CST463 - WEB PROGRAMMING

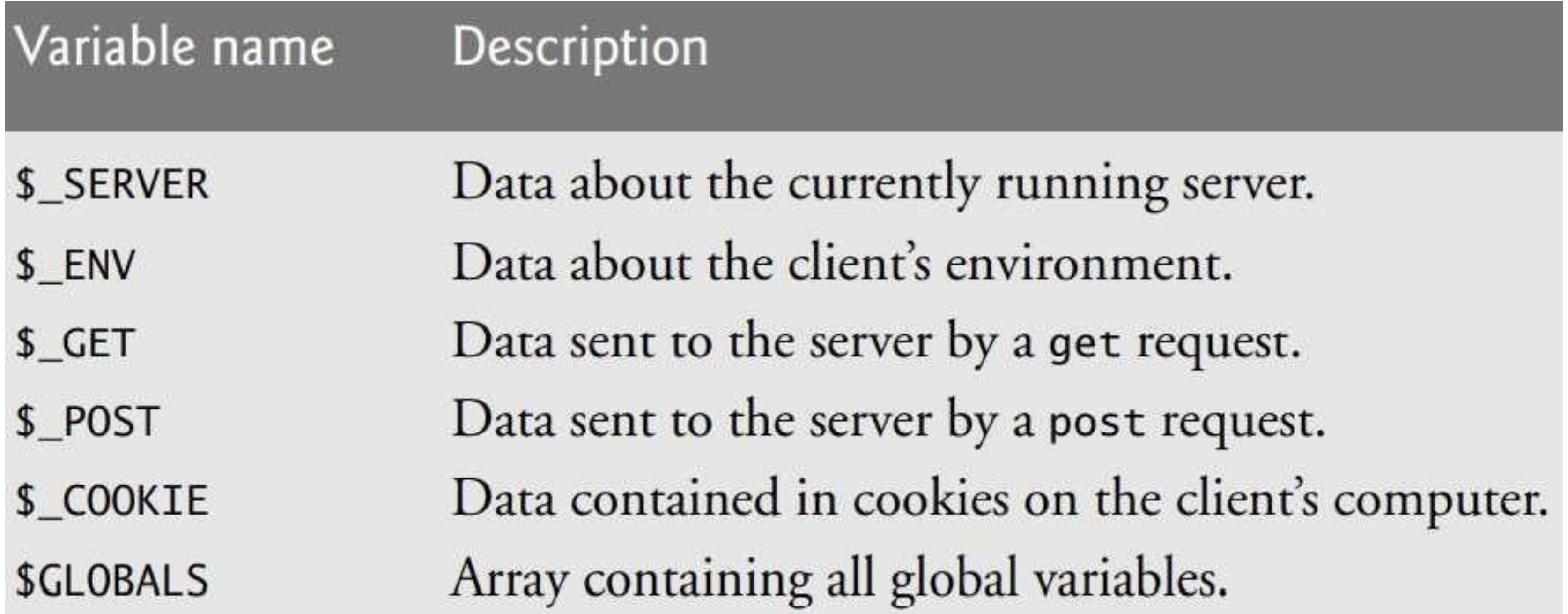
Module 4 (CO3, Cognitive Knowledge Level: Apply)

- Form processing and Business Logic
- Cookies- Sessions
- MySQL Integration-Connecting to MySQL with PHP
- Performing CREATE, DELETE, INSERT, SELECT and UPDATE operations on MySQL table
- Working with MySQL data
- Reading from Database-Dynamic Content.

Form processing and Business Logic

Form processing

- Superglobal arrays are associative arrays predefined by PHP that hold variables acquired from user input, the environment or the web server, and are accessible in any variable scope. Some of PHP’s superglobal arrays



Variable name	Description
$_SERVER	Data about the currently running server.
$_ENV	Data about the client’s environment.
$_GET	Data sent to the server by a get request.
$_POST	Data sent to the server by a post request.
$_COOKIE	Data contained in cookies on the client’s computer.
$GLOBALS	Array containing all global variables.

- The arrays $_GET and $_POST retrieve information sent to the server by HTTP get and post requests, respectively, making it possible for a script to have access to this data when it loads another page

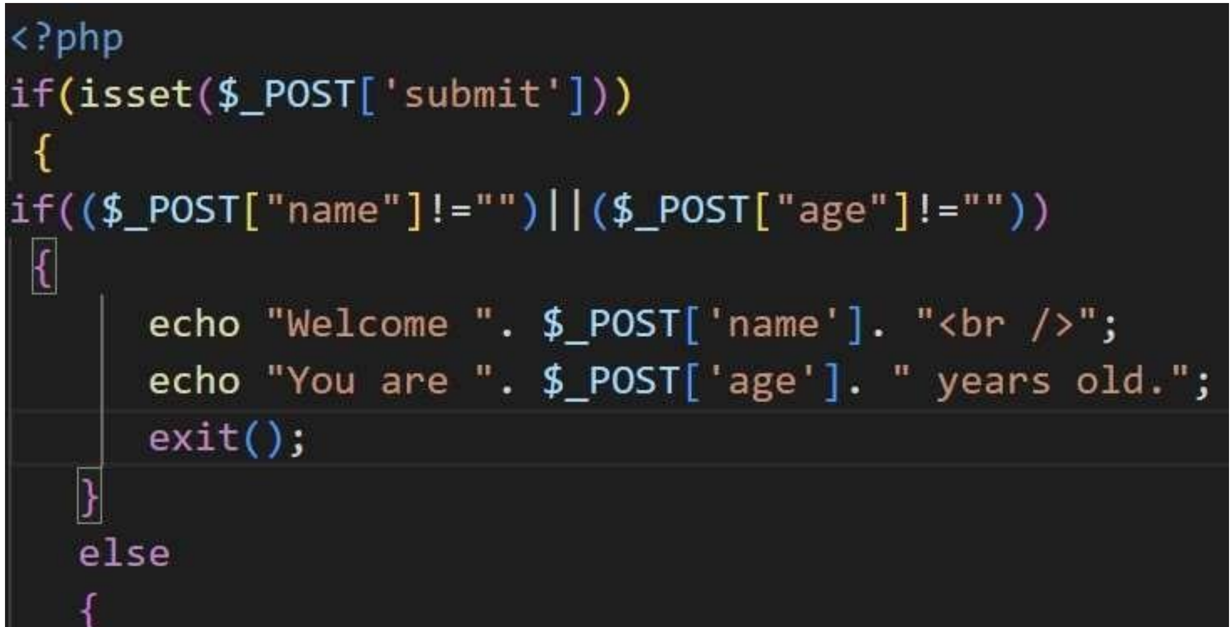
Form processing

- when PHP is used for form handling, the PHP script is embedded in an XHTML document, like other uses of PHP.
- The recommended approach is to use the implicit arrays for form values, $_POST and $_GET.
- These arrays have keys that match the form element names and values that were input by the client.
- For example, if a form has a text box named phone and the form method is POST, the value of that element is available in the PHP script as follows:

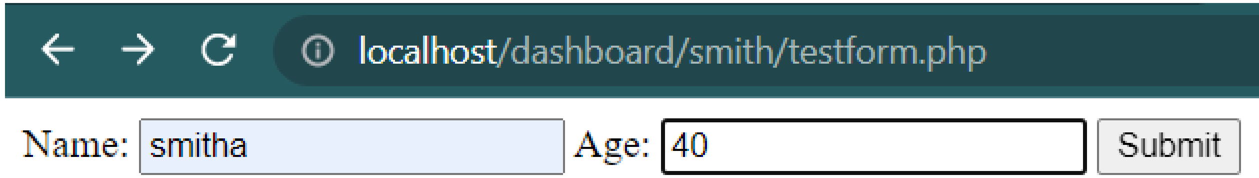
```
$_POST["phone"]
```

- The built-in $_GET function is used to collect values from a form sent with method="get".
- Information sent from a form with the GET method is visible to everyone and has limits on the amount of information to send (max. 100 characters).

Form processing $_POST Function

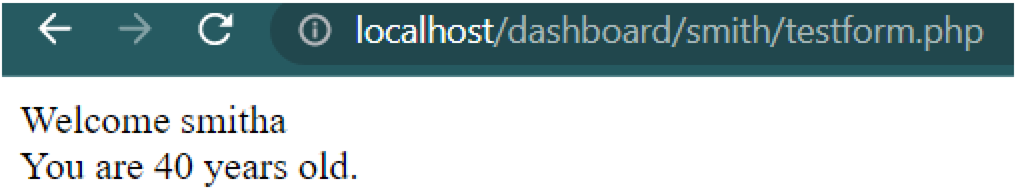


```
<?php
if(isset($_POST['submit']))
 {
if(($_POST["name"]!="")||($_POST["age"]!=""))
 {
     echo "Welcome ". $_POST['name']. "<br />";
     echo "You are ". $_POST['age']. " years old.";
     exit();
   }
   else
   {
    print "invalid";
   }
  }
else
{
?>
```



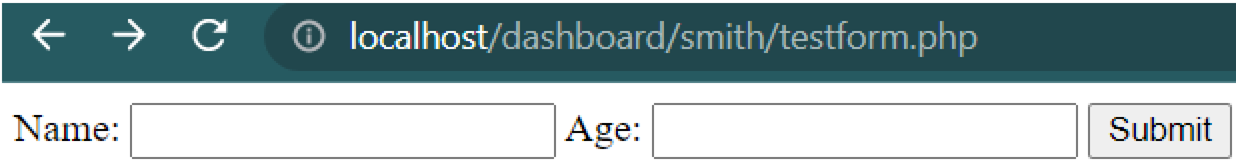
localhost/dashboard/smith/testform.php

Name: smitha Age: 40 Submit



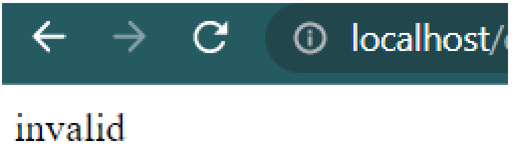
localhost/dashboard/smith/testform.php

Welcome smitha
You are 40 years old.



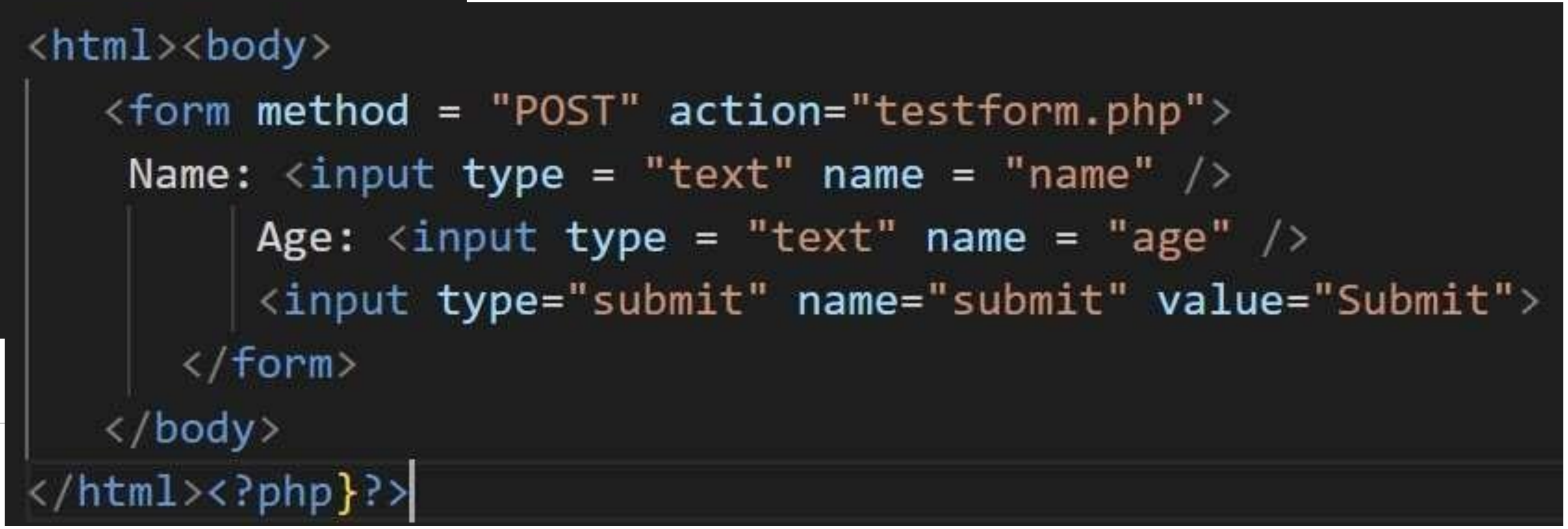
localhost/dashboard/smith/testform.php

Name: Age: Submit



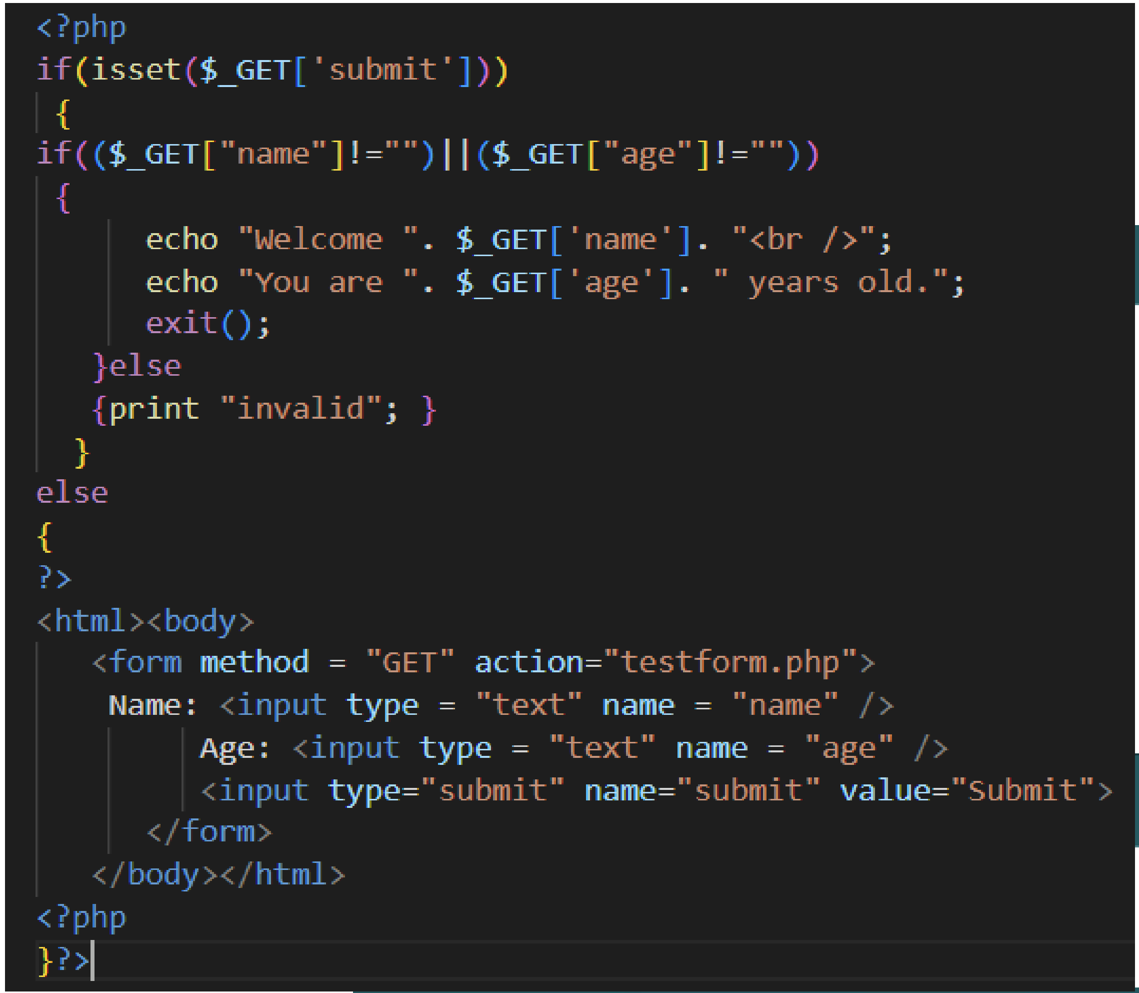
localhost/

invalid

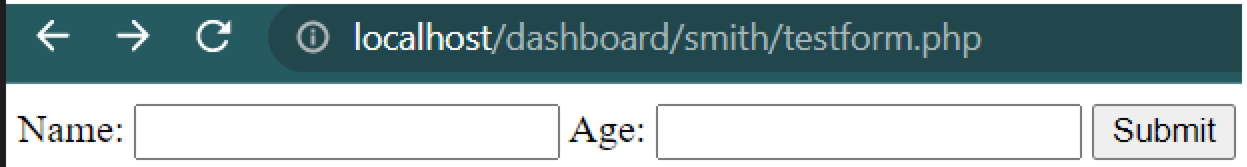


```
<html><body>
   <form method = "POST" action="testform.php">
    Name: <input type = "text" name = "name" />
          Age: <input type = "text" name = "age" />
          <input type="submit" name="submit" value="Submit">
      </form>
   </body>
</html><?php}?>
```

Form processing $_GET Function

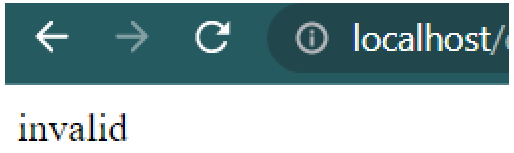


```
<?php
if(isset($_GET['submit']))
 {
if(($_GET["name"]!="")||($_GET["age"]!=""))
 {
      echo "Welcome ". $_GET['name']. "<br />";
      echo "You are ". $_GET['age']. " years old.";
      exit();
   }else
   {print "invalid"; }
  }
else
{
?>
<html><body>
   <form method = "GET" action="testform.php">
    Name: <input type = "text" name = "name" />
         Age: <input type = "text" name = "age" />
         <input type="submit" name="submit" value="Submit">
      </form>
   </body></html>
<?php
}?>
```



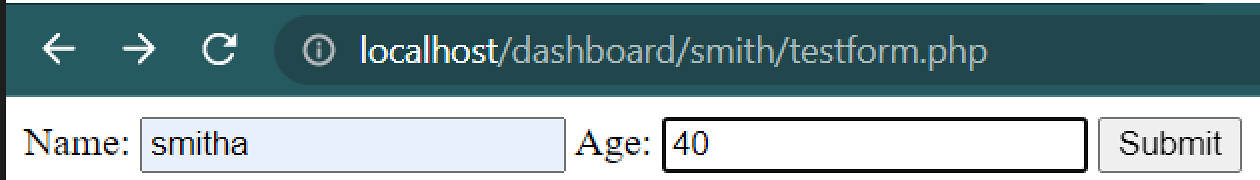
localhost/dashboard/smith/testform.php

Name: [ ] Age: [ ] Submit



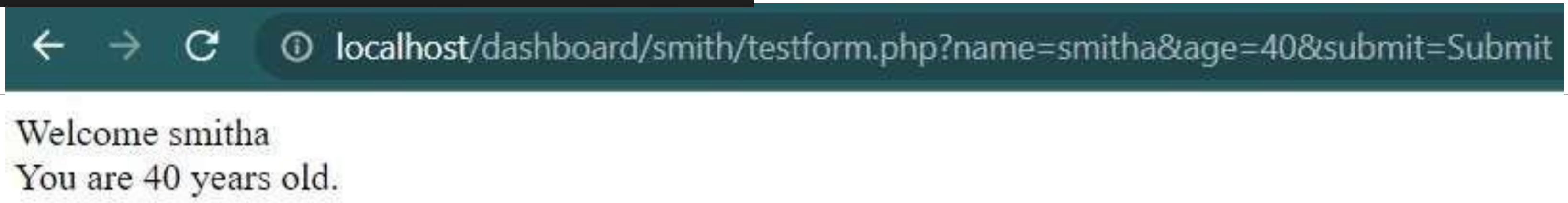
localhost/

invalid



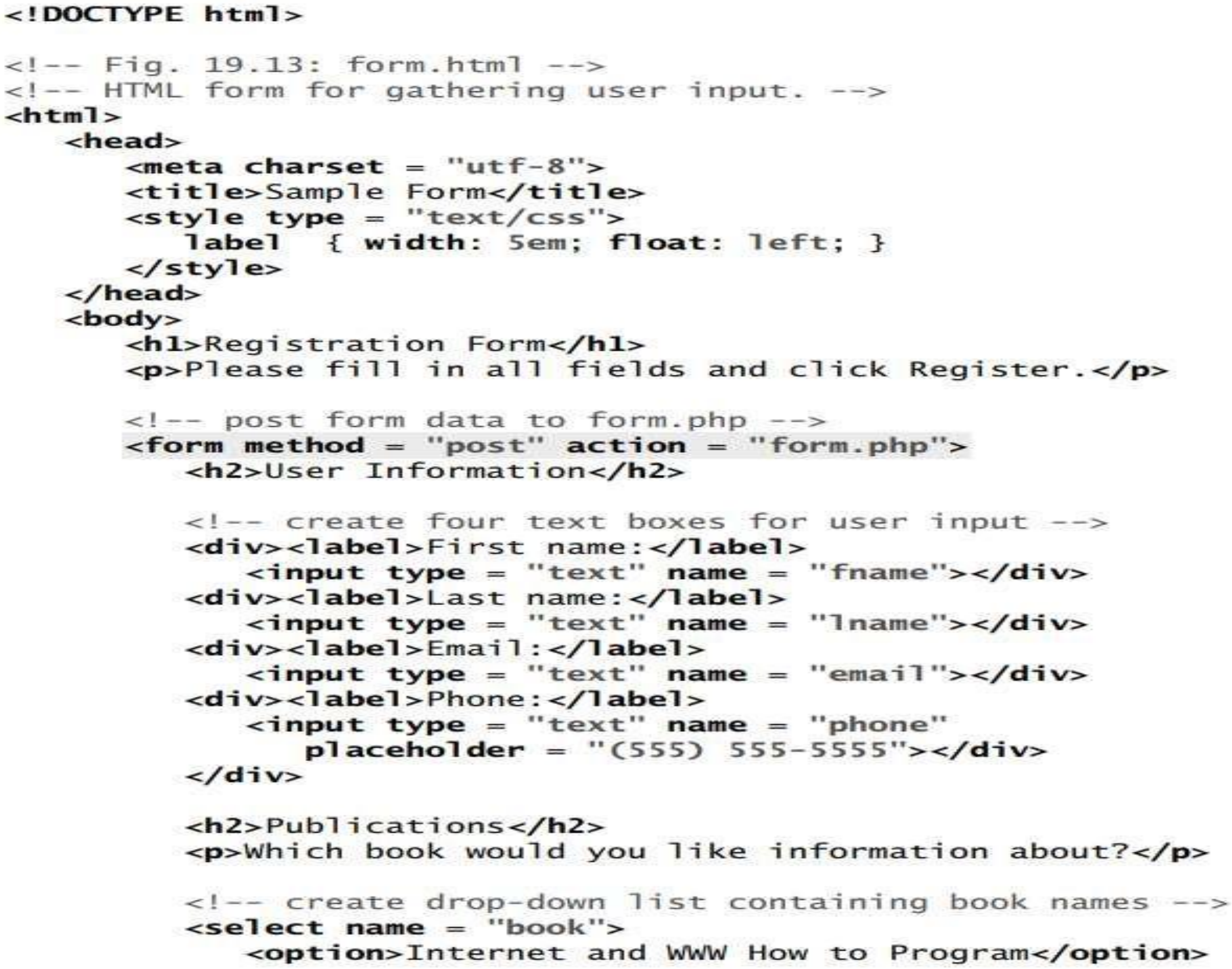
localhost/dashboard/smith/testform.php

Name: smitha Age: 40 Submit



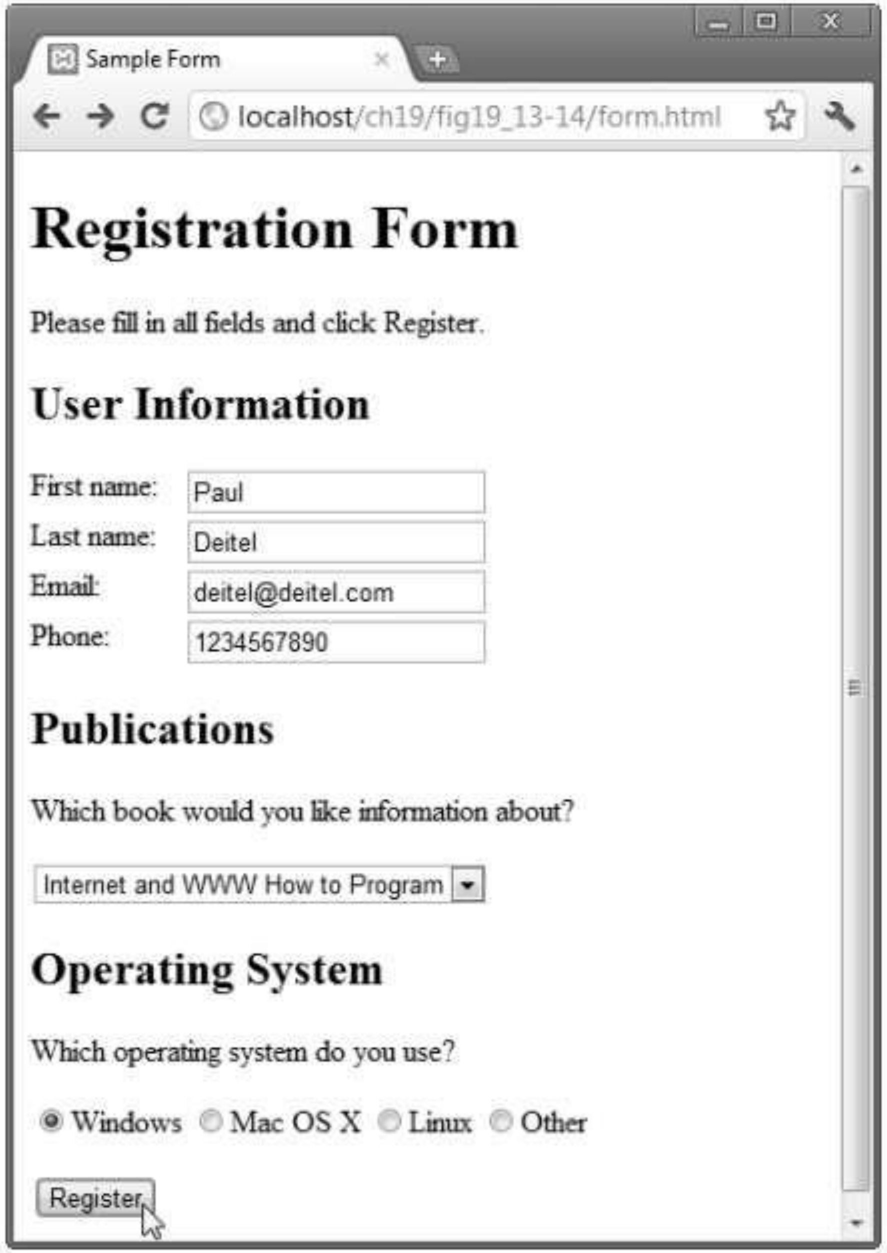
localhost/dashboard/smith/testform.php?name=smitha&age=40&submit=Submit

Welcome smitha
You are 40 years old.



```
<!DOCTYPE html>

<!-- Fig. 19.13: form.html -->
<!-- HTML form for gathering user input. -->
<html>
   <head>
      <meta charset = "utf-8">
      <title>Sample Form</title>
      <style type = "text/css">
         label  { width: 5em; float: left; }
      </style>
   </head>
   <body>
      <h1>Registration Form</h1>
      <p>Please fill in all fields and click Register.</p>

      <!-- post form data to form.php -->
      <form method = "post" action = "form.php">
         <h2>User Information</h2>

         <!-- create four text boxes for user input -->
         <div><label>First name:</label>
            <input type = "text" name = "fname"></div>
         <div><label>Last name:</label>
            <input type = "text" name = "lname"></div>
         <div><label>Email:</label>
            <input type = "text" name = "email"></div>
         <div><label>Phone:</label>
            <input type = "text" name = "phone"
               placeholder = "(555) 555-5555"></div>
         </div>

         <h2>Publications</h2>
         <p>Which book would you like information about?</p>

         <!-- create drop-down list containing book names -->
         <select name = "book">
            <option>Internet and WWW How to Program</option>
            <option>C++ How to Program</option>
            <option>Java How to Program</option>
            <option>Visual Basic How to Program</option>
         </select>

         <h2>Operating System</h2>
         <p>Which operating system do you use?</p>

         <!-- create five radio buttons -->
         <p><input type = "radio" name = "os" value = "Windows"
               checked>Windows
            <input type = "radio" name = "os" value = "Mac OS X">Mac OS
            <input type = "radio" name = "os" value = "Linux">Linux
            <input type = "radio" name = "os" value = "Other">Other</p>

         <!-- create a submit button -->
         <p><input type = "submit" name = "submit" value = "Register"></
      </form>
   </body>
</html>
```

The form is filled out with an incorrect phone number



Registration Form

Please fill in all fields and click Register.

User Information

First name:	Paul
Last name:	Deitel
Email:	deitel@deitel.com
Phone:	1234567890

Publications

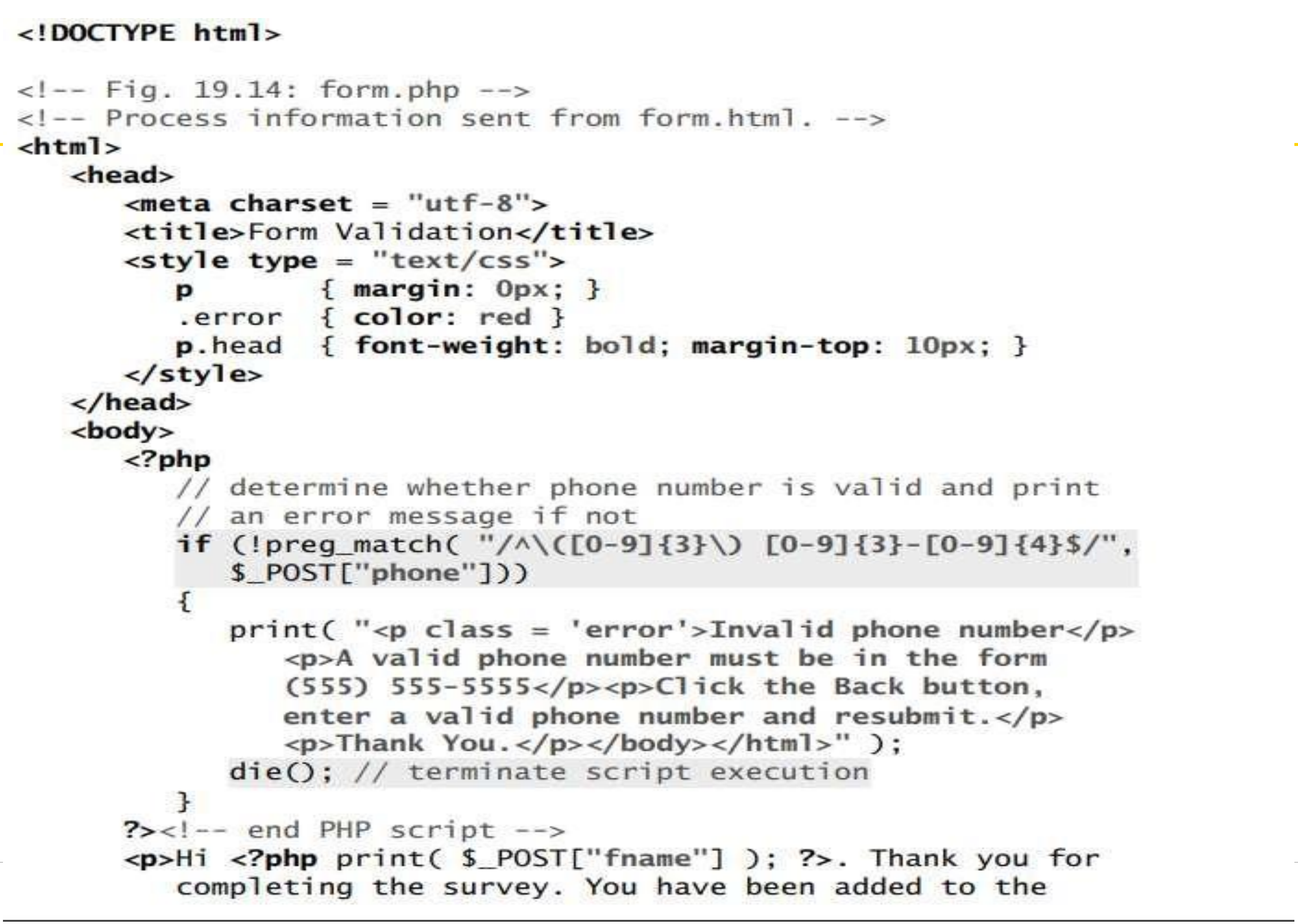
Which book would you like information about?

Internet and WWW How to Program

Operating System

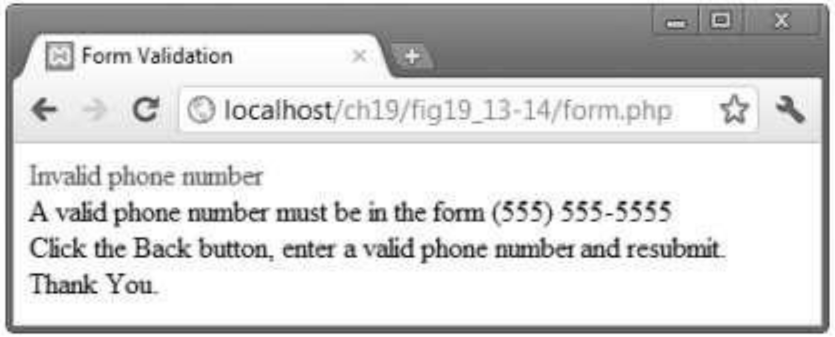
Which operating system do you use?

● Windows ○ Mac OS X ○ Linux ○ Other



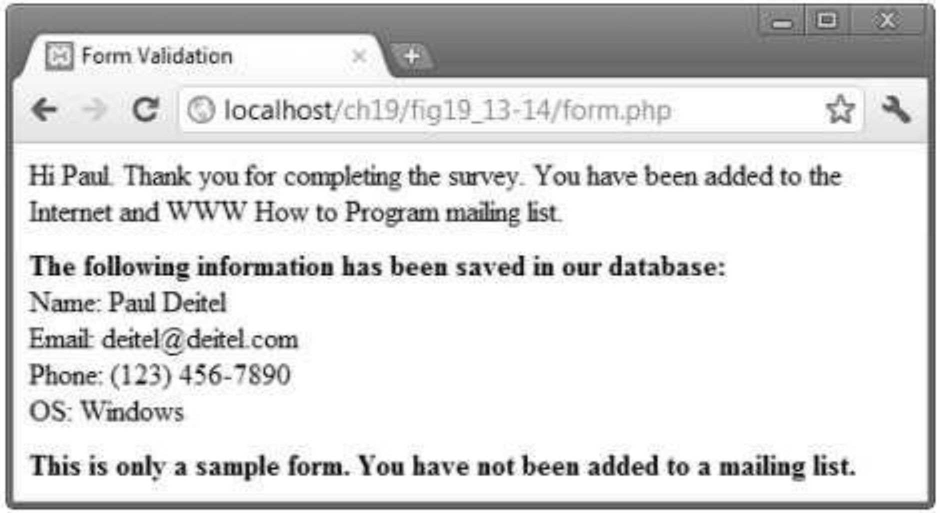
```
<!DOCTYPE html>

<!-- Fig. 19.14: form.php -->
<!-- Process information sent from form.html. -->
<html>
   <head>
      <meta charset = "utf-8">
      <title>Form Validation</title>
      <style type = "text/css">
         p        { margin: 0px; }
         .error   { color: red }
         p.head   { font-weight: bold; margin-top: 10px; }
      </style>
   </head>
   <body>
      <?php
         // determine whether phone number is valid and print
         // an error message if not
         if (!preg_match( "/^\([0-9]{3}\) [0-9]{3}-[0-9]{4}$/",
            $_POST["phone"]))
         {
            print( "<p class = 'error'>Invalid phone number</p>
               <p>A valid phone number must be in the form
               (555) 555-5555</p><p>Click the Back button,
               enter a valid phone number and resubmit.</p>
               <p>Thank You.</p></body></html>" );
            die(); // terminate script execution
         }
      ?><!-- end PHP script -->
      <p>Hi <?php print( $_POST["fname"] ); ?>. Thank you for
         completing the survey. You have been added to the
      <?php print( $_POST["book"] ); ?>mailing list.</p>
   <p class = "head">The following information has been saved
      in our database:</p>
   <p>Name: <?php print( $_POST["fname"] );
      print( $_POST["lname"] ); ?></p>
   <p>Email: <?php print( "$email" ); ?></p>
   <p>Phone: <?php print( "$phone" ); ?></p>
   <p>OS: <?php print( $_POST["os"] ); ?></p>
   <p class = "head">This is only a sample form.
      You have not been added to a mailing list.</p>
</body>
</html>
```

a) Submitting the form in Fig. 19.13 redirects the user to `form.php`, which gives appropriate instructions if the phone number is in an incorrect format



Invalid phone number
A valid phone number must be in the form (555) 555-5555
Click the Back button, enter a valid phone number and resubmit.
Thank You.

b) The results of form.php after the user submits the form in Fig. 19.13 with a phone number in a valid format



Hi Paul. Thank you for completing the survey. You have been added to the Internet and WWW How to Program mailing list.

The following information has been saved in our database:
Name: Paul Deitel
Email: deitel@deitel.com
Phone: (123) 456-7890
OS: Windows

This is only a sample form. You have not been added to a mailing list.

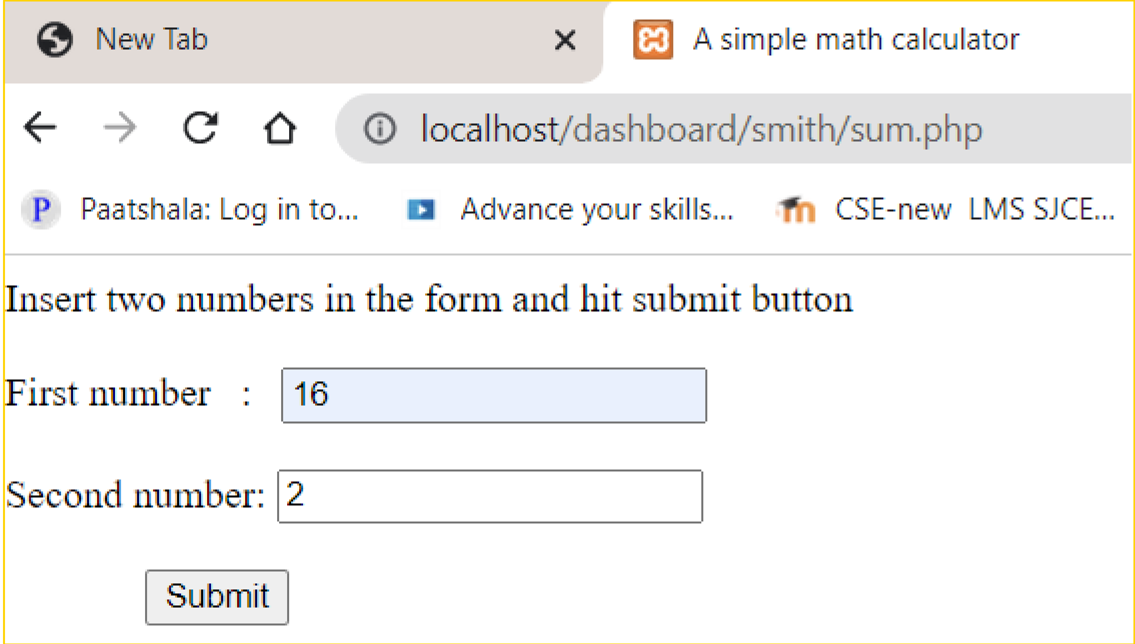
Use business logic to ensure that invalid information is not stored in databases.

Validate important or sensitive form data on the server, since JavaScript may be disabled by the client.

Some data, such as passwords, must always be validated on the server side

Simple PHP Program to generate a simple calculator

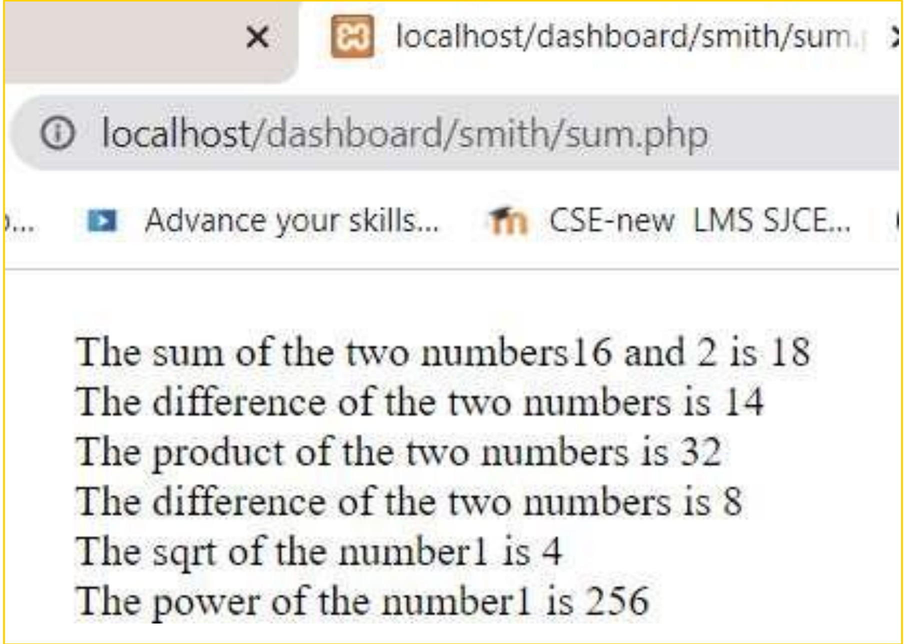
- To find basic mathematical operations on two numbers



Insert two numbers in the form and hit submit button

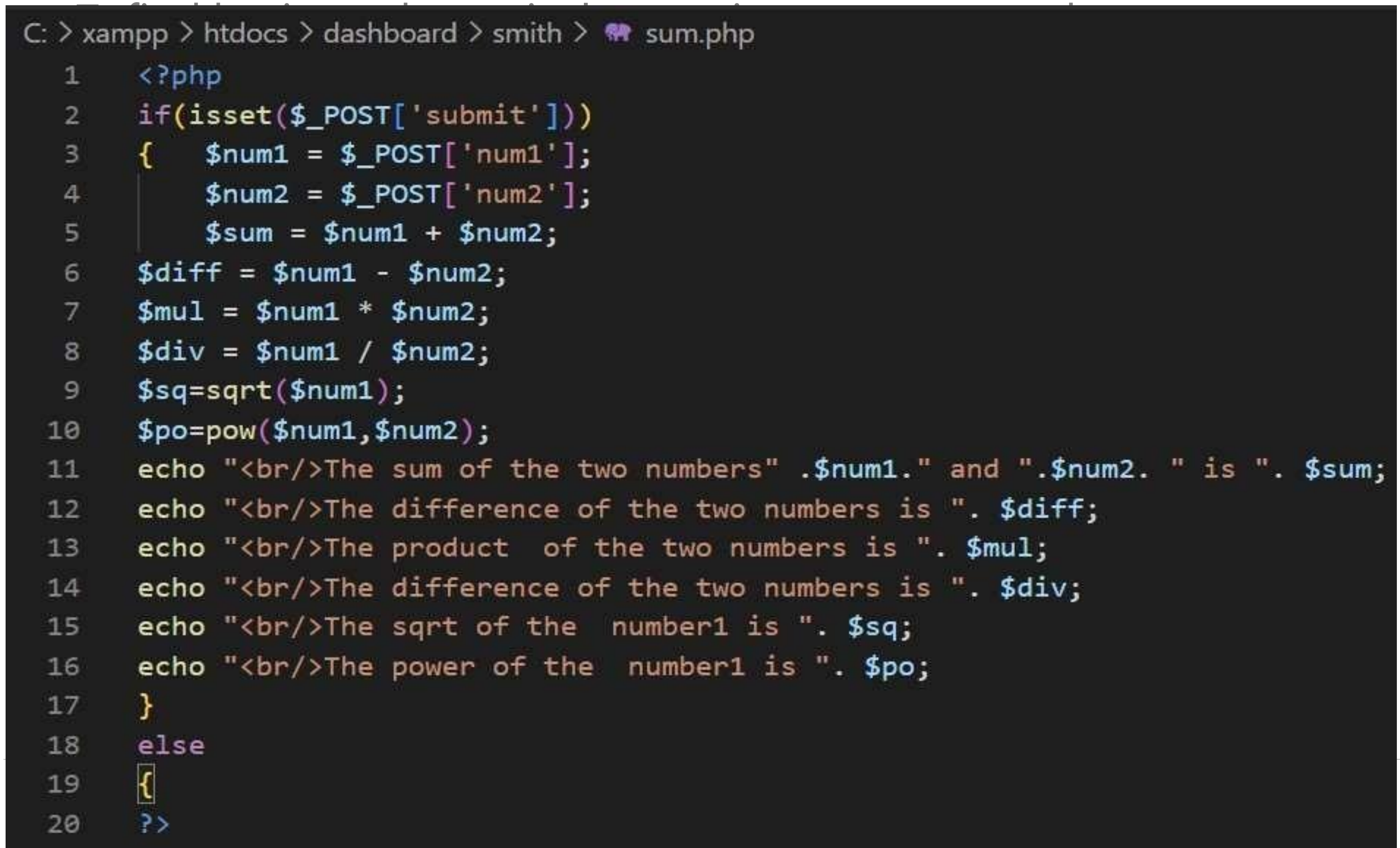
First number : 16

Second number: 2


localhost/dashboard/smith/sum.
localhost/dashboard/smith/sum.php
Advance your skills...
CSE-new LMS SJCE...

```
The sum of the two numbers16 and 2 is 18
The difference of the two numbers is 14
The product of the two numbers is 32
The difference of the two numbers is 8
The sqrt of the number1 is 4
The power of the number1 is 256
```

Simple PHP Program to generate a simple calculator

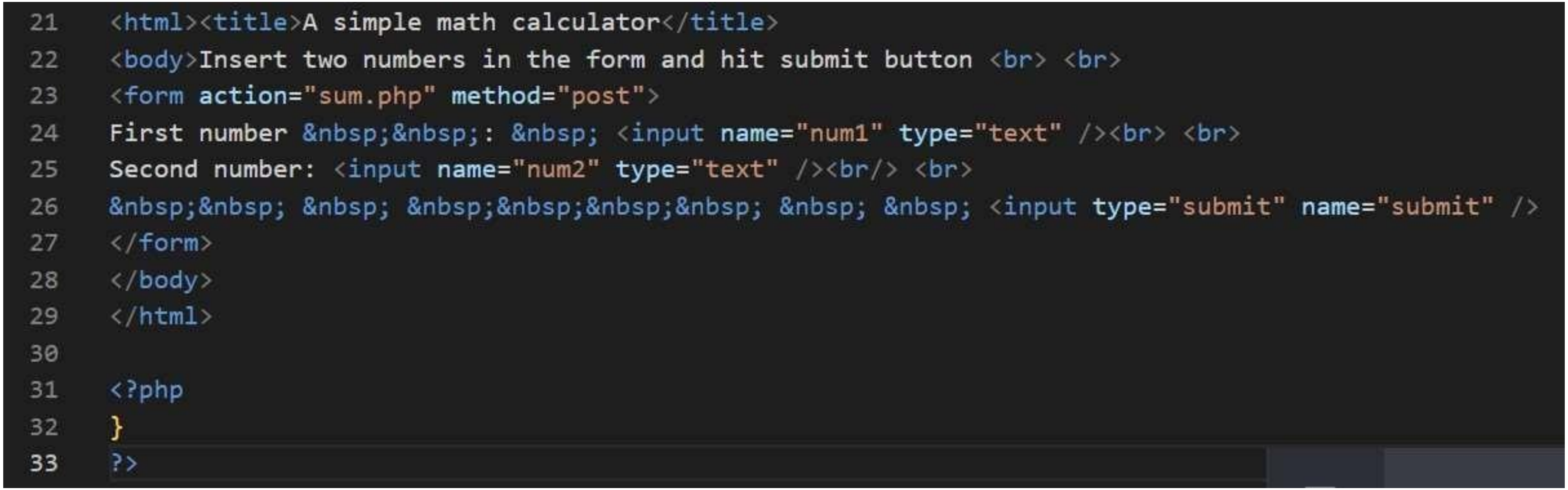


C: > xampp > htdocs > dashboard > smith > sum.php

```php
<?php
if(isset($_POST['submit']))
{   $num1 = $_POST['num1'];
    $num2 = $_POST['num2'];
    $sum = $num1 + $num2;
$diff = $num1 - $num2;
$mul = $num1 * $num2;
$div = $num1 / $num2;
$sq=sqrt($num1);
$po=pow($num1,$num2);
echo "<br/>The sum of the two numbers" .$num1." and ".$num2. " is ". $sum;
echo "<br/>The difference of the two numbers is ". $diff;
echo "<br/>The product  of the two numbers is ". $mul;
echo "<br/>The difference of the two numbers is ". $div;
echo "<br/>The sqrt of the  number1 is ". $sq;
echo "<br/>The power of the  number1 is ". $po;
}
else
{
?>
```

Simple PHP Program to generate a simple calculator

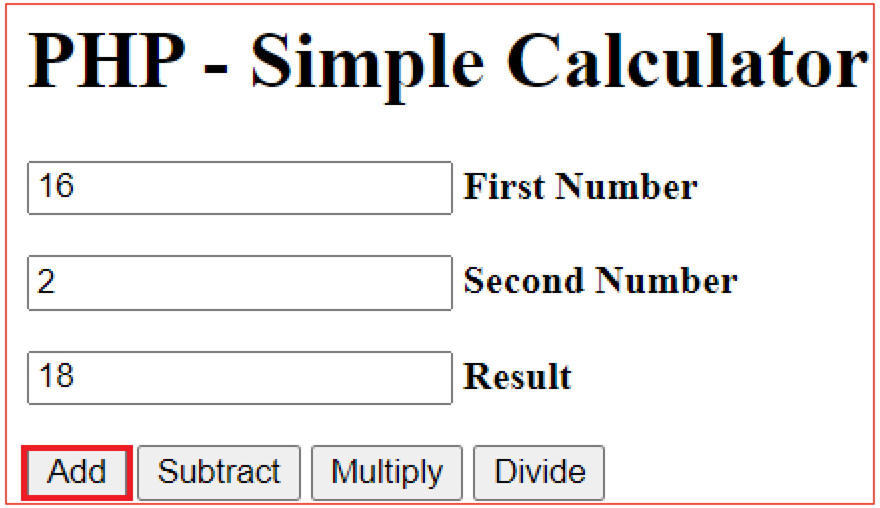
- To find basic mathematical operations on two numbers



```
<html><title>A simple math calculator</title>
<body>Insert two numbers in the form and hit submit button <br> <br>
<form action="sum.php" method="post">
First number &nbsp;&nbsp;: &nbsp; <input name="num1" type="text" /><br> <br>
Second number: <input name="num2" type="text" /><br/> <br>
&nbsp;&nbsp; &nbsp; &nbsp;&nbsp;&nbsp;&nbsp; &nbsp; &nbsp; <input type="submit" name="submit" />
</form>
</body>
</html>

<?php
}
?>
```

Modified PHP Program to generate a simple calculator

- To find basic mathematical operations on two numbers

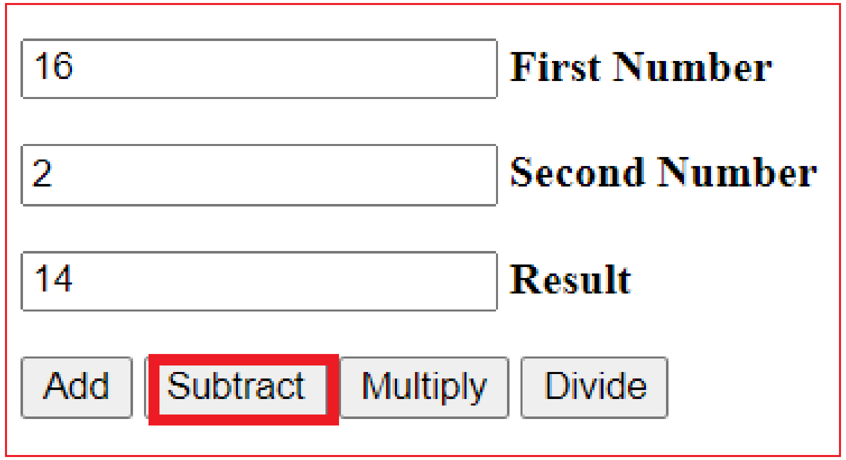


PHP - Simple Calculator

16 First Number

2 Second Number

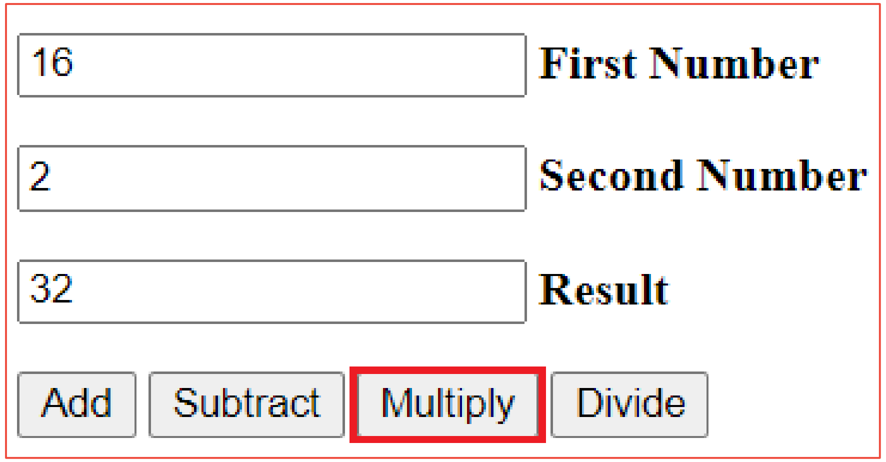
18 Result



16 First Number

2 Second Number

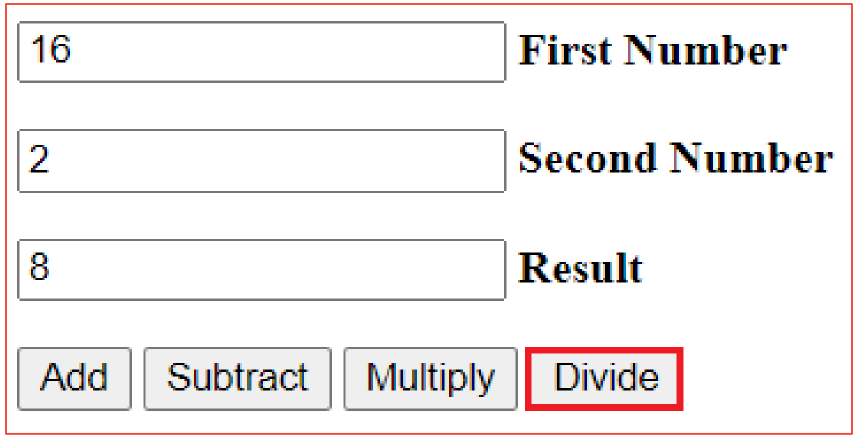
14 Result



16 First Number

2 Second Number

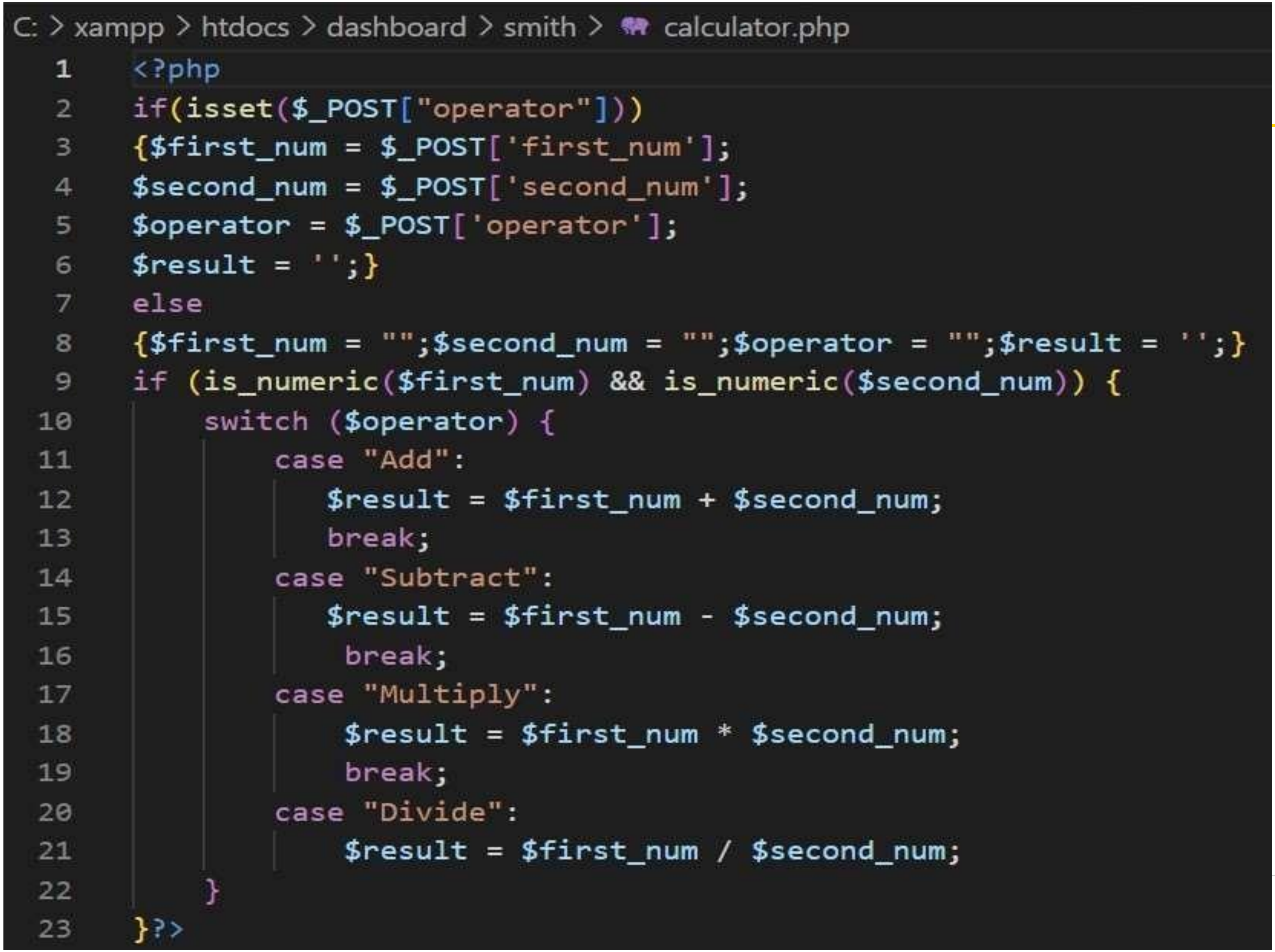
32 Result



16 First Number

2 Second Number

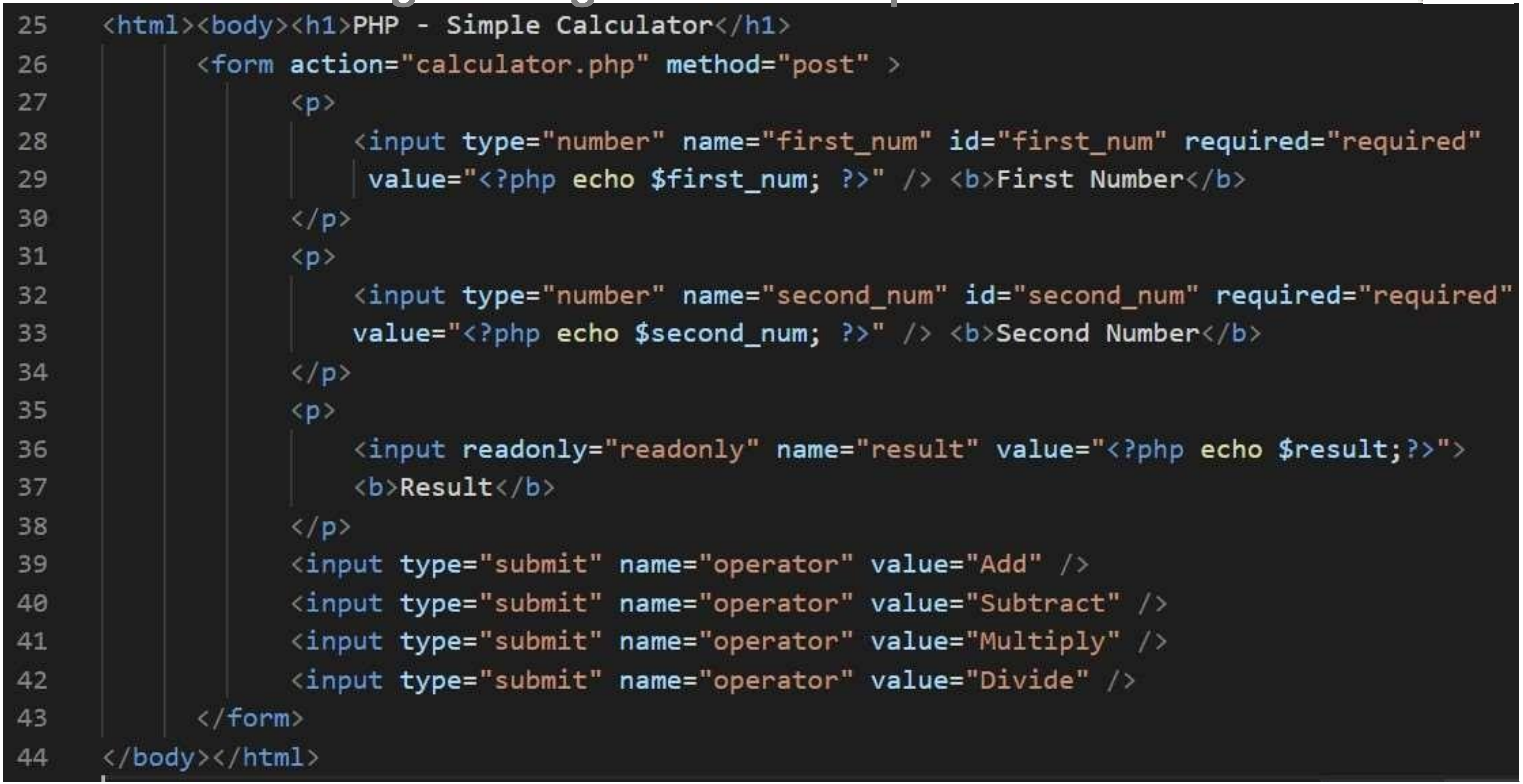
8 Result



C: > xampp > htdocs > dashboard > smith > calculator.php

```php
<?php
if(isset($_POST["operator"]))
{$first_num = $_POST['first_num'];
$second_num = $_POST['second_num'];
$operator = $_POST['operator'];
$result = '';}
else
{$first_num = "";$second_num = "";$operator = "";$result = '';}
if (is_numeric($first_num) && is_numeric($second_num)) {
    switch ($operator) {
        case "Add":
           $result = $first_num + $second_num;
           break;
        case "Subtract":
           $result = $first_num - $second_num;
            break;
        case "Multiply":
            $result = $first_num * $second_num;
            break;
        case "Divide":
            $result = $first_num / $second_num;
    }
}?>
```

Modified PHP Program to generate a simple calculator



```
<html><body><h1>PHP - Simple Calculator</h1>
      <form action="calculator.php" method="post" >
            <p>
                <input type="number" name="first_num" id="first_num" required="required"
                 value="<?php echo $first_num; ?>" /> <b>First Number</b>
            </p>
            <p>
                <input type="number" name="second_num" id="second_num" required="required"
                value="<?php echo $second_num; ?>" /> <b>Second Number</b>
            </p>
            <p>
                <input readonly="readonly" name="result" value="<?php echo $result;?>">
                <b>Result</b>
            </p>
            <input type="submit" name="operator" value="Add" />
            <input type="submit" name="operator" value="Subtract" />
            <input type="submit" name="operator" value="Multiply" />
            <input type="submit" name="operator" value="Divide" />
      </form>
</body></html>
```

Cookies and Session

Cookies

- A cookie is often used to identify a user.
- A cookie is a piece of information that's stored by a server in a text file on a client's computer to maintain information about the client during and between browsing sessions.
- Each time the same computer requests a page with a browser, it will send the cookie too.
- With PHP, you can both create and retrieve cookie values.
- The server is given this information when the browser makes subsequent requests for Web resources from the server.
- Cookies allow the server to present a customized interface to the client.
- They also allow the server to connect requests from a particular client to previous requests, thereby connecting sequences of requests into a session.

Cookies

- A cookie is a small object of information that consists of a name and a textual value.
- A cookie is created by some software system on the server.
- A message from a browser to a server is a request; a message from a server to a browser is a response. The header part of an HTTP communication can include cookies. So, every request sent from a browser to a server, and every response from a server to a browser, can include one or more cookies.
- At the time it is created, a cookie is assigned a lifetime. When the time a cookie has existed reaches its associated lifetime, the cookie is deleted from the browser's host machine.
- a particular cookie is information that is exchanged exclusively between one specific browser and one specific server.

Cookies- setcookie function

- A cookie is set in PHP with the setcookie function. This function takes one or more parameters.

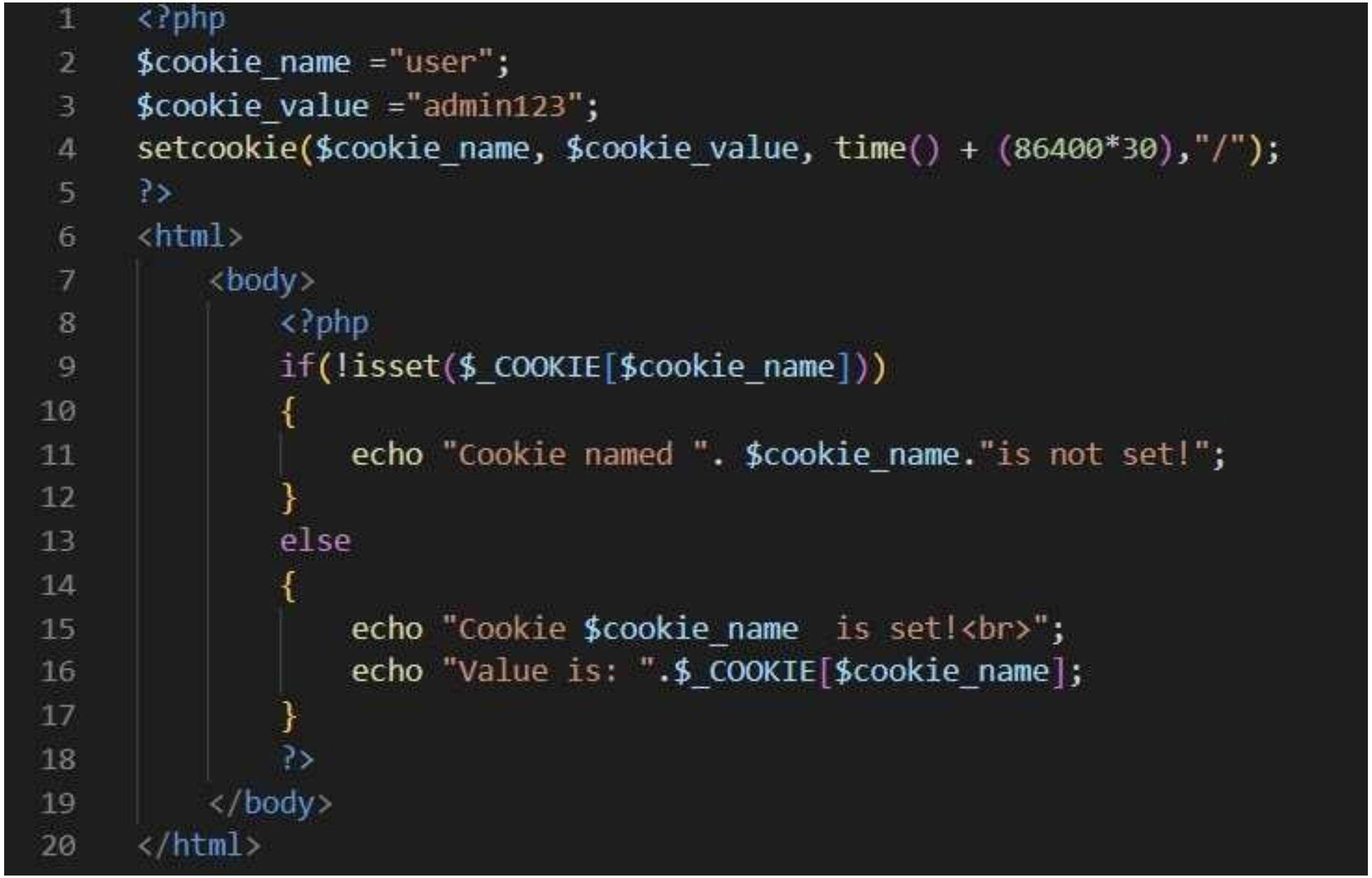
  setcookie(*name, value, expire, path*)

- The first parameter, which is mandatory, is the cookie's name given as a string. The second, if present, is the new value for the cookie, also a string. If the value is absent, setcookie undefines the cookie. The third parameter, when present, is the expiration time in seconds for the cookie, given as an integer.
- The default value for the expiration time is zero, which specifies that the cookie is destroyed at the end of the current session

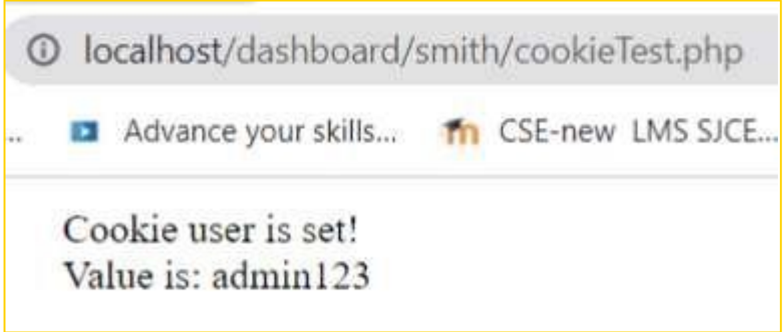
  setcookie(“valid", "true", time() + 86400);

- This call creates a cookie named "valid" whose value is "true" and whose lifetime is one day (86,400 is the number of seconds in a day).

Cookies- setcookie function



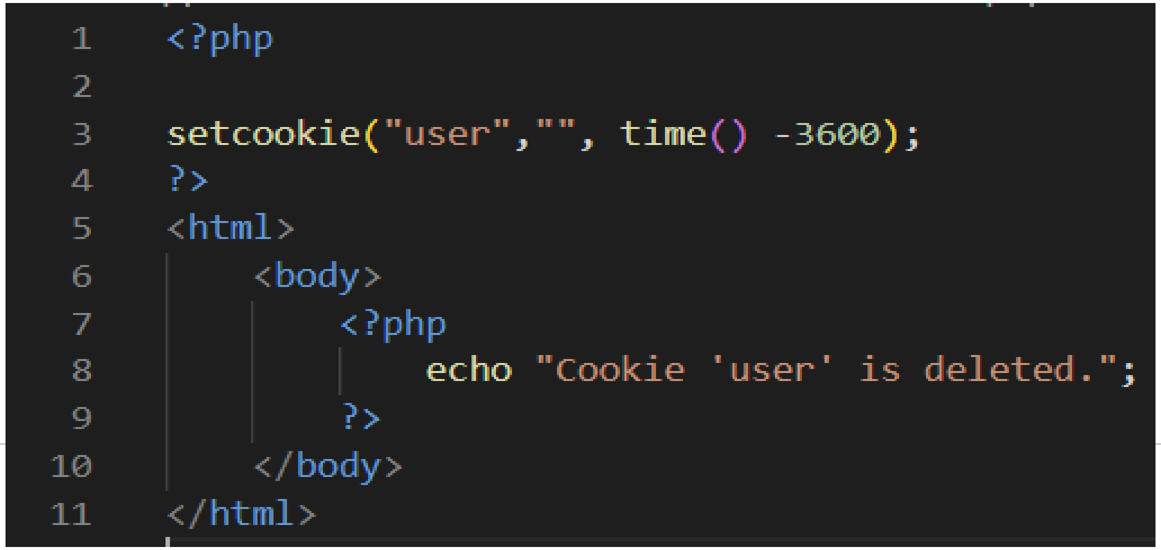
```
<?php
$cookie_name ="user";
$cookie_value ="admin123";
setcookie($cookie_name, $cookie_value, time() + (86400*30),"/");
?>
<html>
    <body>
        <?php
        if(!isset($_COOKIE[$cookie_name]))
        {
            echo "Cookie named ". $cookie_name."is not set!";
        }
        else
        {
            echo "Cookie $cookie_name  is set!<br>";
            echo "Value is: ".$_COOKIE[$cookie_name];
        }
        ?>
    </body>
</html>
```



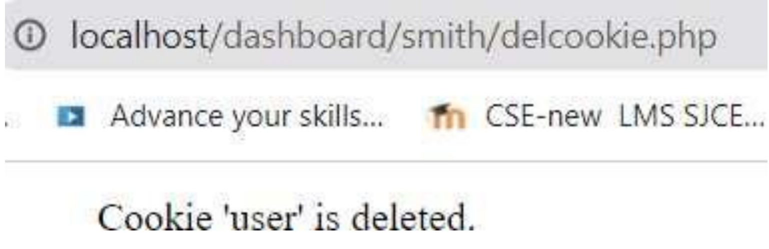
```
Cookie user is set!
Value is: admin123
```

Cookies- setcookie-delete function

- The example creates a cookie named "user" with the value “admin123".
- The cookie will expire after 30 days (86400 * 30).
- The "/" means that the cookie is available in entire website (otherwise, select the directory you prefer).
- retrieve the value of the cookie "user" (using the global variable $_COOKIE).
- use the isset() function to find out if the cookie is set:
- To delete a cookie, use setcookie() function with an expiration date in the past:
- Example



```
<?php

setcookie("user","", time() -3600);
?>
<html>
    <body>
        <?php
            echo "Cookie 'user' is deleted.";
        ?>
    </body>
</html>
```

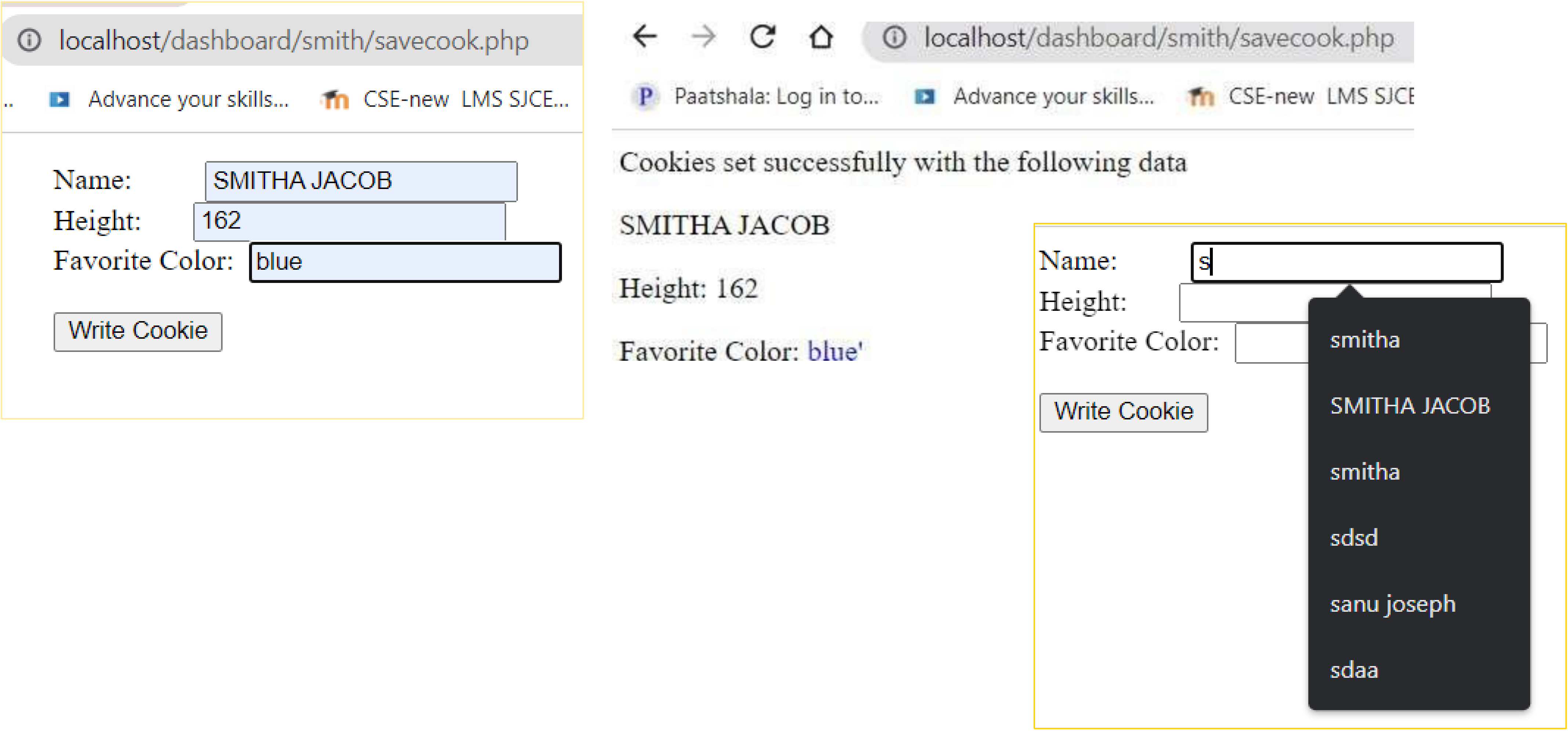


```
Cookie 'user' is deleted.
```

Cookies- setcookie function

- In PHP, cookie values are treated much like form values.
- All cookies that arrive with a request are placed in the implicit $_COOKIES array, which has the cookie names as keys and the cookie values as values.
- most browsers have a limit on the number of cookies that will be accepted from a particular server site.
- In many cases, information about a session is needed only during the session
- Rather than using one or more cookies, a single session array can be used to store information about the previous requests of a client during a session.
- In particular, session arrays often store a unique session ID for a session.

Cookies- setcookie function



localhost/dashboard/smith/savecook.php

Name: SMITHA JACOB
Height: 162
Favorite Color: blue

localhost/dashboard/smith/savecook.php

Cookies set successfully with the following data

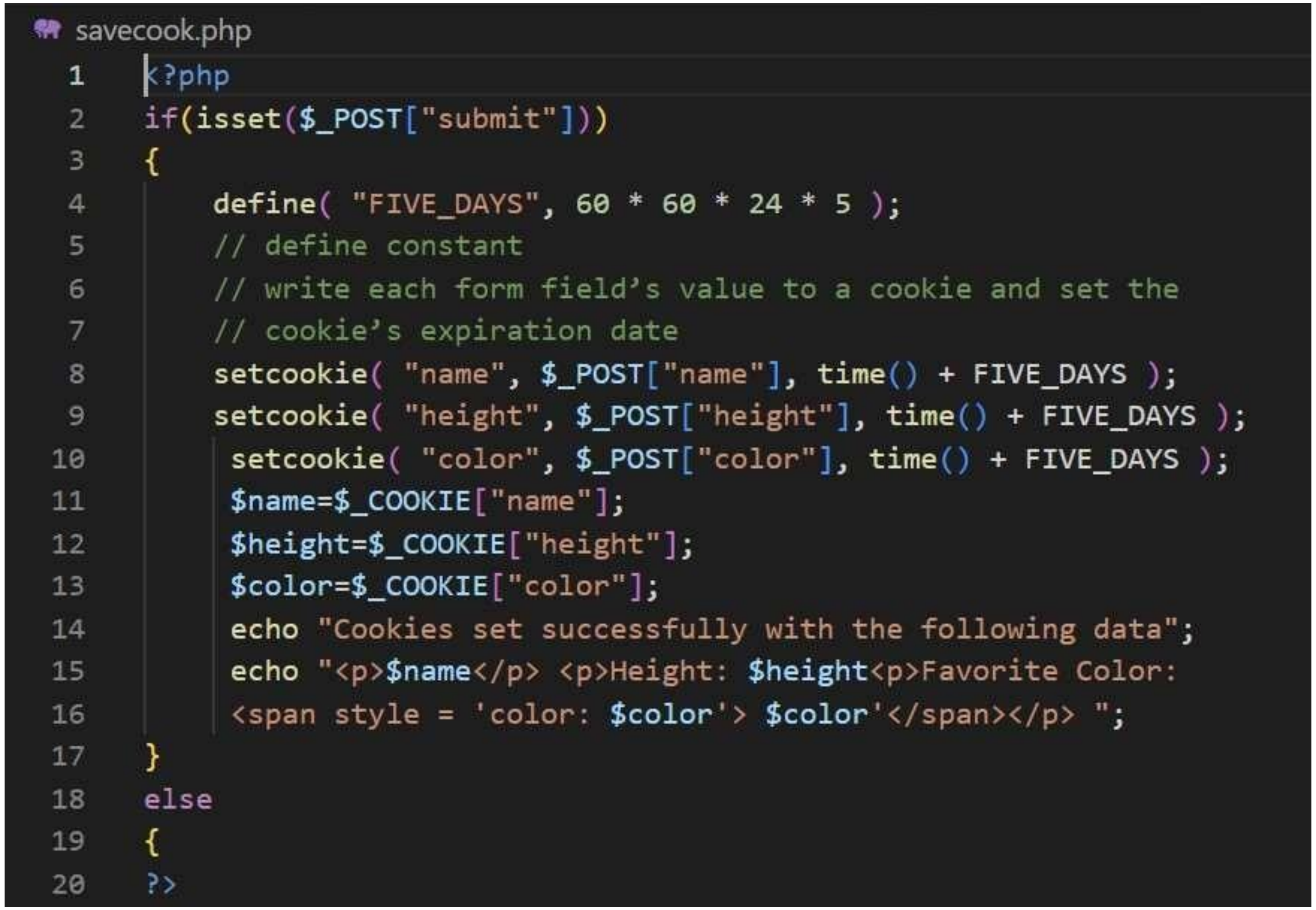
SMITHA JACOB

Height: 162

Favorite Color: blue'

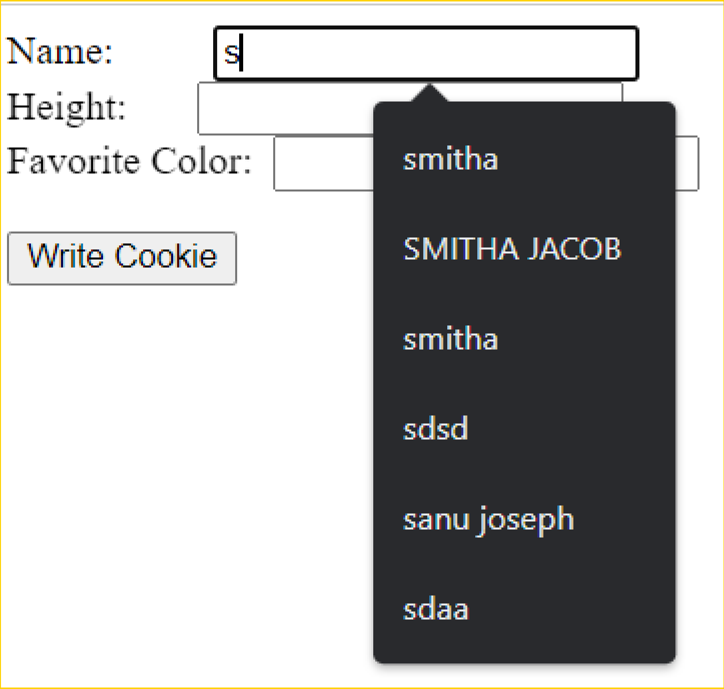
Name: s
Height:
Favorite Color:

Cookies- setcookie function



savecook.php

```php
<?php
if(isset($_POST["submit"]))
{
    define( "FIVE_DAYS", 60 * 60 * 24 * 5 );
    // define constant
    // write each form field’s value to a cookie and set the
    // cookie’s expiration date
    setcookie( "name", $_POST["name"], time() + FIVE_DAYS );
    setcookie( "height", $_POST["height"], time() + FIVE_DAYS );
     setcookie( "color", $_POST["color"], time() + FIVE_DAYS );
     $name=$_COOKIE["name"];
     $height=$_COOKIE["height"];
     $color=$_COOKIE["color"];
     echo "Cookies set successfully with the following data";
     echo "<p>$name</p> <p>Height: $height<p>Favorite Color:
     <span style = 'color: $color'> $color'</span></p> ";
}
else
{
?>
```



Name: s

Height:

Favorite Color:

Write Cookie

smitha

SMITHA JACOB

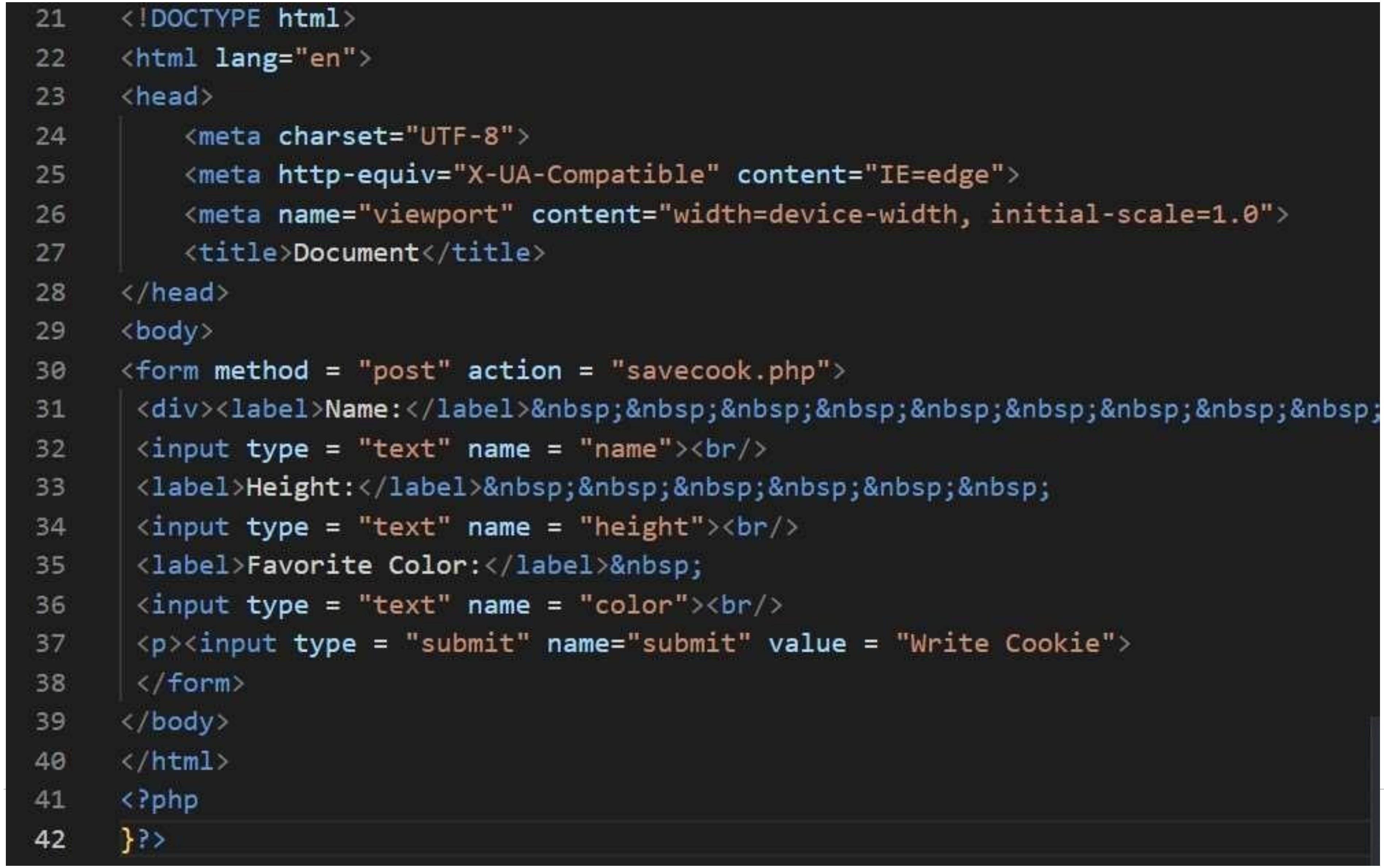
smitha

sdsd

sanu joseph

sdaa

Cookies- setcookie function



```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
<form method = "post" action = "savecook.php">
 <div><label>Name:</label>&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;
 <input type = "text" name = "name"><br/>
 <label>Height:</label>&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;
 <input type = "text" name = "height"><br/>
 <label>Favorite Color:</label>&nbsp;
 <input type = "text" name = "color"><br/>
 <p><input type = "submit" name="submit" value = "Write Cookie">
 </form>
</body>
</html>
<?php
}?>
```

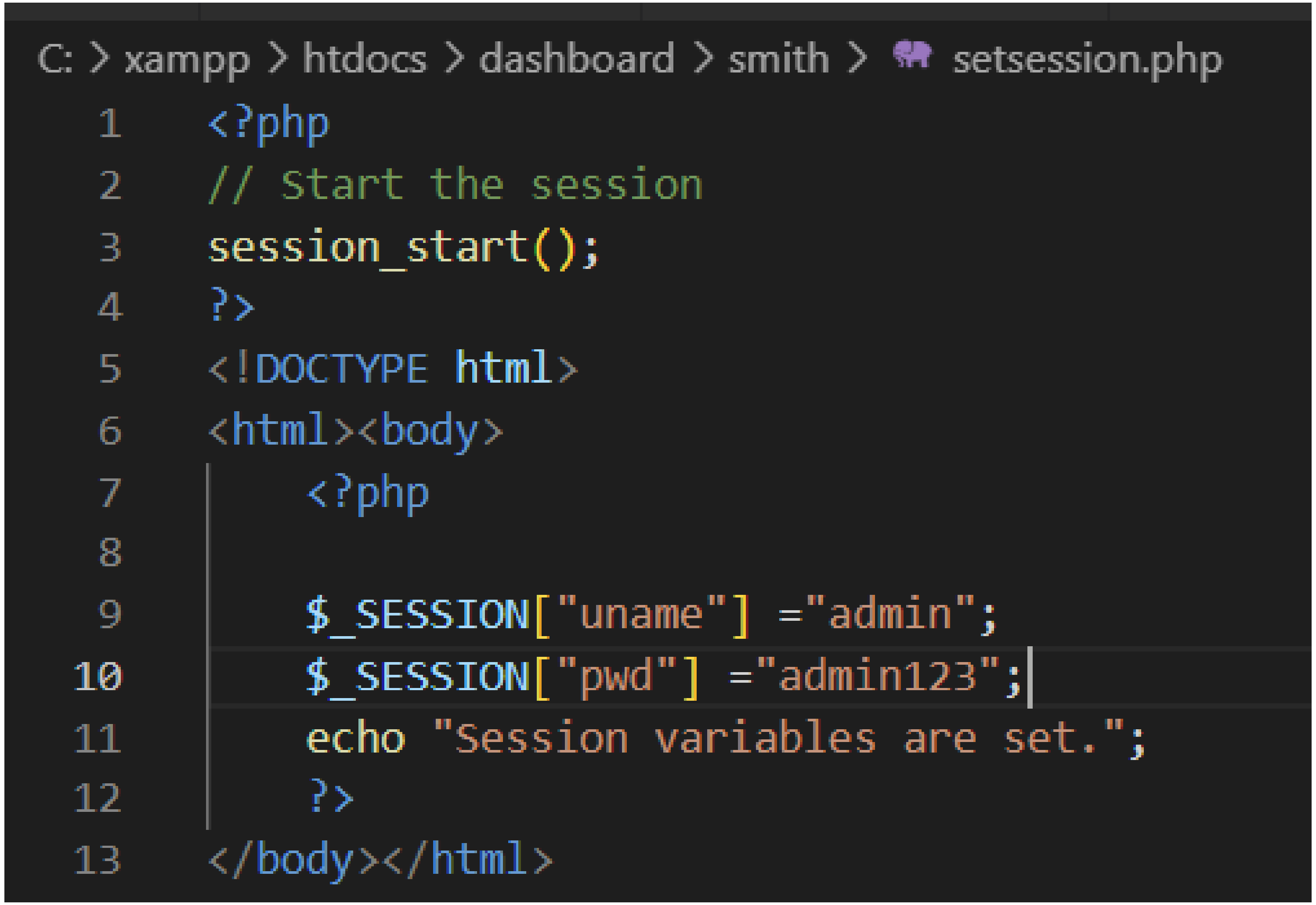
Session

- When you work with an application, you open it, do some changes, and then you close it. This is much like a Session.
- The computer knows who you are. It knows when you start the application and when you end.
- But on the internet the web server does not know who you are or what you do, because the HTTP address doesn't maintain state.
- Session variables solve this problem by storing user information to be used across multiple pages (e.g. username ,pwd etc). By default, session variables last until the user closes the browser.
- So; Session variables hold information about one single user, and are available to all pages in one application.

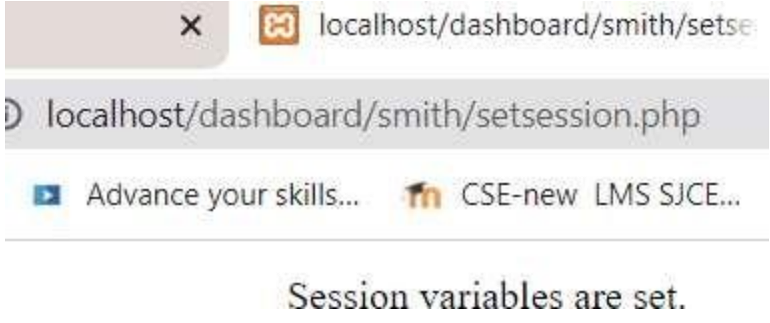
Session

- One significant way that session arrays differ from cookies is that they can be stored on the server, whereas cookies are stored on the client.
- In PHP, a session ID is an internal value that identifies a session.
- Session IDs need not be known or handled in any way by PHP scripts.
- PHP is made aware that a script is interested in session tracking by calling the session_start function, which takes no parameters. The first call to session_start in a session causes a session ID to be created and recorded.
- On subsequent calls to session_start in the same session, the function retrieves the $_SESSION array, which stores any session variables and their values that were registered in previously executed scripts in this session.
- A session is started with the session_start() function.
- Session variables are set with the PHP global variable: $_SESSION

Set Session variables

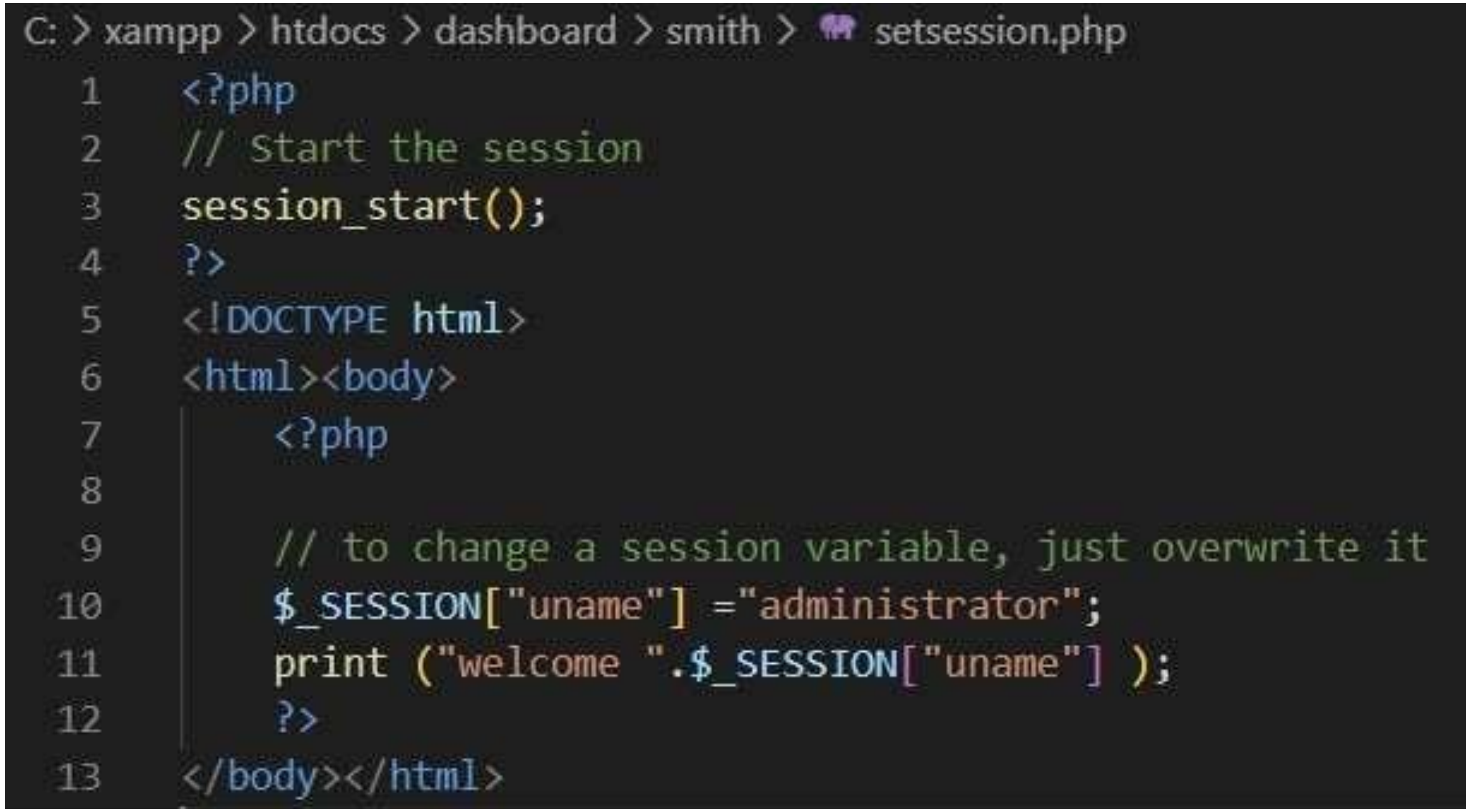


```php
<?php
// Start the session
session_start();
?>
<!DOCTYPE html>
<html><body>
    <?php

    $_SESSION["uname"] ="admin";
    $_SESSION["pwd"] ="admin123";
    echo "Session variables are set.";
    ?>
</body></html>
```


localhost/dashboard/smith/setse
localhost/dashboard/smith/setsession.php
Advance your skills...
CSE-new LMS SJCE...

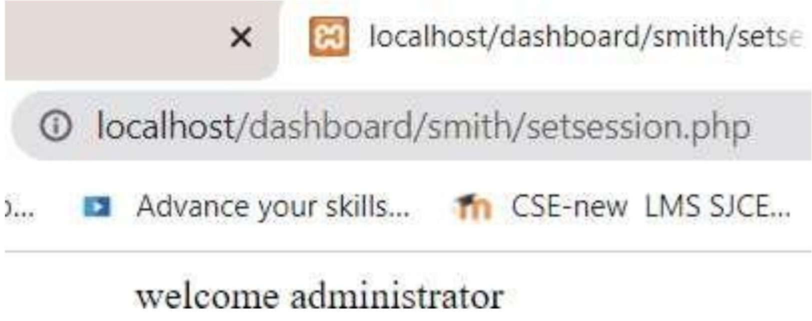
```
Session variables are set.
```

Modify Session variables



C: > xampp > htdocs > dashboard > smith > setsession.php

```
<?php
// Start the session
session_start();
?>
<!DOCTYPE html>
<html><body>
    <?php

    // to change a session variable, just overwrite it
    $_SESSION["uname"] ="administrator";
    print ("welcome ".$_SESSION["uname"] );
    ?>
</body></html>
```

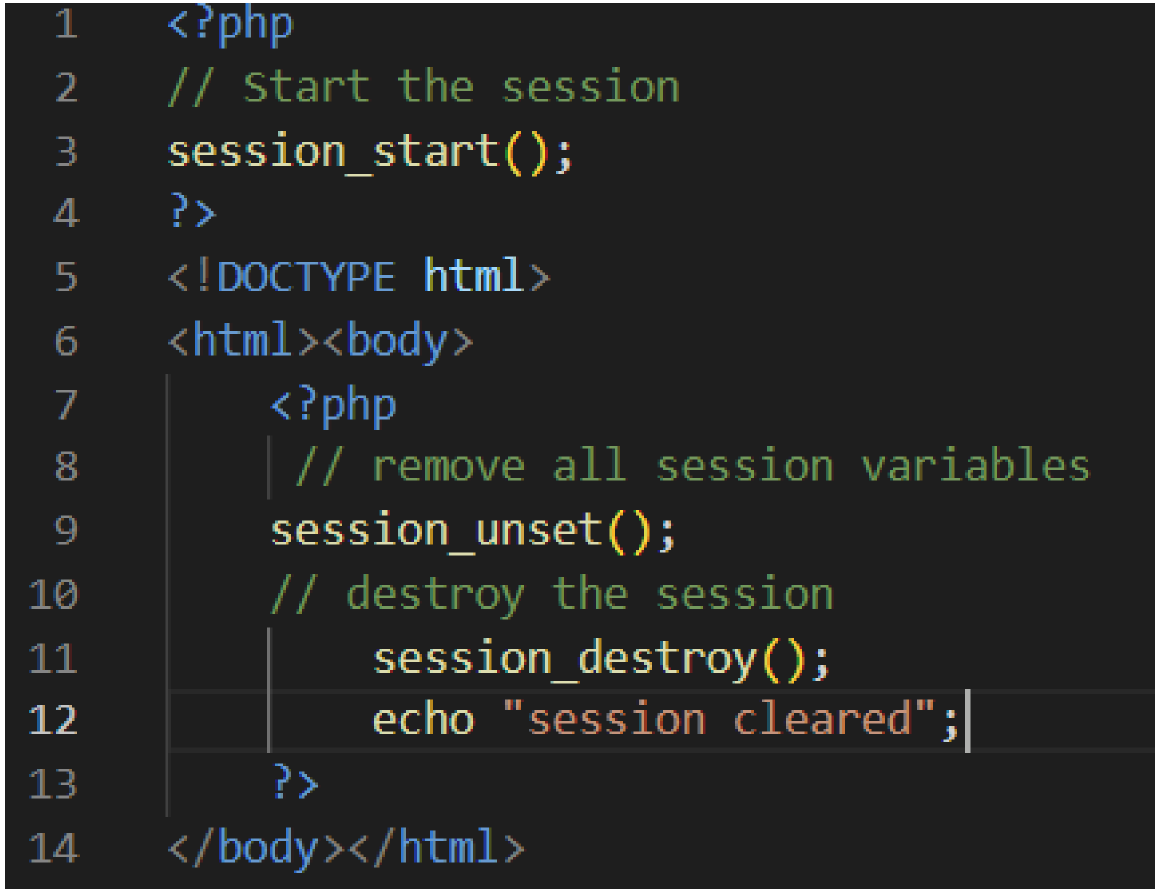


localhost/dashboard/smith/setsession.php

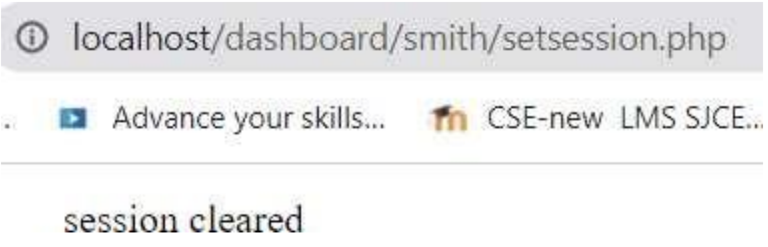
```
welcome administrator
```

Destroy a Session

- To remove all global session variables and destroy the session, use session_unset() and session_destroy():
- Example



```
<?php
// Start the session
session_start();
?>
<!DOCTYPE html>
<html><body>
    <?php
     // remove all session variables
    session_unset();
    // destroy the session
        session_destroy();
        echo "session cleared";
    ?>
</body></html>
```

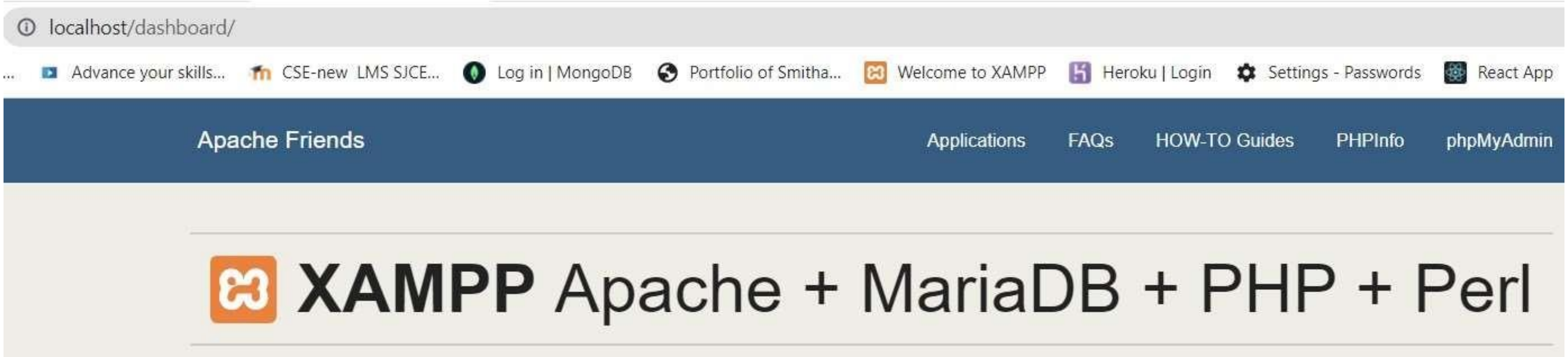


```
session cleared
```

MySQL Integration-Connecting to MySQL with PHP

Connecting PHP to MySQL

- When users enter any data into the fields of your forms, you need to collect that information and add it to the database.To do that, you want to know how to connect PHP with MySQL.
- In order to connect a MySQL database to PHP, you require MySQL on your computer, a tool to create and manage databases, and PHP installed. The most popular ways to connect a PHP script to MySQL are MySQLi and PDO



Connecting PHP to MySQL

- **What is MySQL?**
- MySQL is an open-source relational database management system (RDBMS). It is the most popular database system used with PHP.
- Structured Query Language (SQL). The data in a MySQL database are stored in tables that consist of columns and rows.
- MySQL is a database system that runs on a server. MySQL is ideal for both small and large applications. MySQL is a very fast, reliable, and easy-to-use database system. It uses standard SQL. MySQL compiles on a number of platforms.
- **How we can connect PHP to MySQL?**
- PHP 5 and later can work with a MySQL database using:
- MySQLi extension (the 'i' is abbreviation for improved)
- PDO (PHP Data Objects)

Connecting PHP to MySQL

- **Connection to MySQL using MySQLi**
- PHP provides mysql_connect() function to open a database connection.
- This function takes a single parameter, which is a connection returned by the mysql_connect() function.
- You can disconnect from the MySQL database anytime using another PHP function mysql_close().
- There is also a procedural approach of MySQLi to establish a connection to MySQL database from a PHP script.

Form processing with DB- Making a Connection

- The basic syntax for a connection to MySQL is as follows:

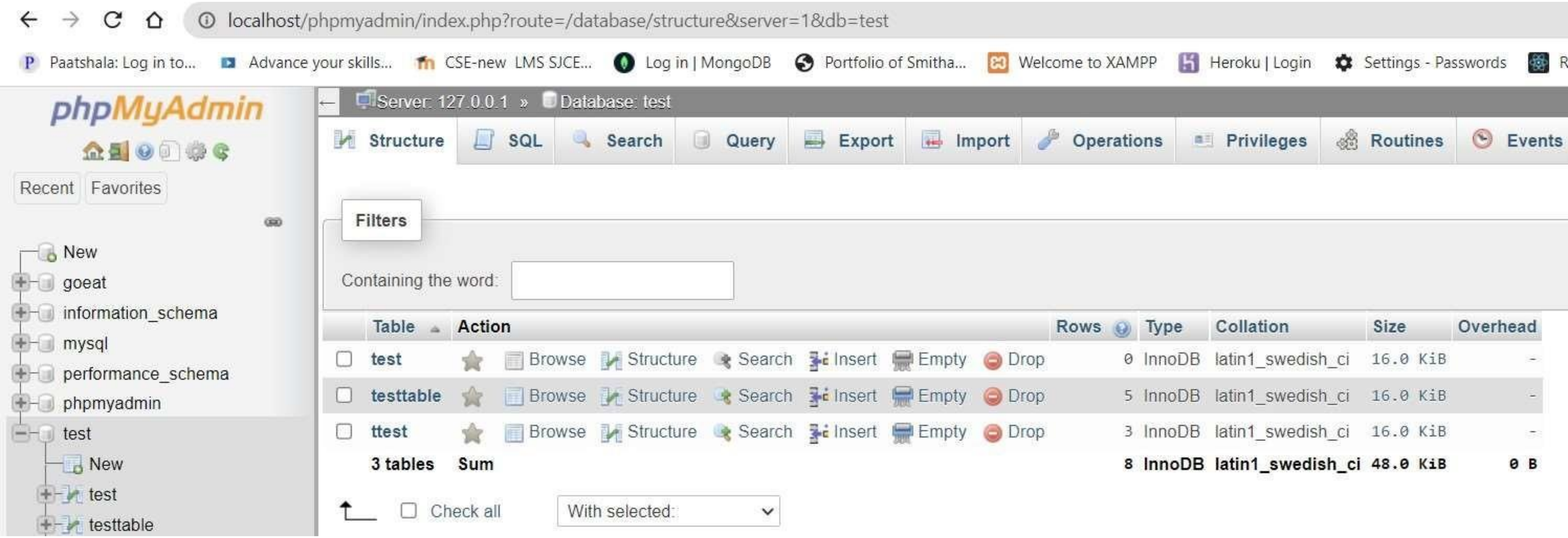
```
$mysqli = mysqli_connect("hostname", "username",  "password", "database");
```

- The value of $mysqli is the result of the function and is used in later functions for communicating with MySQL.
- With sample values inserted, the connection code looks like this:

```
$mysqli = mysqli_connect("localhost", “root", “ ", "test");
```

- It creates a new connection in line 2 and then tests to see whether an error occurred. If an error occurred, an error message and uses the mysqli_connect_error() function to print the message.

Form processing with DB- Making a Connection



localhost/phpmyadmin/index.php?route=/database/structure&server=1&db=test

Filters

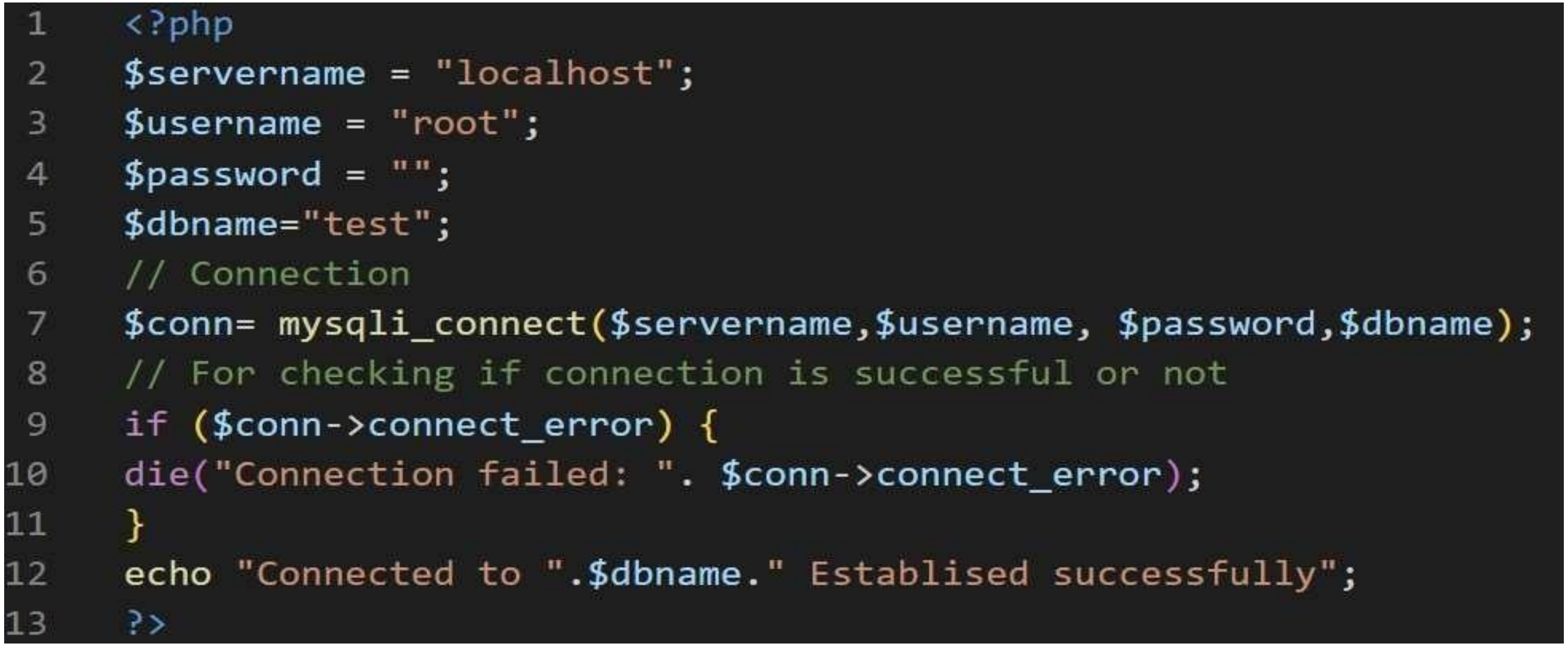
Containing the word:

	Table	Action							Rows	Type	Collation	Size	Overhead
□	test	☆	Browse	Structure	Search	Insert	Empty	Drop	0	InnoDB	latin1_swedish_ci	16.0 KiB	-
□	testtable	☆	Browse	Structure	Search	Insert	Empty	Drop	5	InnoDB	latin1_swedish_ci	16.0 KiB	-
□	ttest	☆	Browse	Structure	Search	Insert	Empty	Drop	3	InnoDB	latin1_swedish_ci	16.0 KiB	-
	3 tables	Sum							8	InnoDB	latin1_swedish_ci	48.0 KiB	0 B

□ Check all

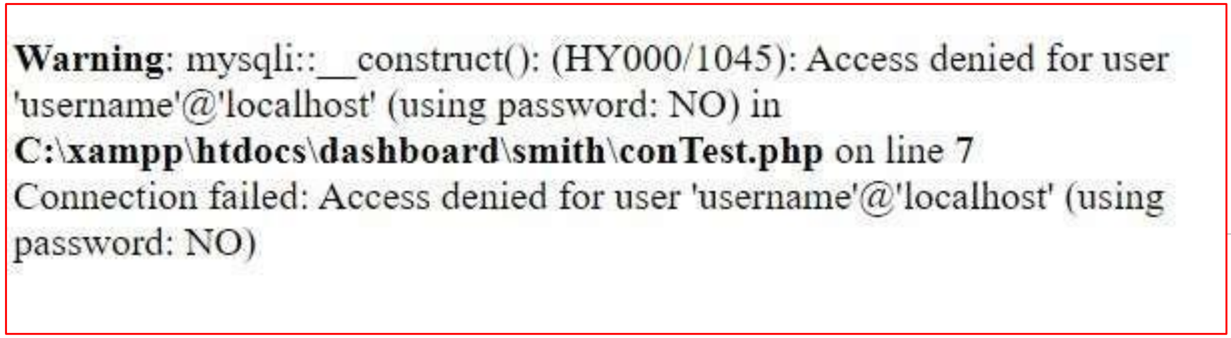
With selected:

Form processing with DB- Making a Connection with ‘test’ DB

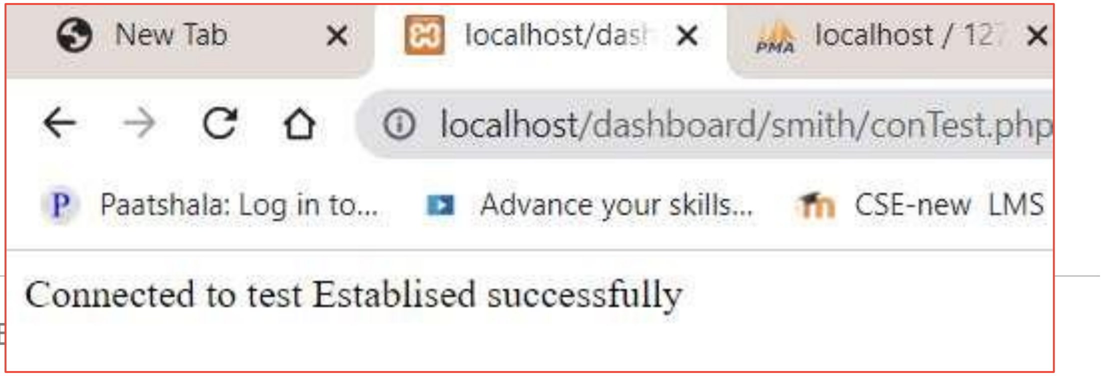


```php
<?php
$servername = "localhost";
$username = "root";
$password = "";
$dbname="test";
// Connection
$conn= mysqli_connect($servername,$username, $password,$dbname);
// For checking if connection is successful or not
if ($conn->connect_error) {
die("Connection failed: ". $conn->connect_error);
}
echo "Connected to ".$dbname." Establised successfully";
?>
```

▶ MySQL_i_Connect_error



```
Warning: mysqli::__construct(): (HY000/1045): Access denied for user
'username'@'localhost' (using password: NO) in
C:\xampp\htdocs\dashboard\smith\conTest.php on line 7
Connection failed: Access denied for user 'username'@'localhost' (using
password: NO)
```



Connected to test Establised successfully

Form processing with DB- Making a Connection

- The basic syntax for a connection to MySQL is as follows:

```
$mysqli = mysqli_connect("hostname", "username",  "password", "database");
```

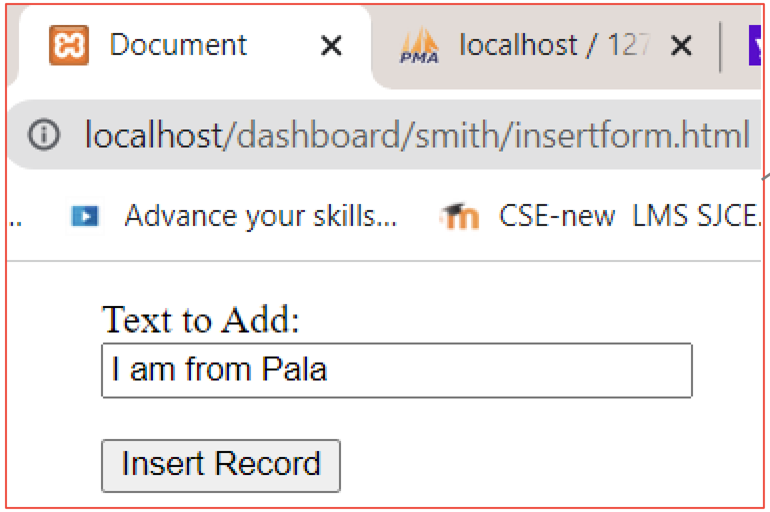
- The value of $mysqli is the result of the function and is used in later functions for communicating with MySQL.
- With sample values inserted, the connection code looks like this:

```
$mysqli = mysqli_connect("localhost", “root", “ ", "test");
```

- It creates a new connection in line 2 and then tests to see whether an error occurred. If an error occurred, an error message and uses the mysqli_connect_error() function to print the message.

Form processing with DB-Executing Queries-Insert records

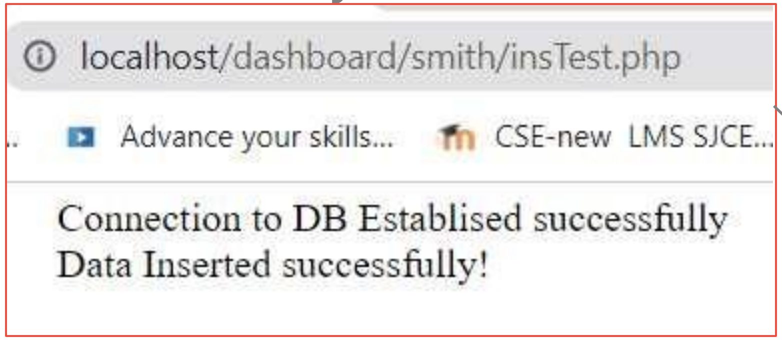
- PHP to MySQL connection is required to inserts information into our database.
- Also we should use INSERT INTO … VALUES syntax for that:



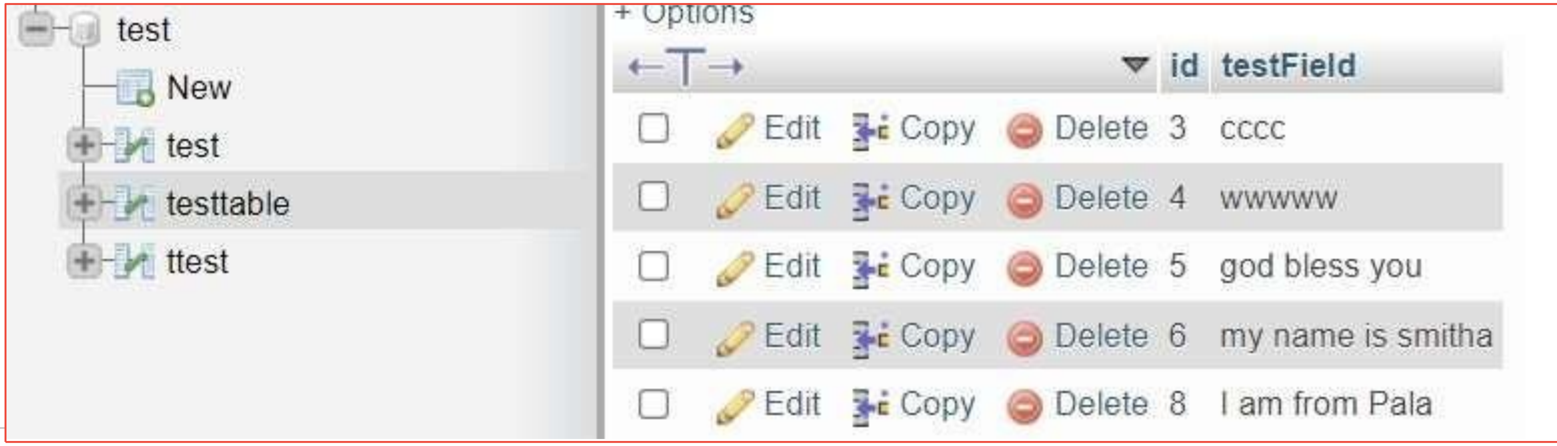
Text to Add:

I am from Pala

Insert Record

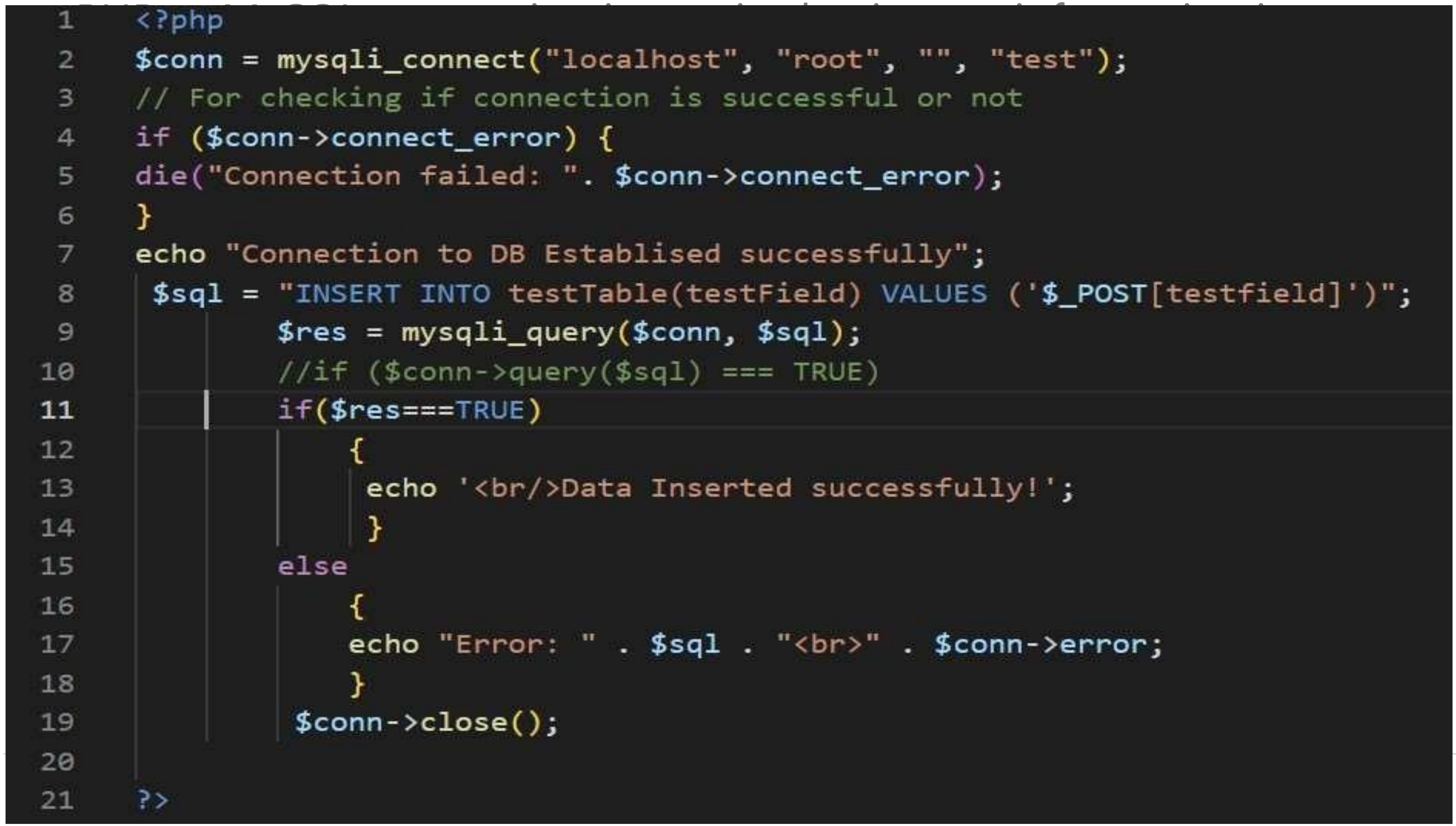


Connection to DB Establised successfully
Data Inserted successfully!



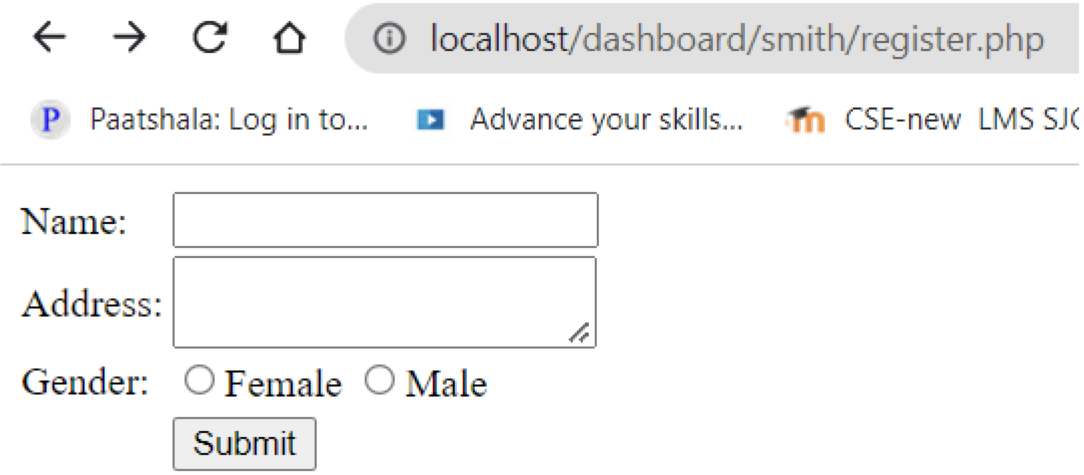
				id	testField
□	Edit	Copy	Delete	3	cccc
□	Edit	Copy	Delete	4	wwwww
□	Edit	Copy	Delete	5	god bless you
□	Edit	Copy	Delete	6	my name is smitha
□	Edit	Copy	Delete	8	I am from Pala

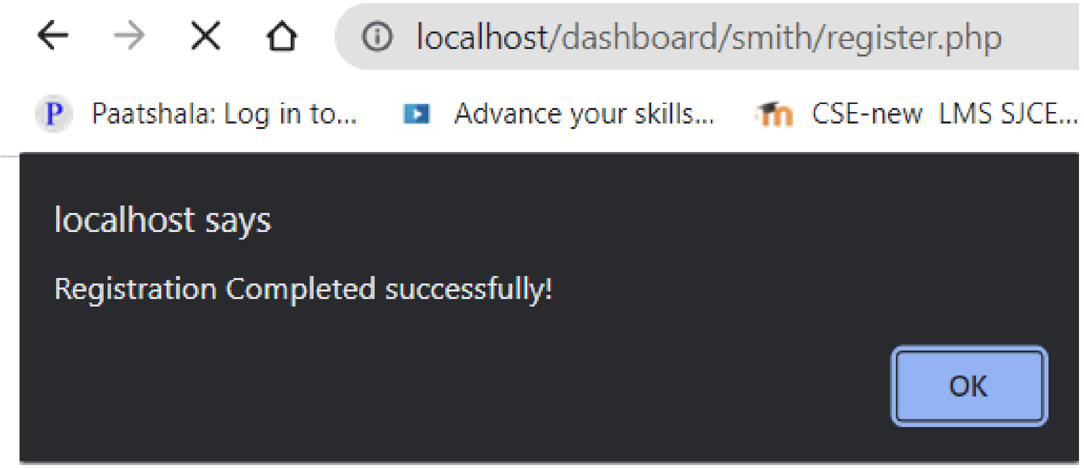
Form processing with DB-Executing Queries-Insert records



```
<?php
$conn = mysqli_connect("localhost", "root", "", "test");
// For checking if connection is successful or not
if ($conn->connect_error) {
die("Connection failed: ". $conn->connect_error);
}
echo "Connection to DB Establised successfully";
 $sql = "INSERT INTO testTable(testField) VALUES ('$_POST[testfield]')";
        $res = mysqli_query($conn, $sql);
        //if ($conn->query($sql) === TRUE)
        if($res===TRUE)
            {
             echo '<br/>Data Inserted successfully!';
             }
        else
            {
            echo "Error: " . $sql . "<br>" . $conn->error;
            }
         $conn->close();

?>
```

Form processing-Registration form





localhost says

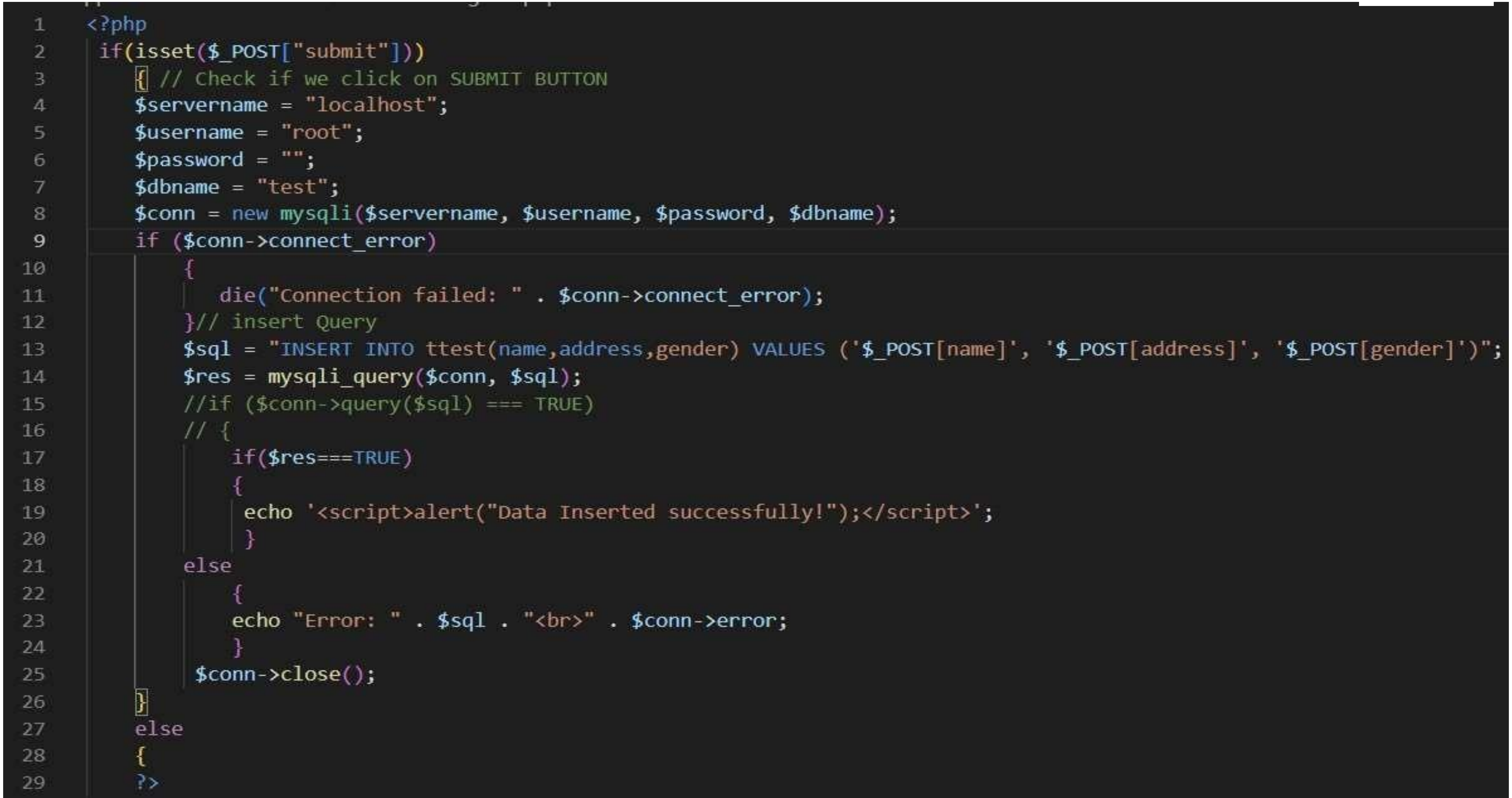
Registration Completed successfully!

Form processing with DB- Executing Queries

- The mysqli_ query() function in PHP is used to send your SQL query to MySQL
- the mysqli_error() function returns a helpful error message when you make a mistake

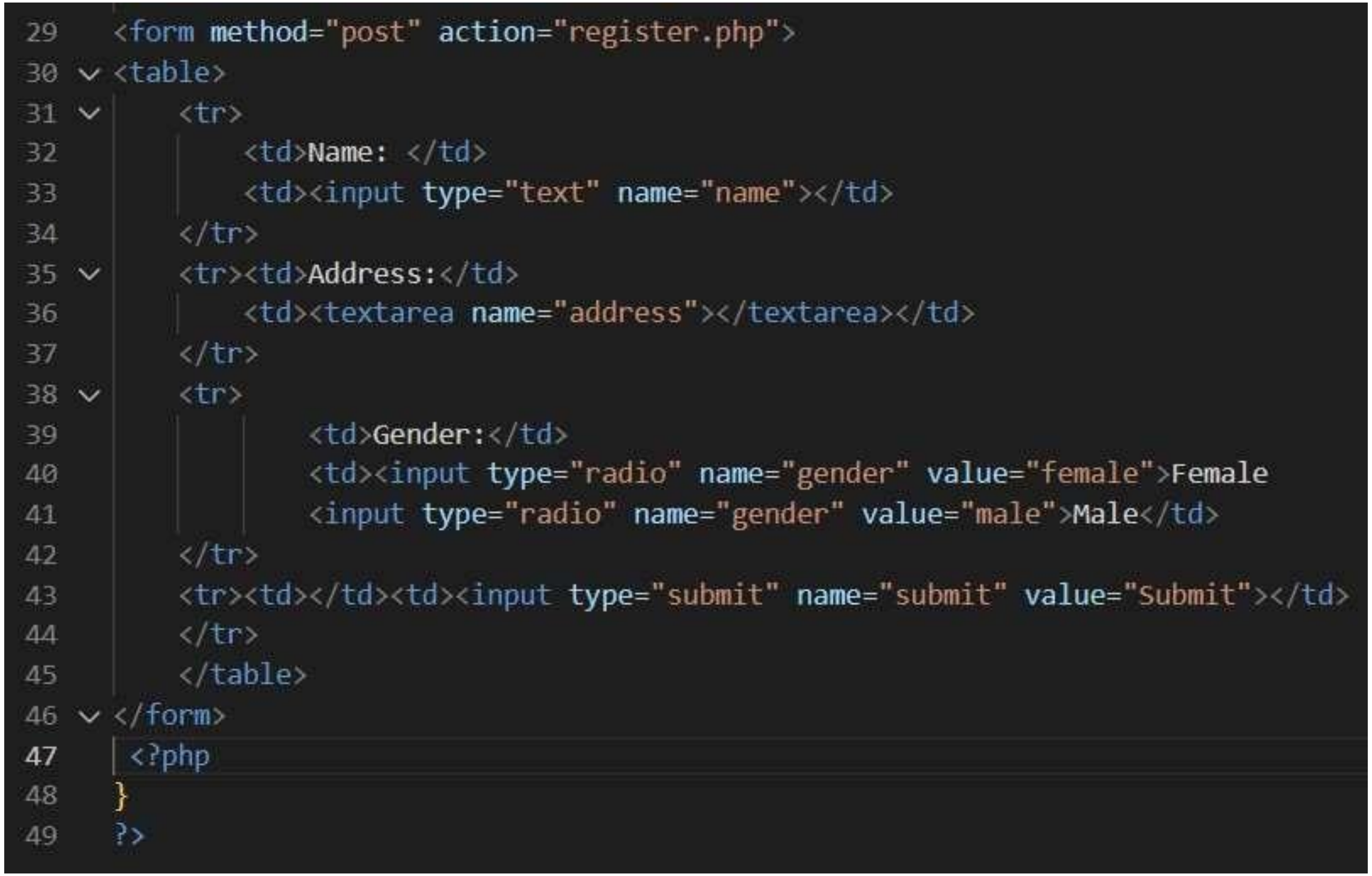
```
$conn = new mysqli($servername, $username, $password, $dbname);
$sql = "INSERT INTO ttest(name,address,gender) VALUES ('$_POST[name]',
'$_POST[address]', '$_POST[gender]')";
        if ($conn->query($sql) === TRUE)
         {
       echo "Data Inserted successfully!";
         }
```

Form processing-Registration form



```
<?php
 if(isset($_POST["submit"]))
    { // Check if we click on SUBMIT BUTTON
    $servername = "localhost";
    $username = "root";
    $password = "";
    $dbname = "test";
    $conn = new mysqli($servername, $username, $password, $dbname);
    if ($conn->connect_error)
        {
           die("Connection failed: " . $conn->connect_error);
        }// insert Query
        $sql = "INSERT INTO ttest(name,address,gender) VALUES ('$_POST[name]', '$_POST[address]', '$_POST[gender]')";
        $res = mysqli_query($conn, $sql);
        //if ($conn->query($sql) === TRUE)
        // {
            if($res===TRUE)
            {
             echo '<script>alert("Data Inserted successfully!");</script>';
             }
        else
            {
            echo "Error: " . $sql . "<br>" . $conn->error;
            }
         $conn->close();
    }
    else
    {
    ?>
```

Form processing-Registration form



```
<form method="post" action="register.php">
<table>
    <tr>
        <td>Name: </td>
        <td><input type="text" name="name"></td>
    </tr>
    <tr><td>Address:</td>
        <td><textarea name="address"></textarea></td>
    </tr>
    <tr>
            <td>Gender:</td>
            <td><input type="radio" name="gender" value="female">Female
            <input type="radio" name="gender" value="male">Male</td>
    </tr>
    <tr><td></td><td><input type="submit" name="submit" value="Submit"></td>
    </tr>
    </table>
</form>
 <?php
}
?>
```

A Script to Create a Table

```
<?php
$mysqli = mysqli_connect("localhost", "testuser", "somepass", "testDB");

if (mysqli_connect_errno()) {
    printf("Connect failed: %s\n", mysqli_connect_error());
    exit();
} else {
     $sql = "CREATE TABLE testTable
           (id INT NOT NULL PRIMARY KEY AUTO_INCREMENT,
           testField VARCHAR(75))";
     $res = mysqli_query($mysqli, $sql);

     if ($res === TRUE) {
            echo "Table testTable successfully created.";
     } else {
         printf("Could not create table: %s\n", mysqli_error($mysqli));
     }

     mysqli_close($mysqli);
 }
 ?>
```

Form processing with DB- Creating Tables

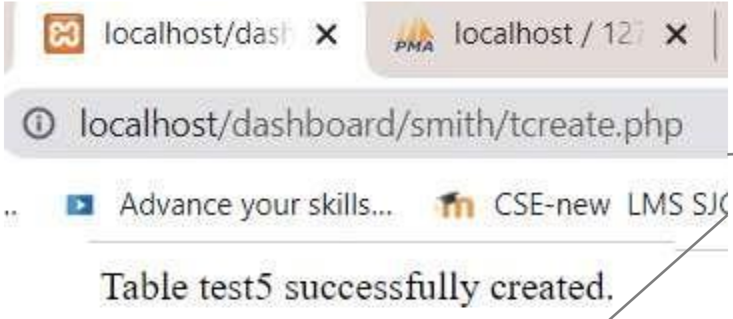
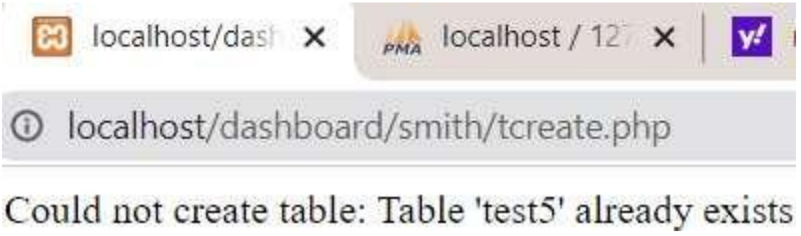
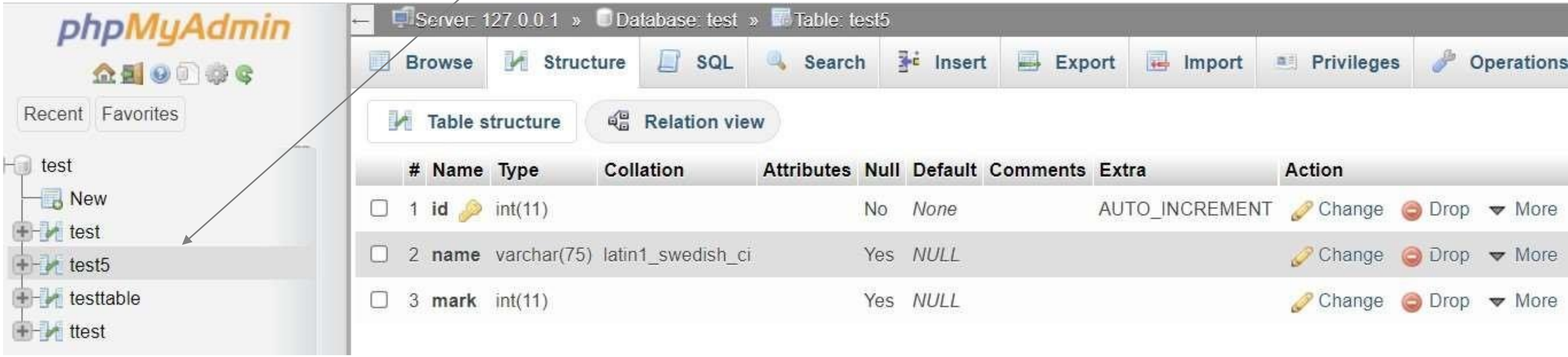


Table test5 successfully created.

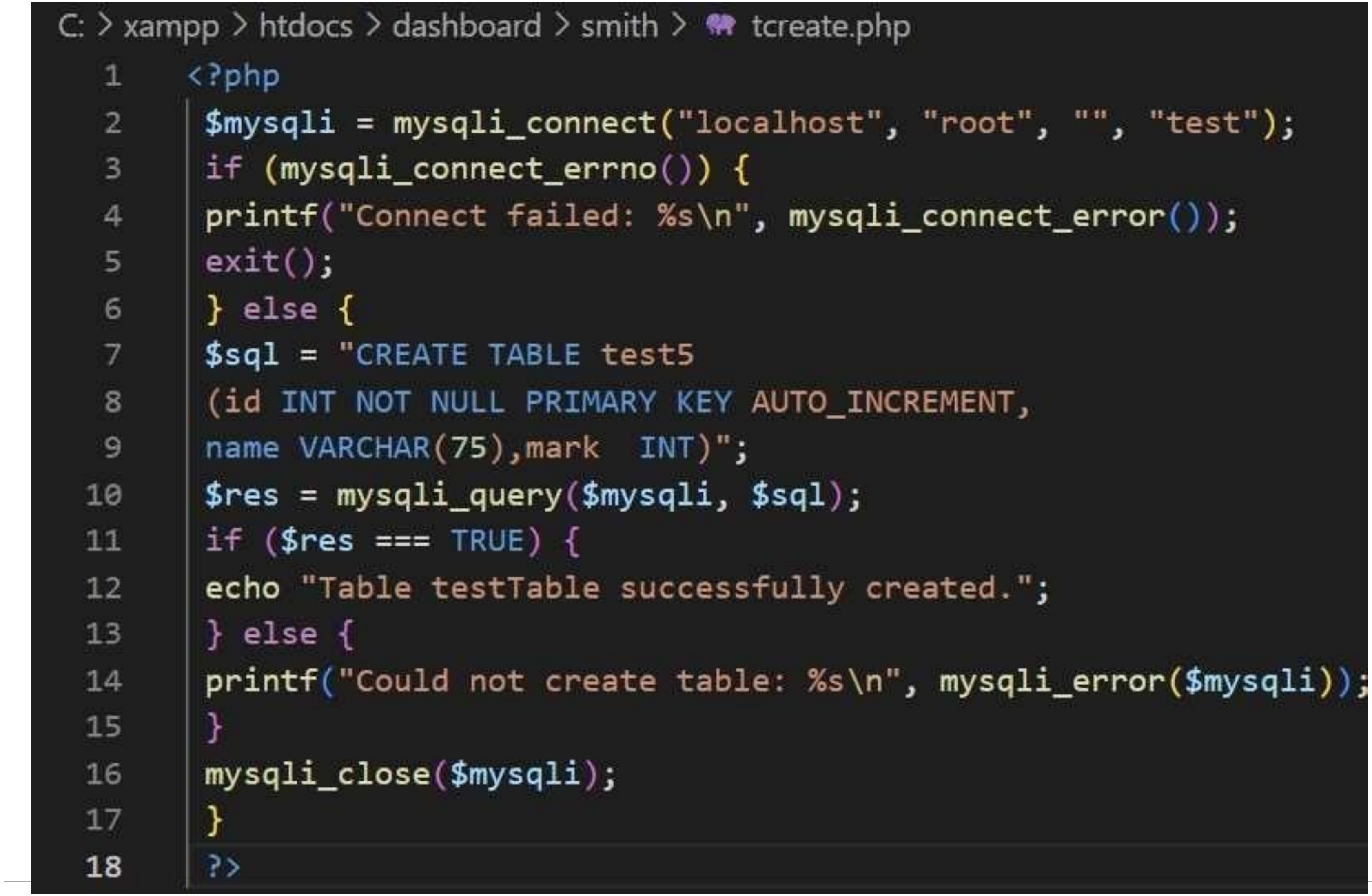


Could not create table: Table 'test5' already exists



	#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
□	1	**id**	int(11)			No	*None*		AUTO_INCREMENT	Change Drop More
□	2	**name**	varchar(75)	latin1_swedish_ci		Yes	*NULL*			Change Drop More
□	3	**mark**	int(11)			Yes	*NULL*			Change Drop More

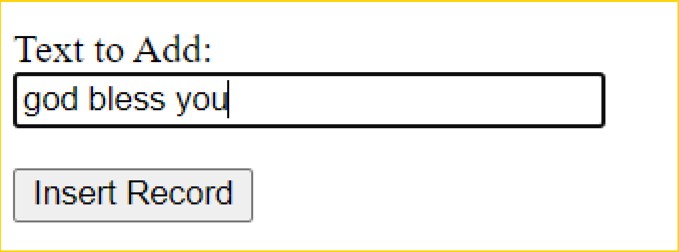
Form processing with DB- Creating Tables



```php
<?php
$mysqli = mysqli_connect("localhost", "root", "", "test");
if (mysqli_connect_errno()) {
printf("Connect failed: %s\n", mysqli_connect_error());
exit();
} else {
$sql = "CREATE TABLE test5
(id INT NOT NULL PRIMARY KEY AUTO_INCREMENT,
name VARCHAR(75),mark  INT)";
$res = mysqli_query($mysqli, $sql);
if ($res === TRUE) {
echo "Table testTable successfully created.";
} else {
printf("Could not create table: %s\n", mysqli_error($mysqli));
}
mysqli_close($mysqli);
}
?>
```

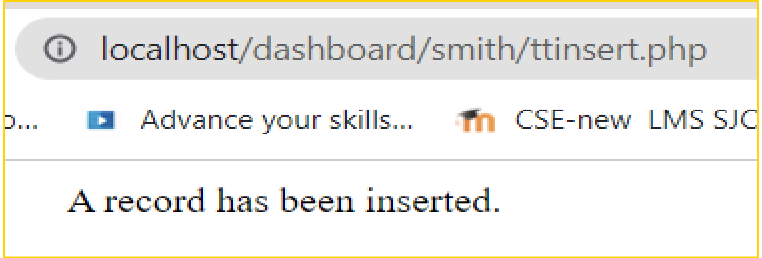
A Script to Insert a Record

```
<?php
$mysqli = mysqli_connect("localhost", "testuser", "somepass", "testDB");

if (mysqli_connect_errno()) {
    printf("Connect failed: %s\n", mysqli_connect_error());
    exit();
} else {
    $sql = "INSERT INTO testTable (testField) VALUES ('some value')";
    $res = mysqli_query($mysqli, $sql);

     if ($res === TRUE) {
            echo "A record has been inserted.";
     } else {
         printf("Could not insert record: %s\n", mysqli_error($mysqli));
     }

     mysqli_close($mysqli);
 }
 ?>
```



Text to Add:

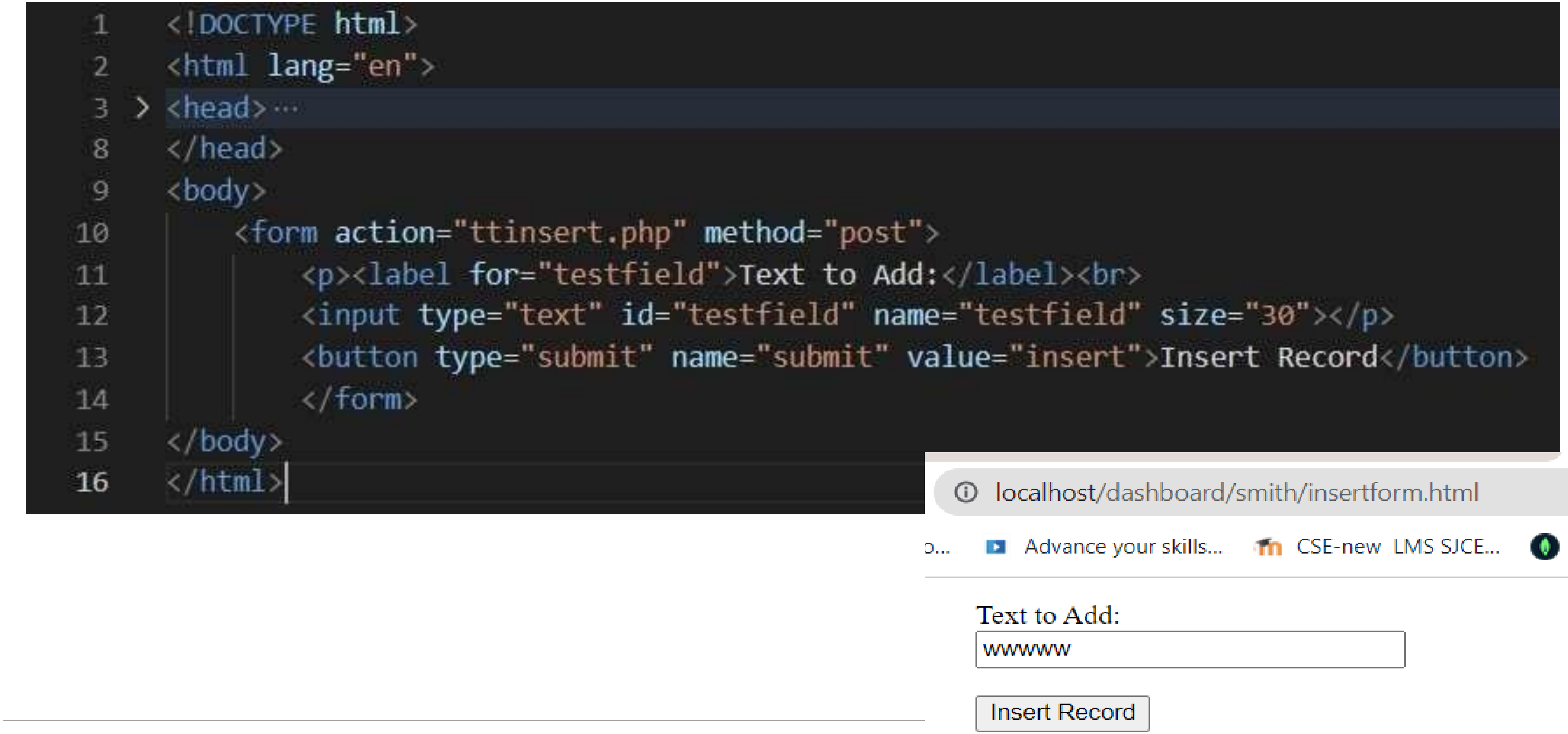
god bless you



localhost/dashboard/smith/ttinsert.php

A record has been inserted.

Form processing with DB- Inserting Tables



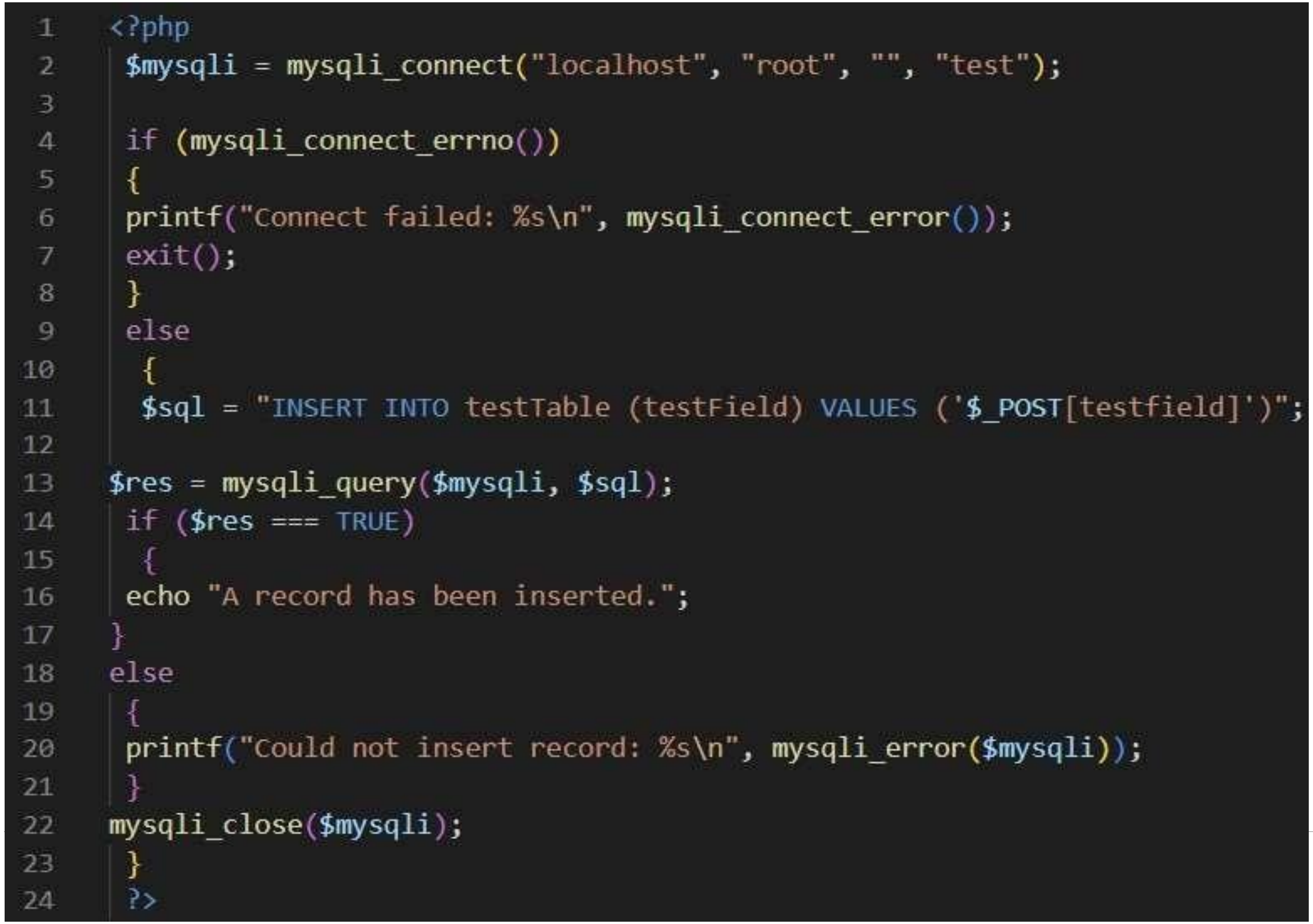
```
<!DOCTYPE html>
<html lang="en">
<head>···
</head>
<body>
    <form action="ttinsert.php" method="post">
        <p><label for="testfield">Text to Add:</label><br>
        <input type="text" id="testfield" name="testfield" size="30"></p>
        <button type="submit" name="submit" value="insert">Insert Record</button>
        </form>
</body>
</html>
```

localhost/dashboard/smith/insertform.html

Text to Add:

wwwww

Form processing with DB- Inserting Tables



```
<?php
 $mysqli = mysqli_connect("localhost", "root", "", "test");

 if (mysqli_connect_errno())
 {
 printf("Connect failed: %s\n", mysqli_connect_error());
 exit();
 }
 else
  {
  $sql = "INSERT INTO testTable (testField) VALUES ('$_POST[testfield]')";

$res = mysqli_query($mysqli, $sql);
 if ($res === TRUE)
  {
 echo "A record has been inserted.";
}
else
 {
 printf("Could not insert record: %s\n", mysqli_error($mysqli));
 }
mysqli_close($mysqli);
 }
 ?>
```

Select Data From a MySQL Database

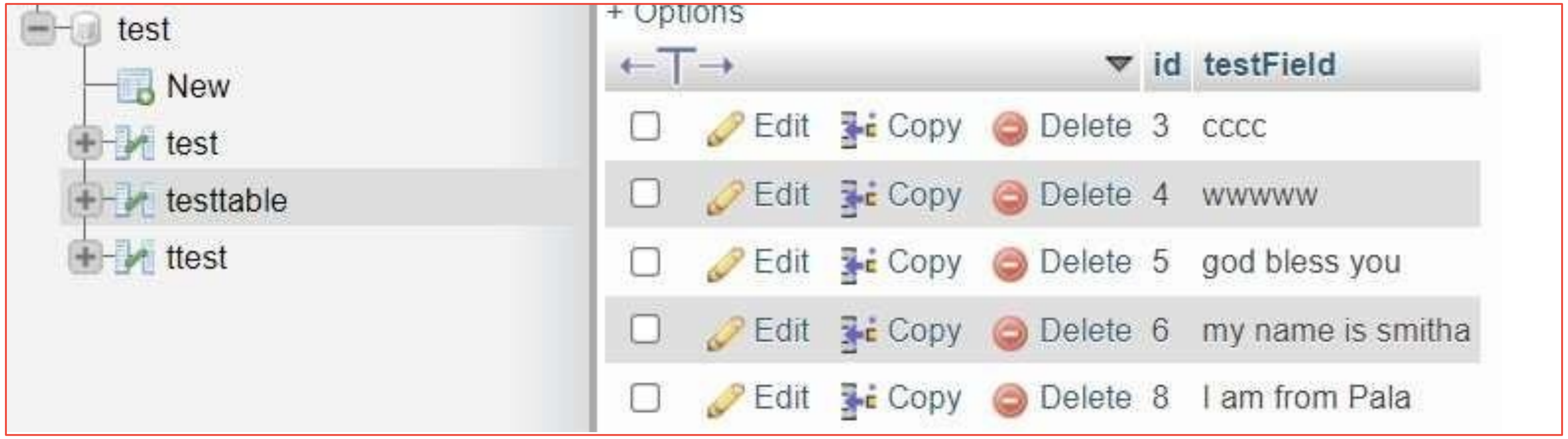
- The SELECT statement is used to select data from one or more tables:

  SELECT column_name(s) FROM table_name

- or we can use the * character to select ALL columns from a table:

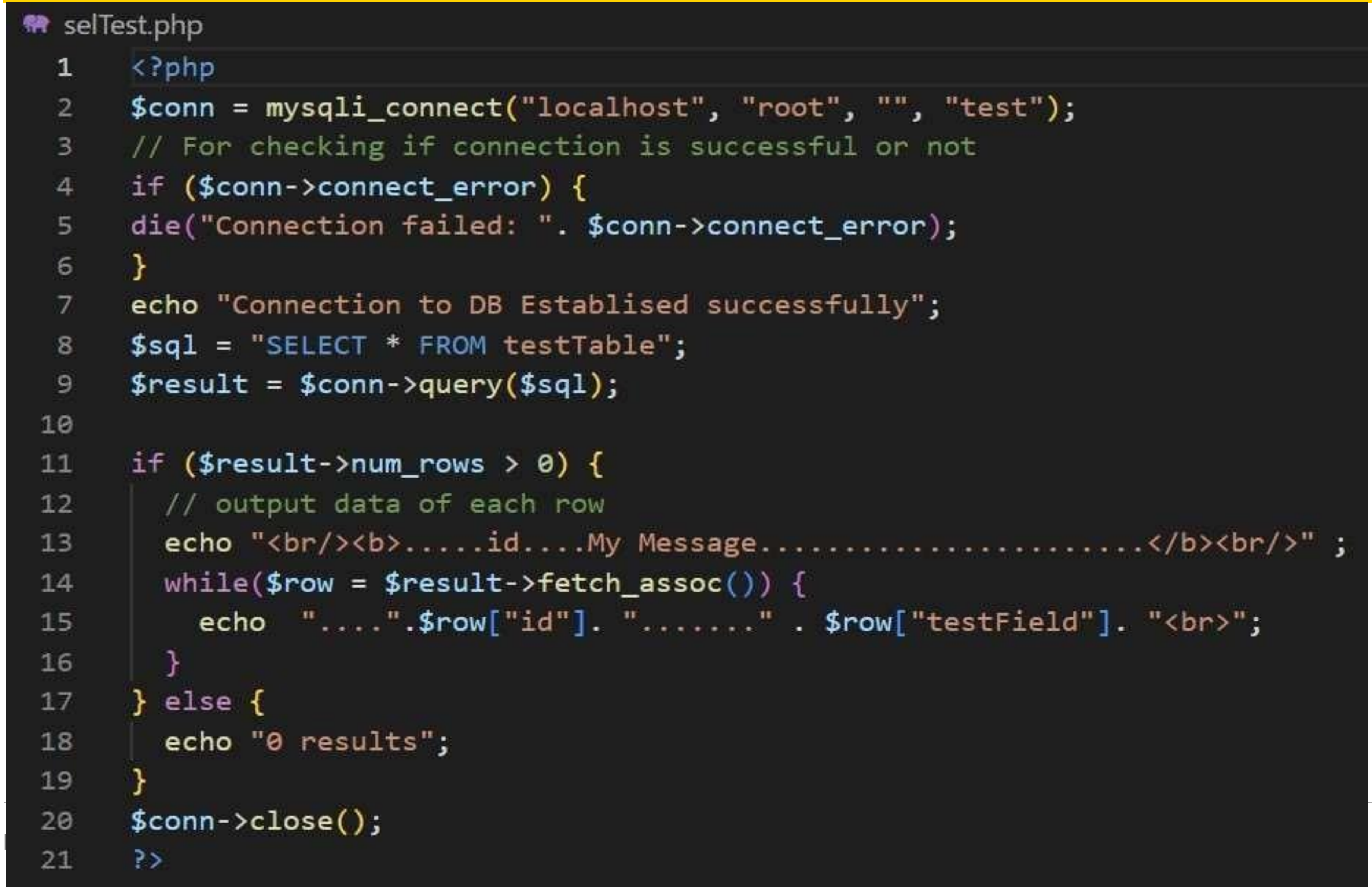
  SELECT * FROM table_name

- Select Data With MySQLi can also be done in two ways
  - MySQLi Object-oriented
  - MySQLi Procedural



				id	testField
□	Edit	Copy	Delete	3	cccc
□	Edit	Copy	Delete	4	wwwww
□	Edit	Copy	Delete	5	god bless you
□	Edit	Copy	Delete	6	my name is smitha
□	Edit	Copy	Delete	8	I am from Pala

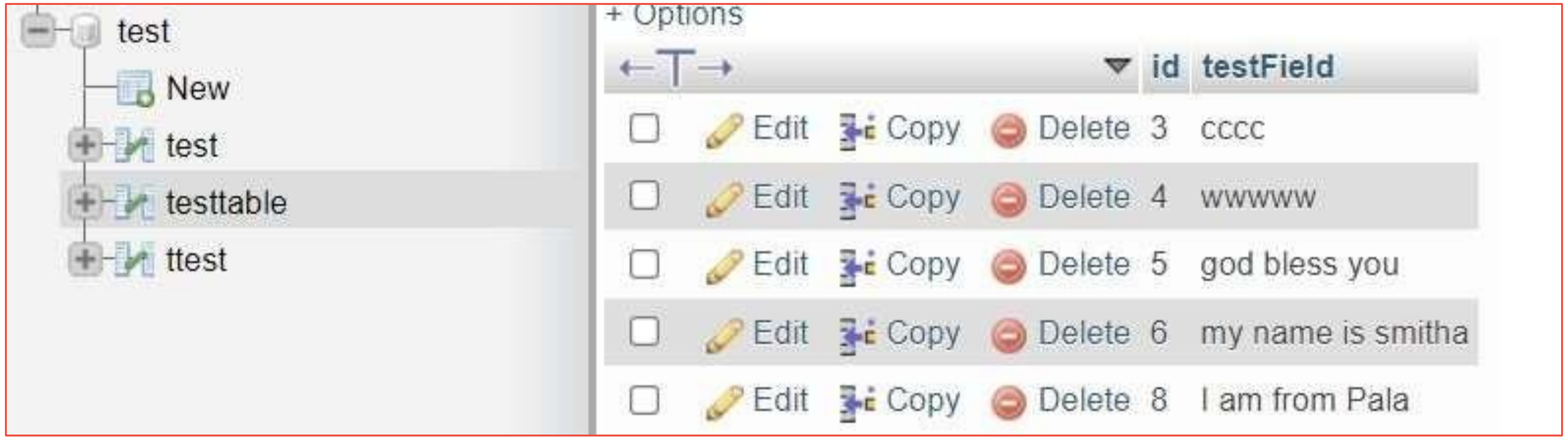
Select Data From a MySQL Database-MySQLi Object-oriented



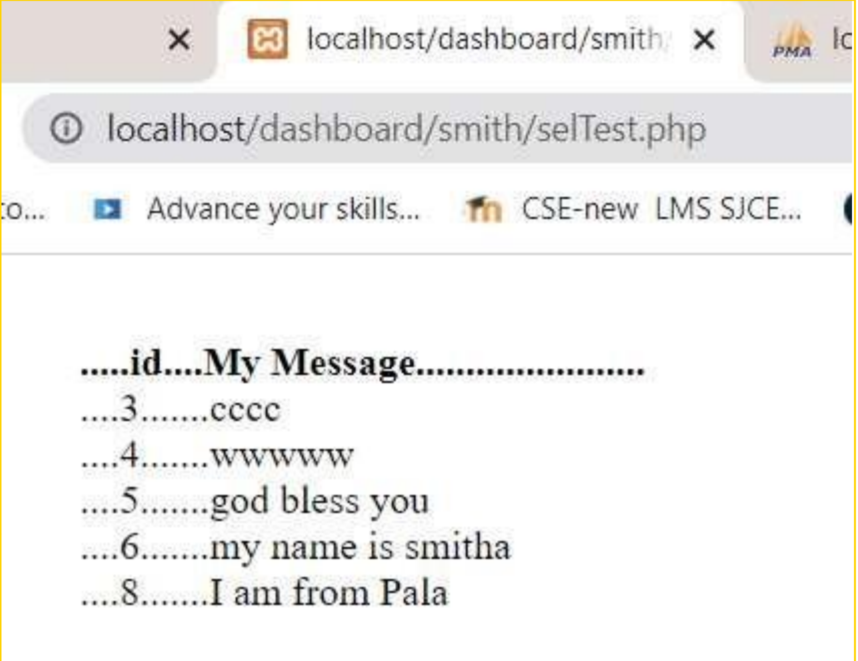
```php
<?php
$conn = mysqli_connect("localhost", "root", "", "test");
// For checking if connection is successful or not
if ($conn->connect_error) {
die("Connection failed: ". $conn->connect_error);
}
echo "Connection to DB Establised successfully";
$sql = "SELECT * FROM testTable";
$result = $conn->query($sql);

if ($result->num_rows > 0) {
  // output data of each row
  echo "<br/><b>.....id....My Message.......................</b><br/>" ;
  while($row = $result->fetch_assoc()) {
    echo  "....".$row["id"]. "......." . $row["testField"]. "<br>";
  }
} else {
  echo "0 results";
}
$conn->close();
?>
```

Select Data From a MySQL Database

- First, we set up an SQL query that selects the id, testField columns from the testTable. The next line of code runs the query and puts the resulting data into a variable called $result.
- Then, the function num_rows() checks if there are more than zero rows returned.
- If there are more than zero rows returned, the function fetch_assoc() puts all the results into an associative array that we can loop through. The while() loop loops through the result set and outputs the data from the id, testField columns.



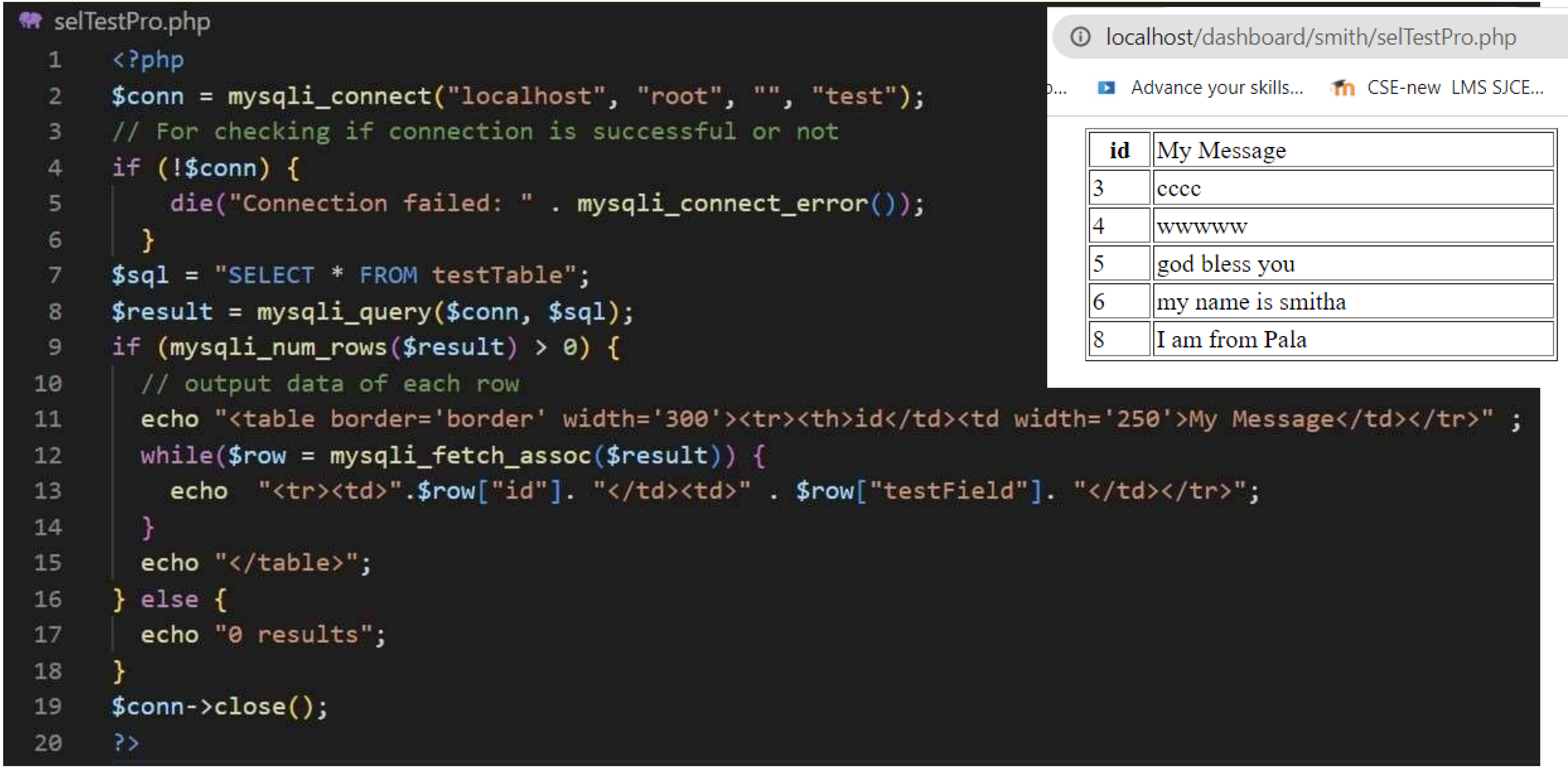
				id	testField
□	Edit	Copy	Delete	3	cccc
□	Edit	Copy	Delete	4	wwwww
□	Edit	Copy	Delete	5	god bless you
□	Edit	Copy	Delete	6	my name is smitha
□	Edit	Copy	Delete	8	I am from Pala



localhost/dashboard/smith
localhost/dashboard/smith/selTest.php
Advance your skills...
CSE-new LMS SJCE...

```
.....id....My Message......................
....3.......cccc
....4.......wwwww
....5.......god bless you
....6.......my name is smitha
....8.......I am from Pala
```

Select Data From a MySQL Database-MySQLi Procedural



selTestPro.php

```php
<?php
$conn = mysqli_connect("localhost", "root", "", "test");
// For checking if connection is successful or not
if (!$conn) {
    die("Connection failed: " . mysqli_connect_error());
  }
$sql = "SELECT * FROM testTable";
$result = mysqli_query($conn, $sql);
if (mysqli_num_rows($result) > 0) {
  // output data of each row
  echo "<table border='border' width='300'><tr><th>id</td><td width='250'>My Message</td></tr>" ;
  while($row = mysqli_fetch_assoc($result)) {
    echo  "<tr><td>".$row["id"]. "</td><td>" . $row["testField"]. "</td></tr>";
  }
  echo "</table>";
} else {
  echo "0 results";
}
$conn->close();
?>
```

localhost/dashboard/smith/selTestPro.php

id	My Message
3	cccc
4	wwwww
5	god bless you
6	my name is smitha
8	I am from Pala

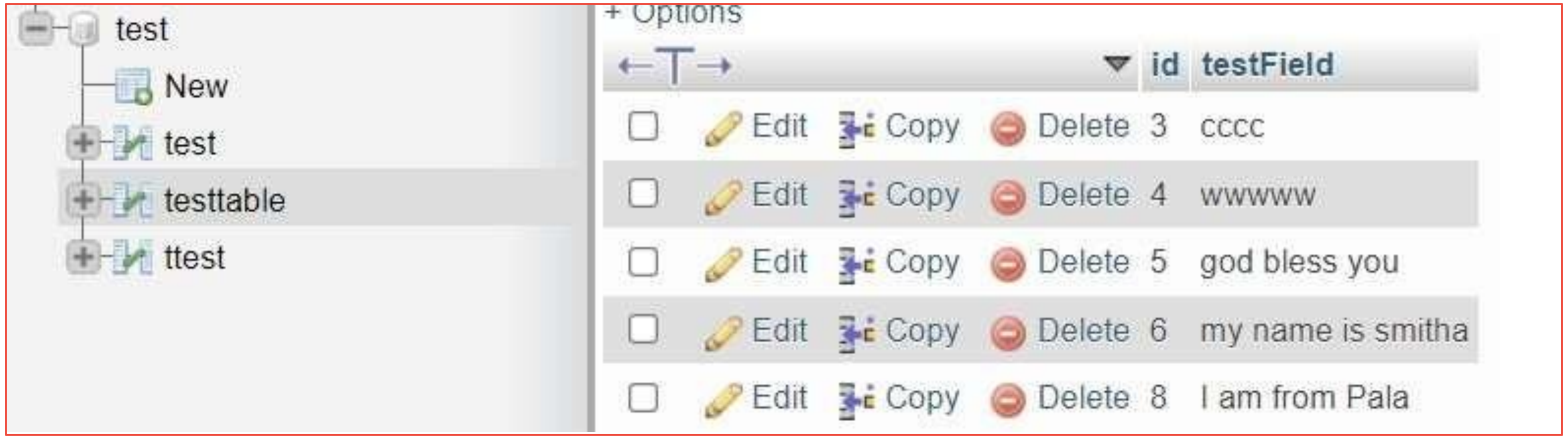
Update Data In a MySQL Table Using MySQLi

- The UPDATE statement is used to update existing records in a table:

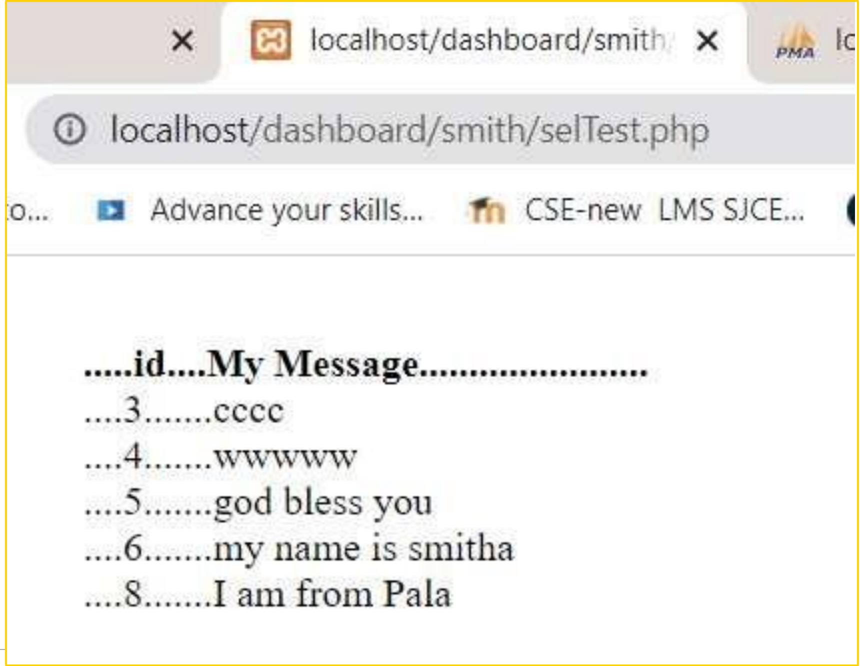
  UPDATE table_name SET column1=value, column2=value2,...

  WHERE some_column=some_value

- The WHERE clause specifies which record or records that should be updated. If you omit the WHERE clause, all records will be updated!

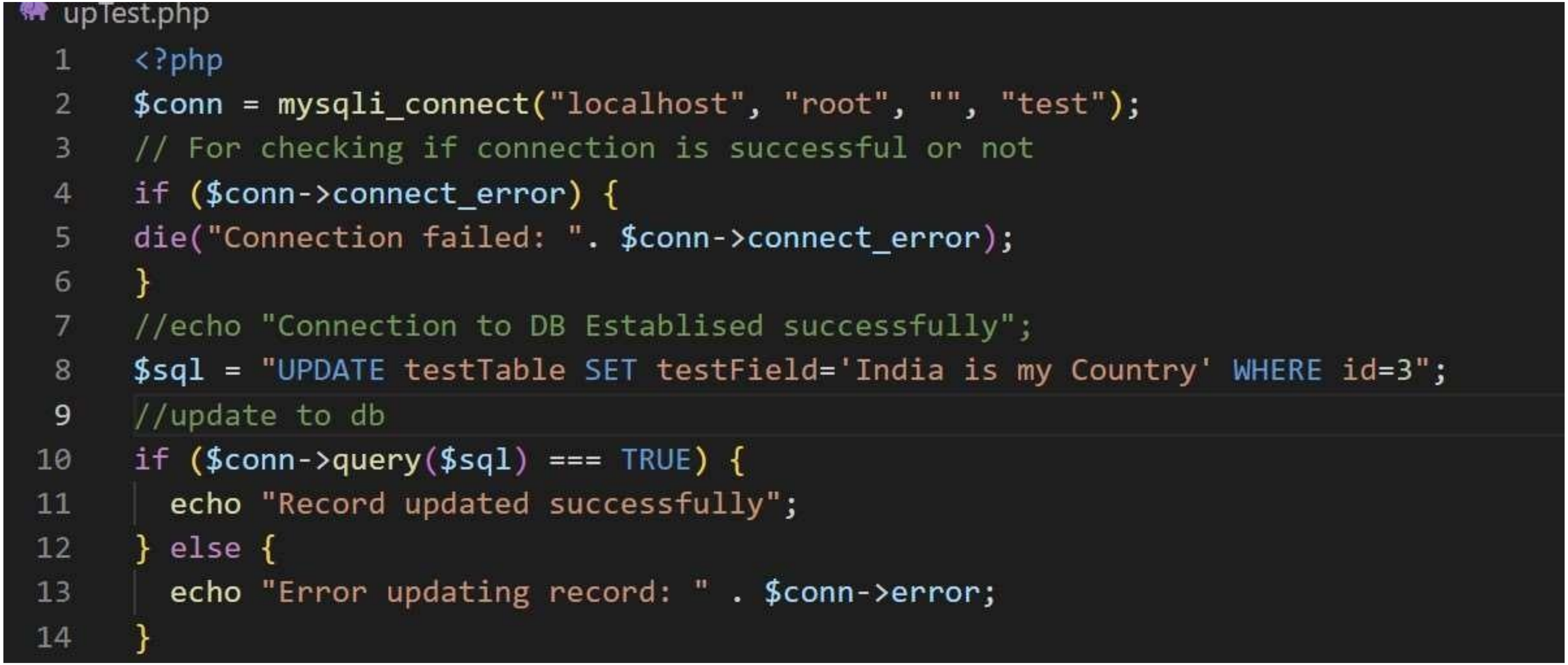


				id	testField
□	Edit	Copy	Delete	3	cccc
□	Edit	Copy	Delete	4	wwwww
□	Edit	Copy	Delete	5	god bless you
□	Edit	Copy	Delete	6	my name is smitha
□	Edit	Copy	Delete	8	I am from Pala


localhost/dashboard/smith
localhost/dashboard/smith/selTest.php
o...
Advance your skills...
CSE-new LMS SJCE...

```
.....id....My Message......................
....3.......cccc
....4.......wwwww
....5.......god bless you
....6.......my name is smitha
....8.......I am from Pala
```

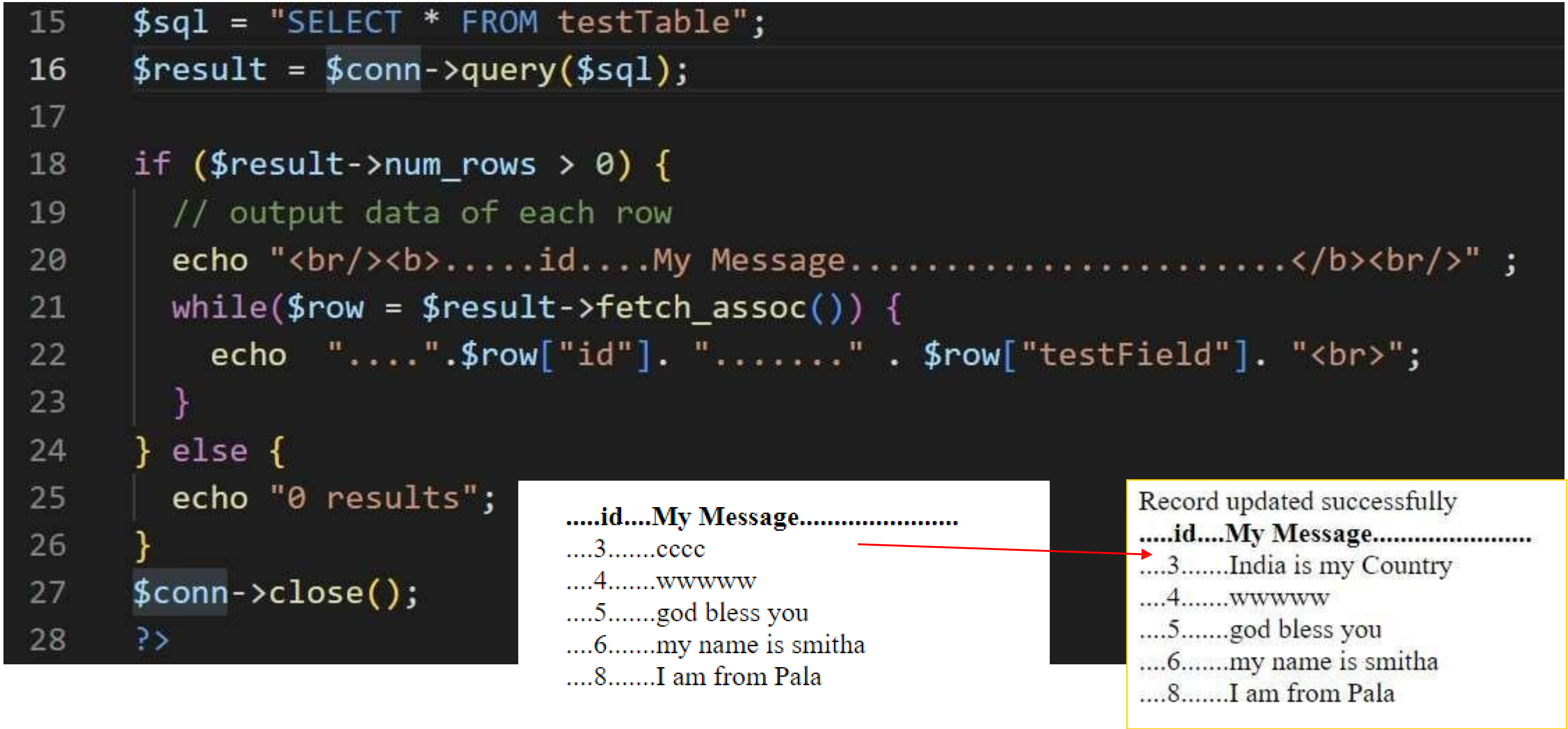
Update Data In a MySQL Table Using MySQLi-ObjectOriented



upTest.php

```php
<?php
$conn = mysqli_connect("localhost", "root", "", "test");
// For checking if connection is successful or not
if ($conn->connect_error) {
die("Connection failed: ". $conn->connect_error);
}
//echo "Connection to DB Establised successfully";
$sql = "UPDATE testTable SET testField='India is my Country' WHERE id=3";
//update to db
if ($conn->query($sql) === TRUE) {
  echo "Record updated successfully";
} else {
  echo "Error updating record: " . $conn->error;
}
```

Update Data In a MySQL Table Using MySQLi contd....

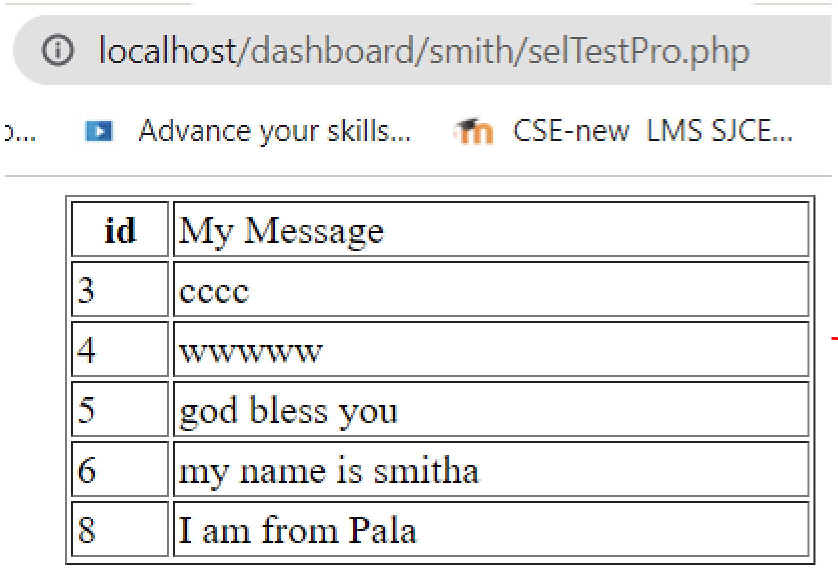


```php
$sql = "SELECT * FROM testTable";
$result = $conn->query($sql);

if ($result->num_rows > 0) {
  // output data of each row
  echo "<br/><b>.....id....My Message.......................</b><br/>" ;
  while($row = $result->fetch_assoc()) {
    echo  "....".$row["id"]. "......." . $row["testField"]. "<br>";
  }
} else {
  echo "0 results";
}
$conn->close();
?>
```

```
.....id....My Message.......................
....3.......cccc
....4.......wwwww
....5.......god bless you
....6.......my name is smitha
....8.......I am from Pala
```

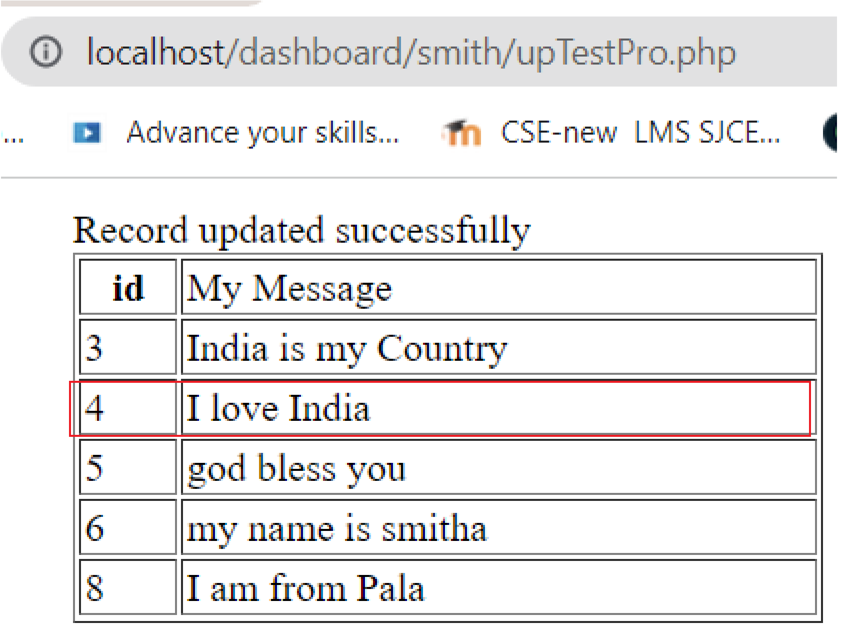
```
Record updated successfully
.....id....My Message.......................
....3.......India is my Country
....4.......wwwww
....5.......god bless you
....6.......my name is smitha
....8.......I am from Pala
```

Update Data In a MySQL Table Using MySQLi-procedural contd….



localhost/dashboard/smith/selTestPro.php

id	My Message
3	cccc
4	wwwww
5	god bless you
6	my name is smitha
8	I am from Pala

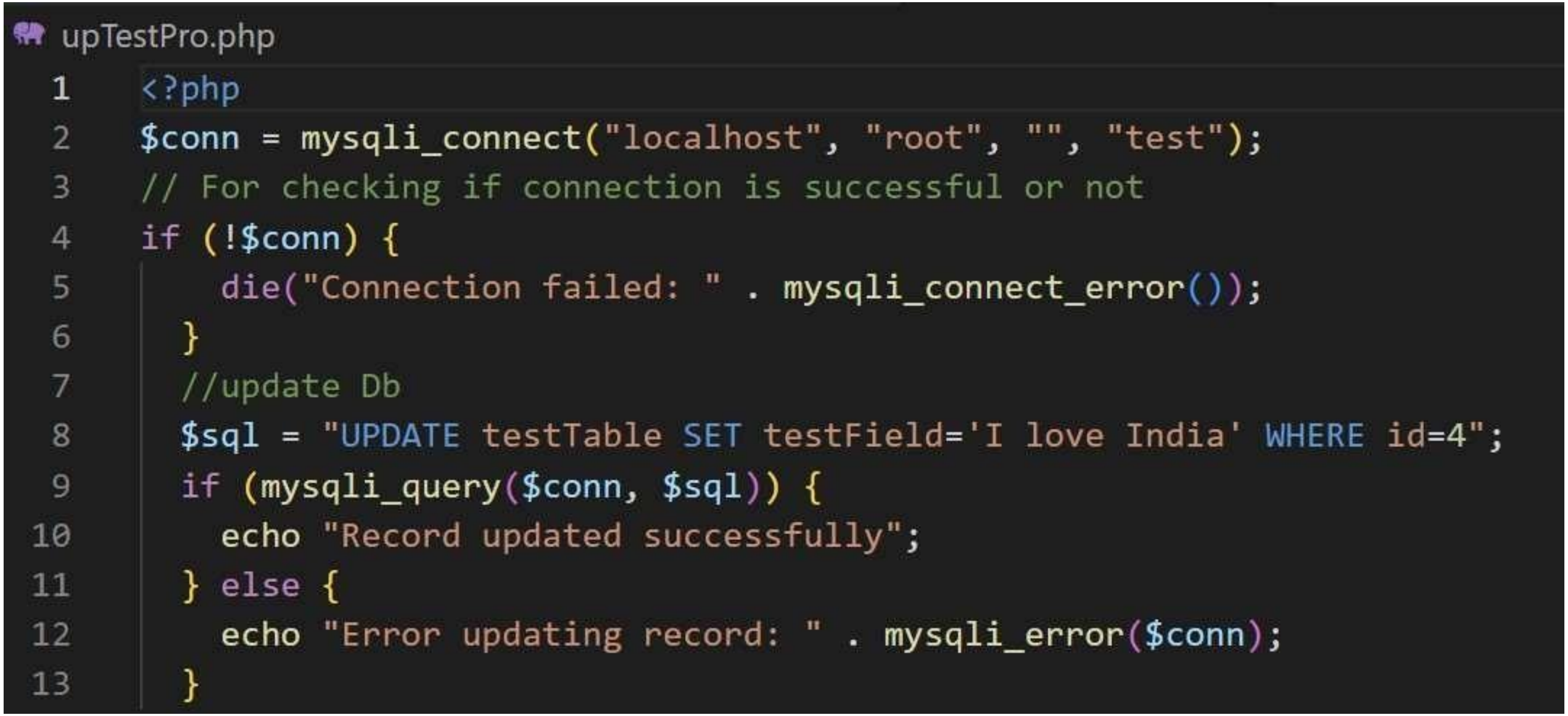


localhost/dashboard/smith/upTestPro.php

Record updated successfully

id	My Message
3	India is my Country
4	I love India
5	god bless you
6	my name is smitha
8	I am from Pala

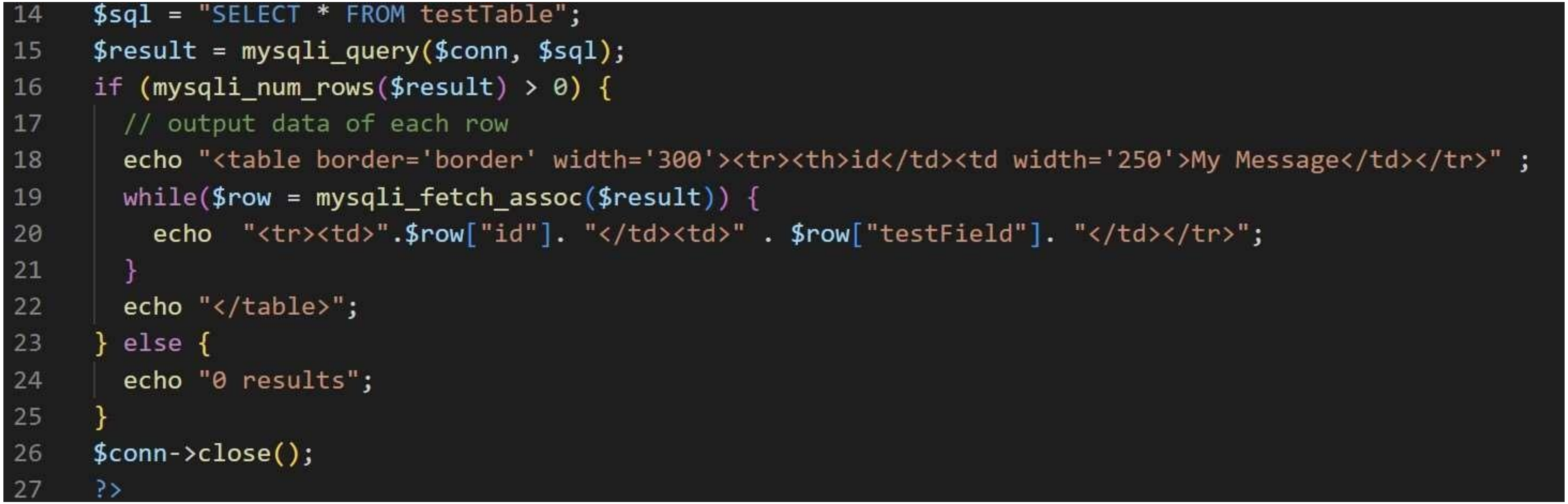
Update Data In a MySQL Table Using MySQLi-Procedural



upTestPro.php

```php
<?php
$conn = mysqli_connect("localhost", "root", "", "test");
// For checking if connection is successful or not
if (!$conn) {
    die("Connection failed: " . mysqli_connect_error());
  }
  //update Db
  $sql = "UPDATE testTable SET testField='I love India' WHERE id=4";
  if (mysqli_query($conn, $sql)) {
    echo "Record updated successfully";
  } else {
    echo "Error updating record: " . mysqli_error($conn);
  }
```

Update Data In a MySQL Table Using MySQLi-procedural contd….



```php
$sql = "SELECT * FROM testTable";
$result = mysqli_query($conn, $sql);
if (mysqli_num_rows($result) > 0) {
  // output data of each row
  echo "<table border='border' width='300'><tr><th>id</td><td width='250'>My Message</td></tr>" ;
  while($row = mysqli_fetch_assoc($result)) {
    echo  "<tr><td>".$row["id"]. "</td><td>" . $row["testField"]. "</td></tr>";
  }
  echo "</table>";
} else {
  echo "0 results";
}
$conn->close();
?>
```

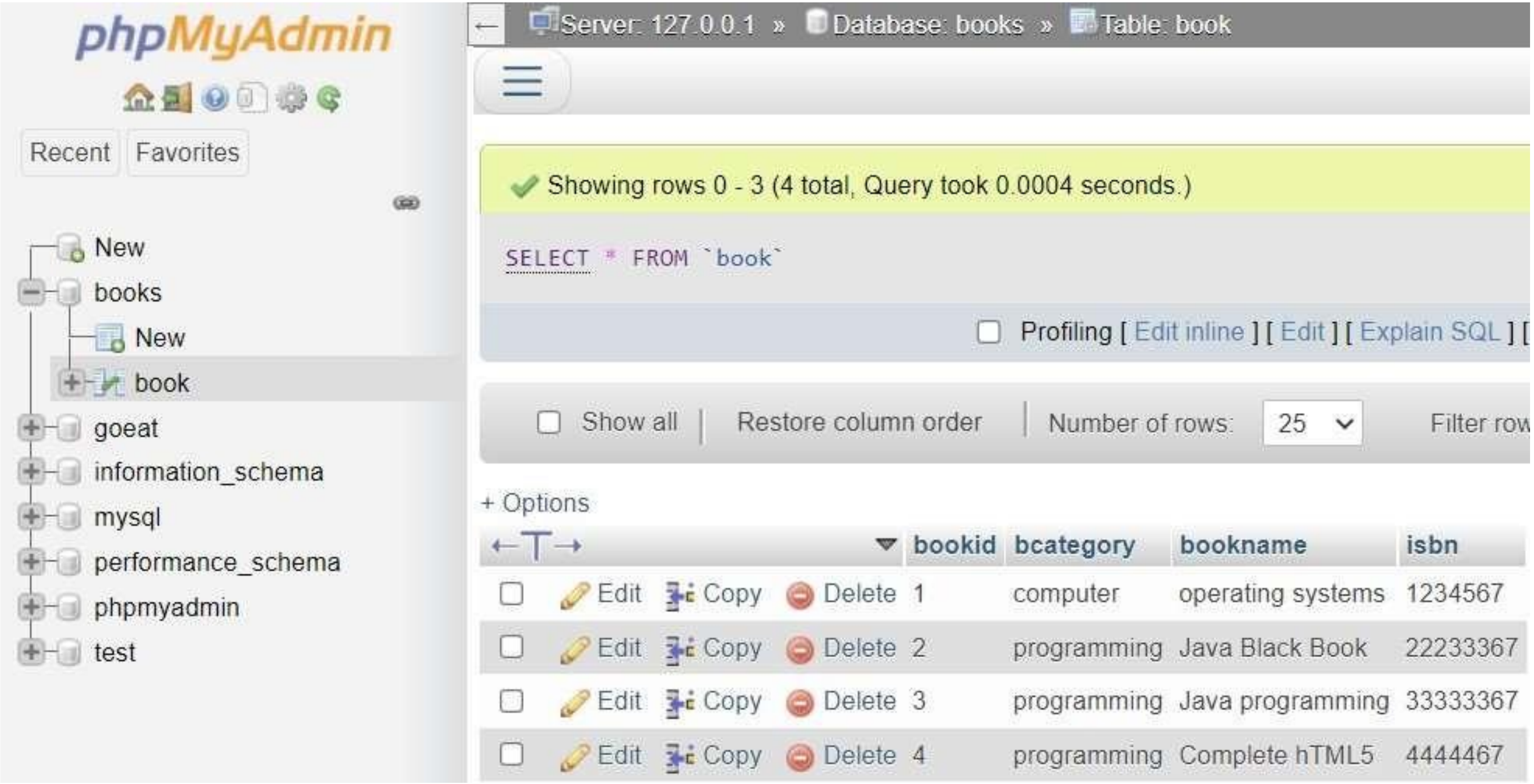
Working with sql Data

Working with Mysql Data

WARNING

- There is no more support for mysql_* functions, they are officially deprecated, no longer maintained and will be removed in the future.
- You should update your code with PDO or MySQLi to ensure the functionality of your project in the future

Working with Mysql Data



phpMyAdmin
Recent
Favorites
New
books
New
book
goeat
information_schema
mysql
performance_schema
phpmyadmin
test
Server: 127.0.0.1 » Database: books » Table: book

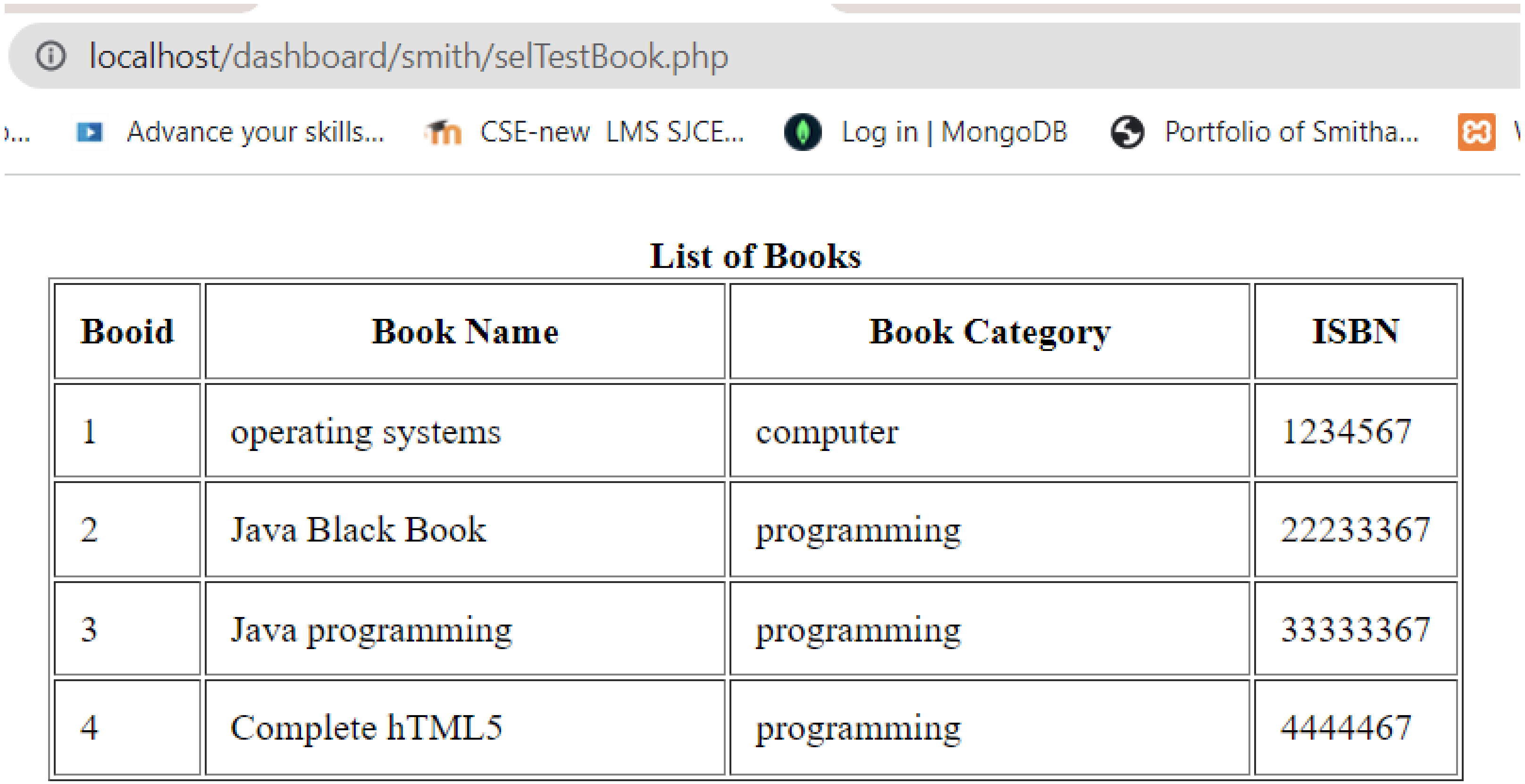
✓ Showing rows 0 - 3 (4 total, Query took 0.0004 seconds.)

```
SELECT * FROM `book`
```

□ Profiling [Edit inline] [Edit] [Explain SQL] [
□ Show all | Restore column order | Number of rows: 25 Filter row
+ Options

	bookid	bcategory	bookname	isbn
□ Edit Copy Delete	1	computer	operating systems	1234567
□ Edit Copy Delete	2	programming	Java Black Book	22233367
□ Edit Copy Delete	3	programming	Java programming	33333367
□ Edit Copy Delete	4	programming	Complete hTML5	4444467

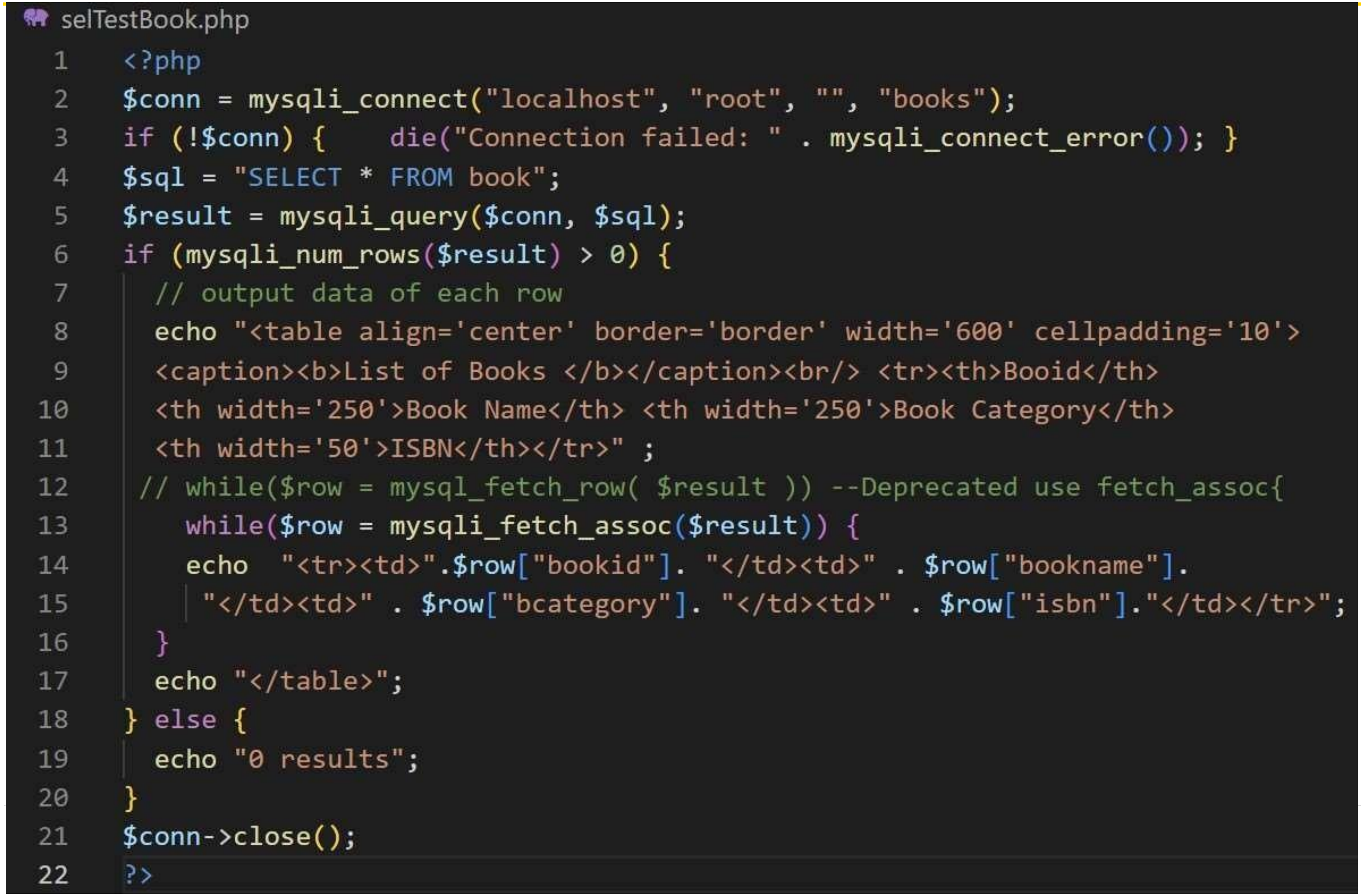
Working with Mysql Data



List of Books

Booid	Book Name	Book Category	ISBN
1	operating systems	computer	1234567
2	Java Black Book	programming	22233367
3	Java programming	programming	33333367
4	Complete hTML5	programming	4444467

Working with Mysql Data

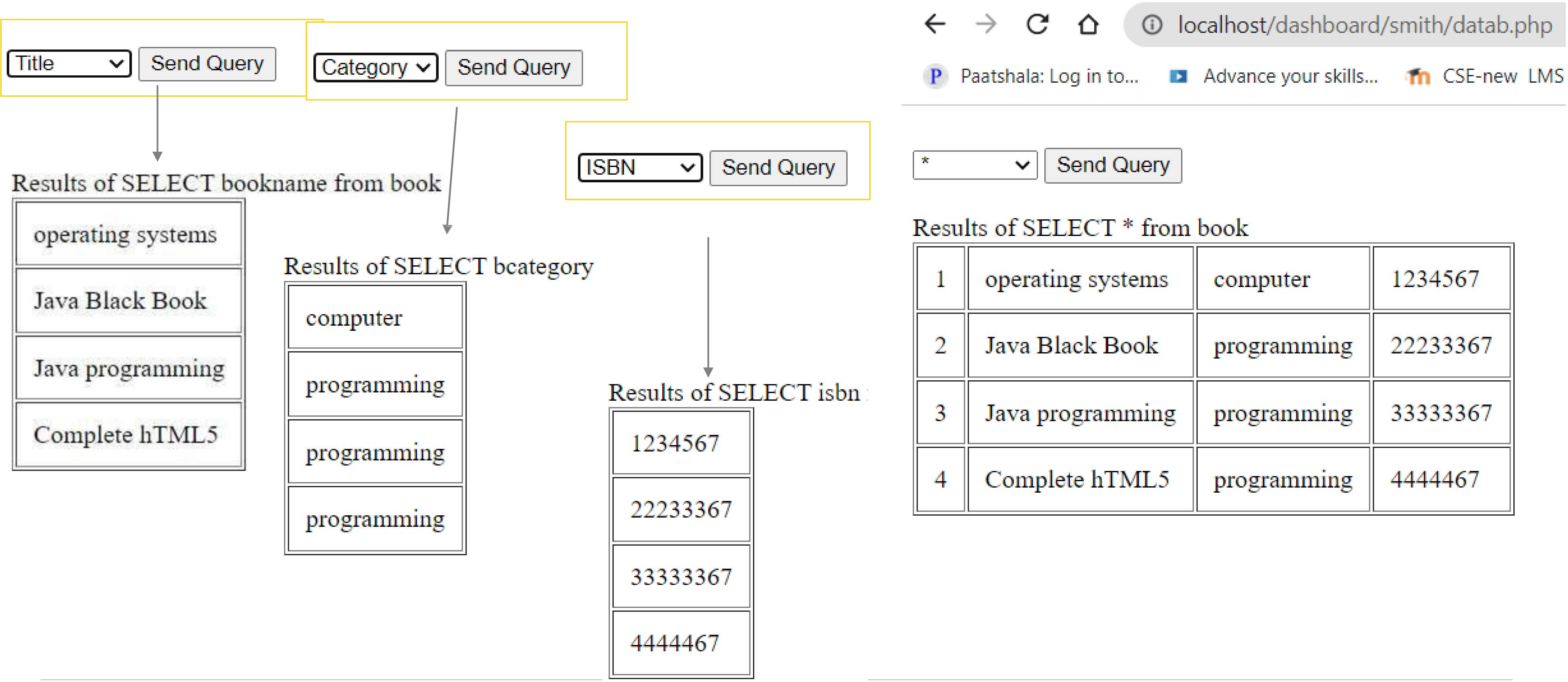


selTestBook.php

```php
<?php
$conn = mysqli_connect("localhost", "root", "", "books");
if (!$conn) {    die("Connection failed: " . mysqli_connect_error()); }
$sql = "SELECT * FROM book";
$result = mysqli_query($conn, $sql);
if (mysqli_num_rows($result) > 0) {
  // output data of each row
  echo "<table align='center' border='border' width='600' cellpadding='10'>
  <caption><b>List of Books </b></caption><br/> <tr><th>Booid</th>
  <th width='250'>Book Name</th> <th width='250'>Book Category</th>
  <th width='50'>ISBN</th></tr>" ;
 // while($row = mysql_fetch_row( $result )) --Deprecated use fetch_assoc{
    while($row = mysqli_fetch_assoc($result)) {
    echo  "<tr><td>".$row["bookid"]. "</td><td>" . $row["bookname"].
     "</td><td>" . $row["bcategory"]. "</td><td>" . $row["isbn"]."</td></tr>";
  }
  echo "</table>";
} else {
  echo "0 results";
}
$conn->close();
?>
```

Reading from Database Dynamically

Accessing Mysql Data-through dynamic Form data



Results of SELECT bookname from book

operating systems
Java Black Book
Java programming
Complete hTML5

Results of SELECT bcategory

computer
programming
programming
programming

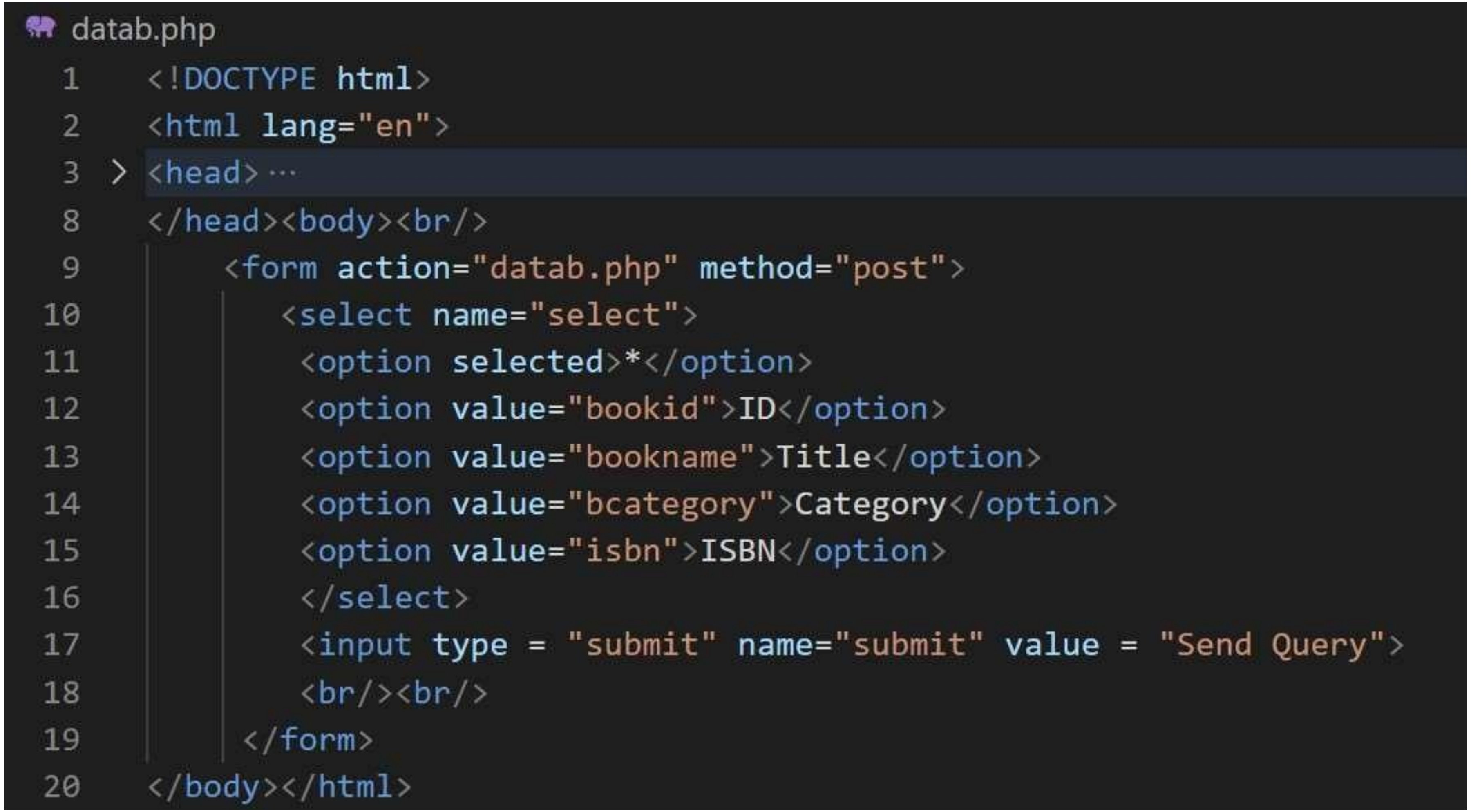
Results of SELECT isbn

1234567
22233367
33333367
4444467

Results of SELECT * from book

1	operating systems	computer	1234567
2	Java Black Book	programming	22233367
3	Java programming	programming	33333367
4	Complete hTML5	programming	4444467

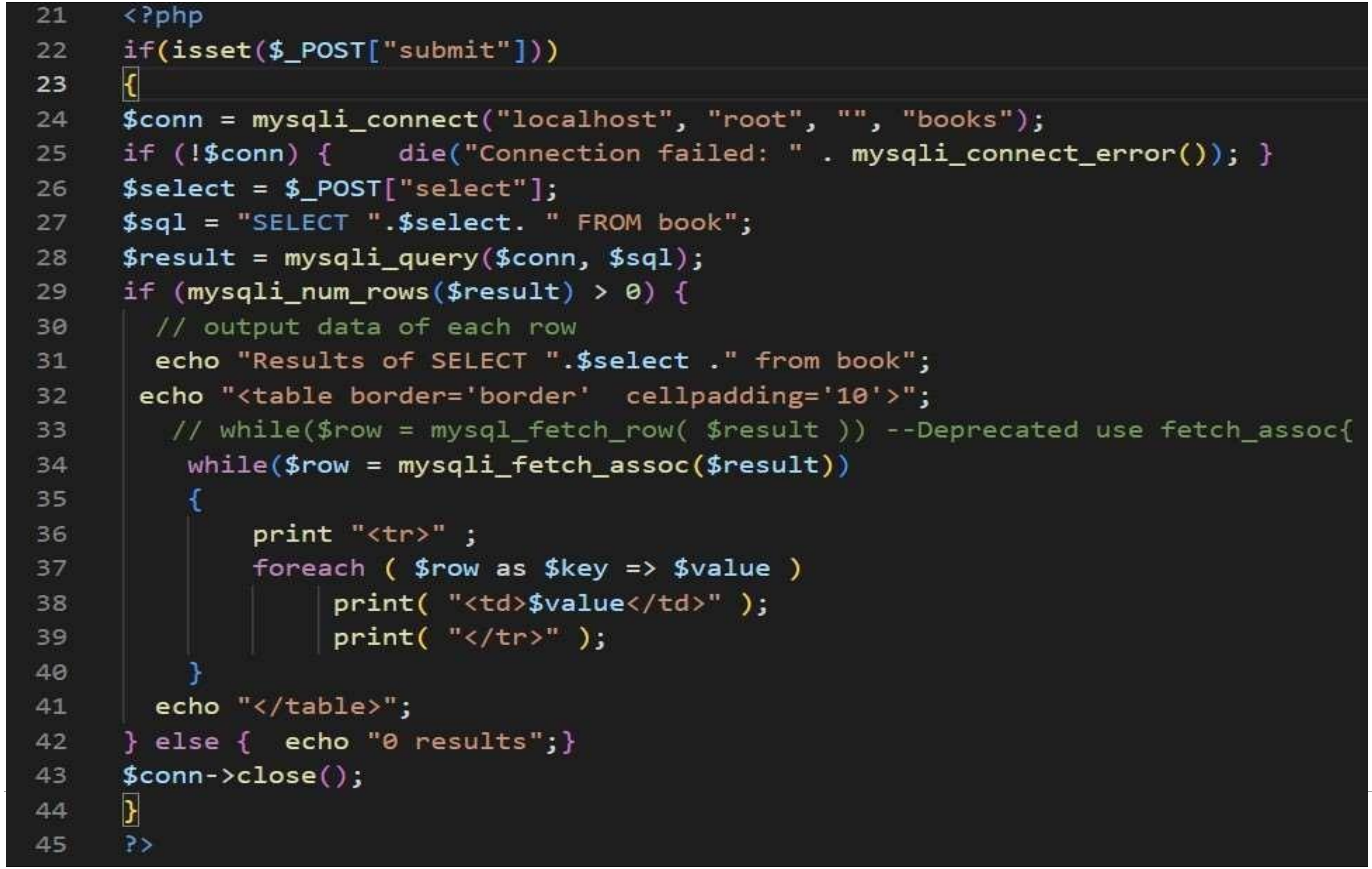
Working with Mysql Data-through Form data



datab.php

```
<!DOCTYPE html>
<html lang="en">
<head> ···
</head><body><br/>
    <form action="datab.php" method="post">
       <select name="select">
        <option selected>*</option>
        <option value="bookid">ID</option>
        <option value="bookname">Title</option>
        <option value="bcategory">Category</option>
        <option value="isbn">ISBN</option>
        </select>
        <input type = "submit" name="submit" value = "Send Query">
        <br/><br/>
     </form>
</body></html>
```

Working with Mysql Data-through Form data



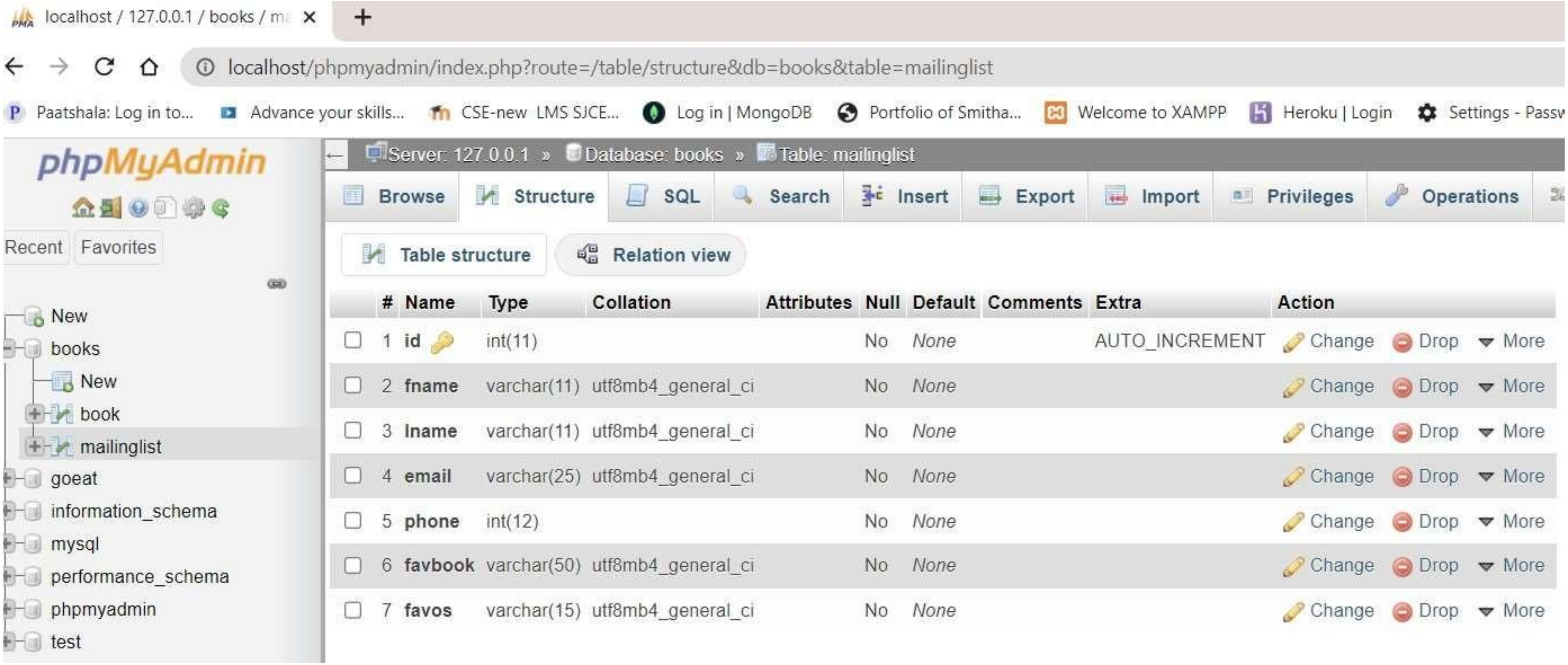
```php
<?php
if(isset($_POST["submit"]))
{
$conn = mysqli_connect("localhost", "root", "", "books");
if (!$conn) {    die("Connection failed: " . mysqli_connect_error()); }
$select = $_POST["select"];
$sql = "SELECT ".$select. " FROM book";
$result = mysqli_query($conn, $sql);
if (mysqli_num_rows($result) > 0) {
  // output data of each row
  echo "Results of SELECT ".$select ." from book";
 echo "<table border='border'  cellpadding='10'>";
   // while($row = mysql_fetch_row( $result )) --Deprecated use fetch_assoc{
    while($row = mysqli_fetch_assoc($result))
    {
        print "<tr>" ;
        foreach ( $row as $key => $value )
             print( "<td>$value</td>" );
             print( "</tr>" );
    }
  echo "</table>";
} else {  echo "0 results";}
$conn->close();
}
?>
```

Dynamic Contents

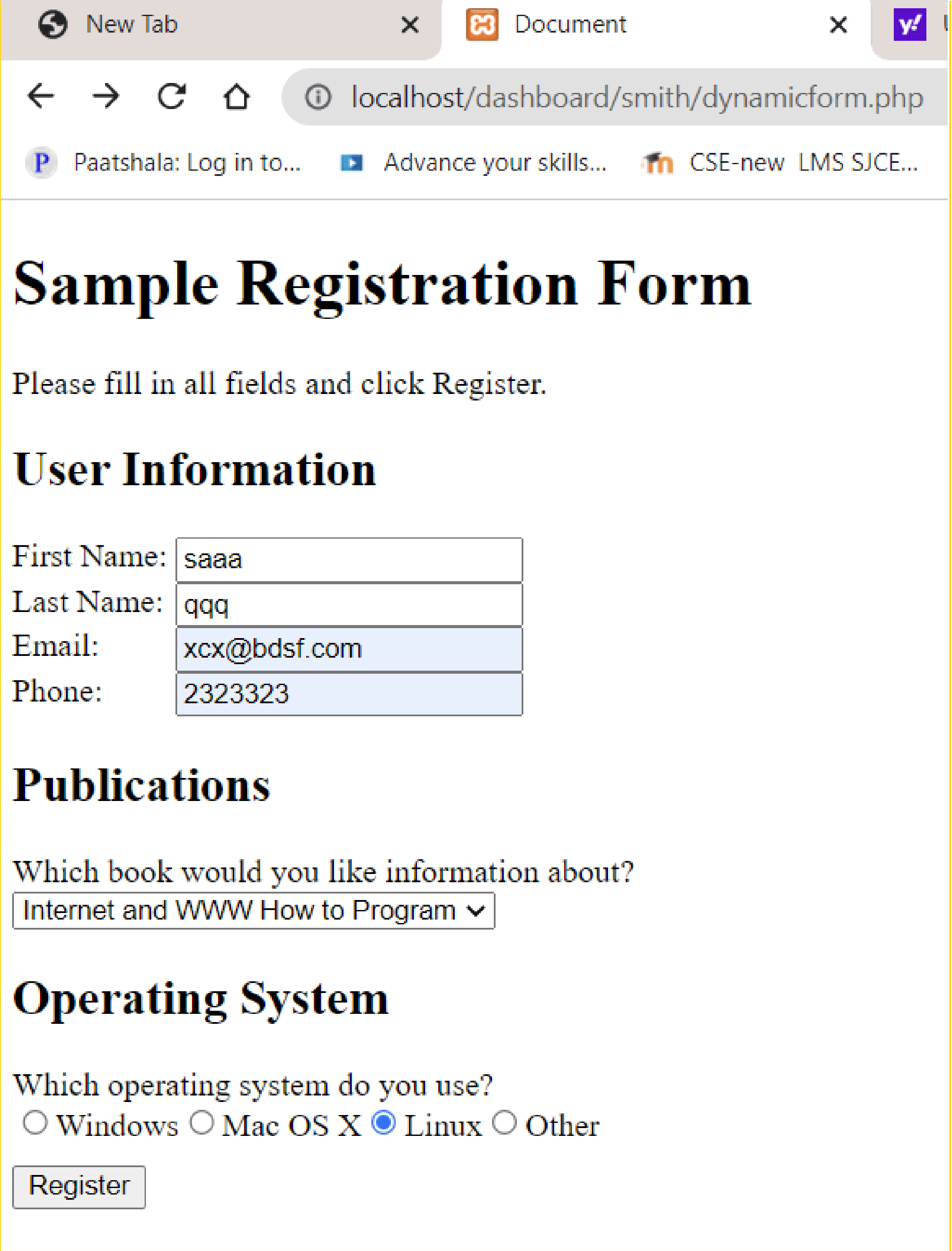
Dynamic Content

- PHP can dynamically change the HTML5 it outputs based on a user's input.
- We can combine the HTML5 form & PHP script into one dynamic document.
- The form is created using a series of loops, arrays and conditionals.
- We add error checking to each of the text input fields and inform the user of invalid entries on the form itself, rather than on an error page.
- If an error exists, the script maintains the previously submitted values in each form element.
- Finally, after the form has been successfully completed, we store the input from the user in a MySQL database.

Dynamic Content-Creation of mailinglist Table



	#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
□	1	id	int(11)			No	*None*		AUTO_INCREMENT	Change Drop More
□	2	fname	varchar(11)	utf8mb4_general_ci		No	*None*			Change Drop More
□	3	lname	varchar(11)	utf8mb4_general_ci		No	*None*			Change Drop More
□	4	email	varchar(25)	utf8mb4_general_ci		No	*None*			Change Drop More
□	5	phone	int(12)			No	*None*			Change Drop More
□	6	favbook	varchar(50)	utf8mb4_general_ci		No	*None*			Change Drop More
□	7	favos	varchar(15)	utf8mb4_general_ci		No	*None*			Change Drop More



Sample Registration Form

Please fill in all fields and click Register.

User Information

First Name:	saaa
Last Name:	qqq
Email:	xcx@bdsf.com
Phone:	2323323

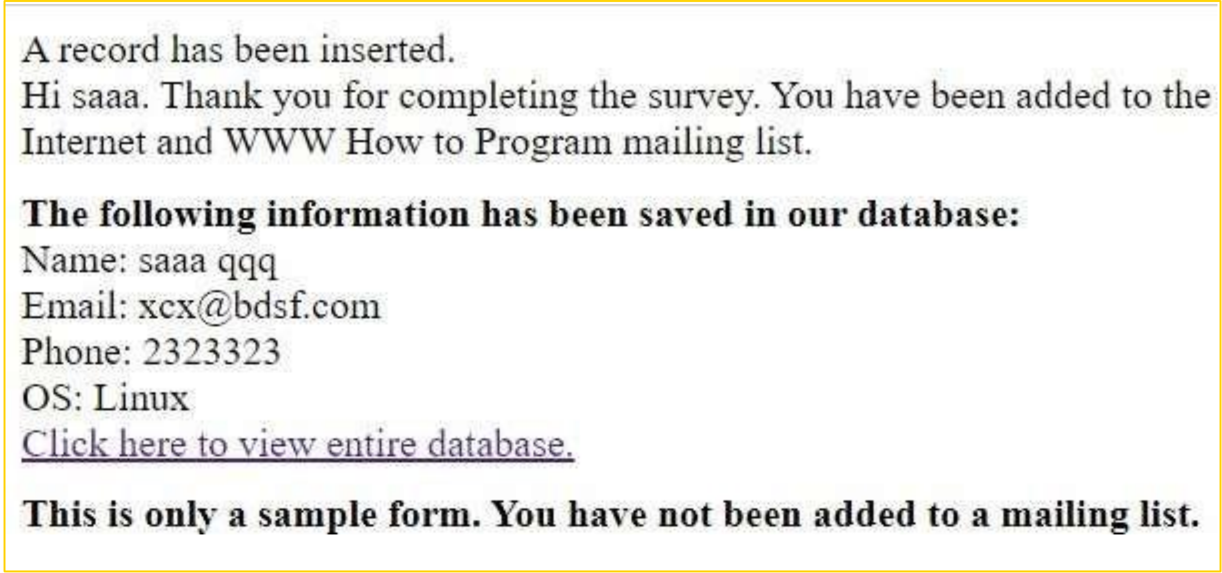
Publications

Which book would you like information about?
Internet and WWW How to Program

Operating System

Which operating system do you use?
○ Windows ○ Mac OS X ● Linux ○ Other

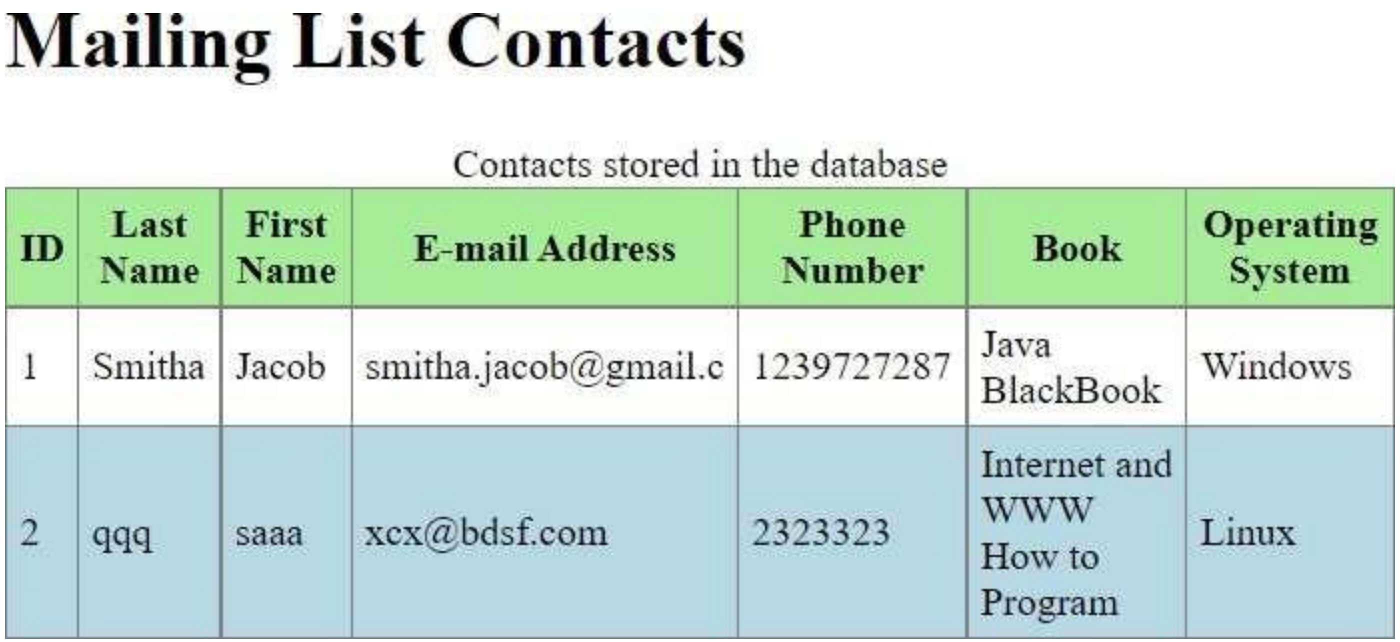
Register



A record has been inserted.
Hi saaa. Thank you for completing the survey. You have been added to the Internet and WWW How to Program mailing list.

The following information has been saved in our database:
Name: saaa qqq
Email: xcx@bdsf.com
Phone: 2323323
OS: Linux
Click here to view entire database.

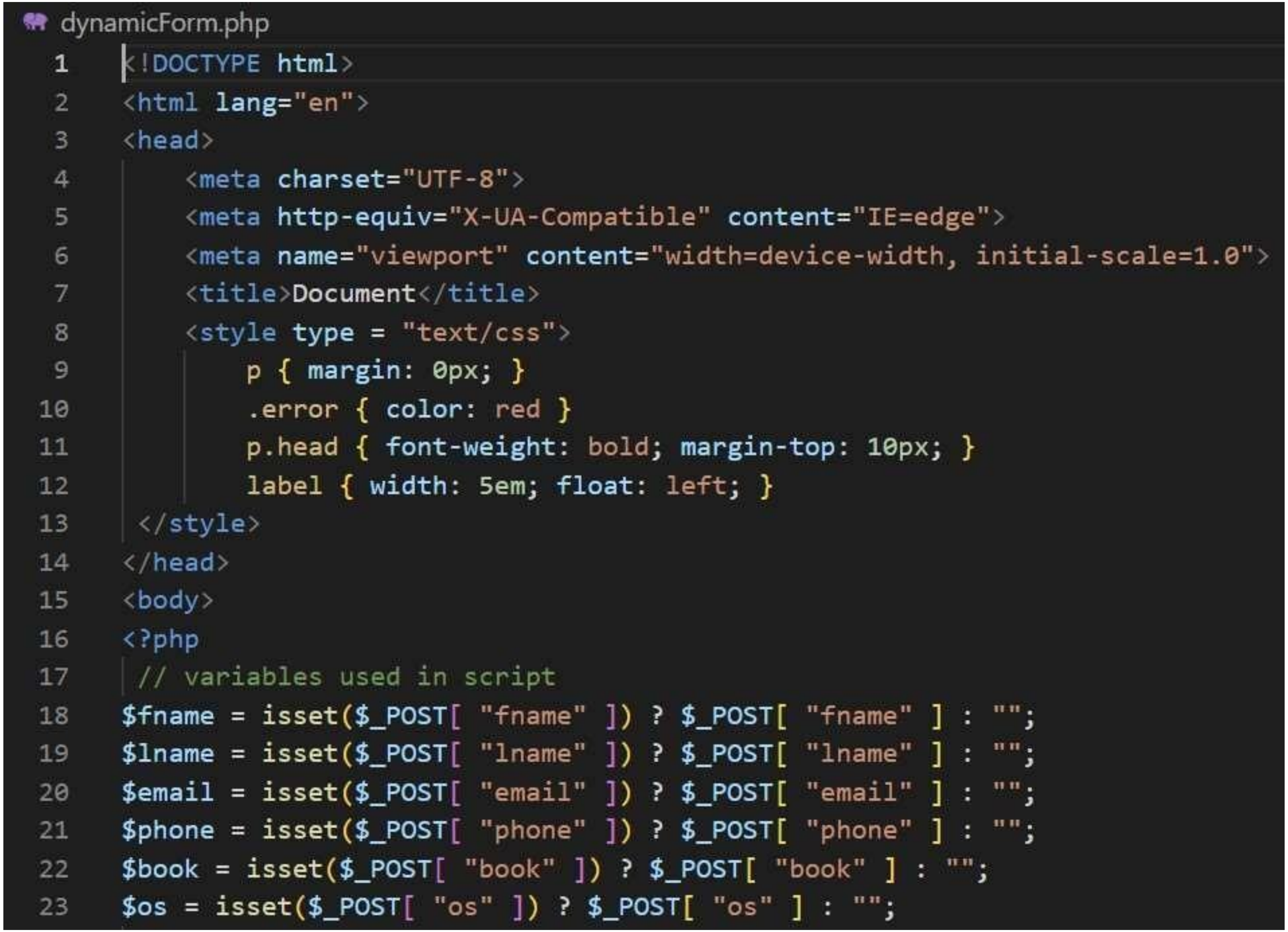
This is only a sample form. You have not been added to a mailing list.



Mailing List Contacts

Contacts stored in the database

ID	Last Name	First Name	E-mail Address	Phone Number	Book	Operating System
1	Smitha	Jacob	smitha.jacob@gmail.c	1239727287	Java BlackBook	Windows
2	qqq	saaa	xcx@bdsf.com	2323323	Internet and WWW How to Program	Linux

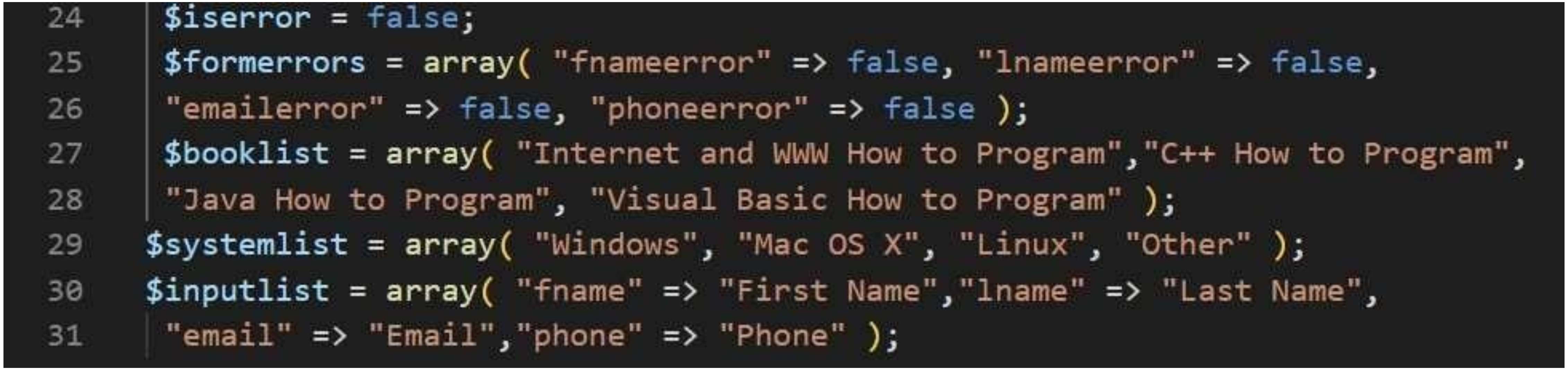


dynamicForm.php

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
    <style type = "text/css">
        p { margin: 0px; }
        .error { color: red }
        p.head { font-weight: bold; margin-top: 10px; }
        label { width: 5em; float: left; }
 </style>
</head>
<body>
<?php
 // variables used in script
$fname = isset($_POST[ "fname" ]) ? $_POST[ "fname" ] : "";
$lname = isset($_POST[ "lname" ]) ? $_POST[ "lname" ] : "";
$email = isset($_POST[ "email" ]) ? $_POST[ "email" ] : "";
$phone = isset($_POST[ "phone" ]) ? $_POST[ "phone" ] : "";
$book = isset($_POST[ "book" ]) ? $_POST[ "book" ] : "";
$os = isset($_POST[ "os" ]) ? $_POST[ "os" ] : "";
```

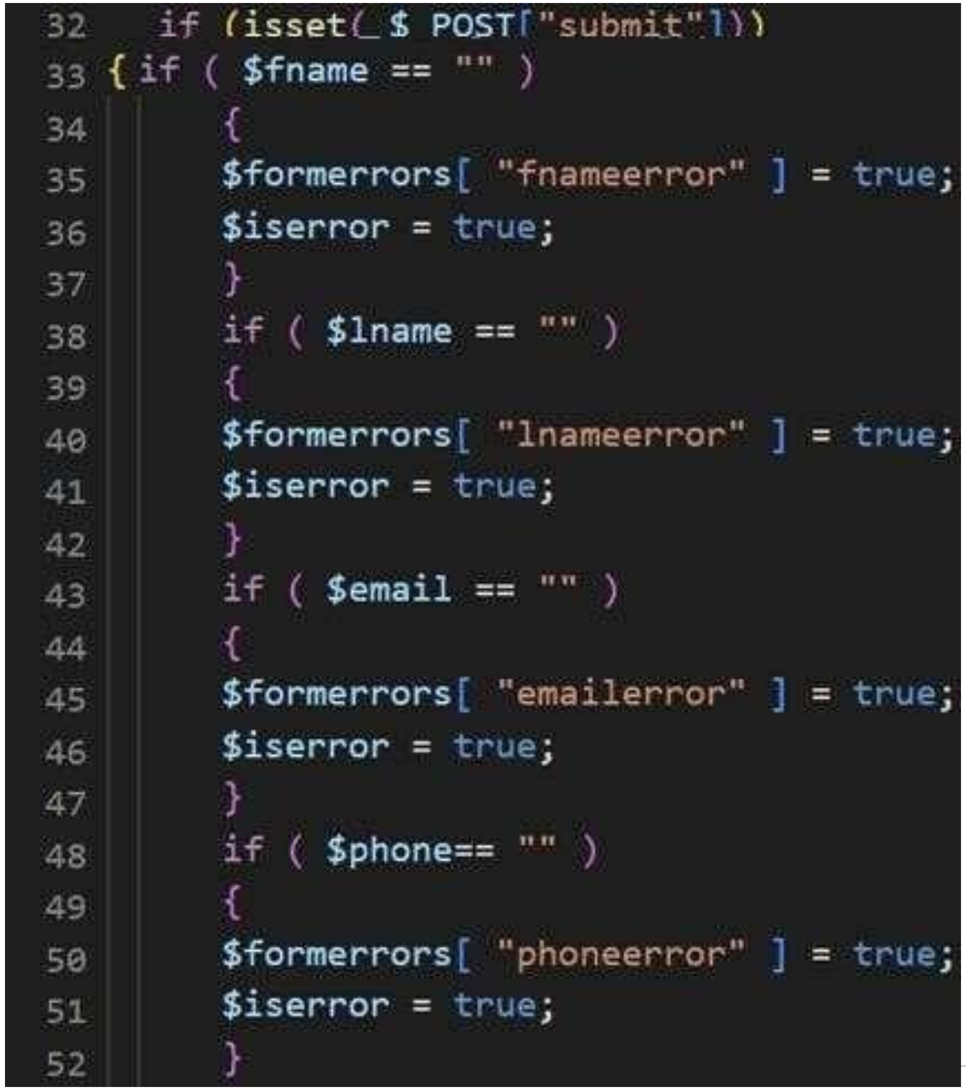
Dynamic Content-Variables & Arrays

- Lines 18–24 create variables that are used throughout the script to fill in form fields and check for errors.
- Line 25 creates an array for formerrors
- Lines 27,29,30 create three arrays, $booklist, $systemlist and $inputlist, that are used to dynamically create the form's input fields.

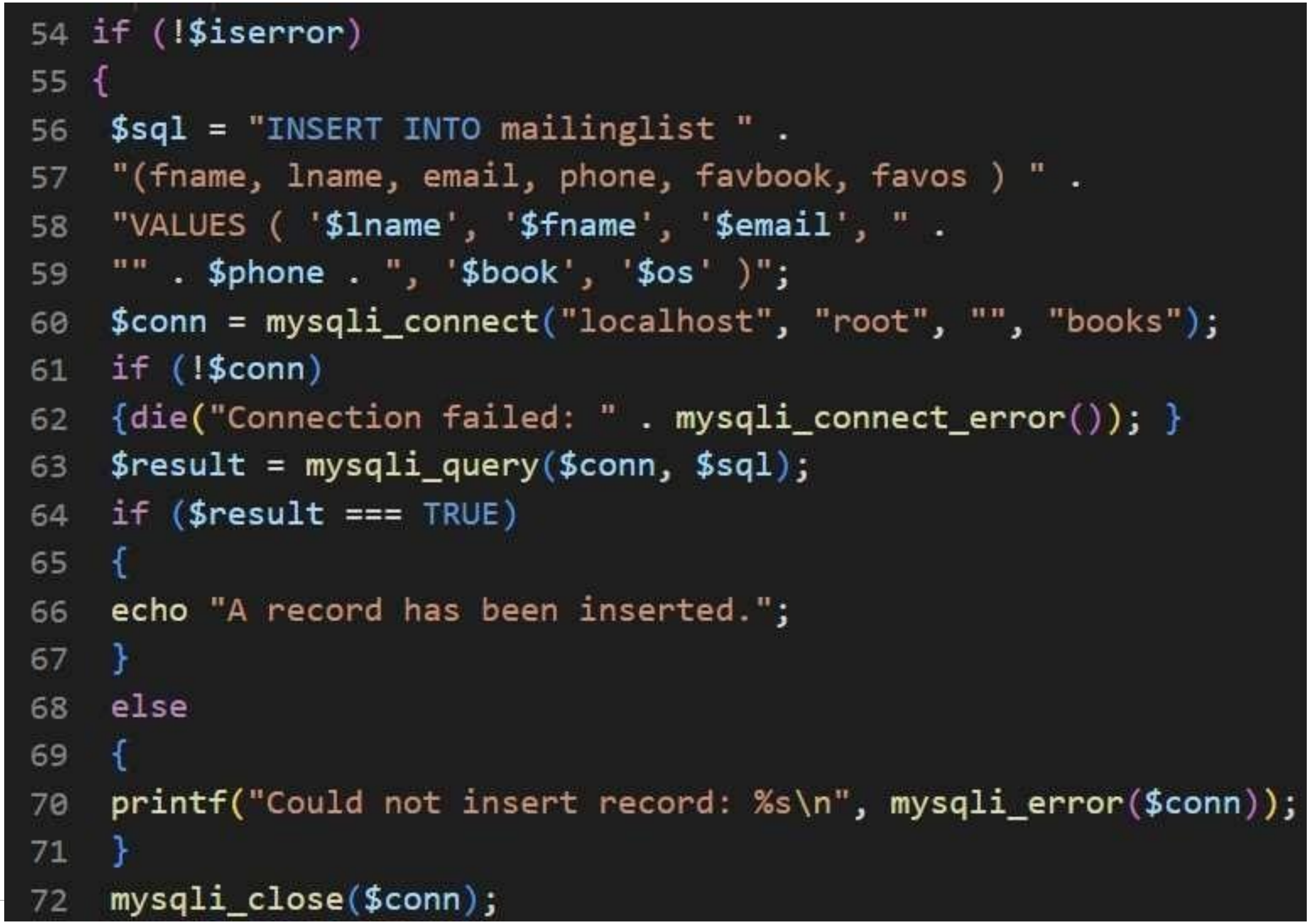


```
24      $iserror = false;
25      $formerrors = array( "fnameerror" => false, "lnameerror" => false,
26      "emailerror" => false, "phoneerror" => false );
27      $booklist = array( "Internet and WWW How to Program","C++ How to Program",
28      "Java How to Program", "Visual Basic How to Program" );
29     $systemlist = array( "Windows", "Mac OS X", "Linux", "Other" );
30     $inputlist = array( "fname" => "First Name","lname" => "Last Name",
31      "email" => "Email","phone" => "Phone" );
```

Dynamic Content-Variables & Arrays

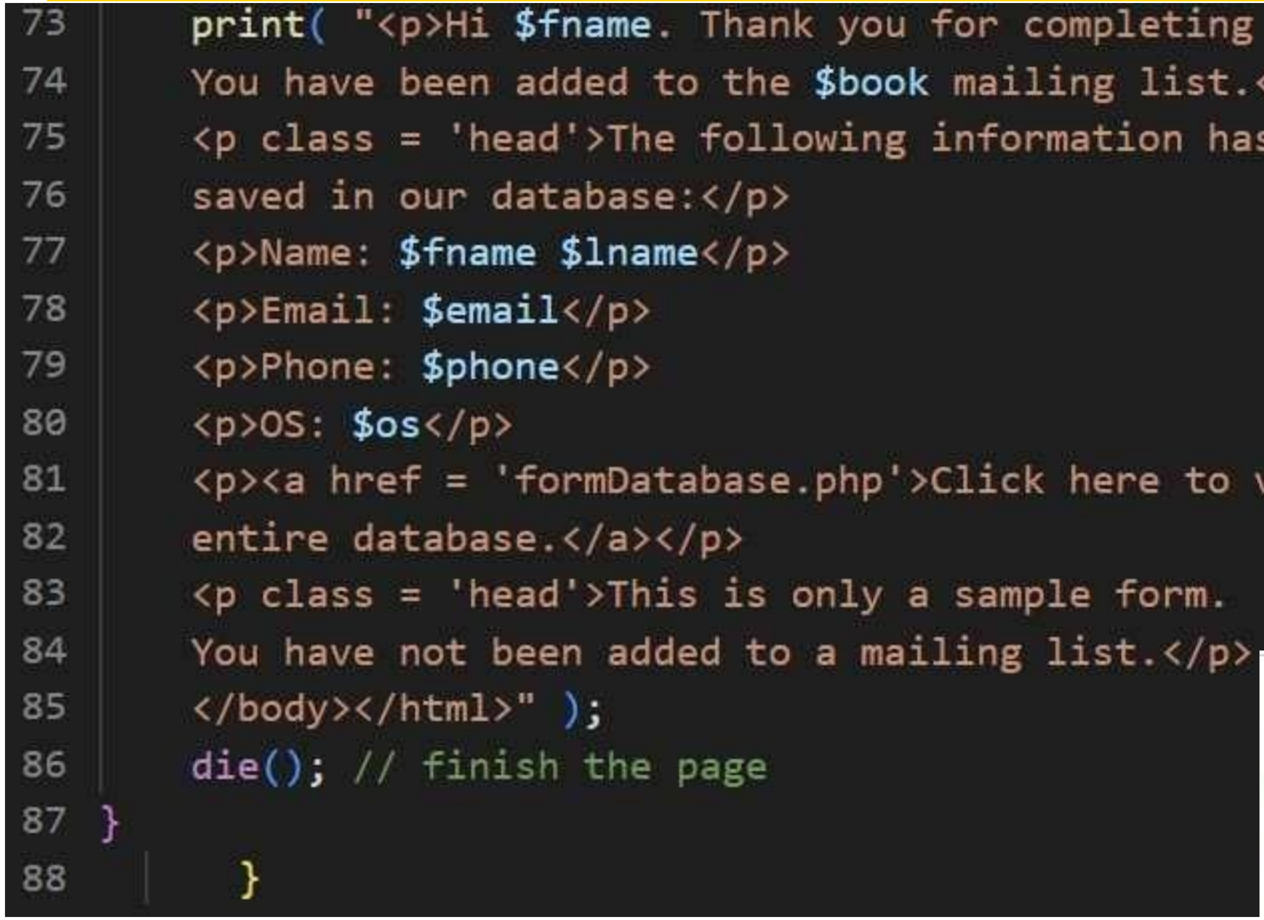


```php
  if (isset($_POST["submit"]))
{ if ( $fname == "" )
      {
      $formerrors[ "fnameerror" ] = true;
      $iserror = true;
      }
      if ( $lname == "" )
      {
      $formerrors[ "lnameerror" ] = true;
      $iserror = true;
      }
      if ( $email == "" )
      {
      $formerrors[ "emailerror" ] = true;
      $iserror = true;
      }
      if ( $phone== "" )
      {
      $formerrors[ "phoneerror" ] = true;
      $iserror = true;
      }
```

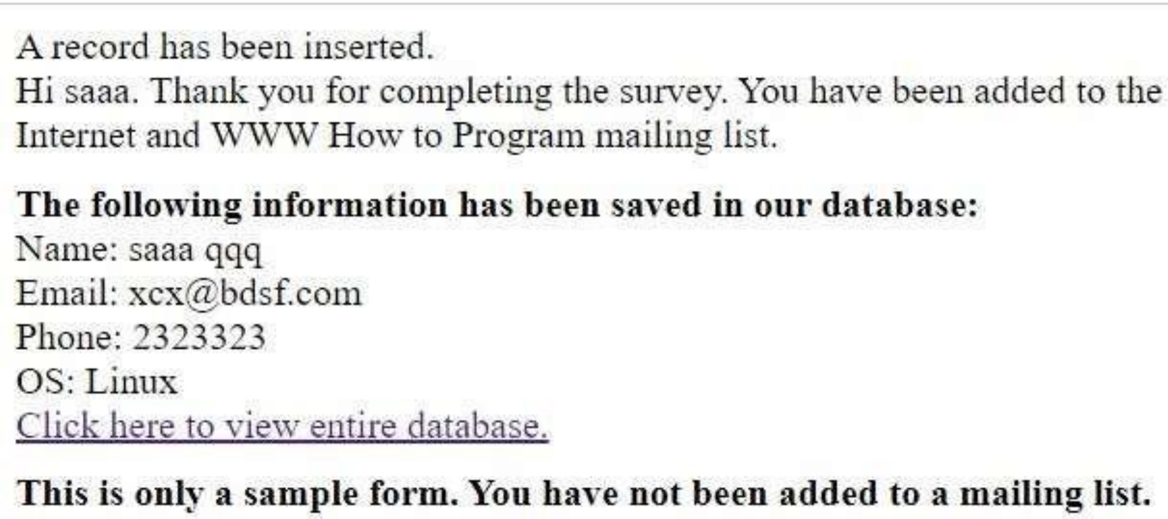


```php
if (!$iserror)
{
 $sql = "INSERT INTO mailinglist " .
 "(fname, lname, email, phone, favbook, favos ) " .
 "VALUES ( '$lname', '$fname', '$email', " .
 "" . $phone . ", '$book', '$os' )";
 $conn = mysqli_connect("localhost", "root", "", "books");
 if (!$conn)
 {die("Connection failed: " . mysqli_connect_error()); }
 $result = mysqli_query($conn, $sql);
 if ($result === TRUE)
 {
 echo "A record has been inserted.";
 }
 else
 {
 printf("Could not insert record: %s\n", mysqli_error($conn));
 }
 mysqli_close($conn);
```

Dynamic Content-Variables & Arrays



```
    print( "<p>Hi $fname. Thank you for completing the survey.
    You have been added to the $book mailing list.</p>
    <p class = 'head'>The following information has been
    saved in our database:</p>
    <p>Name: $fname $lname</p>
    <p>Email: $email</p>
    <p>Phone: $phone</p>
    <p>OS: $os</p>
    <p><a href = 'formDatabase.php'>Click here to view
    entire database.</a></p>
    <p class = 'head'>This is only a sample form.
    You have not been added to a mailing list.</p>
    </body></html>" );
    die(); // finish the page
}
      }
```



A record has been inserted.
Hi saaa. Thank you for completing the survey. You have been added to the Internet and WWW How to Program mailing list.

The following information has been saved in our database:
Name: saaa qqq
Email: xcx@bdsf.com
Phone: 2323323
OS: Linux
Click here to view entire database.

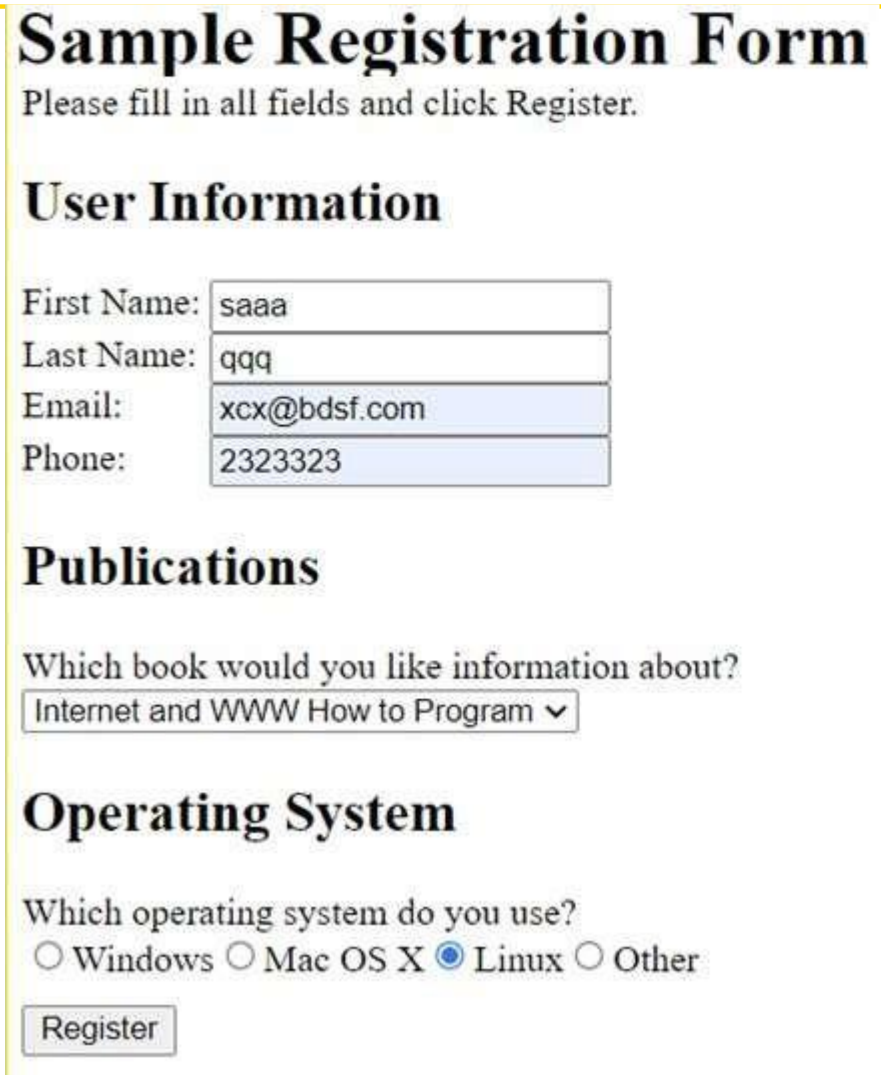
This is only a sample form. You have not been added to a mailing list.

Dynamic Content-Variables & Arrays

- We specify that the form created in this document is self-submitting (i.e., it posts to itself) by setting the action to the script 'dynamicForm.php' in line 94.
- Lines 32-72 use the isset function to determine whether the $_POST array contains keys representing the various form fields.
- These keys exist only after the form is submitted.
- If function isset returns true, then the form has been submitted and we assign the value for each key to a variable. Otherwise, we assign the empty string to each variable.
- Line 53 determines whether any errors were detected, while Dynamically Creating the Form
- If $iserror is false (i.e., there were no input errors), lines 54–88 display the page indicating that the form was submitted successfully

Dynamic Content- Dynamically Creating the Form

- If $iserror is true, lines 54–88 are skipped, and the code from lines 92-128 executes.
- These lines include a series of print statements and conditionals to output the form, as seen in Fig.



Sample Registration Form

Please fill in all fields and click Register.

User Information

First Name:	saaa
Last Name:	qqq
Email:	xcx@bdsf.com
Phone:	2323323

Publications

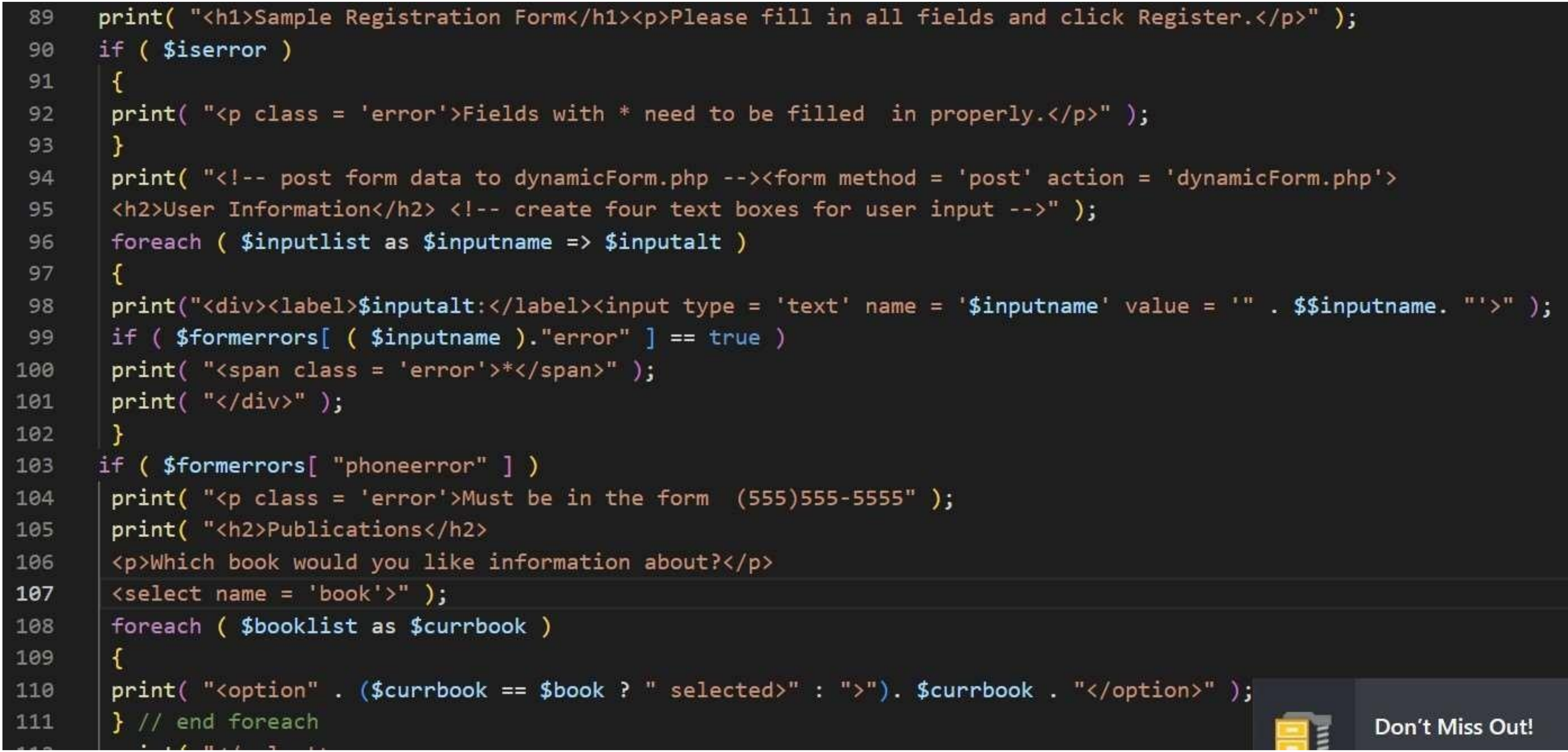
Which book would you like information about?

Internet and WWW How to Program

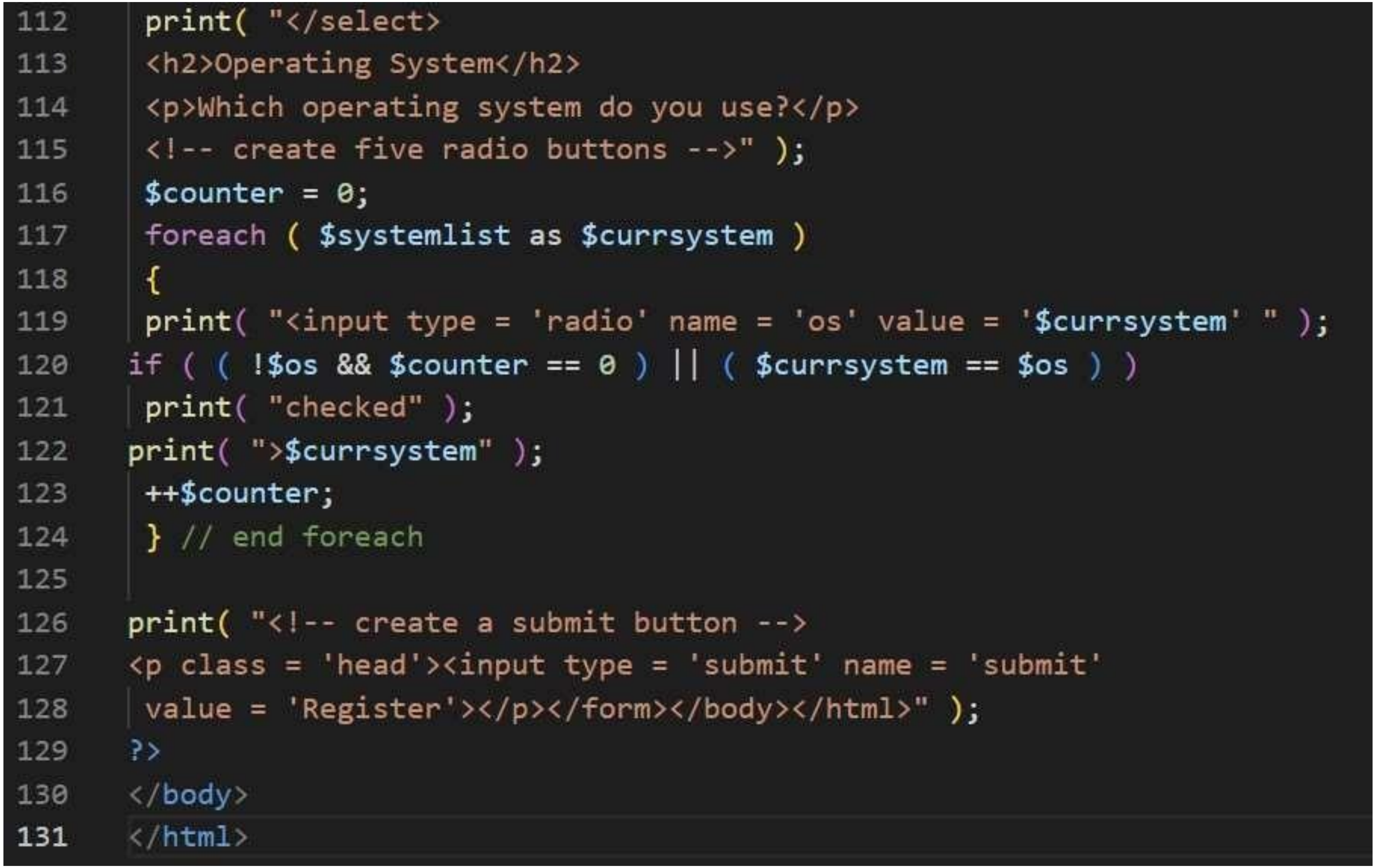
Operating System

Which operating system do you use?

○ Windows ○ Mac OS X ● Linux ○ Other



```
print( "<h1>Sample Registration Form</h1><p>Please fill in all fields and click Register.</p>" );
if ( $iserror )
 {
 print( "<p class = 'error'>Fields with * need to be filled  in properly.</p>" );
 }
 print( "<!-- post form data to dynamicForm.php --><form method = 'post' action = 'dynamicForm.php'>
 <h2>User Information</h2> <!-- create four text boxes for user input -->" );
 foreach ( $inputlist as $inputname => $inputalt )
 {
 print("<div><label>$inputalt:</label><input type = 'text' name = '$inputname' value = '" . $$inputname. "'>" );
 if ( $formerrors[ ( $inputname )."error" ] == true )
 print( "<span class = 'error'>*</span>" );
 print( "</div>" );
 }
if ( $formerrors[ "phoneerror" ] )
 print( "<p class = 'error'>Must be in the form  (555)555-5555" );
 print( "<h2>Publications</h2>
 <p>Which book would you like information about?</p>
 <select name = 'book'>" );
 foreach ( $booklist as $currbook )
 {
 print( "<option" . ($currbook == $book ? " selected>" : ">"). $currbook . "</option>" );
 } // end foreach
```



```
 print( "</select>
 <h2>Operating System</h2>
 <p>Which operating system do you use?</p>
 <!-- create five radio buttons -->" );
 $counter = 0;
 foreach ( $systemlist as $currsystem )
 {
 print( "<input type = 'radio' name = 'os' value = '$currsystem' " );
if ( ( !$os && $counter == 0 ) || ( $currsystem == $os ) )
 print( "checked" );
print( ">$currsystem" );
 ++$counter;
 } // end foreach

print( "<!-- create a submit button -->
<p class = 'head'><input type = 'submit' name = 'submit'
 value = 'Register'></p></form></body></html>" );
?>
</body>
</html>
```

Dynamically Creating the Form

- Lines 96–102 iterate through each element in the $inputlist array.
- In line 98 the value of $$inputname is assigned to the text field’s value attribute. If the form has not yet been submitted, this will be the empty string "".
- The notation $$variable specifies a variable ‘variable’ , which allows the code to reference variables dynamically.
- You can use this expression to obtain the value of the variable whose name is equal to the value of $variable.
- PHP first determines the value of $variable, then appends this value to the leading $ to form the identifier of the variable you wish to reference dynamically.

Dynamically Creating the Form

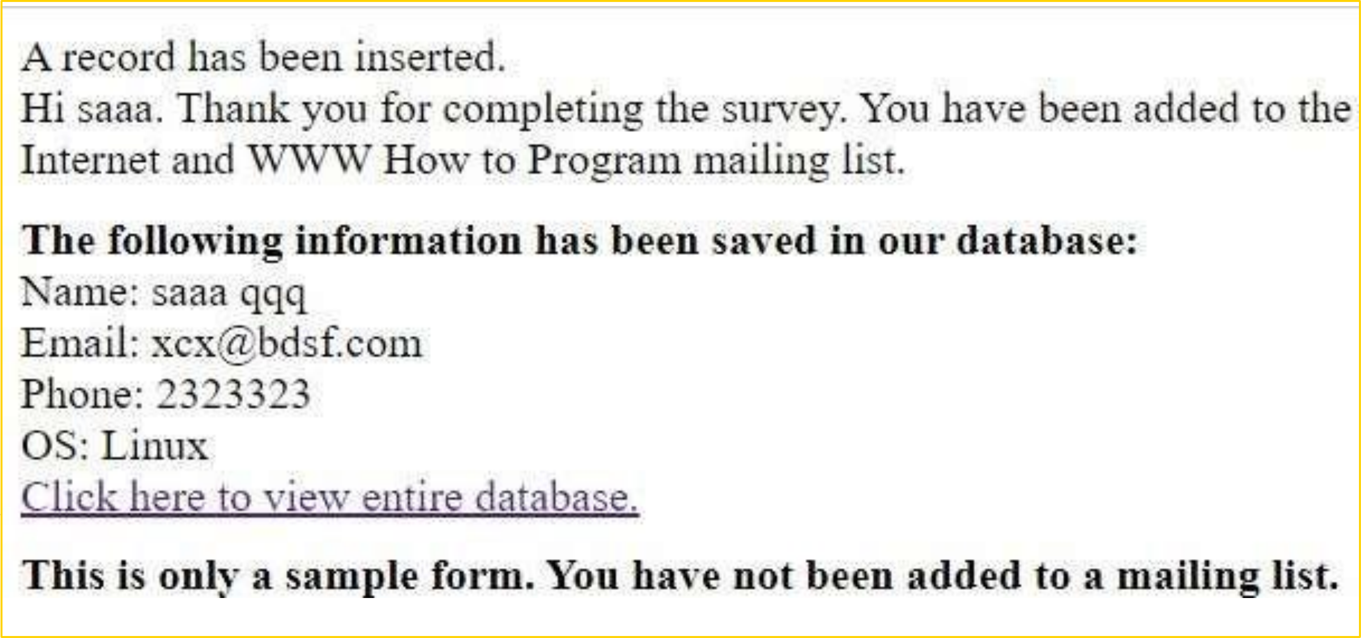
- we use $$inputname to reference the value of each form-field variable.
- During the iteration of the loop, $inputname contains the name of one of the text input elements, such as "email".
- PHP replaces $inputname in the expression $$inputname with the string representing that element’s name forming the expression ${"email"}.
- The entire expression then evaluates to the value of the variable $email. Thus, the variable $email, which stores the value of the e-mail text field after the form has been submitted, is dynamically referenced.
- This dynamic variable reference is added to the string as the value of the input field (using the concatenation operator) to maintain data over multiple submissions of the form.

Dynamic Content- Dynamically Creating the Form

- Lines 99-101 add a red asterisk next to the text input fields that were filled out incorrectly.
- Lines 103-104 display the phone number format instructions in red if the user entered an invalid phone number.
- Lines 105-112 and 113-125 generate options for the book drop-down list and operating-system radio buttons, respectively.
- Lines 120–123 select an operating system radio button under two conditions. If the form is begin displayed for the first time, the first radio button is selected. Otherwise, if the $currsystem variable’s value matches what’s stored in the $os variable, that specific radio button is selected

Dynamic Content- Inserting Data into the Database

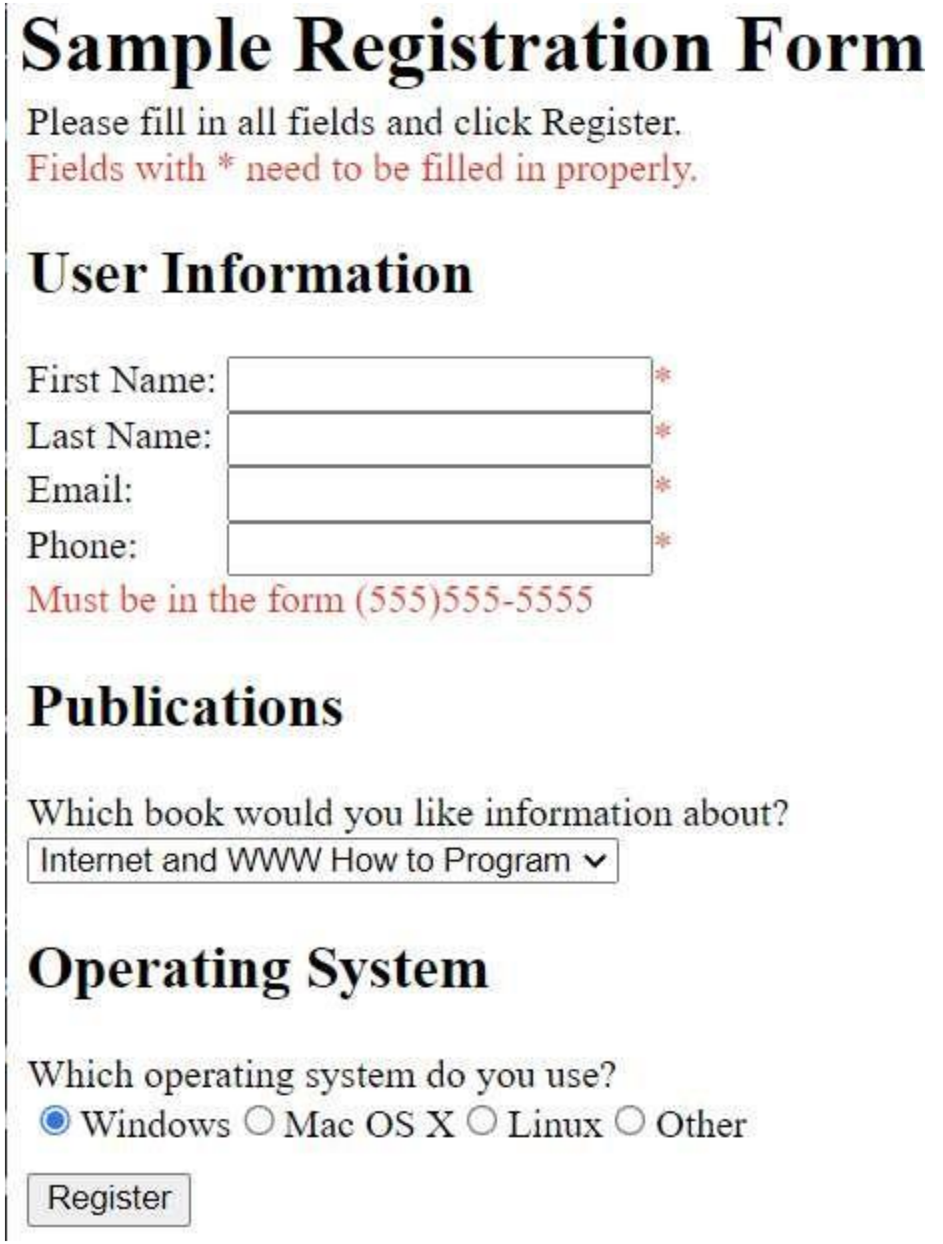
- If the form has been filled out correctly, lines 56-71 place the form information in the MySQL database MailingList using an INSERT statement.
- Lines 81 generate the web page indicating a successful form submission, which also provides a link to formDatabase.php (Fig.).



A record has been inserted.
Hi saaa. Thank you for completing the survey. You have been added to the Internet and WWW How to Program mailing list.

The following information has been saved in our database:
Name: saaa qqq
Email: xcx@bdsf.com
Phone: 2323323
OS: Linux
Click here to view entire database.

This is only a sample form. You have not been added to a mailing list.



Sample Registration Form

Please fill in all fields and click Register.
Fields with * need to be filled in properly.

User Information

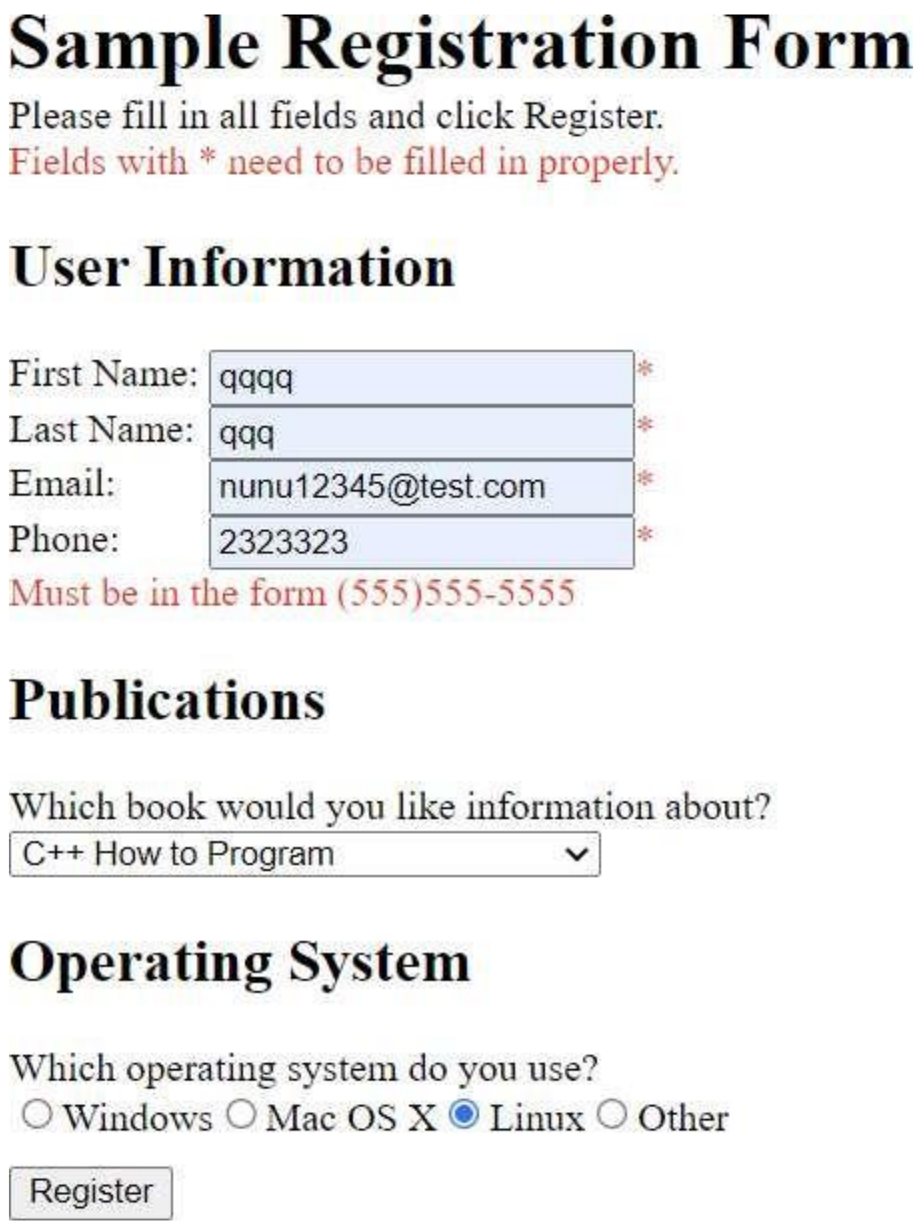
First Name: *
Last Name: *
Email: *
Phone: *
Must be in the form (555)555-5555

Publications

Which book would you like information about?
Internet and WWW How to Program

Operating System

Which operating system do you use?
● Windows ○ Mac OS X ○ Linux ○ Other



Sample Registration Form

Please fill in all fields and click Register.
Fields with * need to be filled in properly.

User Information

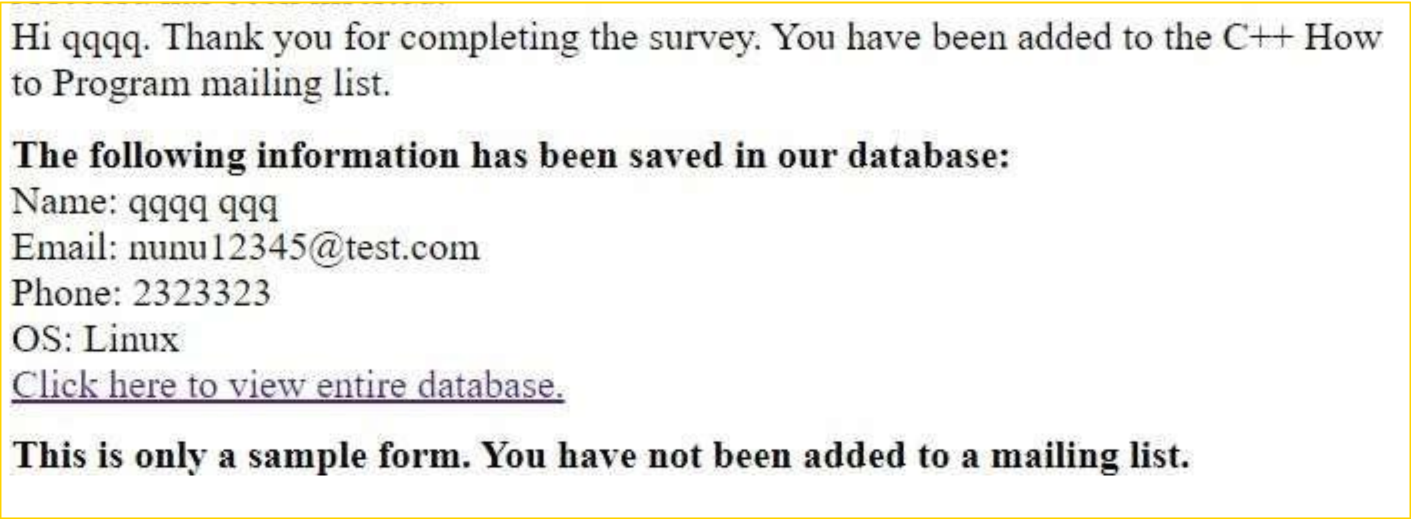
First Name: qqqq *
Last Name: qqq *
Email: nunu12345@test.com *
Phone: 2323323 *
Must be in the form (555)555-5555

Publications

Which book would you like information about?
C++ How to Program

Operating System

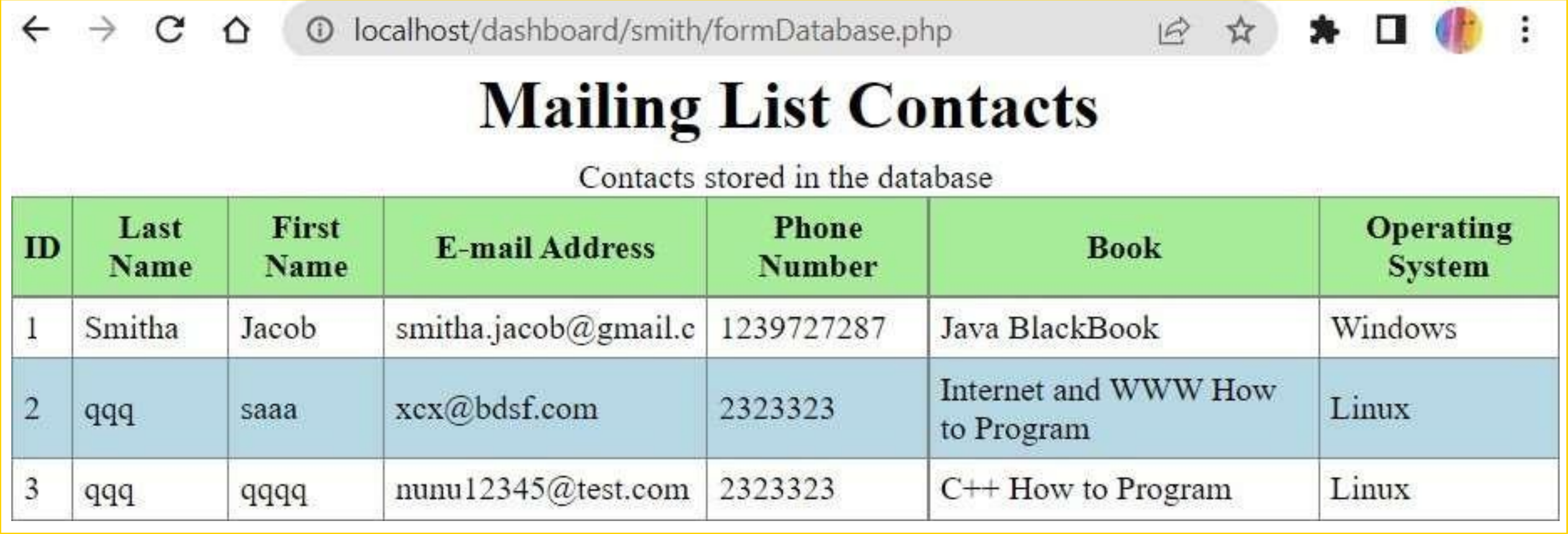
Which operating system do you use?
○ Windows ○ Mac OS X ● Linux ○ Other



Hi qqqq. Thank you for completing the survey. You have been added to the C++ How to Program mailing list.

The following information has been saved in our database:
Name: qqqq qqq
Email: nunu12345@test.com
Phone: 2323323
OS: Linux
Click here to view entire database.

This is only a sample form. You have not been added to a mailing list.



Mailing List Contacts

Contacts stored in the database

ID	Last Name	First Name	E-mail Address	Phone Number	Book	Operating System
1	Smitha	Jacob	smitha.jacob@gmail.c	1239727287	Java BlackBook	Windows
2	qqq	saaa	xcx@bdsf.com	2323323	Internet and WWW How to Program	Linux
3	qqq	qqqq	nunu12345@test.com	2323323	C++ How to Program	Linux

► Full program

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Thank You