mysql_close($conn);
          ?>

       </TABLE>
       </BODY>
</HTML>
```

Code 5: `view_student.php`

2. Upload the file to the gmm-student server using WS_FTP and execute it in the web browser. You should see the content of the table Student.



Student Name	Matric Number	IC Number
Ali Bin Ahmad	AC081111	881212015677
Mohamed Abdul Jalil Bin Omar	AC082222	881010115651
Siti Aminah Binti Abdul Majid	AC083333	880113065652
Aisyah Binti Ramli	AC084444	880923145252
Muhammad Bukhari Bin Abdullah	AC085555	880512136253

Output: output for `view_student.php`