

Lecture 07: PHP & MySQL

Web Programming



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Intro to MySQL



- Released 23 May 1995.
- 11+ Million web servers using MySQL
- Similar, but not exactly same syntax as IBM DB2, Oracle 11g, etc...
- Open-source & free to download, under the GNU General Public License.
- Coded in C / C++, Yacc parser, and custom lexical analyzer.

How do I get PHP or MySQL?

mysql.com (100 MB)

php.net (for reference)

Some web server, like Apache or Wampserver will work.

For the examples, I used Wampserver (wampserver.com) (16 MB)

1. Installed MySQL
2. created some new tables with mysql
3. installed Wampserver
4. make .PHP files and put them in the www folder
5. Go to <http://localhost/my.php>
6. test your code.

Basic SQL Syntax

→ Data Definition Language (DDL)

- **CREATE TABLE / DATABASE / VIEW / etc.....**
- **ALTER ...**
- **DROP ...**

→ Data Manipulation Language (DML)

- **SELECT ... FROM / INTO ... WHERE ...**
- **INSERT INTO ... VALUES ...**
- **UPDATE ... SET ... WHERE ...**
- **DELETE FROM ... WHERE ...**

MySQL Tutorial (1 of 2)

- Following from MySQL 5.1 Manual (3.3 Creating and using a database)
- For Command Prompt usage, follow these steps to use a database.

```
Enter password: XXXXX
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 4
Server version: 5.1.31-community MySQL Community Server (GPL)
Type 'help;' or '\h' for help. Type '\c' to clear the buffer.
mysql> SHOW DATABASES;
+-----+
| Database          |
+-----+
| information_schema |
| mysql              |
| test               |
+-----+
3 rows in set (0.00 sec)
mysql> USE TEST;
Database changed
```



- You can now perform DML & DDL operations!

MySQL Tutorial (2 of 2)

```
mysql> CREATE TABLE myTest (time DATE, note VARCHAR(10), id INT);
Query OK, 0 rows affected (0.11 sec)
```

```
mysql> DESCRIBE myTest;
```

```
+-----+-----+-----+-----+-----+-----+
| Field | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| time  | date          | YES  |     | NULL    |       |
| note  | varchar(10)   | YES  |     | NULL    |       |
| id    | int(11)       | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.05 sec)
```

```
mysql> INSERT INTO myTest VALUES (NULL, "hello", 3);
Query OK, 1 row affected (0.05 sec)
```

```
mysql> SELECT * FROM myTest;
```

```
+-----+-----+-----+
| time | note  | id  |
+-----+-----+-----+
| NULL | hello | 3   |
+-----+-----+-----+
1 row in set (0.01 sec)
```

```
mysql>
```



MySQL + PHP

Need a web server that connects to a local or remote Database?

No problem!

```
1 <?php
2 mysql_connect($SQL_HOST, $SQL_USER, $SQL_PW);
3 mysql_select_db($SQL_DB);
4 ?>
```

Host most likely “localhost”.

To perform SQL commands, try this php function...

```
$sql = mysql_query(“SELECT * FROM myTable);
```

Just like with Java and its JDBC.

There is a way to iterate through the resulting bag.

List all query results

```
1 <table>
2 <?php
3 //TEST2.PHP
4 //By David Sands
5 $link = mysql_connect("localhost", "", "");
6 mysql_select_db("test");
7
8 mysql_query("INSERT INTO test0 (att1, att2) VALUES ('first', 1)");
9 mysql_query("INSERT INTO test0 VALUES ('second', 2)");
10 mysql_query("INSERT INTO test0 VALUES ('third', 3)");
11 $sql = mysql_query("SELECT * FROM test0");
12 while ($myrow = mysql_fetch_object($sql))
13     echo "<tr><td>" . $myrow->att1 . "</td><td>" . $myrow->att2 . "</td><tr>";
14
15 mysql_close($link);
16 ?>
17 </table>
```



first	1
second	2
third	3

Form Post

```
1 <html><body>
2 <!-- TEST.PHP -->
3 <!-- By David Sands -->
4 <form method = post action = "postMyStuff.php">
5   <p>title: <input type="text" name="title"></p>
6   <p><label>
7     <input type="radio" name="radiobutton" value="val1">
8     Radio1</label><label>
9     <input type="radio" name="radiobutton" value="val2">
10    Radio2</label></p>
11   text: <textarea name="text" rows="2" cols="30"></textarea>
12   <br>
13   <input type="submit"></p>
14 </form>
15 </body></html>
```

- Test.php is purely HTML.
- Form's POST action sends the object names to PHP file.
- PHP file extracts them with array `$_POST[]`.

```
1 <?php
2 //POSTMYSTUFF.PHP
3 //By David Sands
4 mysql_connect("localhost", "", "");
5 mysql_select_db("test");
6 $sql = "INSERT INTO MyTest2(title, radio, text) VALUES ('" . $_POST['title'] .
7         "', '" . $_POST['radiobutton'] . "', '" . $_POST['text'] . "')";
8 print "$sql";
9 ?>
```

Form Post



A screenshot of a web browser window. The address bar shows `http://localhost/test.php`. The page content includes a form with the following elements:

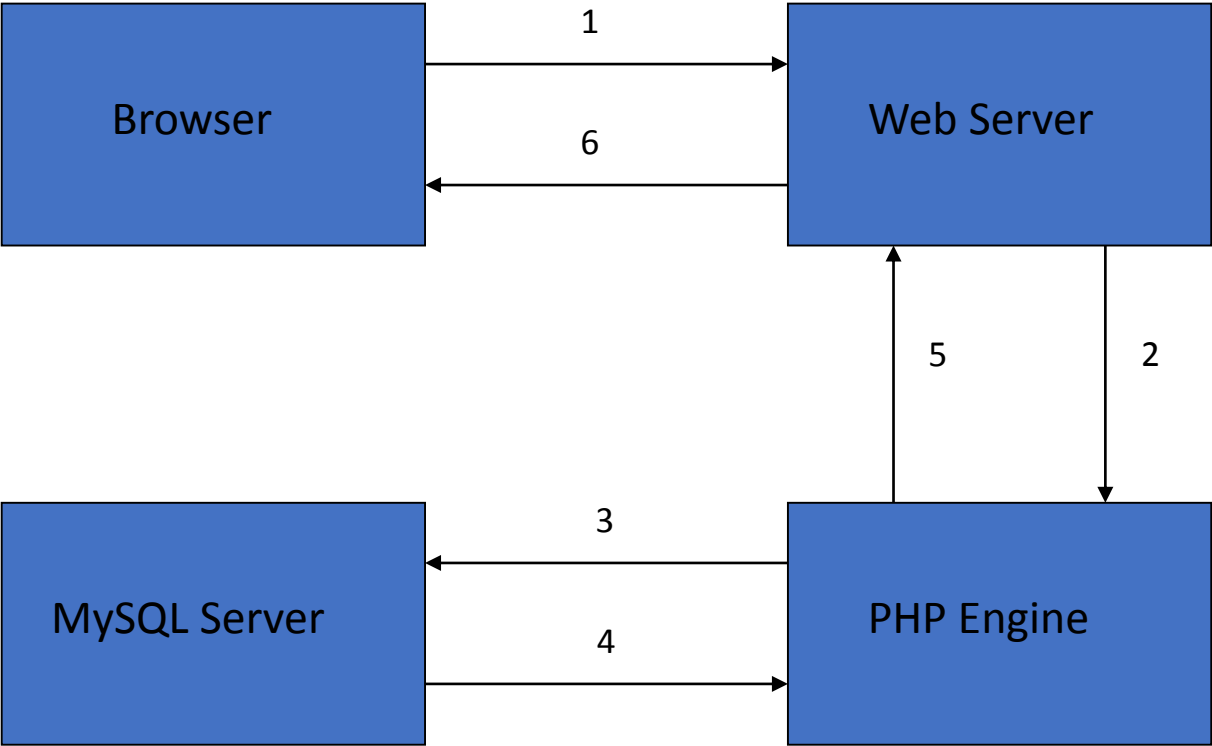
- A text input field labeled "title:" containing the text "Hello".
- Two radio buttons labeled "Radio1" (which is selected) and "Radio2".
- A text area labeled "text:" containing the text "World!".
- A "Submit" button.



A screenshot of a web browser window. The address bar shows `http://localhost/postMyStuff.php`. The page content displays a SQL query result:

```
INSERT INTO MyTest2(title, radio, text) VALUES ('Hello', 'val1', 'World!')
```

A typical web database transaction consists of the following stages



An example

- **Reads and displays the contents of the Friend table from the database Future.**
- Our script will do the following jobs:
 - Set up a connection to the appropriate database
 - Query the database table
 - Retrieve the results
 - Present the results back to the user
- First we need to create the needed database and database table – this time we will do it directly using MySQL Query Browser:

Crimson Editor - [C:\Program Files\Apache Group\Apache2\htdocs\inTheTeaching\MySQL\create Friend.sql]

File Edit Search View Document Project Tools Macros Window Help

create Friend.sql

```
1 CREATE TABLE Friend
2 (frNum INTEGER UNSIGNED NOT NULL AUTO_INCREMENT,
3 firstName VARCHAR(45) NOT NULL,
4 secondName VARCHAR(45) NOT NULL,
5 address VARCHAR(45) NOT NULL,
6 CONSTRAINT frPK PRIMARY KEY(frNum));
7
```

Ready Ln 7, Ch 1 7 ASCII, DOS EA

The image shows a screenshot of the Crimson Editor application window. The title bar reads "Crimson Editor - [C:\Program Files\Apache Group\Apache2\htdocs\inTheTeaching\MySQL\add Friend.sql]". The menu bar includes "File", "Edit", "Search", "View", "Document", "Project", "Tools", "Macros", "Window", and "Help". The toolbar contains various icons for file operations and editing. The main text area displays the following SQL code:

```
1 INSERT INTO Friend (firstName, secondName, address)
2 VALUES ('Michelle', 'Orbinski', 'Kiitotien laita 1, 50190 Leposuo');
3 INSERT INTO Friend (firstName, secondName, address)
4 VALUES ('Britney', 'Blackwater', 'Hiekkaniementie 3, 90190 Katoo');
5 INSERT INTO Friend (firstName, secondName, address)
6 VALUES ('John', 'Pilkington', 'Kaarnalautta 2 a 15, 12670 Aakio');
```

The status bar at the bottom shows "Ready", "Ln 1, Ch 1", "6", "ASCII, DOS", and "EA:".

MySQL Query Browser - Connection: root@localhost:3306 / future

File Edit View Query Script Tools Window MySQL Enterprise Help

Go back Next Refresh

```
SELECT *
FROM Friend;
```

Execute Stop

Resultset 1

frNum	firstName	secondName	address
1	Michelle	Orbinski	Kiitotien laita 1, 50190 Leposuo
2	Britney	Blackwater	Hiekkaniementie 3, 90190 Katoo
3	John	Pilkington	Kaarnalautta 2 a 15, 12670 Aakio

3 rows fetched in 0,0097s (0,000)

Edit Apply Changes Discard Changes First Last Search

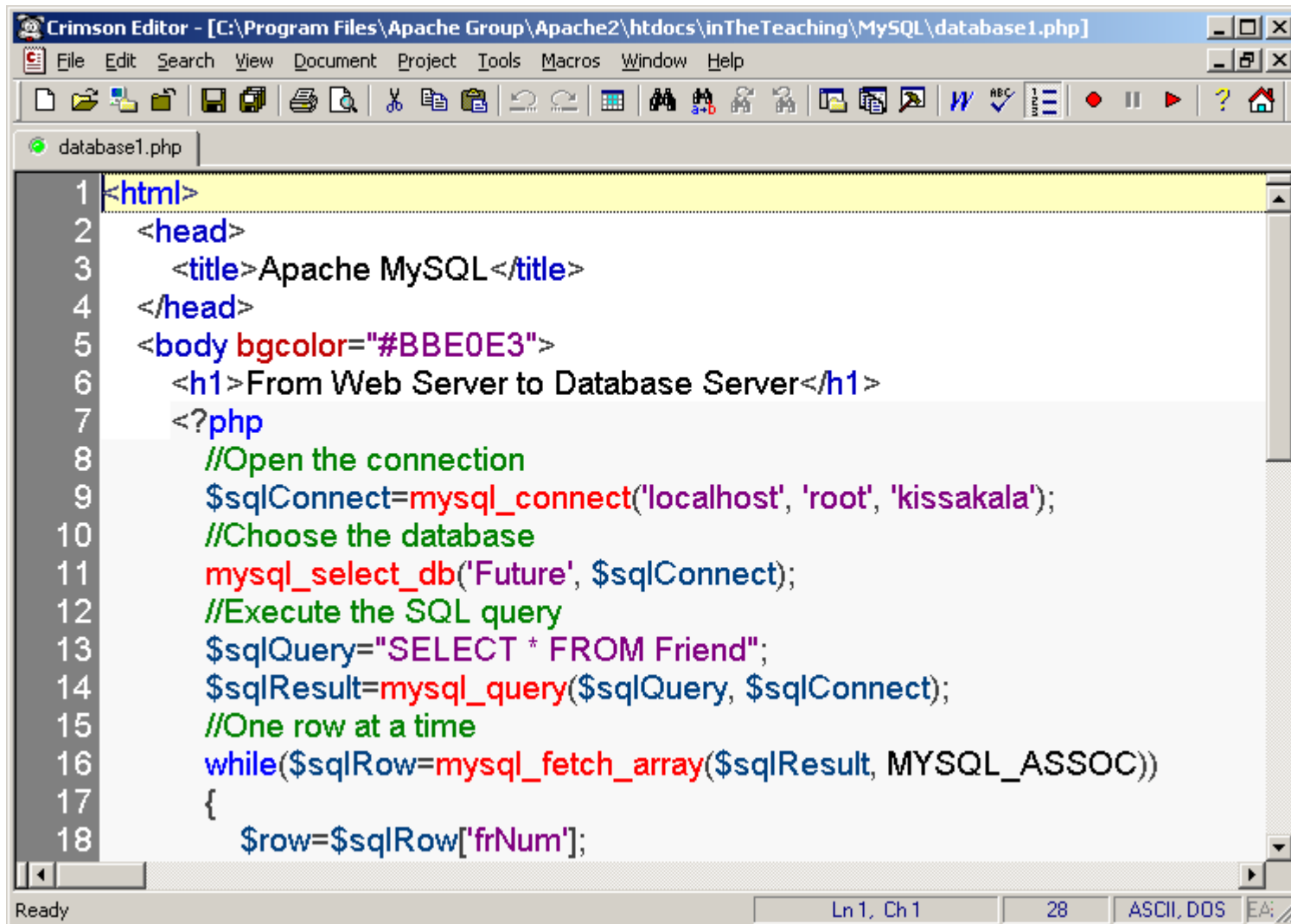
Schemata Bookmarks History

- dreamhome
- future**
 - friend
- hotelli
- information_schema
- istunto
- joululahja
- jukka
- kehvatsu

Syntax Functions Params Trx

- Data Definition Statements
- Data Manipulation Statements
- MySQL Utility Statements
- MySQL Transactional and Locking ...
- Database Administration Statements
- Replication Statements
- SQL Syntax for Prepared Statements

PHP script



```
1 <html>
2   <head>
3     <title>Apache MySQL</title>
4   </head>
5   <body bgcolor="#BBE0E3">
6     <h1>From Web Server to Database Server</h1>
7     <?php
8       //Open the connection
9       $sqlConnect=mysql_connect('localhost', 'root', 'kissakala');
10      //Choose the database
11      mysql_select_db('Future', $sqlConnect);
12      //Execute the SQL query
13      $sqlQuery="SELECT * FROM Friend";
14      $sqlResult=mysql_query($sqlQuery, $sqlConnect);
15      //One row at a time
16      while($sqlRow=mysql_fetch_array($sqlResult, MYSQL_ASSOC))
17      {
18        $row=$sqlRow['frNum'];
```


Crimson Editor - [C:\Program Files\Apache Group\Apache2\htdocs\inTheTeaching\MySQL\database1.php]

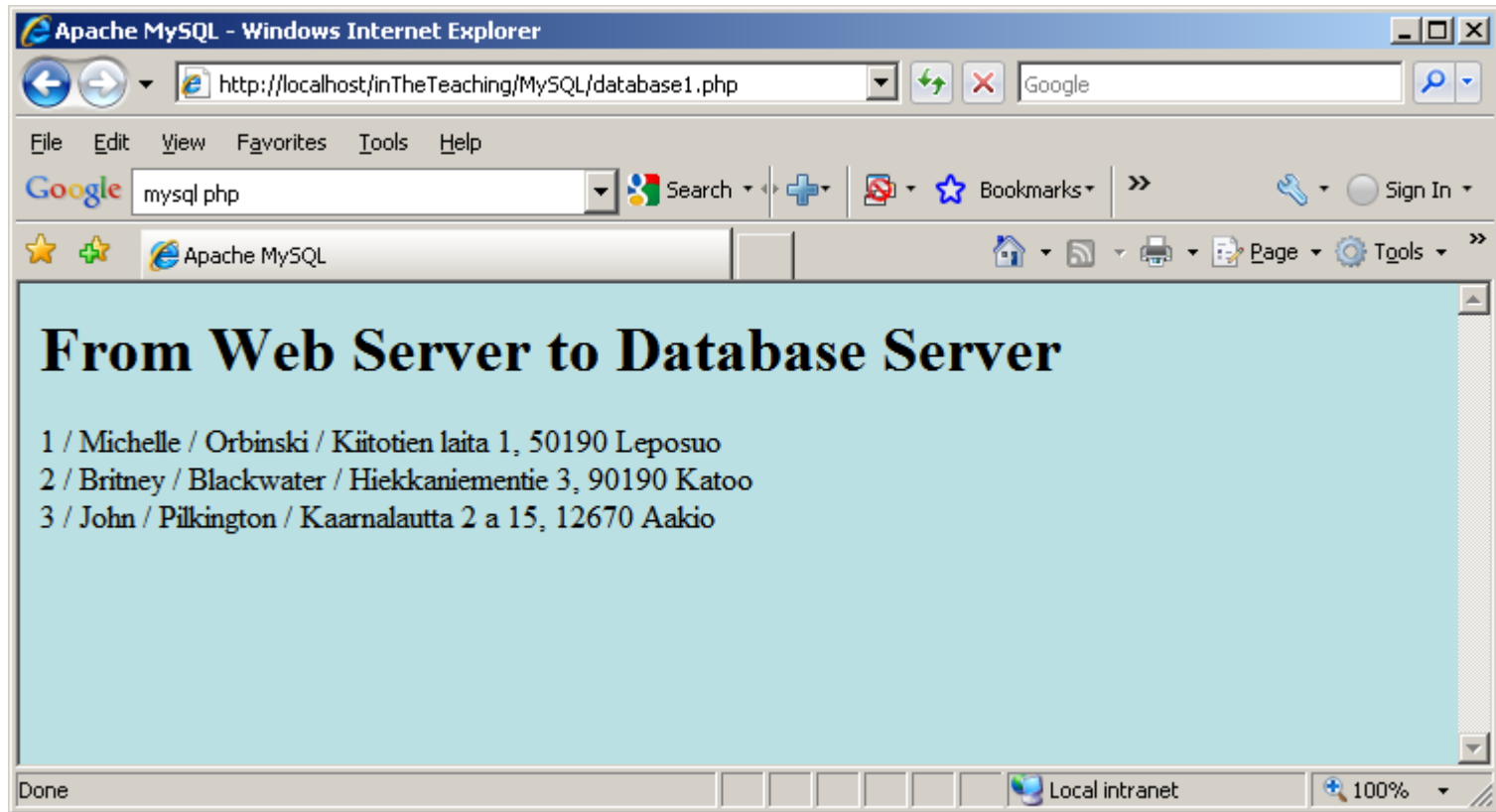
File Edit Search View Document Project Tools Macros Window Help

database1.php

```
16 while($sqlRow=mysql_fetch_array($sqlResult, MYSQL_ASSOC))
17 {
18     $row=$sqlRow['frNum'];
19     $fName=$sqlRow['firstName'];
20     $sName=$sqlRow['secondName'];
21     $addInfo=$sqlRow['address'];
22     echo $row. " / ". $fName. " / ". $sName. " / ". $addInfo. "<br>";
23 }
24 //Close the connection
25 mysql_close($sqlConnect);
26 ?>
27 </body>
28 </html>
```

Ready Ln 1, Ch 1 28 ASCII, DOS EA

...and what you can see from the browser:



```
`$sqlResult = mysql_query...`
```

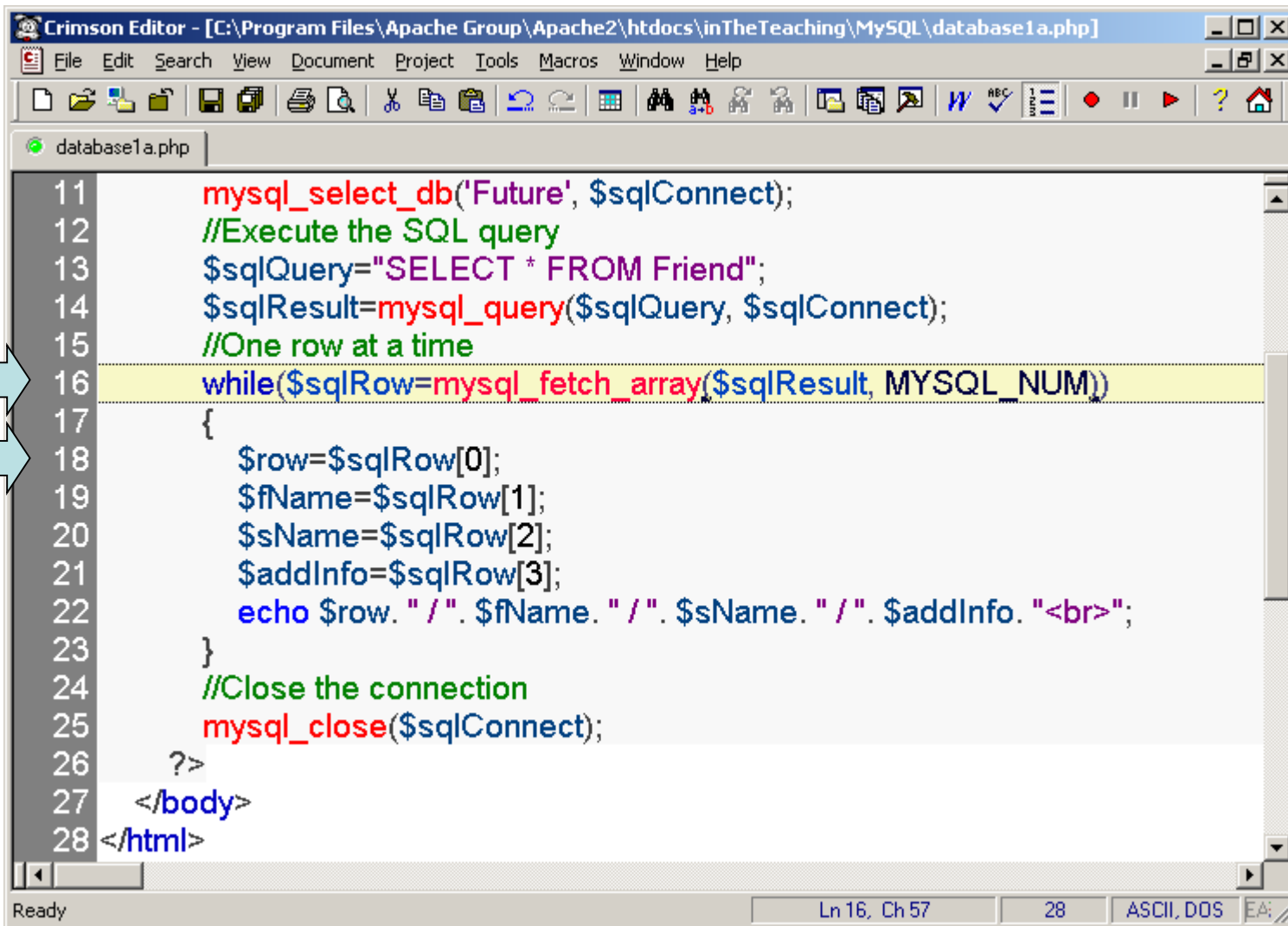
- When you select items from a database using `mysql_query()`, the data is returned as a MySQL result.
- Since we want to use this data in our program we need to **store it in a variable**. `$sqlResult` now holds the result from our `mysql_query()`.

```
`while ($sqlRow = mysql_fetch_array(
$sqlResult...)`
```

- The **mysql_fetch_array** function gets the next-in-line associative array from a MySQL result.
- By putting it in a while loop it will continue to fetch the next array until there is no next array to fetch.
- This function can be called as many times as you want, but it will return **FALSE** when the last associative array has already been returned.
- By placing this function within the conditional statement of the while loop, we can “kill” two birds with one stone:

1. We can retrieve the next associative array from our MySQL resource, `$sqlResult`, so that we can print out the retrieved information.
2. We can tell the while loop to stop printing out information when the MySQL resource has returned the last array, as `FALSE` is returned when it reaches the end and this will cause the while loop to halt.

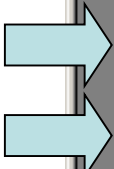
In the above script, we have accessed the firstName column like this: `$sqlRow['firstName']`. That can also be done by using integer indexing:



```
11  mysql_select_db('Future', $sqlConnect);
12  //Execute the SQL query
13  $sqlQuery="SELECT * FROM Friend";
14  $sqlResult=mysql_query($sqlQuery, $sqlConnect);
15  //One row at a time
16  while($sqlRow=mysql_fetch_array($sqlResult, MYSQL_NUM))
17  {
18      $row=$sqlRow[0];
19      $fName=$sqlRow[1];
20      $sName=$sqlRow[2];
21      $addInfo=$sqlRow[3];
22      echo $row. " / ". $fName. " / ". $sName. " / ". $addInfo. "<br>";
23  }
24  //Close the connection
25  mysql_close($sqlConnect);
26  ?>
27  </body>
28  </html>
```

Ready Ln 16, Ch 57 28 ASCII, DOS EA;

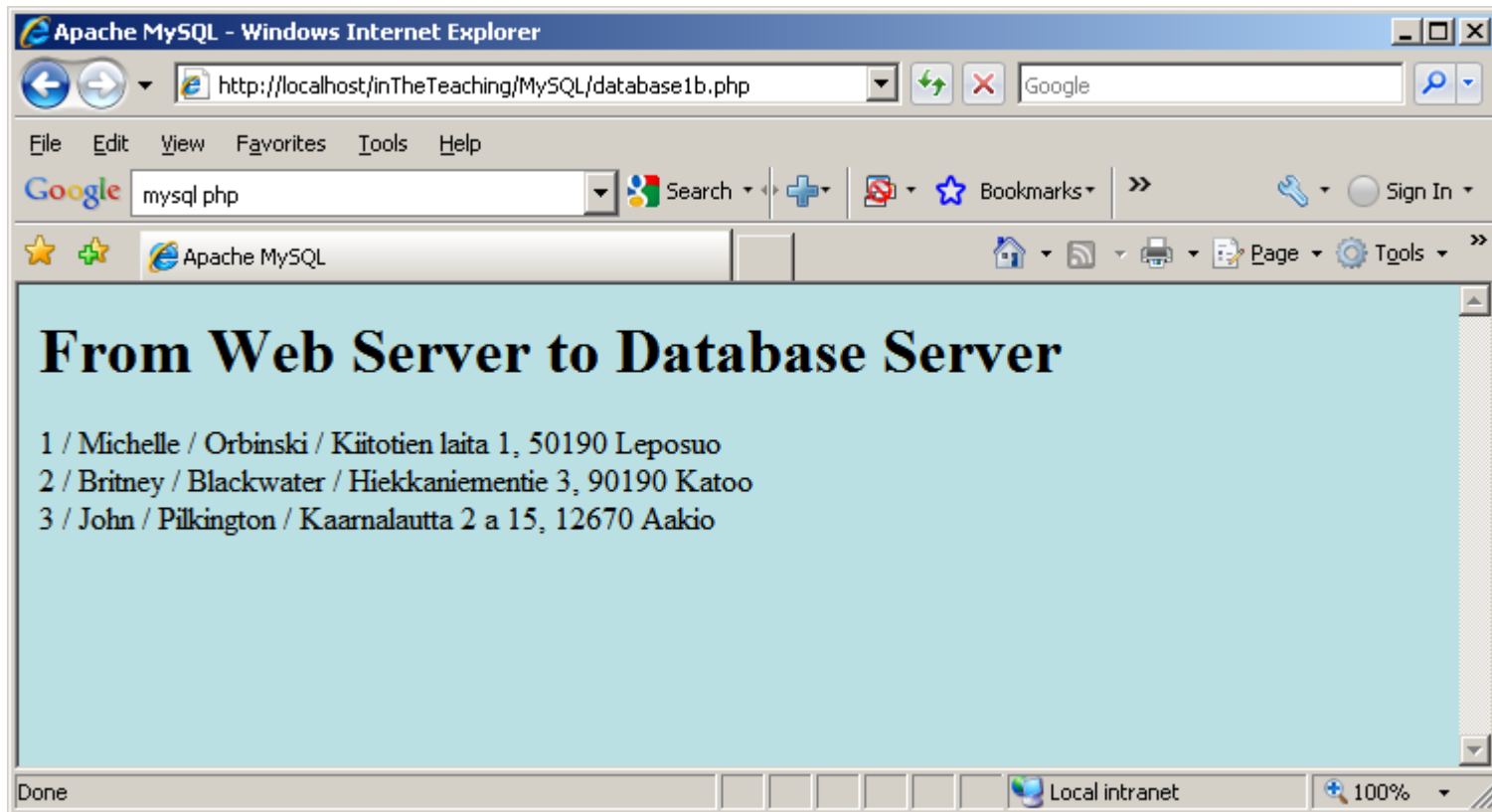
Or finding out the number of rows in a recordset:



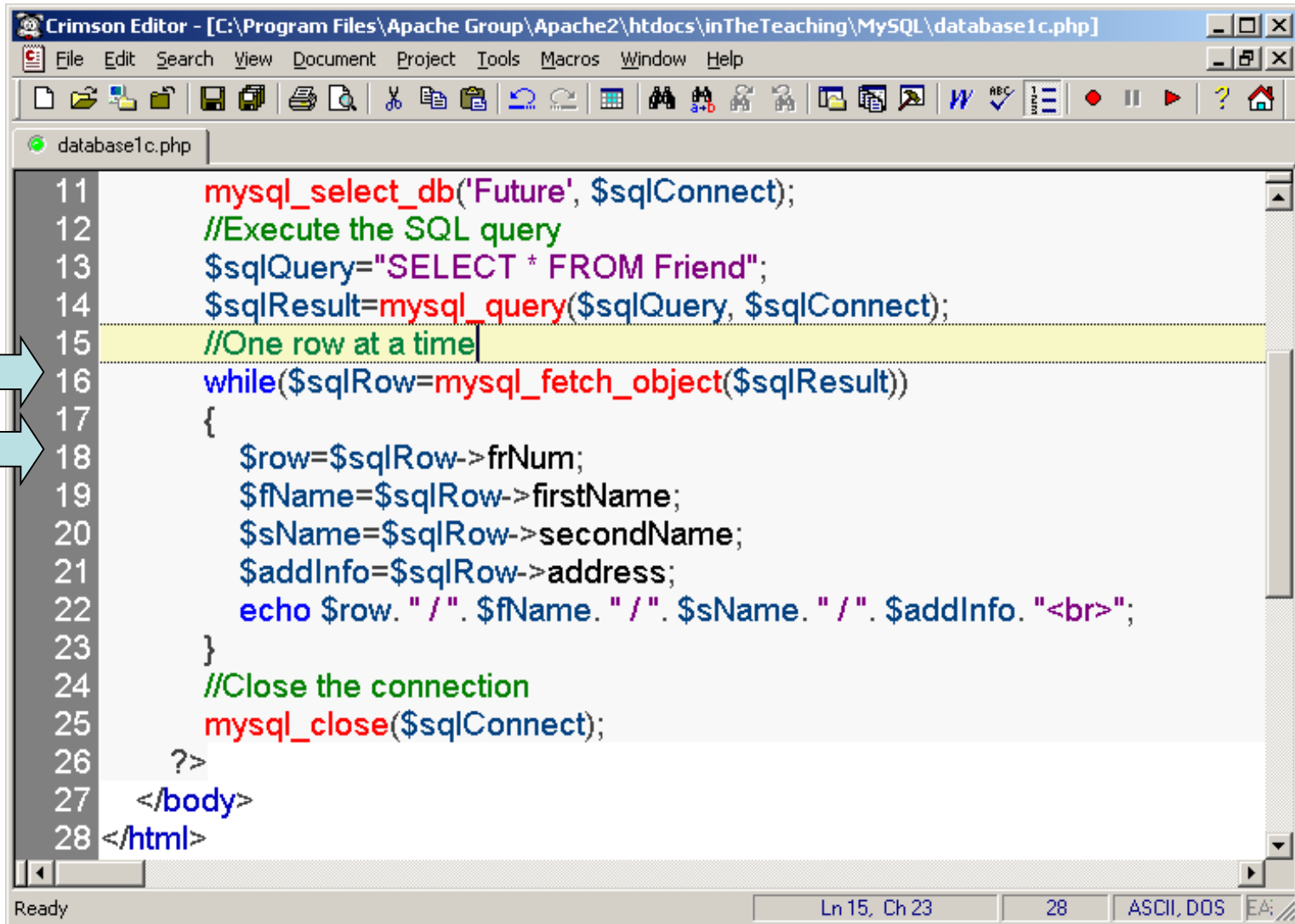
```
11     mysql_select_db('Future', $sqlConnect);
12     //Execute the SQL query
13     $sqlQuery="SELECT * FROM Friend";
14     $sqlResult=mysql_query($sqlQuery, $sqlConnect);
15     //One row at a time
16     for($i=0; $i<mysql_num_rows($sqlResult); $i++)
17     {
18         $row=mysql_result($sqlResult, $i, 'frNum');
19         $fName=mysql_result($sqlResult, $i, 'firstName');
20         $sName=mysql_result($sqlResult, $i, 'secondName');
21         $addInfo=mysql_result($sqlResult, $i, 'address');
22         echo $row. " / ". $fName. " / ". $sName. " / ". $addInfo. "<br>";
23     }
24     //Close the connection
25     mysql_close($sqlConnect);
26     ?>
27     </body>
28 </html>
```

Ready

Ln 21, Ch 55 28 ASCII, DOS EA

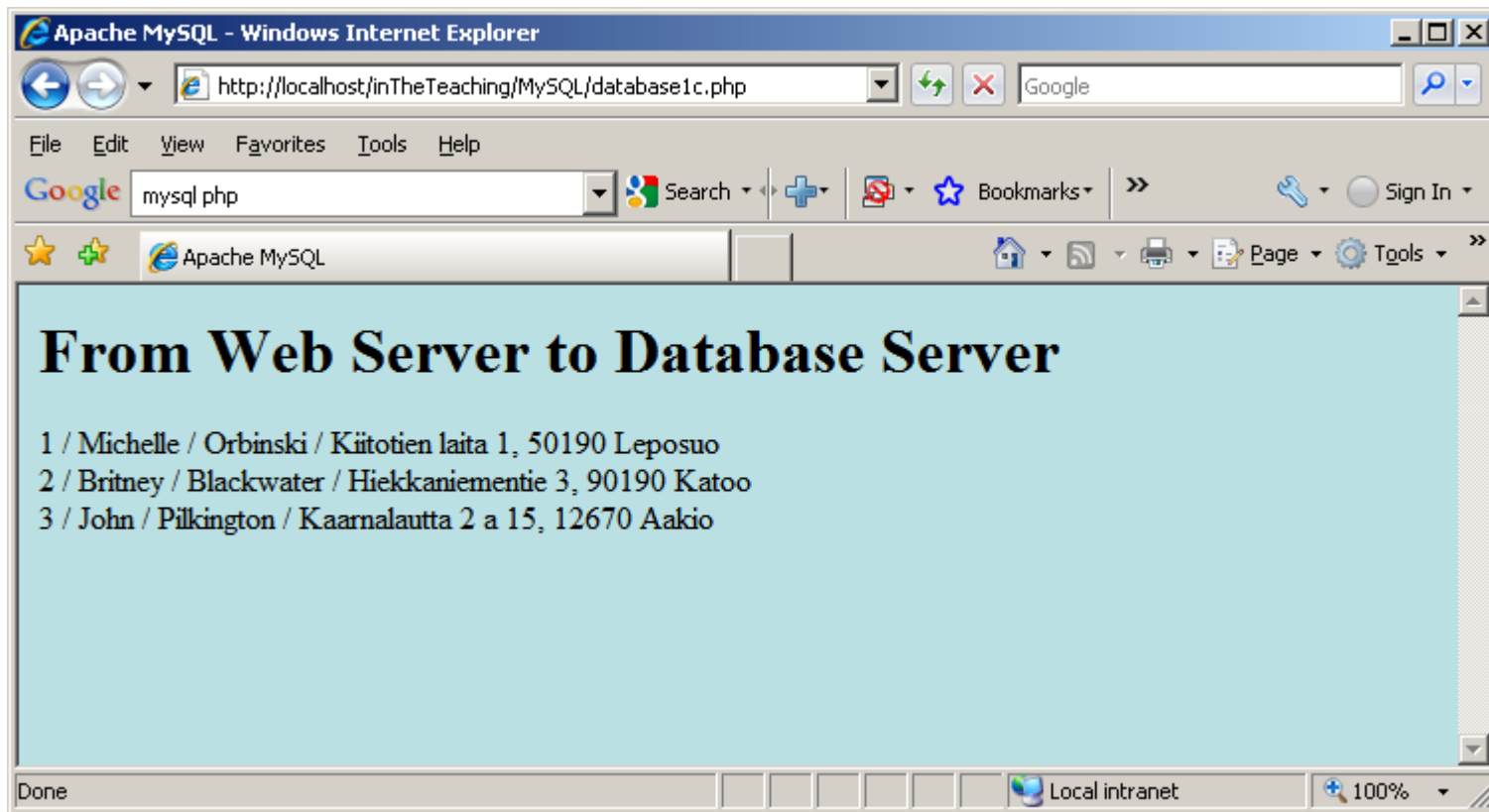


Or returning a row from a recordset as an object

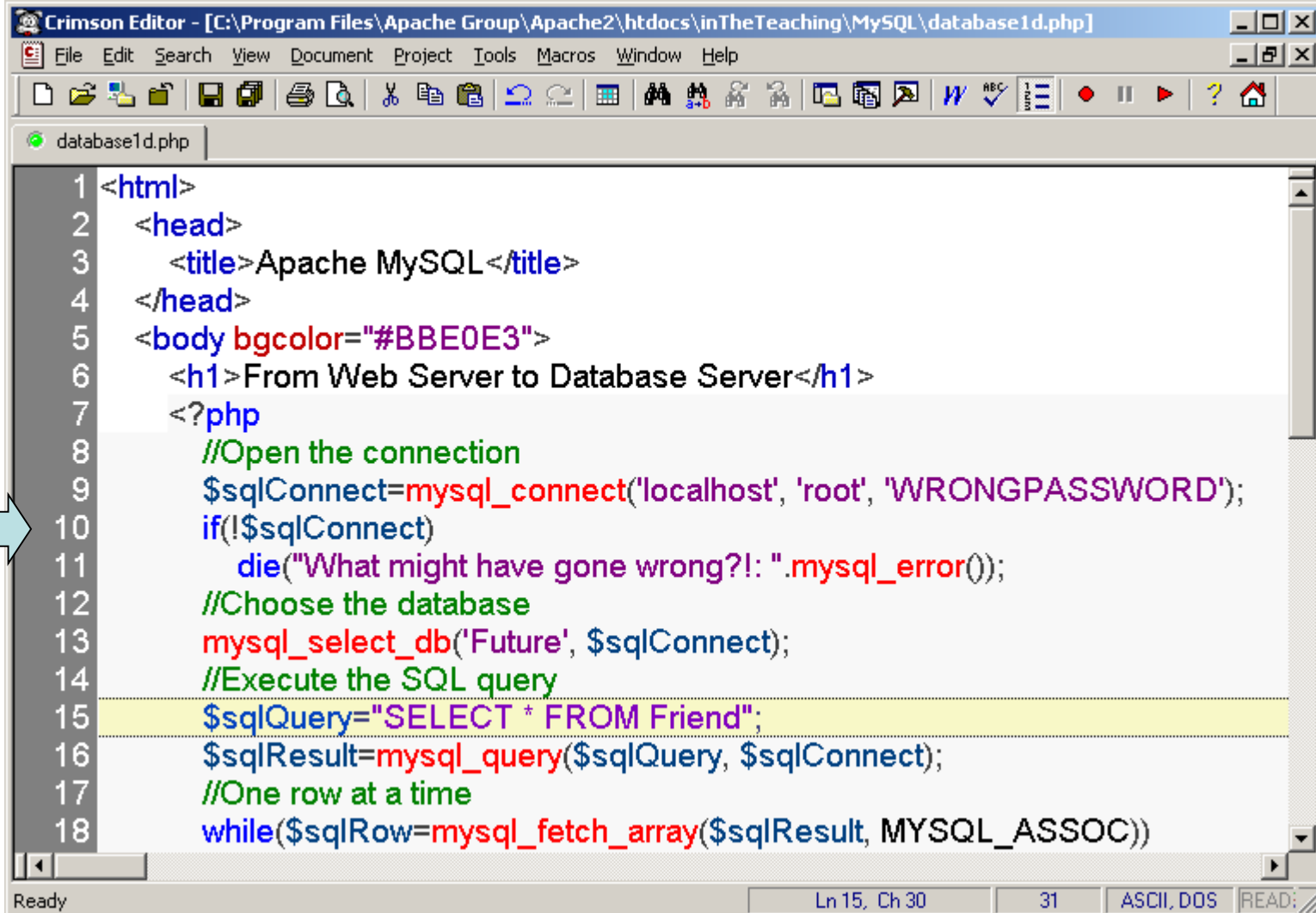


```
Crimson Editor - [C:\Program Files\Apache Group\Apache2\htdocs\inTheTeaching\MySQL\database1c.php]
File Edit Search View Document Project Tools Macros Window Help
database1c.php
11 mysql_select_db('Future', $sqlConnect);
12 //Execute the SQL query
13 $sqlQuery="SELECT * FROM Friend";
14 $sqlResult=mysql_query($sqlQuery, $sqlConnect);
15 //One row at a time
16 while($sqlRow=mysql_fetch_object($sqlResult))
17 {
18     $row=$sqlRow->frNum;
19     $fName=$sqlRow->firstName;
20     $sName=$sqlRow->secondName;
21     $addInfo=$sqlRow->address;
22     echo $row. " / ". $fName. " / ". $sName. " / ". $addInfo. "<br>";
23 }
24 //Close the connection
25 mysql_close($sqlConnect);
26 ?>
27 </body>
28 </html>
```

Ready Ln 15, Ch 23 28 ASCII, DOS EA: //

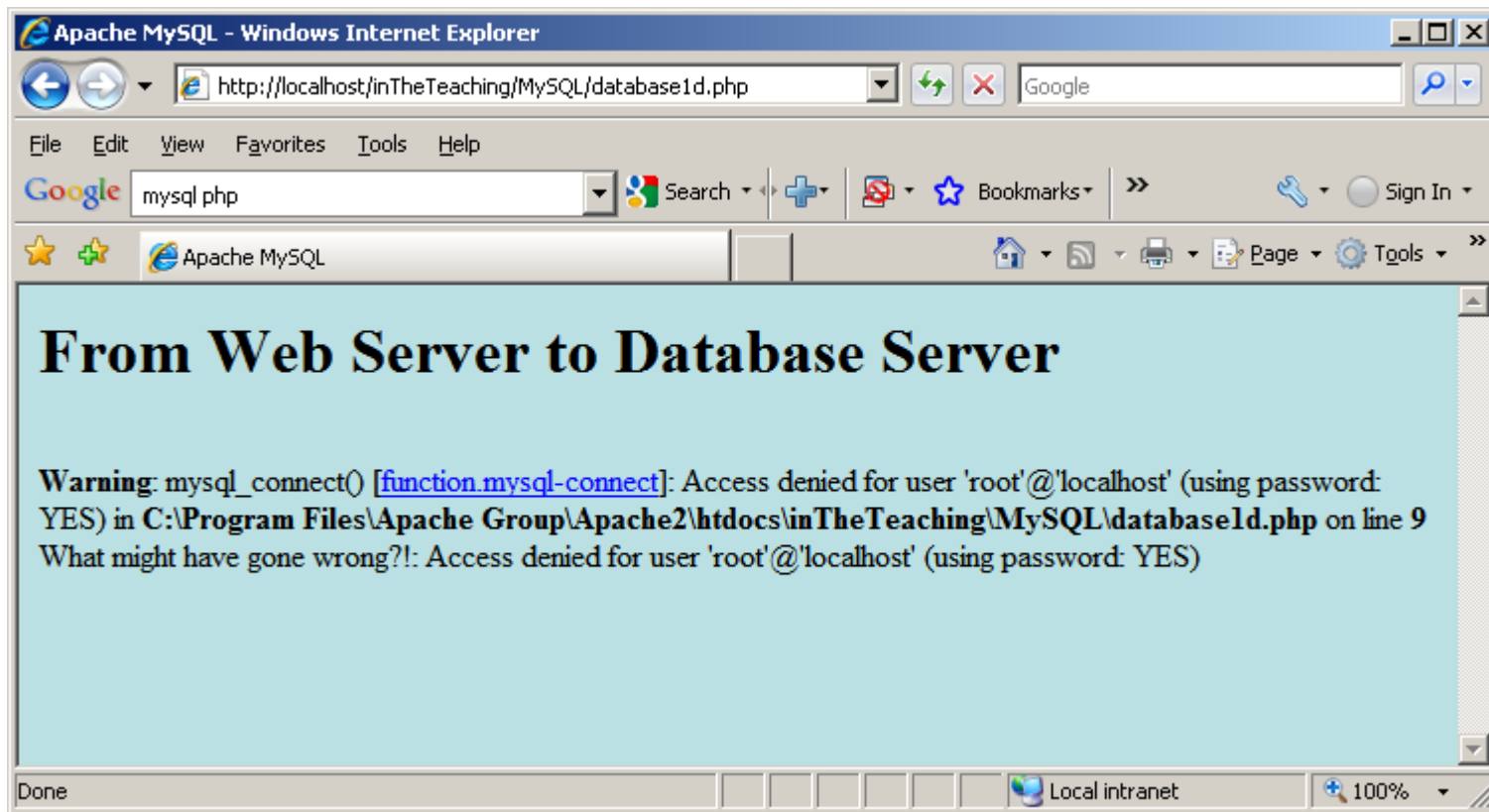


A minor modification to the original example: let's make it display a message if there is an error when connecting to the database server:

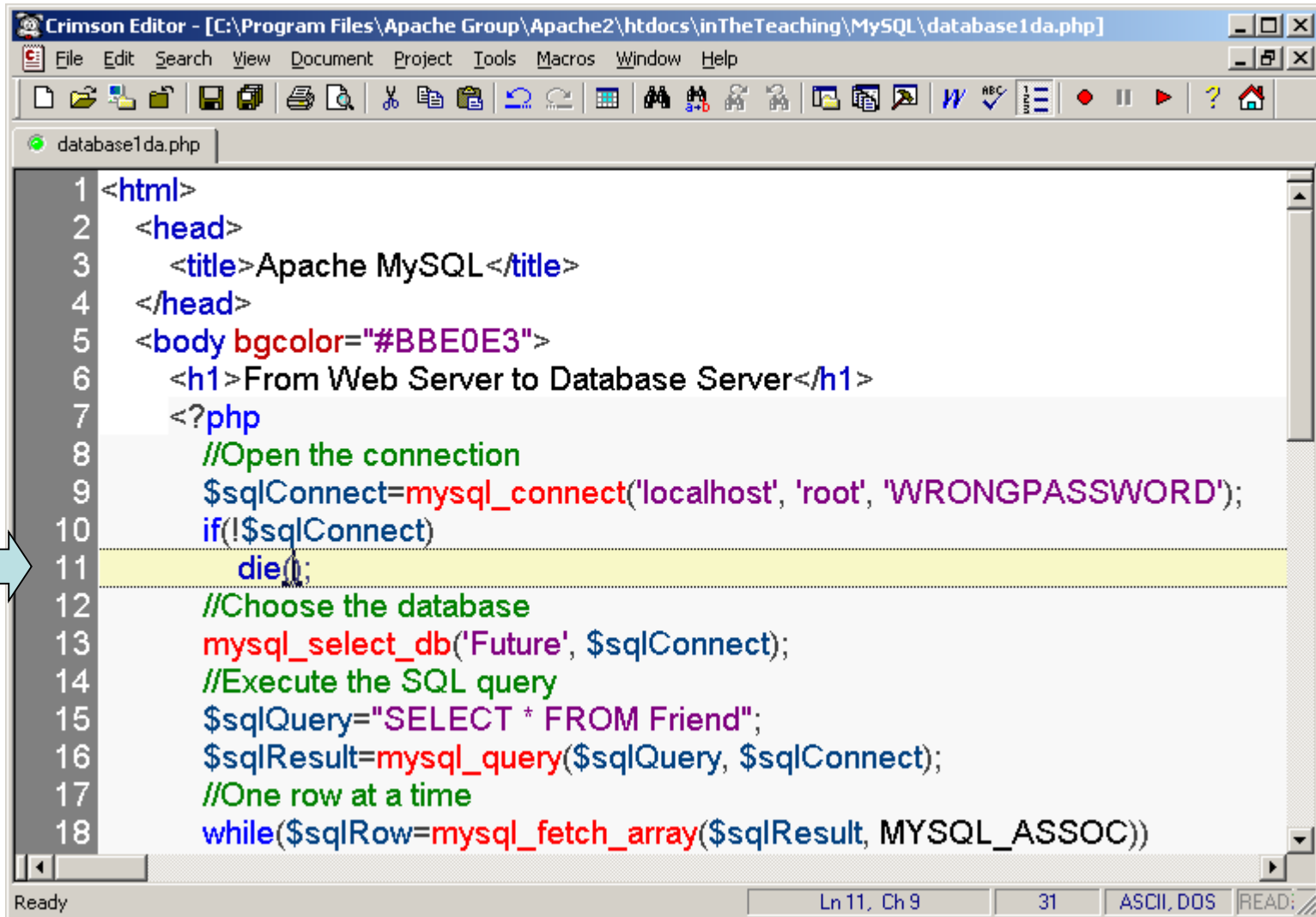


```
Crimson Editor - [C:\Program Files\Apache Group\Apache2\htdocs\inTheTeaching\MySQL\database1d.php]
File Edit Search View Document Project Tools Macros Window Help
database1d.php
1 <html>
2   <head>
3     <title>Apache MySQL</title>
4   </head>
5   <body bgcolor="#BBE0E3">
6     <h1>From Web Server to Database Server</h1>
7     <?php
8       //Open the connection
9       $sqlConnect=mysql_connect('localhost', 'root', 'WRONGPASSWORD');
10      if(!$sqlConnect)
11        die("What might have gone wrong?!: ".mysql_error());
12      //Choose the database
13      mysql_select_db('Future', $sqlConnect);
14      //Execute the SQL query
15      $sqlQuery="SELECT * FROM Friend";
16      $sqlResult=mysql_query($sqlQuery, $sqlConnect);
17      //One row at a time
18      while($sqlRow=mysql_fetch_array($sqlResult, MYSQL_ASSOC))
```

Ready Ln 15, Ch 30 31 ASCII, DOS READ:

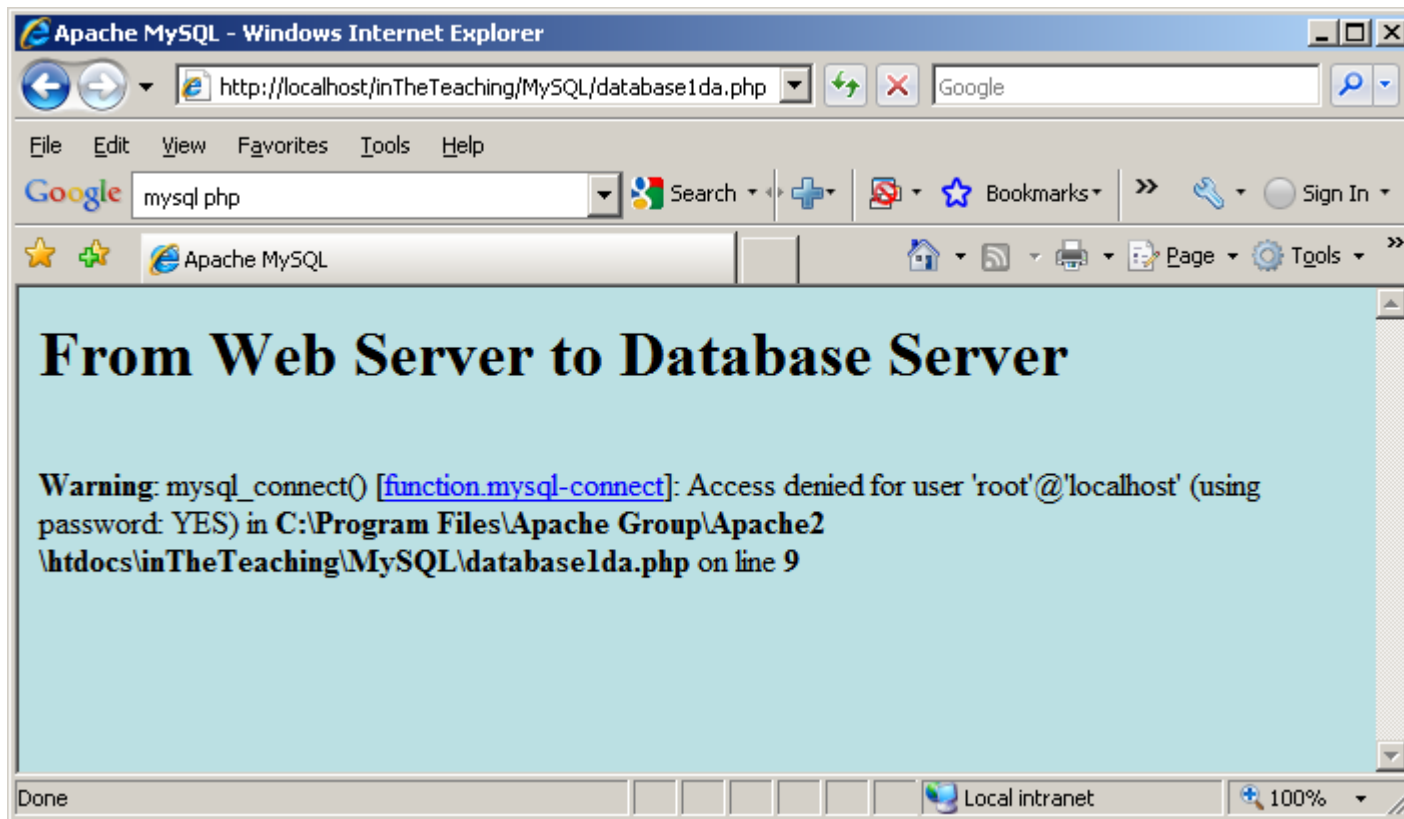


So it seems that `die()` needs no arguments because `mysql_connect()` is able to give the same information:

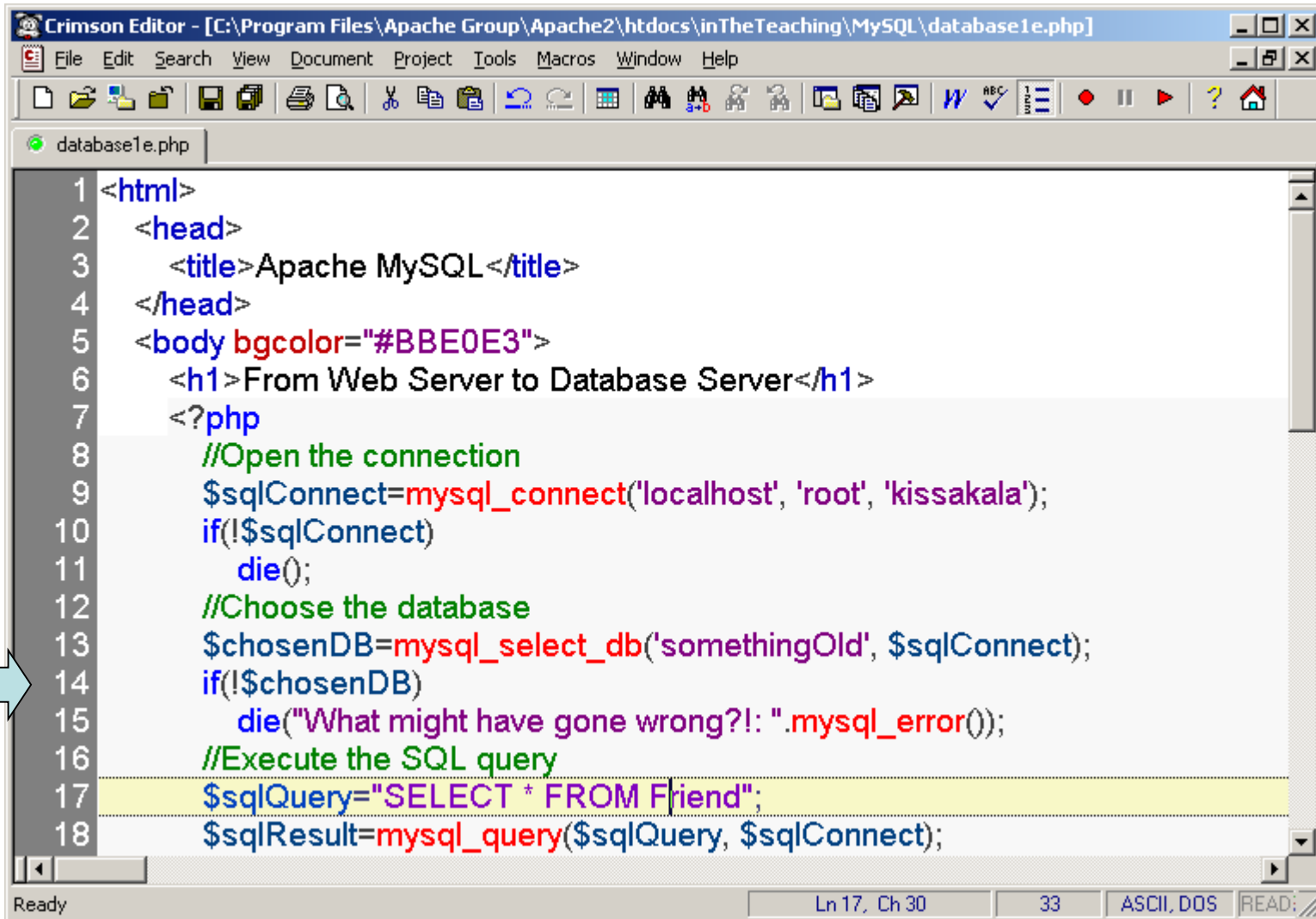


```
Crimson Editor - [C:\Program Files\Apache Group\Apache2\htdocs\inTheTeaching\MySQL\database1 da.php]
File Edit Search View Document Project Tools Macros Window Help
database1 da.php
1 <html>
2 <head>
3 <title>Apache MySQL</title>
4 </head>
5 <body bgcolor="#BBE0E3">
6 <h1>From Web Server to Database Server</h1>
7 <?php
8 //Open the connection
9 $sqlConnect=mysql_connect('localhost', 'root', 'WRONGPASSWORD');
10 if(!$sqlConnect)
11 die();
12 //Choose the database
13 mysql_select_db('Future', $sqlConnect);
14 //Execute the SQL query
15 $sqlQuery="SELECT * FROM Friend";
16 $sqlResult=mysql_query($sqlQuery, $sqlConnect);
17 //One row at a time
18 while($sqlRow=mysql_fetch_array($sqlResult, MYSQL_ASSOC))
```

Ready Ln 11, Ch 9 31 ASCII, DOS READ:

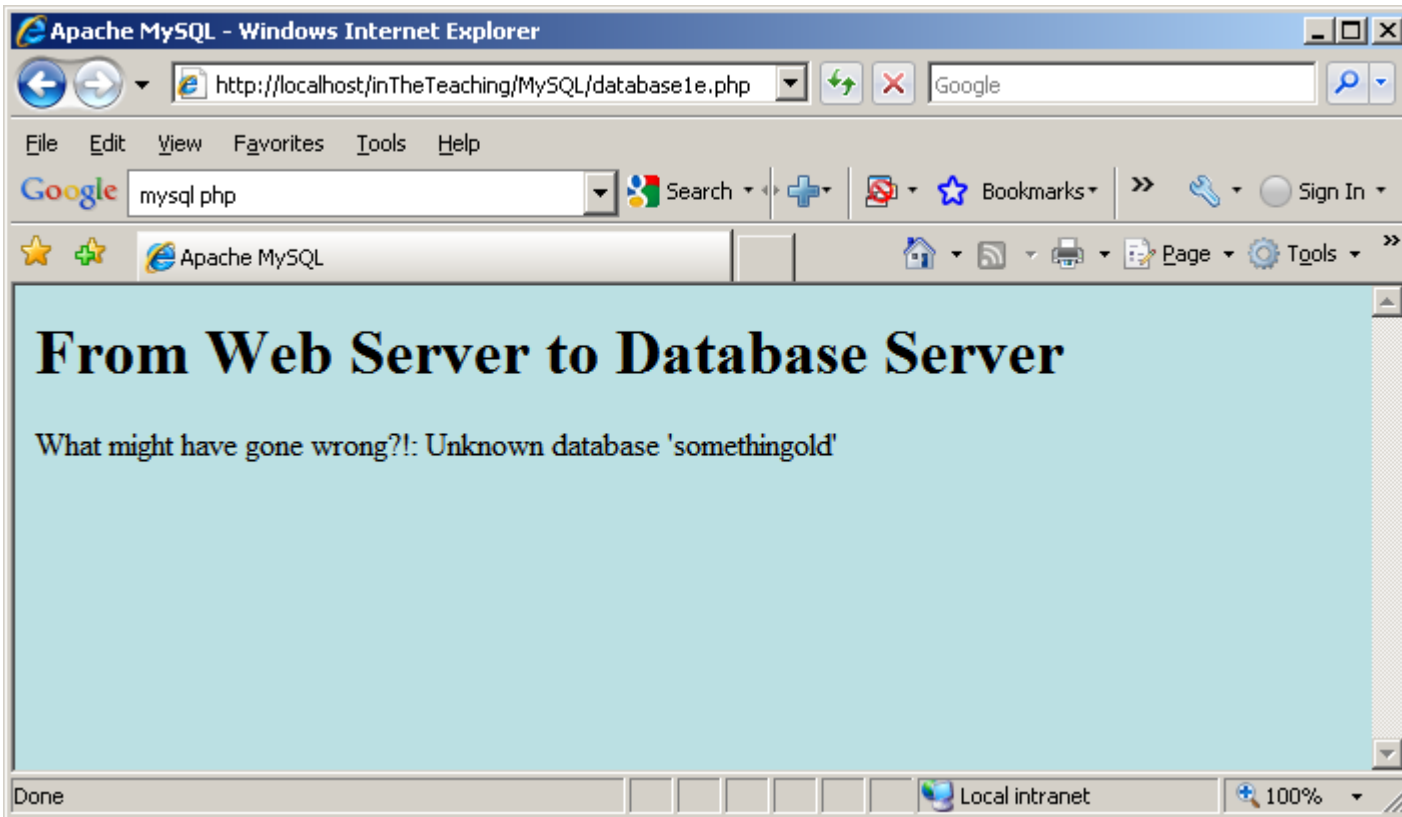


A minor modification to the original example: let's make it display a message if there is an error when selecting the database we want to use:

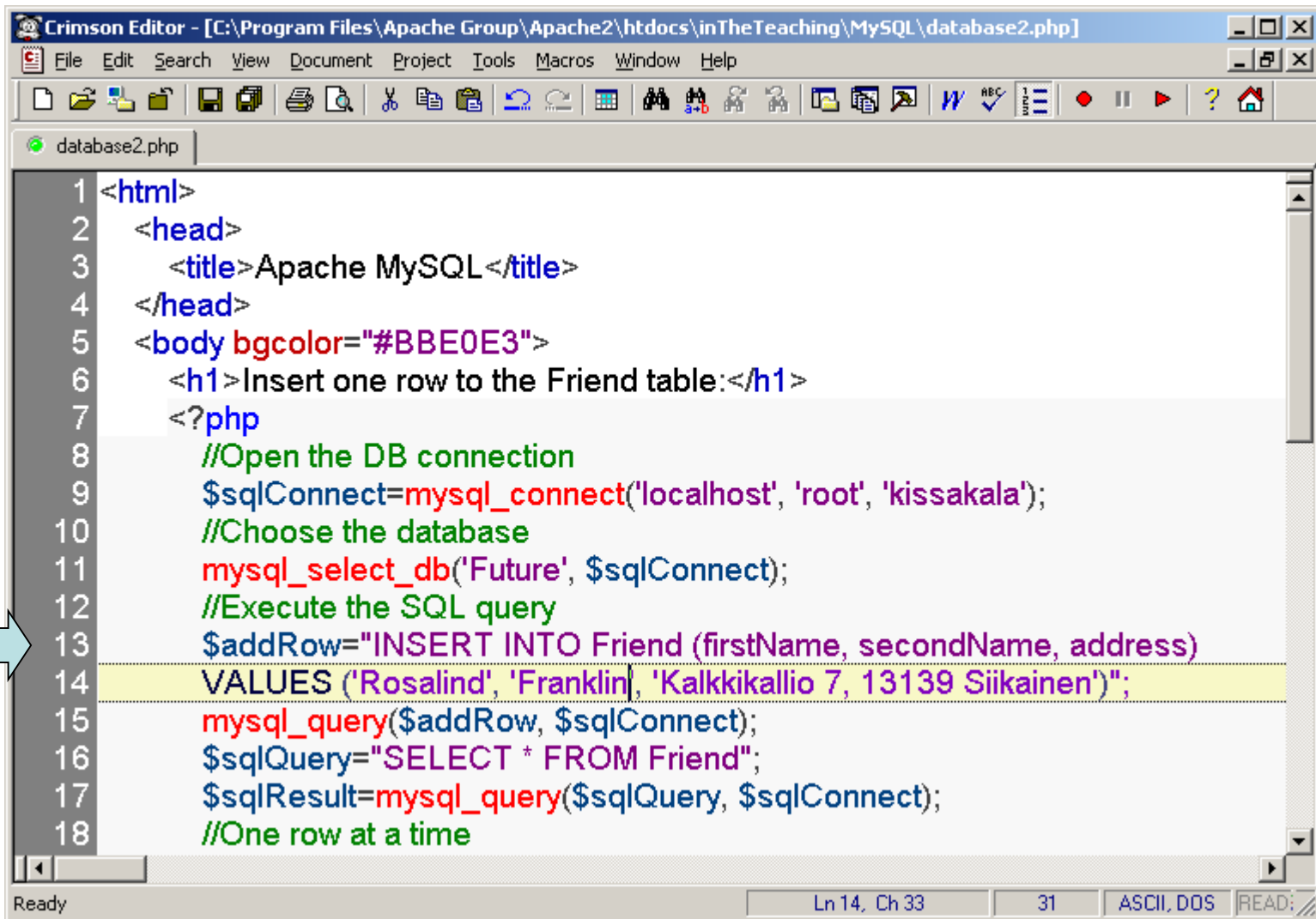


```
Crimson Editor - [C:\Program Files\Apache Group\Apache2\htdocs\inTheTeaching\MySQL\database1e.php]
File Edit Search View Document Project Tools Macros Window Help
database1e.php
1 <html>
2   <head>
3     <title>Apache MySQL</title>
4   </head>
5   <body bgcolor="#BBE0E3">
6     <h1>From Web Server to Database Server</h1>
7     <?php
8       //Open the connection
9       $sqlConnect=mysql_connect('localhost', 'root', 'kissakala');
10      if(!$sqlConnect)
11        die();
12      //Choose the database
13      $chosenDB=mysql_select_db('somethingOld', $sqlConnect);
14      if(!$chosenDB)
15        die("What might have gone wrong?! ".mysql_error());
16      //Execute the SQL query
17      $sqlQuery="SELECT * FROM Friend";
18      $sqlResult=mysql_query($sqlQuery, $sqlConnect);
```

Ready Ln 17, Ch 30 33 ASCII, DOS READ:



In the next example we will insert one row to the Friend table. First directly from web server to the database server without any user interface.



```
1 <html>
2   <head>
3     <title>Apache MySQL</title>
4   </head>
5   <body bgcolor="#BBE0E3">
6     <h1>Insert one row to the Friend table:</h1>
7     <?php
8       //Open the DB connection
9       $sqlConnect=mysql_connect('localhost', 'root', 'kissakala');
10      //Choose the database
11      mysql_select_db('Future', $sqlConnect);
12      //Execute the SQL query
13      $addRow="INSERT INTO Friend (firstName, secondName, address)
14      VALUES ('Rosalind', 'Franklin', 'Kalkkikallio 7, 13139 Siikainen)";
15      mysql_query($addRow, $sqlConnect);
16      $sqlQuery="SELECT * FROM Friend";
17      $sqlResult=mysql_query($sqlQuery, $sqlConnect);
18      //One row at a time
```

Ready Ln 14, Ch 33 31 ASCII, DOS READ

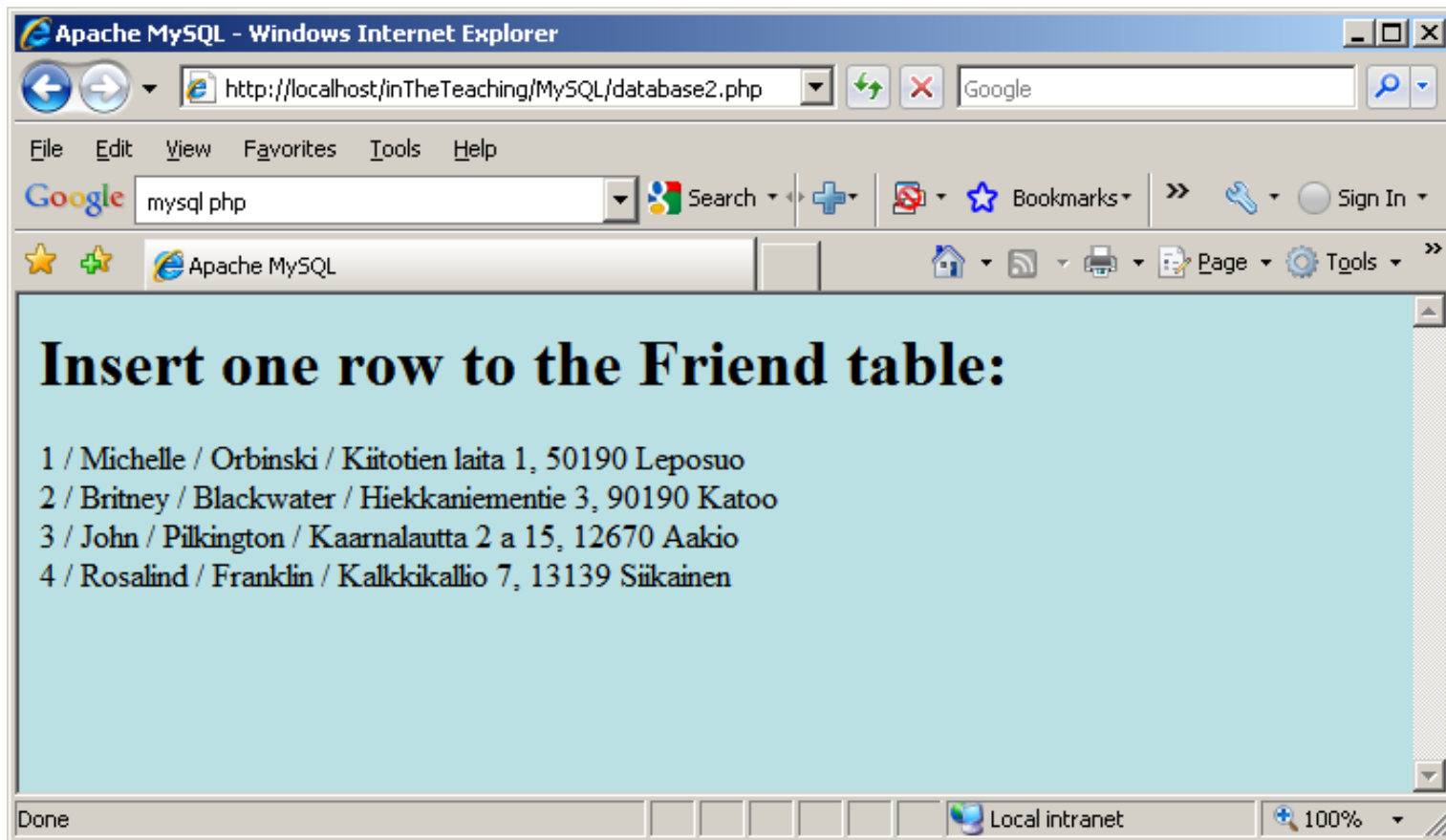
Crimson Editor - [C:\Program Files\Apache Group\Apache2\htdocs\inTheTeaching\MySQL\database2.php]

File Edit Search View Document Project Tools Macros Window Help

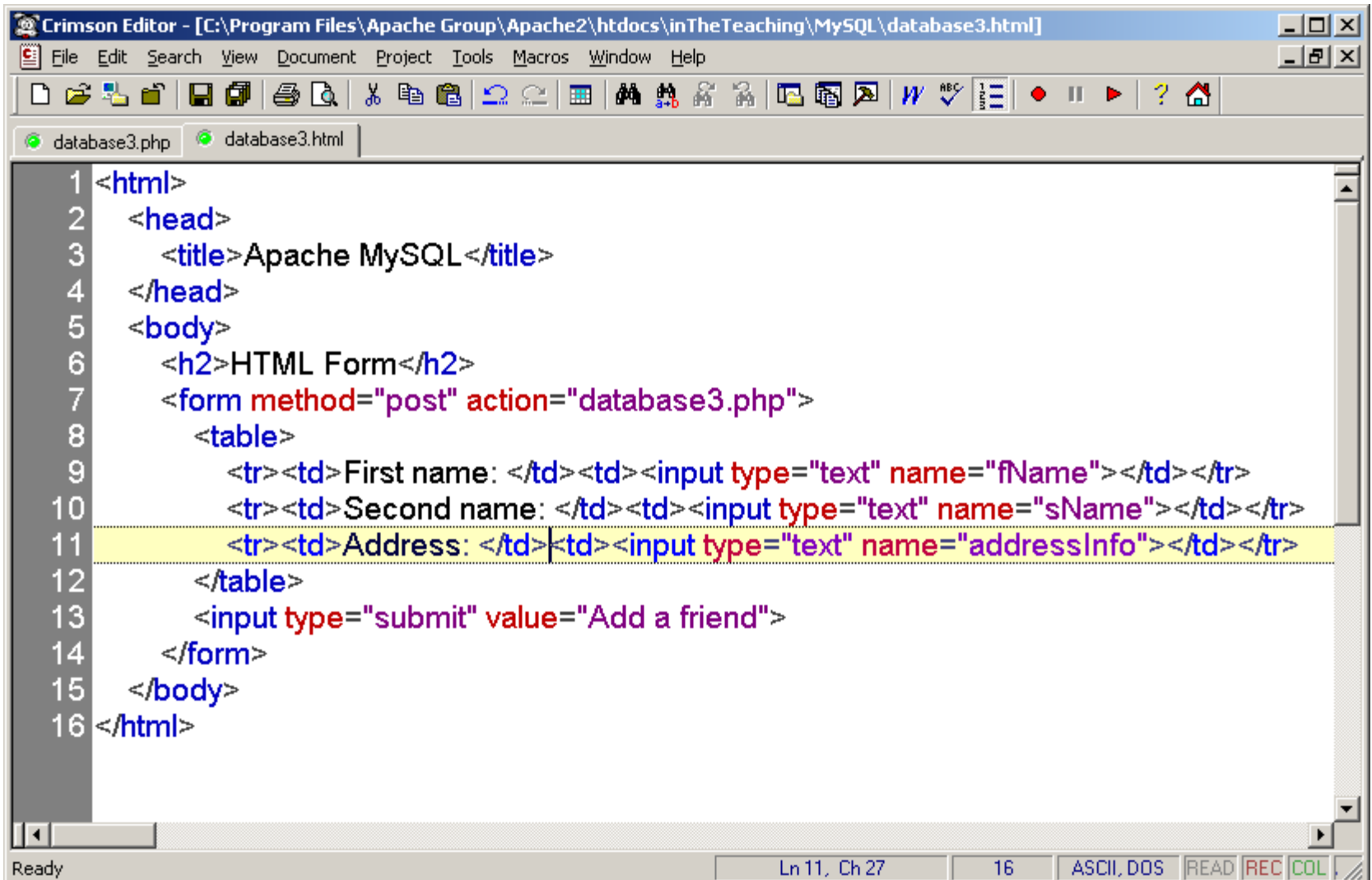
database2.php

```
18 //One row at a time
19 while($sqlRow=mysql_fetch_array($sqlResult, MYSQL_ASSOC))
20 {
21     $row=$sqlRow['frNum'];
22     $fName=$sqlRow['firstName'];
23     $sName=$sqlRow['secondName'];
24     $addInfo=$sqlRow['address'];
25     echo $row. " / ". $fName. " / ". $sName. " / ". $addInfo."<br>";
26 }
27 //Close the connection
28 mysql_close($sqlConnect);
29 ?>
30 </body>
31 </html>
```

Ready Ln 14, Ch 33 31 ASCII, DOS READ:



A bit more complex task: Insert data from a form into a database:
Now we will create an HTML form that can be used to add new records to the Friend table, file database3.html:



The screenshot shows a text editor window titled "Crimson Editor - [C:\Program Files\Apache Group\Apache2\htdocs\inTheTeaching\MySQL\database3.html]". The editor displays the following HTML code:

```
1 <html>
2   <head>
3     <title>Apache MySQL</title>
4   </head>
5   <body>
6     <h2>HTML Form</h2>
7     <form method="post" action="database3.php">
8       <table>
9         <tr><td>First name: </td><td><input type="text" name="fName"></td></tr>
10        <tr><td>Second name: </td><td><input type="text" name="sName"></td></tr>
11        <tr><td>Address: </td><td><input type="text" name="addressInfo"></td></tr>
12      </table>
13      <input type="submit" value="Add a friend">
14    </form>
15  </body>
16 </html>
```

The code is color-coded: HTML tags are blue, attribute values are purple, and text content is black. Line 11 is highlighted in yellow. The status bar at the bottom shows "Ready", "Ln 11, Ch 27", "16", and "ASCII, DOS READ REC COL".

Apache MySQL - Windows Internet Explorer

http://localhost/inTheTeaching/MySQL/database3.html

File Edit View Favorites Tools Help

Google Search + - * Bookmarks >> Sign In

Apache MySQL Home RSS Print Page Tools >>

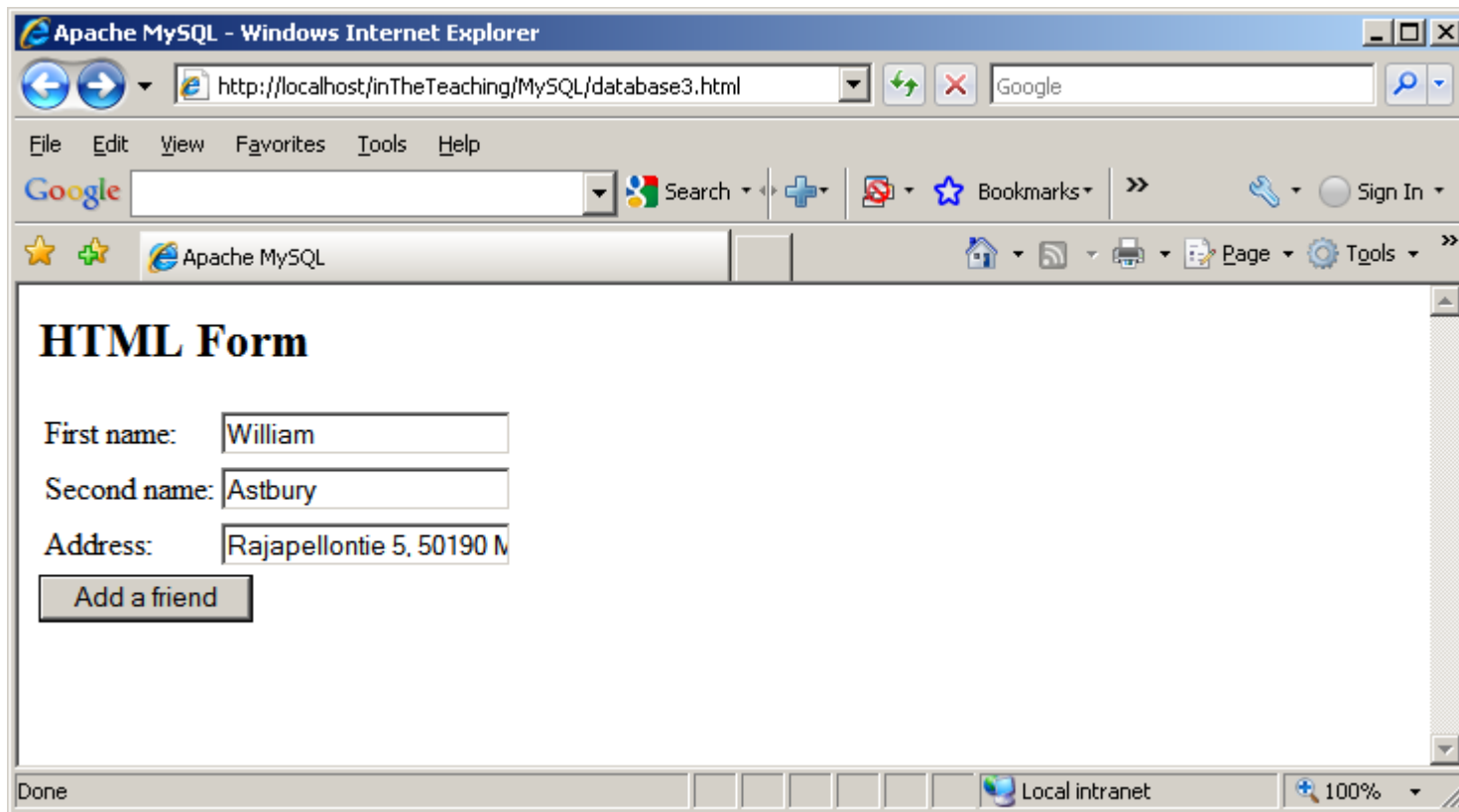
HTML Form

First name:

Second name:

Address:

Done Local intranet 100%

The image shows a screenshot of a Windows Internet Explorer browser window. The title bar reads "Apache MySQL - Windows Internet Explorer". The address bar contains the URL "http://localhost/inTheTeaching/MySQL/database3.html". The browser's menu bar includes "File", "Edit", "View", "Favorites", "Tools", and "Help". Below the menu bar is a search bar with the "Google" logo and a search button. To the right of the search bar are icons for "Search", a plus sign, a minus sign, "Bookmarks", and "Sign In". The main content area displays an "HTML Form" with three text input fields: "First name:" containing "William", "Second name:" containing "Astbury", and "Address:" containing "Rajapellontie 5, 50190 M". Below these fields is a button labeled "Add a friend". The status bar at the bottom shows "Done", "Local intranet", and a zoom level of "100%".

Crimson Editor - [C:\Program Files\Apache Group\Apache2\htdocs\inTheTeaching\MySQL\database3a.php]

File Edit Search View Document Project Tools Macros Window Help

database3a.php

```
1 <html>
2 <head>
3   <title>Explorer Apache MySQL</title>
4 </head>
5 <body bgcolor="#BBE0E3">
6   <h1>Insert one row to the friend table, PHP:</h1>
7   <?php
8     if(!empty($_POST['fName']) && !empty($_POST['sName']) &&
9       !empty($_POST['addressInfo']))
10    {
11      //Open the DB connection
12      $sqlConnect=mysql_connect('localhost', 'root', 'kissakala');
13      //Choose the database
14      mysql_select_db('future', $sqlConnect);
15      //Execute the SQL query
16      $addRow="INSERT INTO friend (firstName, secondName, address)
17      VALUES ('$_POST[fName]', '$_POST[sName]', '$_POST[addressInfo]')";
18      mysql_query($addRow, $sqlConnect);
```

Ready Ln 1, Ch 1 41 ASCII, DOS READ REC COL

```
Crimson Editor - [C:\Program Files\Apache Group\Apache2\htdocs\inTheTeaching\MySQL\database3a.php]
File Edit Search View Document Project Tools Macros Window Help
database3a.php
18     mysql_query($addRow, $sqlConnect);
19     $sqlQuery="SELECT * FROM friend";
20     $sqlResult=mysql_query($sqlQuery, $sqlConnect);
21     //One row at a time
22     while($sqlRow=mysql_fetch_array($sqlResult, MYSQL_ASSOC))
23     {
24         $row=$sqlRow['frNum'];
25         $fName=$sqlRow['firstName'];
26         $sName=$sqlRow['secondName'];
27         $addInfo=$sqlRow['address'];
28         echo $row." / ".$fName." / ".$sName." / ".
29             $addInfo."<br>";
30     }
31     //Close the connection
32     mysql_close($sqlConnect);
33 }
34 else
35 {
Ready Ln 1, Ch 1 41 ASCII, DOS READ REC COL
```

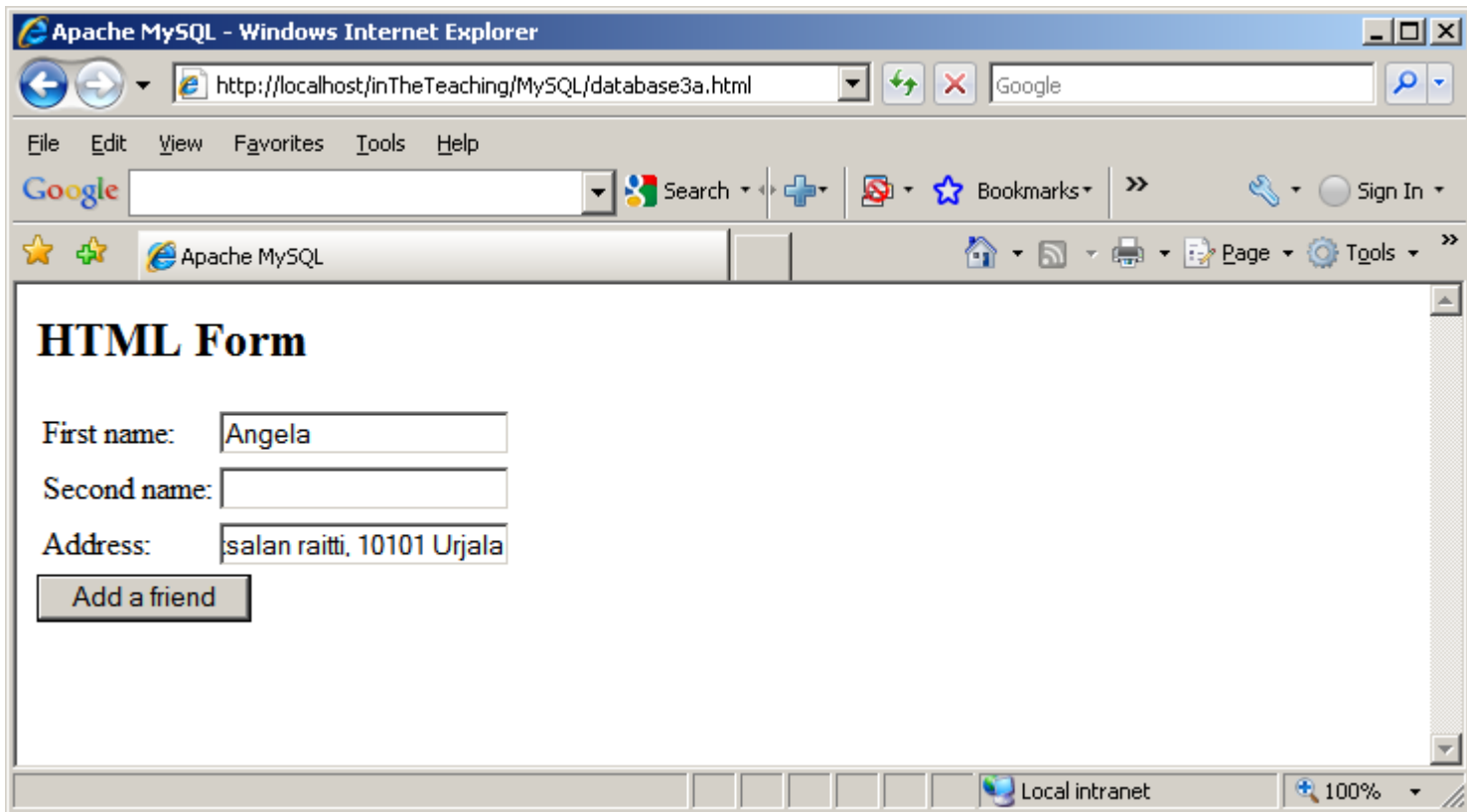
Crimson Editor - [C:\Program Files\Apache Group\Apache2\htdocs\inTheTeaching\MySQL\database3a.php]

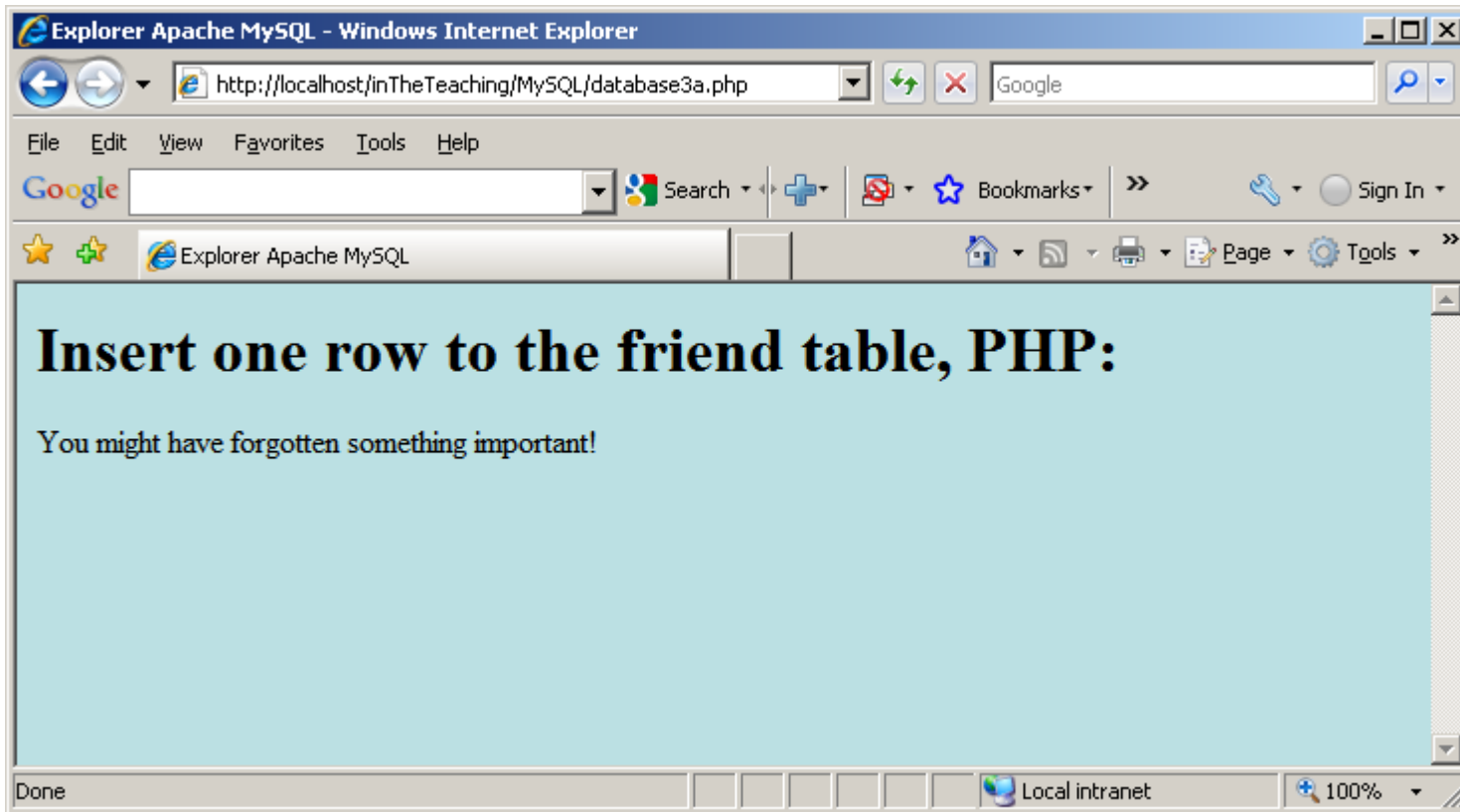
File Edit Search View Document Project Tools Macros Window Help

database3a.php

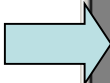
```
34     else
35     {
36         echo "You might have forgotten something important!";
37         exit();
38     }
39     ?>
40 </body>
41 </html>
```

Ready Ln 1, Ch 1 41 ASCII, DOS READ REC COL





Definitely we need to improve the source code:



```
Crimson Editor - [C:\Program Files\Apache Group\Apache2\htdocs\inTheTeaching\MySQL\update2a.php]
File Edit Search View Document Project Tools Macros Window Help
update2a.php
59 //Did there exist any rows satisfying the required search conditions???
60 $sqlBeginning="SELECT * FROM Friend
61 WHERE firstName LIKE '%$_POST[oldFirstName]%'
62 AND secondName LIKE '%$_POST[secondName]%'
63 AND address LIKE '%$_POST[addressInfo]%'";
64
65 $sqlChecking=mysql_query($sqlBeginning, $sqlConnect);
66 //If no rows can be found, then this test raises false:
67 if(mysql_num_rows($sqlChecking))
68 {
69     echo "There was one row: <br>";
70     while ($sqlRow=mysql_fetch_array($sqlChecking, MYSQL_ASSOC))
71     {
72         $row=$sqlRow['frNum'];
73         $fName=$sqlRow['firstName'];
74         $sName=$sqlRow['secondName'];
75         $addInfo=$sqlRow['address'];
76         echo $row. " / ". $fName. " / ". $sName. " / ". $addInfo. "<br>";

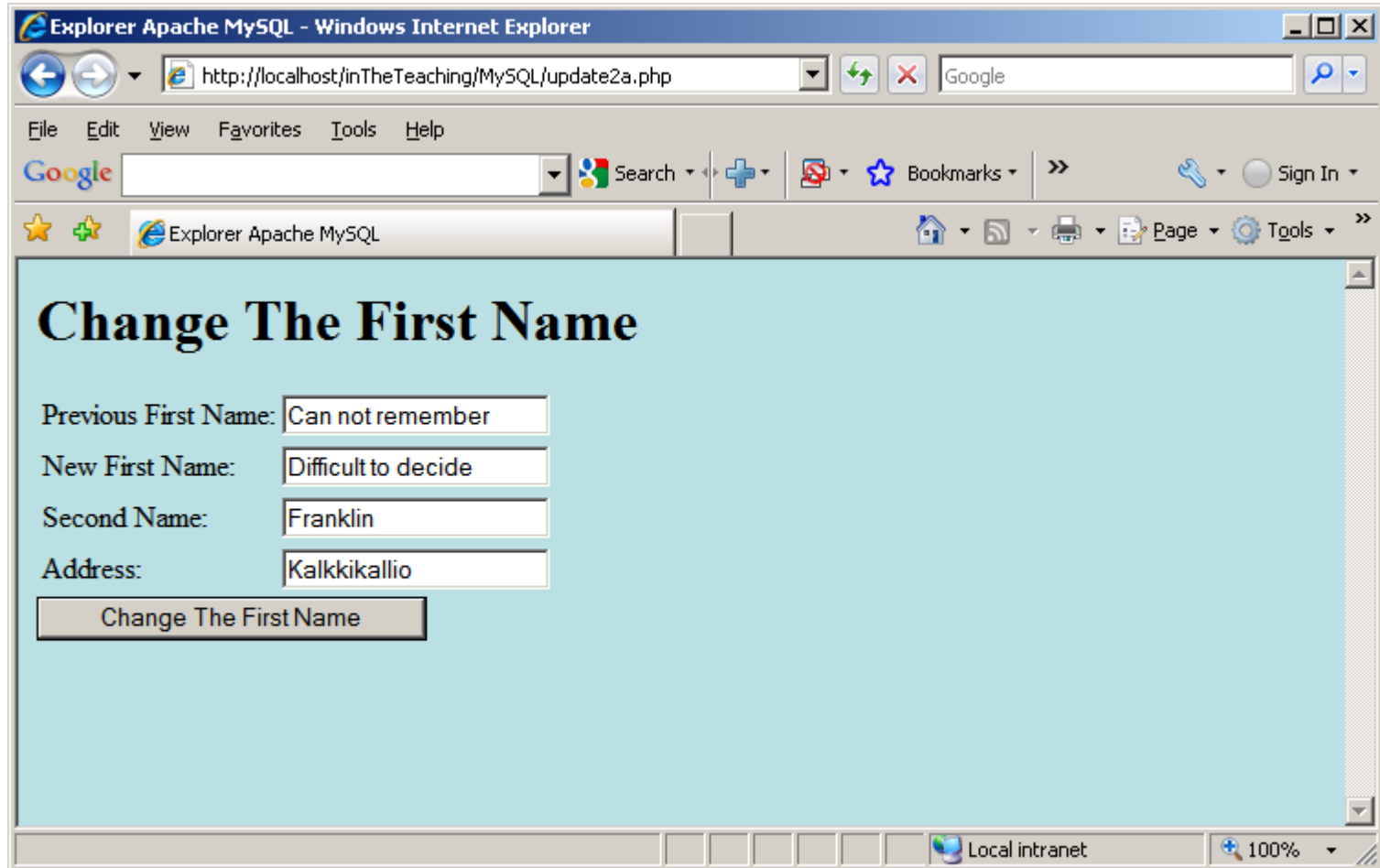
```

Ready Ln 119, Ch 1 120 ASCII, DOS READ REC COL

```
Crimson Editor - [C:\Program Files\Apache Group\Apache2\htdocs\inTheTeaching\MySQL\update2a.php]
File Edit Search View Document Project Tools Macros Window Help
update2a.php
76         echo $row. " / ". $fName. " / ". $sName. " / ". $addInfo. "<br>";
77     }
78 }
79 else
80 {
81     echo "Sorry, no matches could be found!!<br>". "<a href=\"update2a.php\">".
82     "Maybe you would like to try again?!</a>";
83     exit();
84 }
85
86 //Execute the SQL query
87 $sqlChangeFName="UPDATE Friend SET firstName=
88 '$_POST[newFirstName]'
89 WHERE firstName LIKE '%$_POST[oldFirstName]%'
90 AND secondName LIKE '%$_POST[secondName]%'
91 AND address LIKE '%$_POST[addressInfo]%'";
92
93 $ifSucceeded=mysql_query($sqlChangeFName, $sqlConnect);

Ready Ln 119, Ch 1 120 ASCII, DOS READ REC COL v
```

Let us test the modification. The second name and the address are valid values:



The screenshot shows a Windows Internet Explorer browser window. The title bar reads "Explorer Apache MySQL - Windows Internet Explorer". The address bar contains the URL "http://localhost/inTheTeaching/MySQL/update2a.php". The browser's menu bar includes "File", "Edit", "View", "Favorites", "Tools", and "Help". The toolbar features a Google search box, a "Search" button, a "+" button, a "Bookmarks" button, and a "Sign In" button. The address bar also shows "Explorer Apache MySQL" and various utility icons like Home, RSS, Print, Page, and Tools. The main content area has a light blue background and a title "Change The First Name" in a large, bold, black serif font. Below the title are four text input fields: "Previous First Name:" with the value "Can not remember", "New First Name:" with the value "Difficult to decide", "Second Name:" with the value "Franklin", and "Address:" with the value "Kalkkikallio". At the bottom of the form is a button labeled "Change The First Name". The status bar at the bottom of the browser window shows "Local intranet" and a zoom level of "100%".

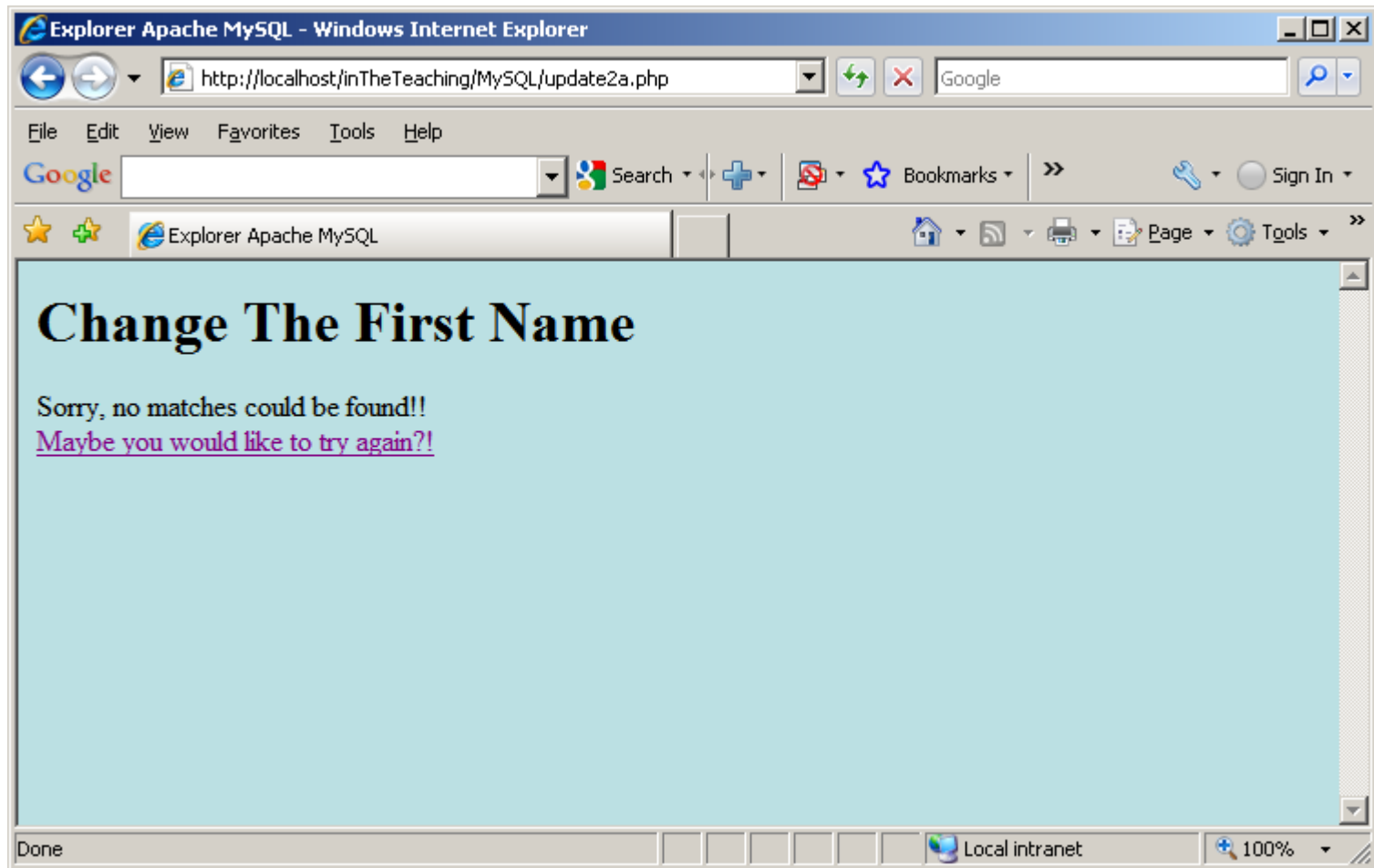
Change The First Name

Previous First Name:

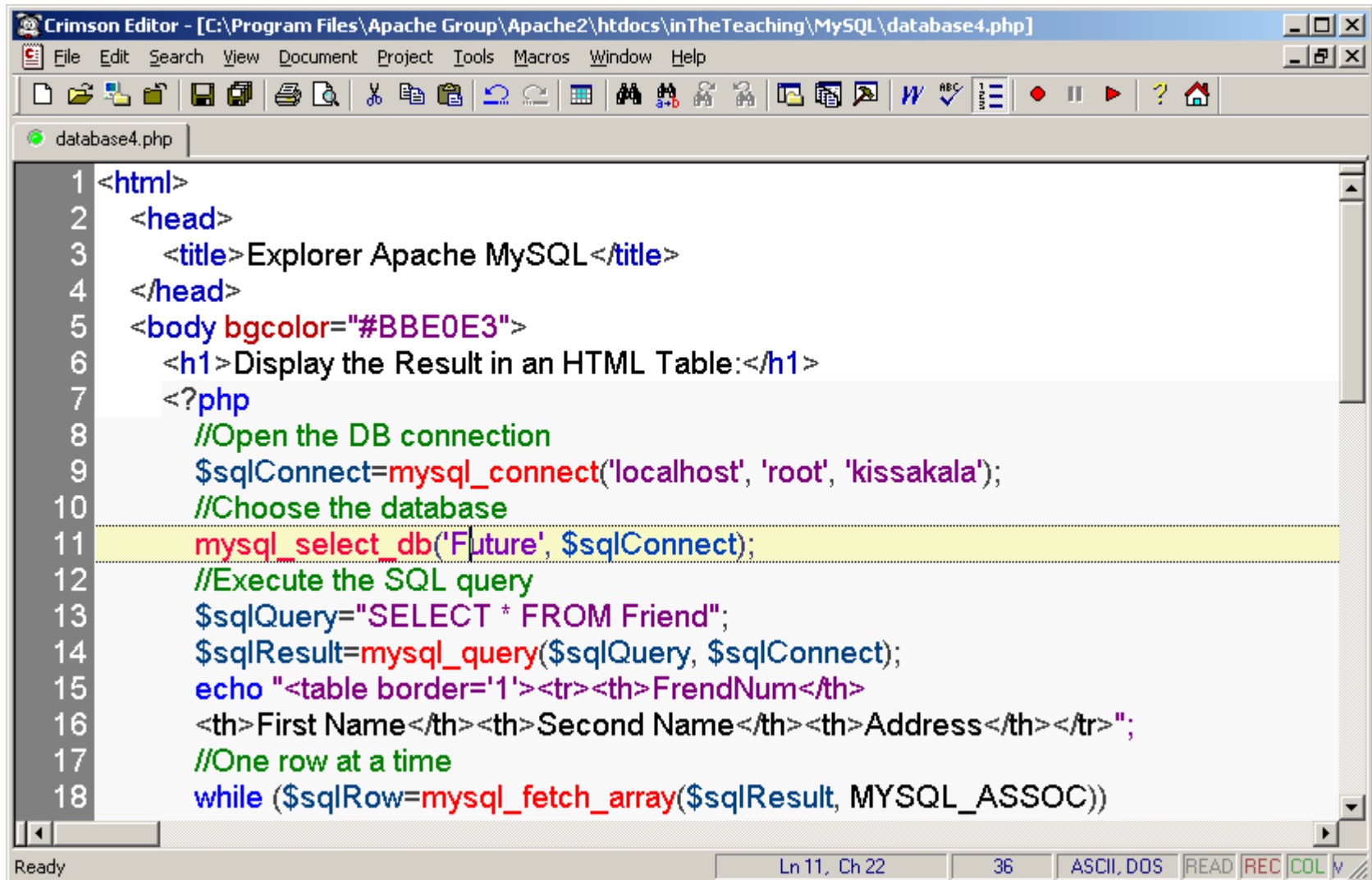
New First Name:

Second Name:

Address:



The following example selects the same data as the example above, but will display the data in an HTML table:



The image shows a screenshot of a text editor window titled "Crimson Editor - [C:\Program Files\Apache Group\Apache2\htdocs\inTheTeaching\MySQL\database4.php]". The editor displays PHP code for connecting to a MySQL database and displaying the results of a query in an HTML table. The code is as follows:

```
1 <html>
2   <head>
3     <title>Explorer Apache MySQL</title>
4   </head>
5   <body bgcolor="#BBE0E3">
6     <h1>Display the Result in an HTML Table:</h1>
7     <?php
8       //Open the DB connection
9       $sqlConnect=mysql_connect('localhost', 'root', 'kissakala');
10      //Choose the database
11      mysql_select_db('Future', $sqlConnect);
12      //Execute the SQL query
13      $sqlQuery="SELECT * FROM Friend";
14      $sqlResult=mysql_query($sqlQuery, $sqlConnect);
15      echo "<table border='1'><tr><th>FrendNum</th>
16      <th>First Name</th><th>Second Name</th><th>Address</th></tr>";
17      //One row at a time
18      while ($sqlRow=mysql_fetch_array($sqlResult, MYSQL_ASSOC))
```

The status bar at the bottom of the editor shows "Ready", "Ln 11, Ch 22", "36", "ASCII, DOS", "READ", "REC", "COL", and "v".

Crimson Editor - [C:\Program Files\Apache Group\Apache2\htdocs\inTheTeaching\MySQL\database4.php]

File Edit Search View Document Project Tools Macros Window Help

database4.php

```
18 while ($sqlRow=mysql_fetch_array($sqlResult, MYSQL_ASSOC))
19 {
20     $row=$sqlRow['frNum'];
21     $fName=$sqlRow['firstName'];
22     $sName=$sqlRow['secondName'];
23     $addInfo=$sqlRow['address'];
24     echo "<tr>";
25     echo "<td>".$row."</td>";
26     echo "<td>".$fName."</td>";
27     echo "<td>".$sName."</td>";
28     echo "<td>".$addInfo."</td>";
29     echo "</tr>";
30 }
31 echo "</table>";
32 //Close the connection
33 mysql_close($sqlConnect);
34 ?>
35 </body>
36 </html>
```

Ready Ln 11, Ch 22 36 ASCII, DOS READ REC COL V

Explorer Apache MySQL - Windows Internet Explorer

http://localhost/inTheTeaching/MySQL/database4.php

File Edit View Favorites Tools Help

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Explorer Apache MySQL

Display the Result in an HTML Table:

FrendNum	First Name	Second Name	Address
1	Michelle	Orbinski	Kiitotien laita 1, 50190 Leposuo
2	Britney	Blackwater	Hiekkaniementie 3, 90190 Katoo
3	John	Pilkington	Kaarnalautta 2 a 15, 12670 Aakio
4	Rosalind Elsie	Franklin	Kalkkikallio 7, 13139 Siikainen
5	William	Astbury	Rajapellontie 5, 50190 Mikkeli
6	Reg	Turnill	Nahkalakintie 5, 90800 Raahe
7	Richard	Hollingham	Pyynikintie 8, 56200 Tampere

Done Local intranet 100%