

Chapter 20

A database-driven web site

Objectives

Applied

1. Develop database-driven web sites using any of the skills in this chapter or this section.

Knowledge

1. Describe the use of a content management system for a database-driven application.
2. Describe the use of include files and the include path.
3. Describe the directory structure for a database-driven web site.

The text that's entered by the user

The Fender Stratocaster is *the* electric guitar design that changed the world. This guitar features a thicker bridge block for increased sustain and a more stable point of contact with the strings.

Features:

- * Thicker bridge block
- * 3-ply parchment pick guard
- * Tinted neck

The HTML that's generated by the system

```
<p>The Fender Stratocaster is <i>the</i> electric
guitar design that changed the world. This guitar
features a thicker bridge block for increased
sustain and a more stable point of contact
with the strings.</p>
```

```
<p>Features:</p>
```

```
<ul>
```

```
  <li>Thicker bridge block</li>
```

```
  <li>3-ply parchment pick guard</li>
```

```
  <li>Tinted neck</li>
```

```
</ul>
```

The rules for this content management system

- Use two returns to start a new paragraph.
- Use an asterisk to mark items in a bulleted list.
- Use one return between items in a bulleted list.
- Use standard HMTL tags for bold and italics.

The util/tags.php file

```
<?php
function add_tags($text) {

    // Convert return characters to Unix new lines
    // Convert Windows characters
    $text = str_replace("\r\n", "\n", $text);

    // Convert Mac characters
    $text = str_replace("\r", "\n", $text);

    // Get an array of paragraphs
    $paragraphs = explode("\n\n", $text);
```

The util/tags.php file (continued)

```
// Add tags to each paragraph
$text = '';
foreach($paragraphs as $p) {
    $p = ltrim($p);

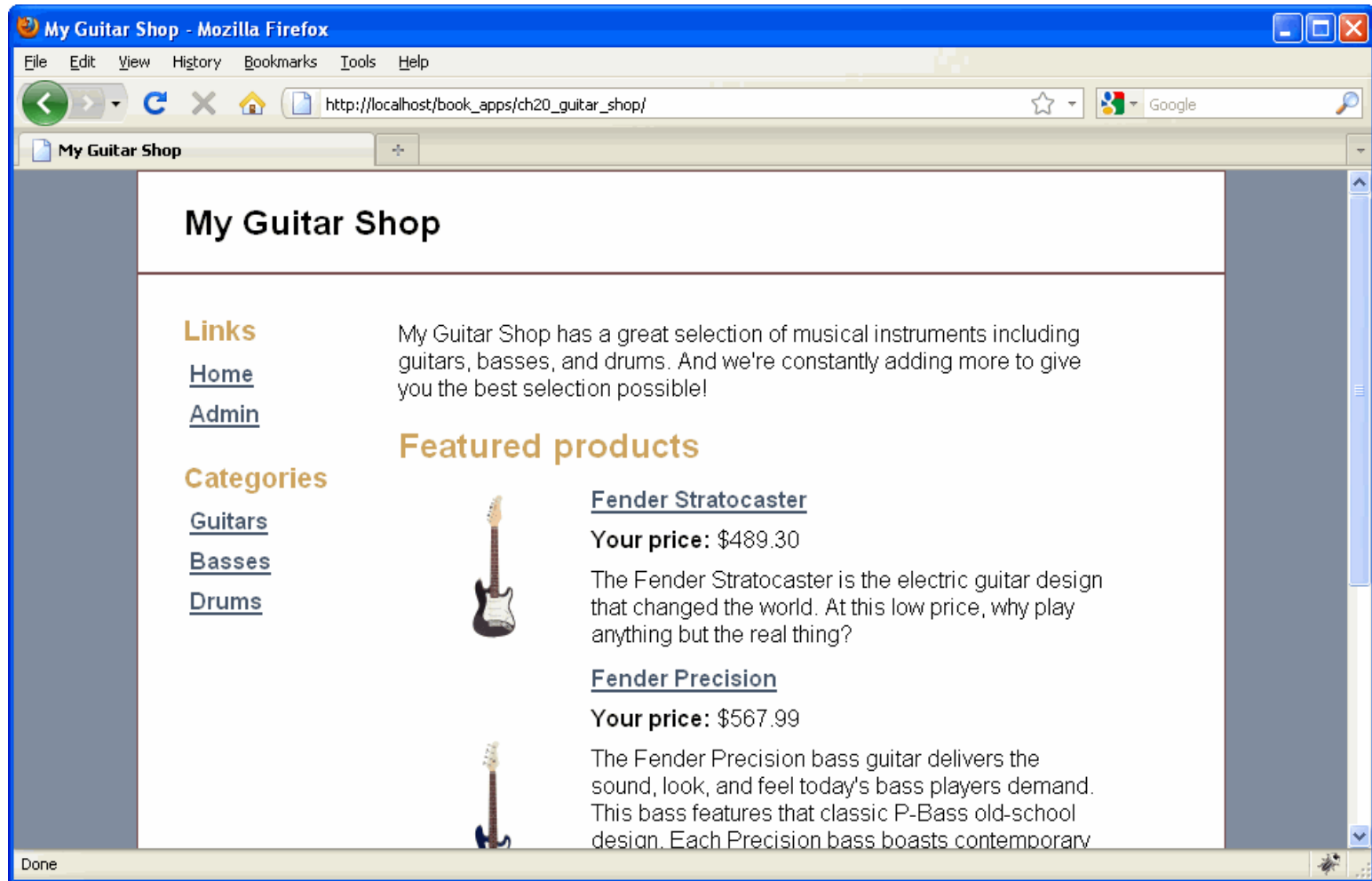
    $first_char = substr($p, 0, 1);
    if ($first_char == '*') {
        // Add <ul> and <li> tags
        $p = '<ul>' . $p . '</li></ul>';
        $p = str_replace("*", '<li>', $p);
        $p = str_replace("\n", '</li>', $p);
    } else {
        // Add <p> tags
        $p = '<p>' . $p . '</p>';
    }
    $text .= $p;
}

return $text;
}
?>
```

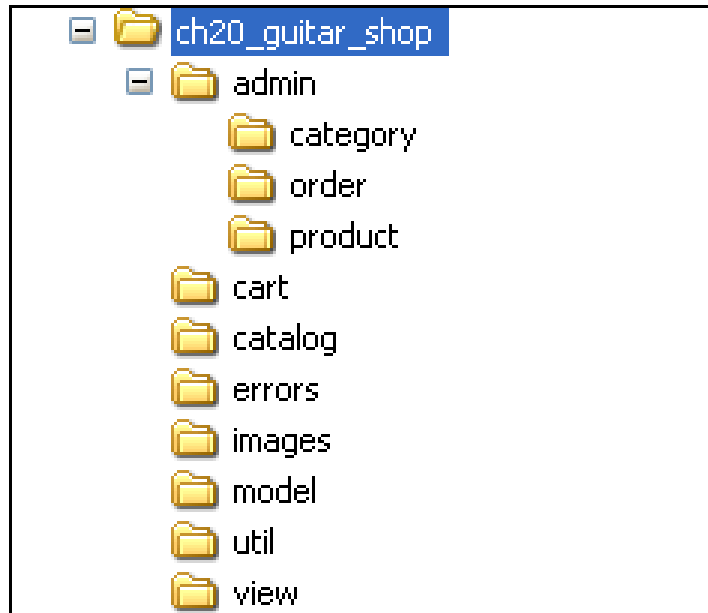
Code that uses the add_tags function

```
$description = add_tags($description);
```


The Home page for the Guitar Shop web site



The directory structure for the web site starting from htdocs/book_apps



Files in the application's root directory

`index.php`

`home_view.php`

`main.css`

The util/main.php file (an include file)

```
<?php
// Get the document root
$doc_root = $_SERVER['DOCUMENT_ROOT'];

// Get the application path
$uri = $_SERVER['REQUEST_URI'];
$dirs = explode('/', $uri);
$app_path = '/' . $dirs[1] . '/' . $dirs[2] . '/';

// Set the include path
set_include_path($doc_root . $app_path);
?>
```

\$_SERVER is an array containing information such as headers, paths, and script locations. The entries in this array are created by the web server.

The view/header.php file (an include file)

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 ... >
<html xmlns="http://www.w3.org/1999/xhtml">

    <!-- the head section -->
    <head>
        <title>My Guitar Shop</title>
        <link rel="stylesheet" type="text/css"
            href="<?php echo $app_path ?>main.css" />
    </head>

    <!-- the body section -->
    <body>
        <div id="page">
            <div id="header">
                <h1>My Guitar Shop</h1>
            </div>
            <div id="main">
```

The view/sidebar.php file (an include file)

```
<div id="sidebar">
  <ul>
    <!-- These links are for testing only.
         Remove them from a production application. -->
    <h2>Links</h2>
    <li>
      <a href="<?php echo $app_path; ?>">Home</a>
    </li>
    <li>
      <a href=
        "<?php echo $app_path; ?>admin">Admin</a>
    </li>
```

The view/sidebar.php file (continued)

```
<h2>Categories</h2>
    <!-- display links for all categories -->
    <?php foreach ($categories as $category) : ?>
    <li>
        <a href="<?php echo $app_path .
            'catalog?action=list_products' .
            '&category_id=' .
                $category['categoryID']; ?>">
            <?php echo $category['categoryName']; ?>
        </a>
    </li>
    <?php endforeach; ?>
    <li>&nbsp;</li>
</ul>
</div>
```

The view/sidebar_admin.php file (an include file)

```
<div id="sidebar">
  <ul>
    <h2>Links</h2>
    <li>
      <a href="<?php echo $app_path; ?>">Home</a>
    </li>
    <li>
      <a href="<?php echo $app_path; ?>
        admin">Admin</a>
    </li>
```


The view/sidebar_admin.php file (continued)

```
<h2>Categories</h2>
    <!-- display links for all categories -->
    <?php foreach ($categories as $category) : ?>
    <li>
        <a href="<?php echo $app_path .
            'admin/product?action=list_products' .
            '&category_id=' .
                $category['categoryID']; ?>">
            <?php echo $category['categoryName']; ?>
        </a>
    </li>
    <?php endforeach; ?>
    <li>&nbsp;</li>

</ul>
</div>
```

The view/product.php file (an include file)

```
<?php
    // Parse data
    $category_id = $product['categoryID'];
    $product_code = $product['productCode'];
    $product_name = $product['productName'];
    $description = $product['description'];
    $list_price = $product['listPrice'];
    $discount_percent = $product['discountPercent'];

    // Add HTML tags to the description
    $description = add_tags($description);
```

The view/product.php file (continued)

```
// Calculate discounts
$discount_amount =
    round($list_price * ($discount_percent / 100), 2);
$unit_price = $list_price - $discount_amount;

// Format discounts
$discount_percent = number_format($discount_percent, 0);
$discount_amount = number_format($discount_amount, 2);
$unit_price = number_format($unit_price, 2);

// Get image URL and alternate text
$image_filename = $product_code . '_m.png';
$image_path = $app_path . 'images/' . $image_filename;
$image_alt = 'Image filename: ' . $image_filename;
```

?>

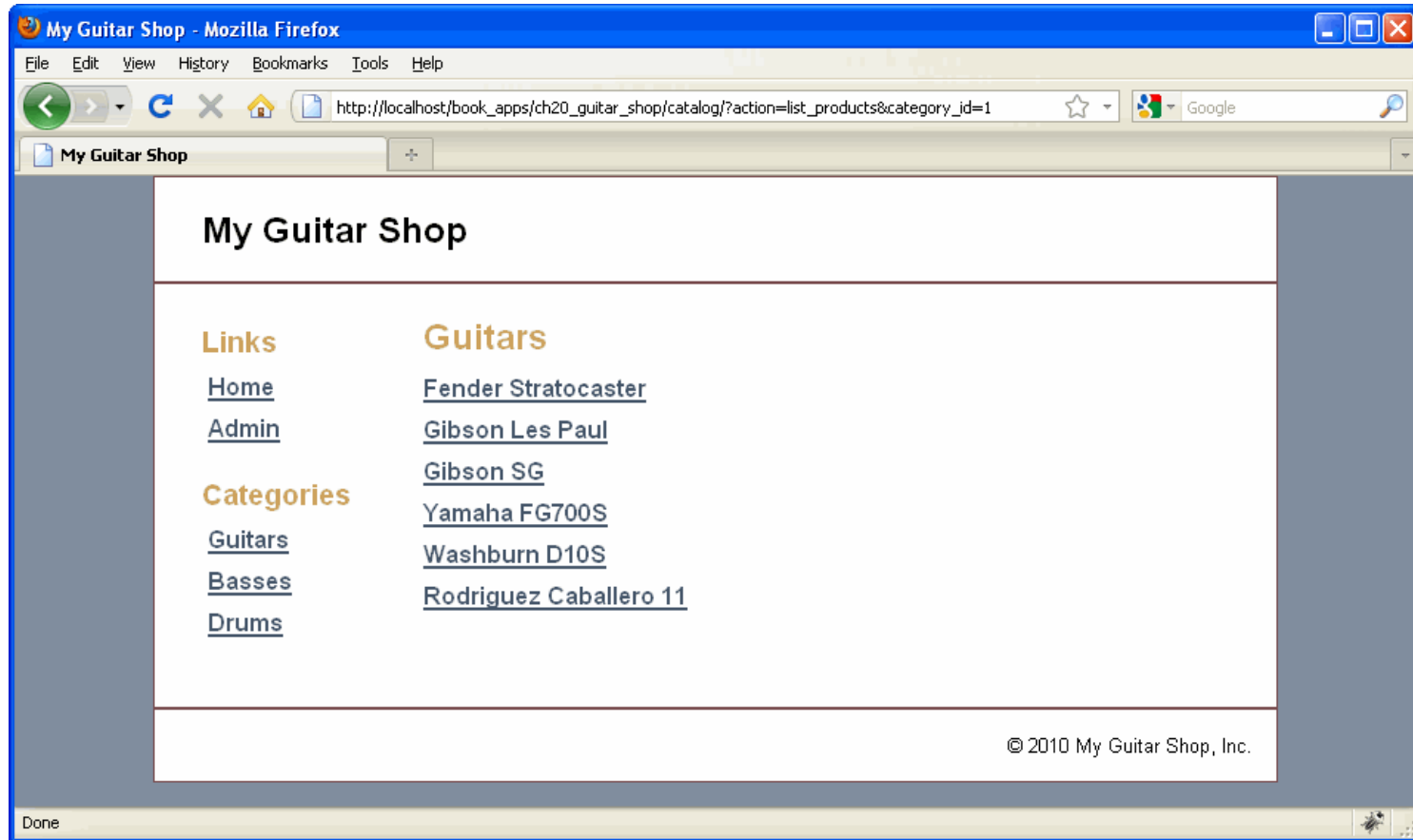
The view/product.php file (continued)

```
<h1><?php echo $product_name; ?></h1>
<div id="left_column">
    <p>" /></p>
</div>
```

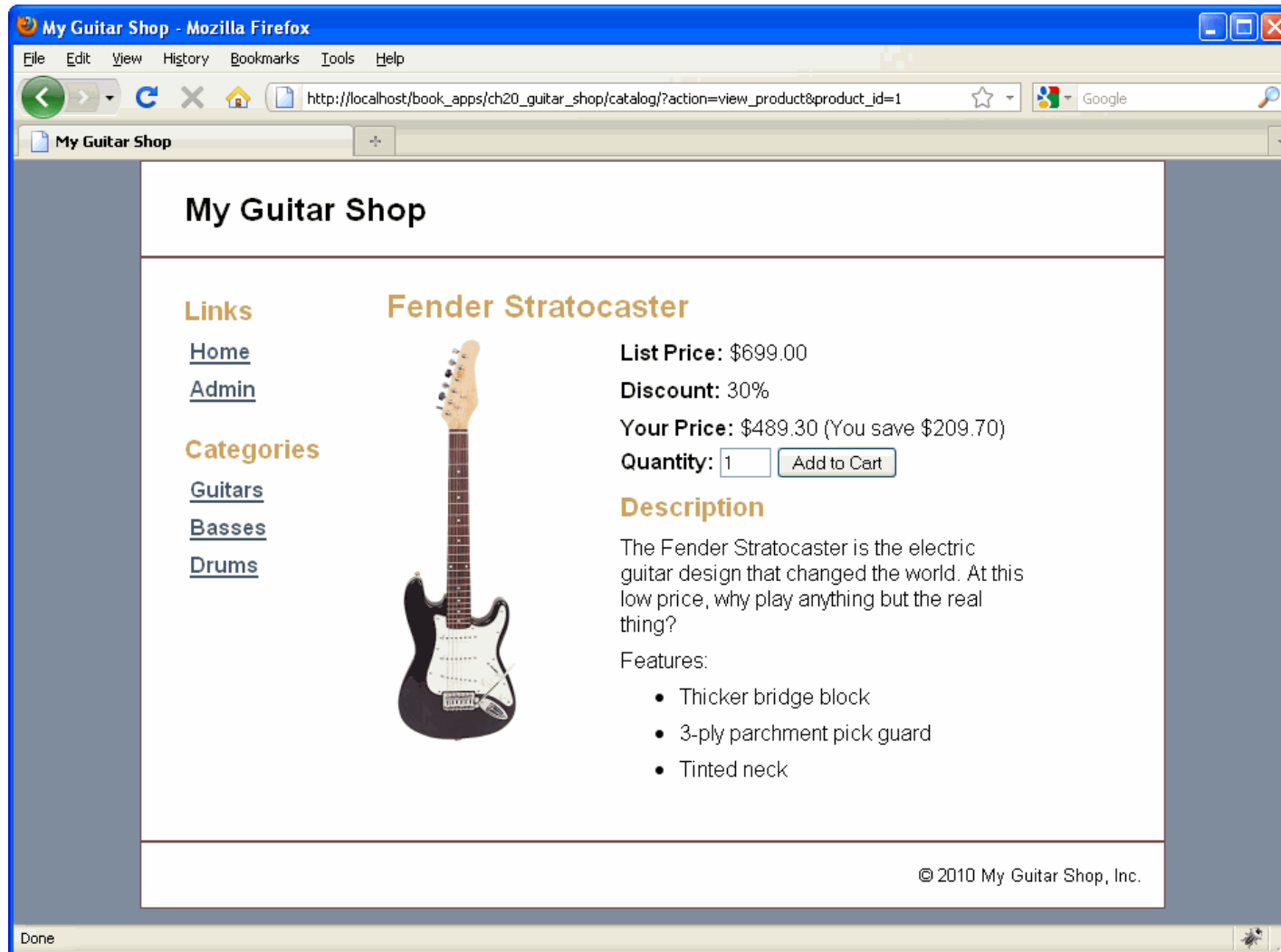
The view/product.php file (continued)

```
<div id="right_column">
  <p><b>List Price:</b>
    <?php echo '$' . $list_price; ?></p>
  <p><b>Discount:</b>
    <?php echo $discount_percent . '%'; ?></p>
  <p><b>Your Price:</b>
    <?php echo '$' . $unit_price; ?>
    (You save <?php echo '$' . $discount_amount; ?>)</p>
  <form action="<?php echo $app_path . 'cart' ?>"
    method="post">
    <input type="hidden" name="action" value="add" />
    <input type="hidden" name="product_id"
      value="<?php echo $product_id; ?>" />
    <b>Quantity:</b>
    <input type="text" name="quantity"
      value="1" size="2" />
    <input type="submit" value="Add to Cart" />
  </form>
  <h2>Description</h2>
  <?php echo $description; ?>
</div>
```

The Product List page



The Product View page



The catalog/index.php file

```
<?php
require_once(' ../util/main.php');
require_once(' ../util/tags.php');
require_once(' ../model/database.php');
require_once(' ../model/product_db.php');
require_once(' ../model/category_db.php');

if (isset($_POST['action'])) {
    $action = $_POST['action'];
} else if (isset($_GET['action'])) {
    $action = $_GET['action'];
} else {
    $action = 'list_products';
}
```


The catalog/index.php file (continued)

```
switch ($action) {
    case 'list_products':
        // get current category
        $category_id = $_GET['category_id'];
        if (empty($category_id)) {
            $category_id = 1;
        }

        // get categories and products
        $current_category = get_category($category_id);
        $categories = get_categories();
        $products = get_products_by_category($category_id);

        // Display view
        include('product_list.php');
        break;
}
```

The catalog/index.php file (continued)

```
case 'view_product':  
    $categories = get_categories();  
  
    // Get product data  
    $product_id = $_GET['product_id'];  
    $product = get_product($product_id);  
  
    // Display product  
    include('product_view.php');  
    break;  
}  
?>
```

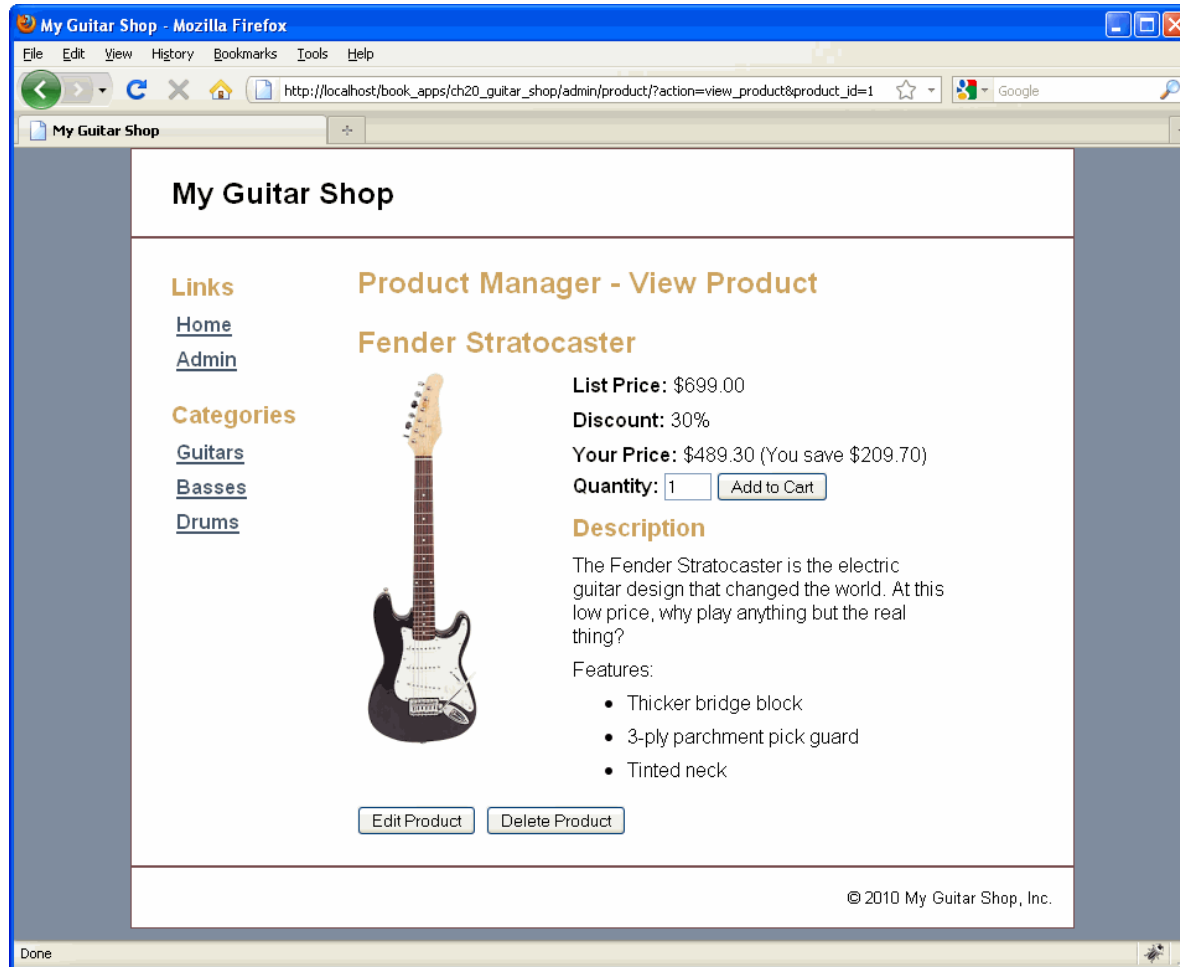
The catalog/product_list.php file

```
<?php include '../view/header.php'; ?>
<?php include '../view/sidebar.php'; ?>
<div id="content">
    <h1><?php echo $current_category['categoryName']; ?>
    </h1>
    <?php if (count($products) == 0) : ?>
        <p>There are no products in this category.</p>
    <?php else: ?>
        <?php foreach ($products as $product) : ?>
            <p>
                <a href=
                    "?action=view_product&product_id=
                    <?php echo $product['productID']; ?>">
                    <?php echo $product['productName']; ?>
                </a>
            </p>
        <?php endforeach; ?>
    <?php endif; ?>
</div>
<?php include '../view/footer.php'; ?>
```

The catalog/product_view.php file

```
<?php include '../view/header.php'; ?>
<?php include '../view/sidebar.php'; ?>
<div id="content">
    <!-- display product -->
    <?php include '../view/product.php'; ?>
</div>
<?php include '../view/footer.php'; ?>
```

The Product View page



The Product Add/Edit page

The screenshot shows a web browser window titled "My Guitar Shop - Mozilla Firefox". The address bar displays the URL: `http://localhost/book_apps/ch20_guitar_shop/admin/product/?action=view_product&product_id=1`. The page content is divided into a left sidebar and a main content area.

My Guitar Shop

Links

- [Home](#)
- [Admin](#)

Categories

- [Guitars](#)
- [Basses](#)
- [Drums](#)

Product Manager - Edit Product

Category:

Code:

Name:

List Price:

Discount Percent:

Description:

Features:

- * Thicker bridge block
- * 3-ply parchment pick guard
- * Tinted neck

The admin/product/index.php file

```
<?php
require_once('../../util/main.php');
require_once('../../util/tags.php');
require_once('../../model/database.php');
require_once('../../model/product_db.php');
require_once('../../model/category_db.php');

if (isset($_POST['action'])) {
    $action = $_POST['action'];
} else if (isset($_GET['action'])) {
    $action = $_GET['action'];
} else {
    $action = 'list_products';
}
```

The admin/product/index.php file (continued)

```
$action = strtolower($action);
switch ($action) {
    case 'list_products':
        // get categories and products
        $category_id = $_GET['category_id'];
        if (empty($category_id)) {
            $category_id = 1;
        }
        $current_category = get_category($category_id);
        $categories = get_categories();
        $products = get_products_by_category($category_id);

        // display product list
        include('product_list.php');
        break;
```


The admin/product/index.php file (continued)

```
case 'view_product':
    $categories = get_categories();
    $product_id = $_GET['product_id'];
    $product = get_product($product_id);
    include('product_view.php');
    break;
case 'delete_product':
    $category_id = $_POST['category_id'];
    $product_id = $_POST['product_id'];
    delete_product($product_id);

    // Display Product List page for current category
    header("Location: .?category_id=$category_id");
    break;
```

The admin/product/index.php file (continued)

```
case 'show_add_edit_form':
    if (isset($_GET['product_id'])) {
        $product_id = $_GET['product_id'];
    } else {
        $product_id = $_POST['product_id'];
    }
    $product = get_product($product_id);
    $categories = get_categories();
    include('product_add_edit.php');
    break;
```

The admin/product/index.php file (continued)

```
case 'add_product':
    $category_id = $_POST['category_id'];
    $code = $_POST['code'];
    $name = $_POST['name'];
    $description = $_POST['description'];
    $price = $_POST['price'];
    $discount_percent = $_POST['discount_percent'];

    if (empty($code) || empty($name)
        || empty($description) || empty($price) ) {
        $error = 'Invalid product data.Check fields.';
        include('../../errors/error.php');
    } else {
        $categories = get_categories();
        $product_id =
            add_product($category_id, $code, $name,
                $description, $price, $discount_percent);
        $product = get_product($product_id);
        include('product_view.php');
    }
    break;
```

The admin/product/index.php file (continued)

```
case 'update_product':
    $product_id = $_POST['product_id'];
    $code = $_POST['code'];
    $name = $_POST['name'];
    $description = $_POST['description'];
    $price = $_POST['price'];
    $discount_percent = $_POST['discount_percent'];
    $category_id = $_POST['category_id'];

    if (empty($code) || empty($name)
        || empty($description) || empty($price) ) {
        $error = 'Invalid product data.Check fields.';
        include('../errors/error.php');
    } else {
        $categories = get_categories();
        update_product($product_id, $code, $name,
            $description, $price, $discount_percent,
            $category_id);
        $product = get_product($product_id);
        include('product_view.php'); }
    break; } ?>
```

The admin/product/product_view.php file

```
<?php include '../../view/header.php'; ?>
<?php include '../../view/sidebar_admin.php'; ?>
<div id="content">
    <h1>Product Manager - View Product</h1>

    <!-- display product -->
    <?php include '../../view/product.php'; ?>

    <!-- display buttons -->
    <div id="buttons">
        <form action="" method="post" id="edit_button_form">
            <input type="hidden" name="action"
                value="show_add_edit_form"/>
            <input type="hidden" name="product_id"
                value="<?php echo $product['productID']; ?>" />
            <input type="hidden" name="category_id"
                value="<?php echo $product['categoryID']; ?>" />
            <input type="submit" value="Edit Product" />
        </form>
    </div>
</div>
```

The admin/product/product_view.php file (cont.)

```
<form action="" method="post" >
  <input type="hidden" name="action"
    value="delete_product"/>
  <input type="hidden" name="product_id"
    value="<?php echo $product['productID']; ?>" />
  <input type="hidden" name="category_id"
    value="<?php echo $product['categoryID']; ?>" />
  <input type="submit" value="Delete Product"/>
</form>
</div>
</div>
<?php include '../view/footer.php'; ?>
```

The admin/product/product_add_edit.php file

```
<?php include '../../view/header.php'; ?>
<?php include '../../view/sidebar_admin.php'; ?>
<div id="content">
    <?php
    if (isset($product_id)) {
        $heading_text = 'Edit Product';
    } else {
        $heading_text = 'Add Product';
    }
    ?>
    <h1 class="top">
        Product Manager - <?php echo $heading_text; ?></h1>
    <form action="index.php" method="post"
        id="add_edit_product_form">
        <?php if (isset($product_id)) : ?>
            <input type="hidden" name="action"
                value="update_product" />
            <input type="hidden" name="product_id"
                value="<?php echo $product_id; ?>" />
```

The product_add_edit.php file (continued)

```
<?php else: ?>
    <input type="hidden" name="action"
        value="add_product" />
<?php endif; ?>

    <input type="hidden" name="category_id"
        value="<?php echo $product['categoryID']; ?>" />

<label>Category:</label>
<select name="category_id">
<?php foreach ($categories as $category) :
    if ($category['categoryID'] ==
        $product['categoryID']) {
        $selected = 'selected';
    } else {
        $selected = '';
    }
?>
```


The product_add_edit.php file (continued)

```
<option value=
    "<?php echo $category['categoryID']; ?>"
    <?php echo $selected ?>>
    <?php echo $category['categoryName']; ?>
</option>
<?php endforeach; ?>
</select>
<br />

<label>Code:</label>
<input type="input" name="code"
    value="<?php echo $product['productCode']; ?>" />
<br />

<label>Name:</label>
<input type="input" name="name"
    value="<?php echo $product['productName']; ?>" />
<br />
```

The product_add_edit.php file (continued)

```
<label>List Price:</label>
<input type="input" name="price"
  value="<?php echo $product['listPrice']; ?>" />
<br />

<label>Discount Percent:</label>
<input type="input" name="discount_percent"
  value=
    "<?php echo $product['discountPercent']; ?>" />
<br />

<label>Description:</label>
<textarea name="description" rows="10">
  <?php echo $product['description']; ?>
</textarea>
<br />

<label>&nbsp;</label>
<input type="submit" value="Submit" />
</form>
```

The product_add_edit.php file (continued)

```
<h2>How to format the Description entry</h2>
<ul>
    <li>Use two returns to start a new paragraph.</li>
    <li>Use an asterisk to mark items in a bulleted
        list.</li>
    <li>Use one return between items in a bulleted
        list.</li>
    <li>Use standard HMTL tags for bold and
        italics.</li>
</ul>
</div>
<?php include '../../view/footer.php'; ?>
```