INTRODUCTION TO PHP AND MySQL – A PHP GUESTBOOK APPLICATION

This exercise demonstrates a popular application of **PHP** – a guestbook for a website – where visitors can leave comments. These are stored in a **MySQL** database and can be retrieved at any time for viewing in chronological order on a single page.

For this exercise, you will need to create a **MySQL** database. The **MySQL** database should be called **guestbookX** – where **X** is your unique identifier.

Creating a Guestbook Database Table

A guestbook application first requires a database table to store the messages that visitors will leave. This can be created directly in the **MySQL** monitor/console or with a **PHP** script.

The following script creates a table called **Guestbook** with fields for **ID**, **Name**, **Email Address** and **Comments** and an automatic **timestamp** entry of the date and time that the message was recorded.

The script needs to be run just once to build the **Guestbook** table.

1. Create a new folder in your **My PHP Sites** folder called **Guestbook**.

2. Create a new Dreamweaver site pointing to this folder. You will need to add Remote Info and Testing Server information, and create a new folder on the server **Guestbook** to which you will publish.

3. Open a new **PHP** file, and enter the following code:

```
<!doctype html>

<html>
<head>
    <meta charset="utf-8">
    <title> Create Guestbook Table </title>
</head>
<body>
    <?php
        $user = "XXXXX";
        $password = "XXXXX";
```

```php
    $database = "guestbookX";

    //connect to MySQL database
    $conn = mysql_connect("localhost", $user,$password)
    or die("Could not connect to MySQL");

    //select the database
    $rs = mysql_select_db($database, $conn)
    or die("Could not select database");

    //create the SQL query
    $query = "ID int(4) auto_increment, Name varchar(50),";
    $query.= "EMail varchar(50), Comments text, ";
    $query.= "Time timestamp(14), primary key(id)";
    $sql = "create table Guestbook($query)";

    //execute the query
    $rs = mysql_query ($sql);

    //confirm the result
    if($rs)
    {
        $msg = "<h3>Created Guestbook table</h3>";
    }
    else
    {
        $msg = "<h3>Could not create Guestbook table";
        $msg.= "<br />Does it already exist?</h3>";
    }
    echo($msg);
    ?>
</body>
</html>
```

Note: The **14-digit timestamp** represents **year(4)**, **month(2)**, **day number(2)**, **hours(2)**, **minutes(2)** and **seconds(2)** – in that order.

1.   Save your **PHP** file as **guestbook-create.php**.

2.   Publish your file, and view the published file in a browser.

You can confirm the creation and format of the **Guestbook** table in the **MySQL** console:
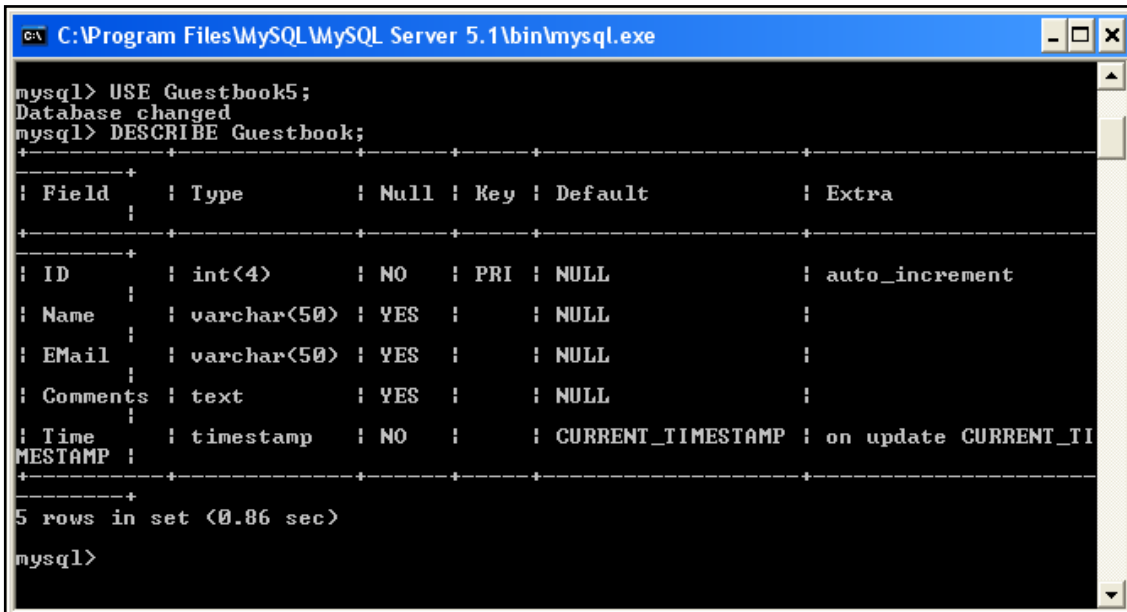
At the **mysql** prompt, enter:

USE GuestbookX;

Press the **Enter**/**Return** key.

DESCRIBE Guestbook;

Press the **Enter**/**Return** key.

Subsequent attempts to run this script will fail because the **Guestbook** table has already been created.

Signing the Guestbook

Once the **Guestbook** database table has been created, data can be stored in it by submission from an **HTML** form using **PHP**. When first loaded in a browser the following **PHP** script displays a form containing fields for **Name**, **Email** and **Comments**. Upon submission, the form will be displayed once more if any of the three fields are blank.

If the form has been completed correctly, the script will add the input entries to the corresponding columns of the **Guestbook** database table.

The page will display a confirmation and provide a hyperlink to another page where the **Guestbook** data can be seen.

Note: When the page is first loaded the **$submit** variable will not exist.

1. Open a new **PHP** file, and enter the following code:

```
<!doctype html>

<html>
<head>
    <meta charset="utf-8">
    <title> Sign the Guestbook </title>
</head>
```

```php
<body>
    <?php
        error_reporting(E_ALL ^ E_NOTICE);

        $self = $_SERVER['PHP_SELF'];
        $name = $_POST['name'];
        $email = $_POST['email'];
        $comments = $_POST['comments'];
        $submit = $_POST['submit'];

        //the HTML form
        $form = "<form action = \"$self\" method = \"post\">";
        $form. = "Name: <input type = \"text\" name = \"name\" ";
        $form. = "size = \"50\" value = \"$name\"> <br />";
        $form. = "Email: <input type = \"text\" name = \"email\" ";
        $form. = "size  =\"50\" value = \"$email\"> <br />";
        $form. = "Comments:<br />";
        $form. = "<textarea name = \"comments\" cols = \"45\" ";
        $form.= "rows = \"4\">$comments</textarea> <br>";
        $form.= "<input type = \"submit\" name = \"submit\" ";
        $form.= "value = \"Sign\"> </form>";

        //on first opening display the form
        if(!$submit)
        {
            $msg = $form;
        }
        else
            //redisplay a message and the form if incomplete
            if(!$name or !$email or !$comments)
            {
                $msg = "<b>Please complete all fields</b><br /><br />";
                $msg. = $form;
            }
            else
            //add the form data to the guestbook database table
            {
                $user = "XXXXX";
                $password = "XXXXX";
                $database = "guestbookX";

                //connect to MySQL
```

```php
$conn = mysql_connect("localhost", $user,$password)
or die("Count not connect to MySQL database");

//select the database
$rs = mysql_select_db($database,$conn)
or die("Could not select database");

//create the SQL query
if($name and $comments)
{
    $sql = "insert into guestbook (Name, EMail, Comments)
    values (\"$name\",\"$email\",\"$comments\")";
    $rs = mysql_query($sql,$conn)
    or die ("Could not execute SQL query");
}

//confirm the entry and display a link to view guestbook
if($rs)
{
    $msg = "<h3>Thank you - your entry has been saved.</h3>";
    $msg. = "<h3><a href = \"guestbook-view.php\">";
    $msg.= "View My Guestbook</a></h3>";
}
}
echo($msg);
?>
</body>
</html>
```
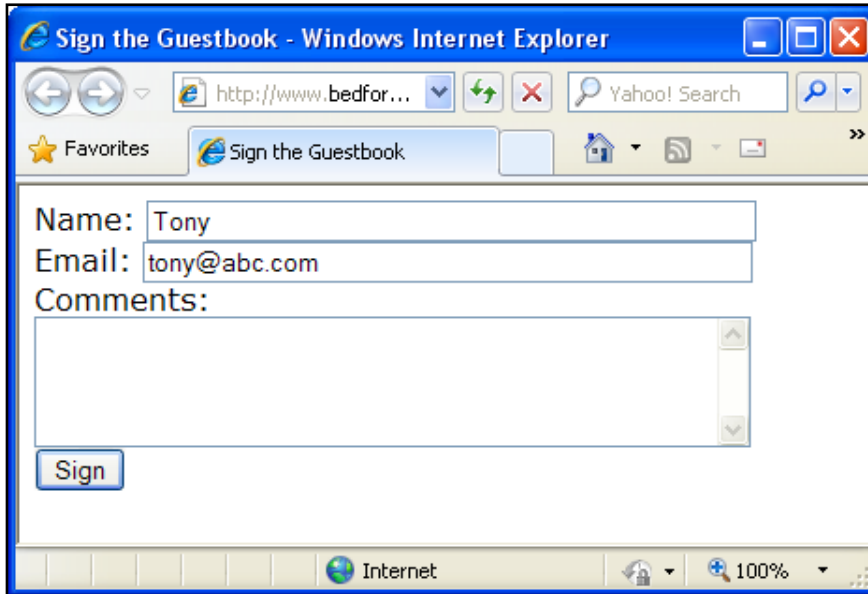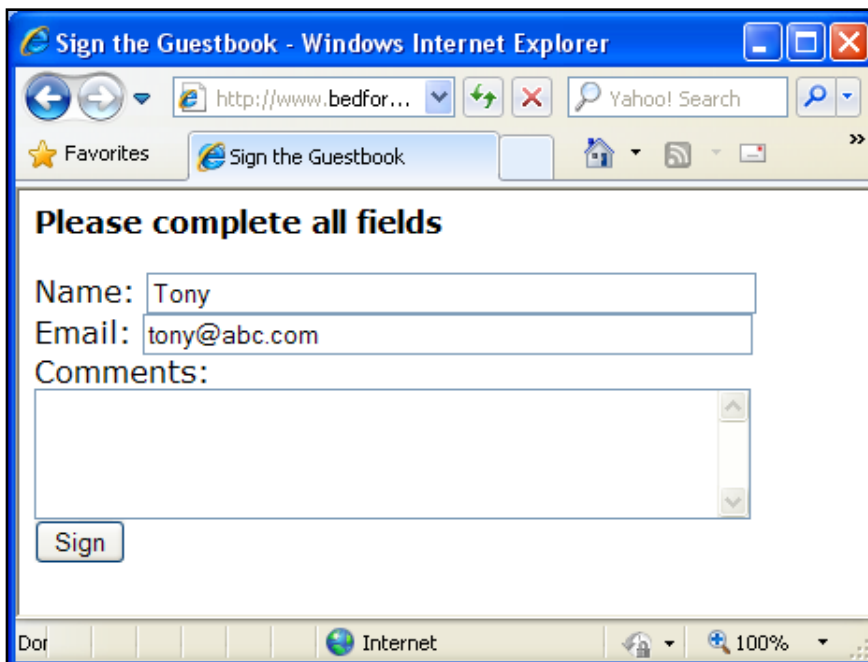
2.   Save your **PHP** file as **guestbook-sign.php**.

3.   Publish your file, and view the published file in a browser.
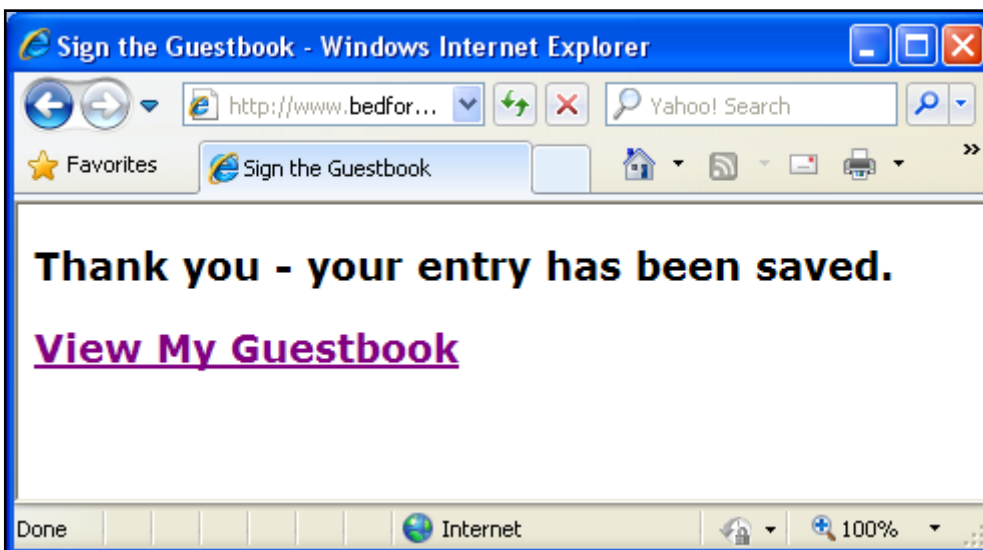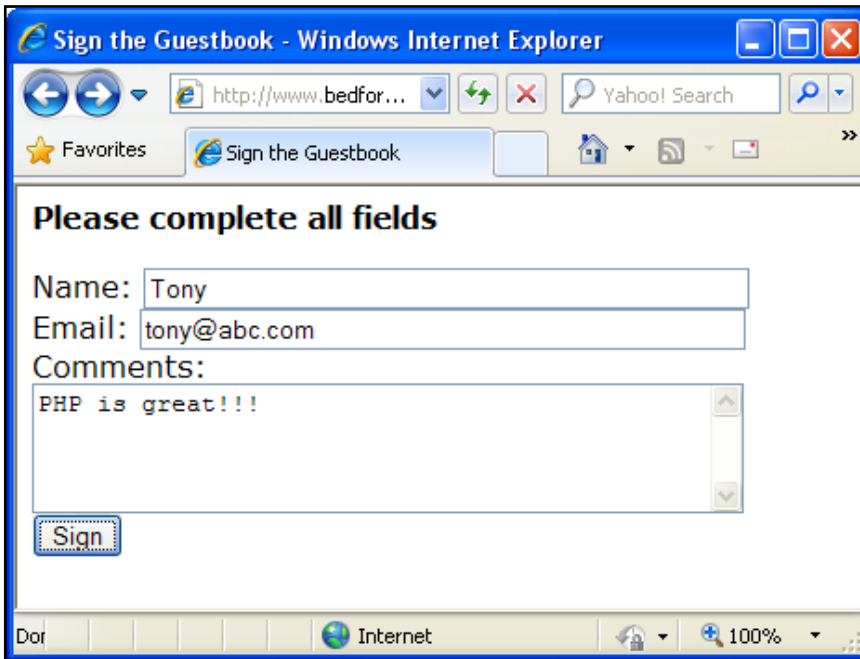
4.   Enter a **Name** and **Email**, and click **Sign**.

The form is redisplayed after submission of an incomplete form – there is no entry in the **comments** field. Notice that the previous entries are retained by assigning their **PHP** variable values to the form's **HTML** value attributes.

When the form is submitted with entries in all fields, the data is added to the **Guestbook** database table and a confirmation is displayed.
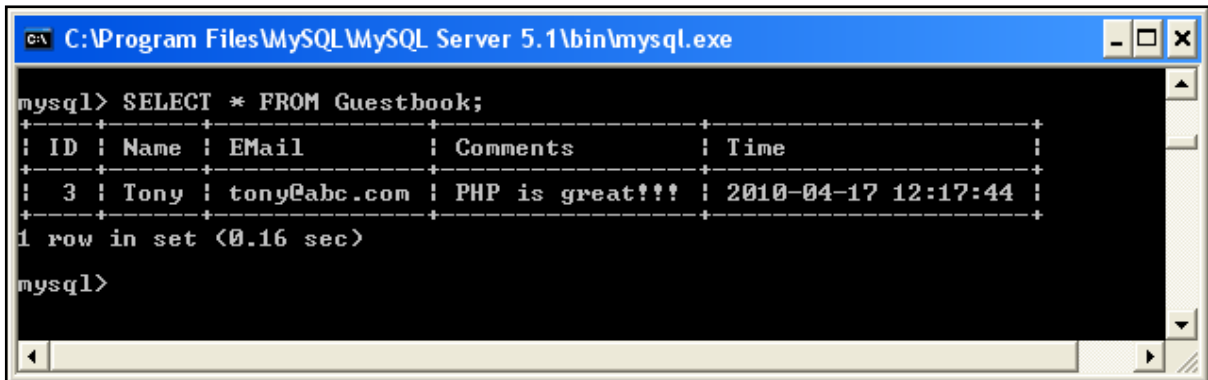
The record can now be viewed in the **MySQL** console.

At the **mysql** prompt, enter:

SELECT * FROM Guestbook;

Press the **Enter**/**Return** key.

```
C:\Program Files\MySQL\MySQL Server 5.1\bin\mysql.exe                    _ □ ✕

mysql> SELECT * FROM Guestbook;
+----+------+--------------+-----------------+---------------------+
| ID | Name | EMail        | Comments        | Time                |
+----+------+--------------+-----------------+---------------------+
|  3 | Tony | tony@abc.com | PHP is great!!! | 2010-04-17 12:17:44 |
+----+------+--------------+-----------------+---------------------+
1 row in set (0.16 sec)

mysql>
```

Note: Data is added automatically to the **ID** and **Time** fields.

Viewing the Guestbook

Following the link on **guestbook-sign.php** loads the **guestbook-view.php** script. This extracts the data from each field of the latest **three** records in the **Guestbook** database table – arranged in descending time order.

The script writes an **HTML** table for each record and displays the stored **name**, **email address**, **comments** and **entry time**.

1.	Open a new **PHP** file, and enter the following code:

```
<!doctype html>

<html>
<head>
    <title>View Guestbook</title>
    <meta charset="utf-8">
</head>
<body>
    <h3>Latest Guestbook entries...</h3>
    <?php
        error_reporting(E_ALL ^ E_NOTICE);

        //connect to MySQL
        $user = "XXXXX";
        $password = "XXXXX";
        $database = "guestbookX";
```

```php
$rs = mysql_connect( "localhost", $user , $password )
or die( "Could not connect to MySQL" );

//select the database
$rs = mysql_select_db( $database )
or die("Could not select MySQL database");

//create the SQL query
$sql = "select * from guestbook order by time desc limit 3";

//execute the query
$rs = mysql_query( $sql )
or die("Could not execute SQL query");

//loop through all records
while($row = mysql_fetch_array( $rs))
{
?>
    <table border = "1" width = "450">
    <tr>
    <td><b>Name:</b> <?php echo $row["Name"]; ?></td>
    <td><b>Email:</b> <a href = "mailto:<?php echo $row["EMail"]; ?>">
    <?php echo $row["EMail"]; ?></a> </td>
    </tr>
    <tr>
    <td colspan = "2">Date: <?php echo $row["Time"]; ?></td>
    </tr>
    <tr>
    <td colspan="2"><b>Comments:</b> <?php echo $row["Comments"];
    ?></td>
    </tr>
    </table>
    <br />
<?php } ?>
</body>
</html>
```
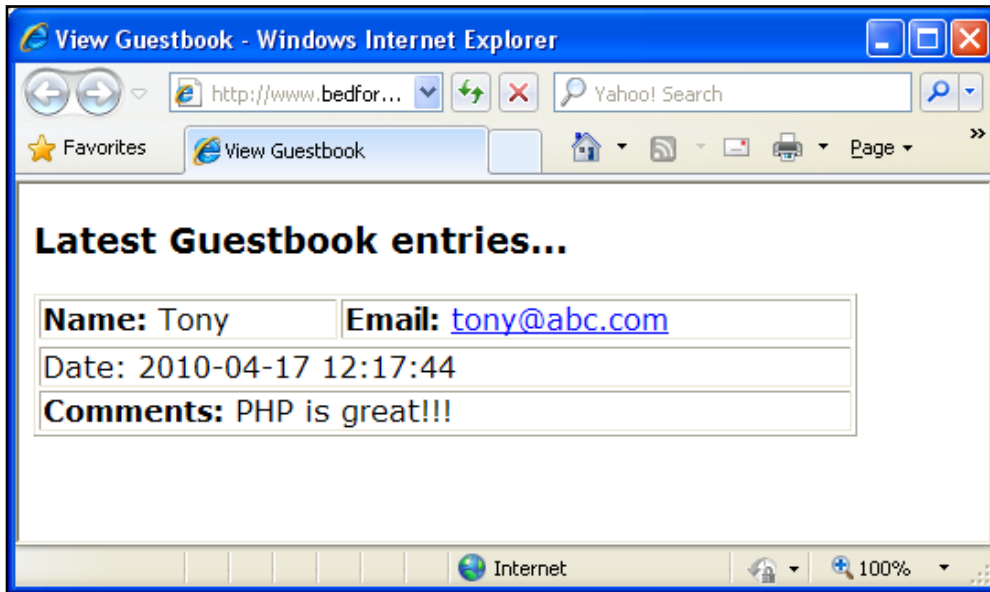
2.   Save your **PHP** file as **guestbook-view.php**.

3.   Publish your file, and view the published file in a browser.

The **SQL** query in this example will extract data from only the latest **three** entries because the **SQL limit** specifies a value of **3**.

Even with ten entries added to the **Guestbook** database table, the script generates **HTML** tables for only the last three entries.

The visitor's email address is formatted as a link with the **mailto:** protocol to make email response simpler. Clicking a hyperlink that uses the **mailto:** protocol will open your default email client application with the target address already completed – just type a reply and then send the email response.

4.   View **guestbook-sign.php** in your browser and type in some more guestbook entries.

5.   Access **guestbook-view.php** and view these entries.