

a description of the image, and a file input field for the image. To accompany each image file, create a text file that contains the name and description of the image. Create a separate Web page that displays the pictures with a caption showing the name and description fields. Ensure that the Projects directory has read and write permissions for everyone.

## Discovery Projects

The Chinese Zodiac site is a comprehensive project that will be updated in the Discovery Projects in each chapter. All files for the Chinese Zodiac site will be saved in a folder named ChineseZodiac in the root Web folder on the server.



### Discovery Project 5-1

Reopen **inc\_site\_layout.php**, which you created in Discovery Project 4-1. The file is in the Includes folder of the ChineseZodiac folder. Replace the “[Insert site layout content here]” placeholder with Web content that describes the process of developing a dynamic Web template. Be sure to differentiate between dynamic and static content and illustrate the syntax for targeting content to a dynamic content section.

Save the inc\_site\_layout.php file and upload it to the server. The contents of this file should appear in the dynamic content section when you click the Site Layout button or the Site Layout text hyperlink from the Chinese zodiac Web template.



### Discovery Project 5-2

Create a new document in your text editor and create an All-in-One Web form that prompts the user for his or her birth year. Validate the user input to require the user to enter a number. Use a nested **if...else** statement to display the appropriate version of the message, “You were born under the sign of the [zodiac sign]”, and display the zodiac image representing the posted year. Use the Chinese zodiac images that you saved in the Images folder in Discovery Project 1-4. Track the number of times each year is entered by storing a counter for each year in a file in a “statistics” subdirectory. Ensure that the PHP scripting engine has read and write permissions for the “statistics” subdirectory. Display a message at the bottom of the page showing how many times the specified year has been entered using the message “You are visitor [count] to enter [year]”. Use a separate file for each year. Figure 5-18 shows a sample Web form and Figure 5-19 shows a sample output Web page.

Chinese Zodiac Using IF ELSE – Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://student200.ucb.sephone.us/PHP\_Projects/ChineseZodiac/zodiac5.html

THE CHINESE ZODIAC

Using IF ELSE

Year of Birth:

Birth Information

Reset and Submit Information

Done

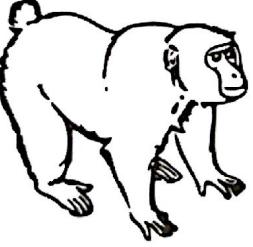
Figure 5-18 Sample Web form for the if...else program

Chinese Zodiac If/Else – Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://student200.ucb.sephone.us/PHP\_Projects/ChineseZodiac/process\_zodiac5.php

You were born under the sign of the monkey.



You are person 23 to enter 1980

[Back](#)

Done

Figure 5-19 Sample output for the if...else statement

Save the file as **BirthYear\_ifelse.php** and upload it to the ChineseZodiac folder on the server. Create the “statistics” subdirectory and ensure that the write permissions are set to allow the PHP scripting engine to write files in the directory.

Reopen the **BirthYear\_ifelse.php** file. Modify the script to use a **switch** statement instead of the nested **if...else** statements. Save the file as **BirthYear\_switch.php** and upload it to the ChineseZodiac folder on the server.



## Discovery Project 5-3

Create a new document in your text editor and type the `<!DOCTYPE>` declaration, `<html>` element, document head, and `<body>` element. Use the strict DTD and “Show Source Code” as the content of the `<title>` element. This script will display the source code of a PHP script with syntax highlighting. This is accomplished by using the `file_get_contents()` function you learned in this chapter to read the script into a string, and by using a new function, `highlight_string()`. The `highlight_string()` function takes a string of PHP code and displays it with color-coded syntax highlighting in a Web browser. To use these functions, insert the following PHP code block in the body:

```
<?php
if (isset($_GET['source_file'])) {
    $SourceFile = file_get_contents(
        stripslashes($_GET['source_file']));
    highlight_string($SourceFile);
}
else
    echo "<p>No source file name entered</p>\n";
?>
```

Save the document as **ShowSourceCode.php** in the ChineseZodiac directory and upload the document to the Web server.

Open the **inc\_string\_functions.php** file in your text editor and replace the “[Insert string function content here]” placeholder text with the title “String and Character Functions.” Add a text navigation bar below the title with the following internal hyperlinks that link to a description of the PHP program. You can insert the text navigation bar directly in the **inc\_control\_structures.php** file or create the bar as a separate file and include it.

```
<a href="#string">String Functions</a>
<a href="#char">Character Functions</a>
```

Below the text navigation bar, create a section for each hyperlink and insert an anchor to the named section. The first section, “String Functions”, is for the **SimilarNames.php** script you created in Discovery Project 3-4. The second section, “Character Functions”, is for the **EmbeddedWords.php** script you created in Discovery Project 3-5. Describe the purpose of each PHP program. For example: “This script counts the number of times each letter appears in a string and compares that count to the number of times each letter appears in the names of the Chinese zodiac signs to determine if the name can be

made from the characters in the string." The code for the two anchor targets is listed below.

```
<a id="string">String Functions</a>
<a id="char">Character Functions</a>
```

Below the descriptive content, insert a text hyperlink with the link text "[Test the Script]" that opens the appropriate PHP script for the section.

Add a second text hyperlink with the link text "[View the Source Code]" that displays the source code of the respective PHP program. Use the following code for the hyperlink, replacing `file_name` with the name of the program referenced in the "[Test the Script]" hyperlink:

```
<a href="ShowSourceCode.php?source_file=file_name">[View the Source Code]</a>
```

Save the file and upload it to the Includes folder in the ChineseZodiac folder on the server. Open index.php by entering the following URL in your Web browser's address bar: `http://<yourserver>/ChineseZodiac/index.php`. Click the String Functions button or menu item to display the updated inc\_string\_functions.php. Test the links to verify that they display properly.

## Discovery Project 5-4

Open the `inc_control_structures.php` file in your text editor and replace the "[Insert control structure content here]" placeholder text with the title "Conditional Statements and Looping Structures." Add a text navigation bar below the title with the following internal hyperlinks that link to a description of the PHP program. You can insert the text navigation bar directly in the `inc_control_structures.php` file or create the bar as a separate file and include it.

```
<a href="#if_else">If...Else Statement</a>
<a href="#switch">Switch Statement</a>
<a href="#while_loop">While Loop</a>
<a href="#for_loop">For Loop</a>
```

Below the text navigation bar, create a section for each hyperlink and insert an anchor to the named section. Describe the purpose of each PHP program. For example: "This all-in-one form prompts the user to enter a 4-digit birth year, which is validated for numeric input. The browser displays the user's Chinese zodiac sign and the associated zodiac image using an if...else statement." The code for the four anchor targets is listed below:

```
<a id="if_else">If...Else Statement</a>
<a id="switch">Switch Statement</a>
```

```
<a id="while_loop">While Loop</a>
<a id="for_loop">For Loop</a>
```

Below the descriptive content, insert a text hyperlink with the link text “[Test the Script]” that opens the appropriate script. For the “If... Else Statement” section, use the BirthYear\_ifelse.php script created in Discovery Project 5-2. For the “Switch Statement” section, use the BirthYear\_switch.php script, also created in Discovery Project 5-2. For the “While Loop” section, use the Chinese\_Zodiac\_while\_loop.php script created in Discovery Project 2-5. For the “For Loop” section, use the Chinese\_Zodiac\_for\_loop.php script created in Discovery Project 2-4.

Add a second text hyperlink with the link text “[View the Source Code]” that calls the ShowSourceCode.php script created in Discovery Project 5-3 to display the source code of the appropriate PHP script for this section. Use the following code for the hyperlink, replacing file\_name with the name of the program referenced in the “[Test the Script]” hyperlink:

```
<a href="ShowSourceCode.php?source_file=file_name">[View the
Source Code]</a>
```

Save the file and upload it to the Includes folder in the ChineseZodiac folder on the server. Open index.php by entering the following URL in your Web browser’s address bar: *http://<yourserver>/ChineseZodiac/index.php*. Click the Control Structures button or menu item to display the updated inc\_control\_structures.php. Test the links to verify that they display properly.



## Discovery Project 5-5

Create an All-in-One Web form with a text area box for the user to enter a Chinese proverb and write the data to a file named proverbs.txt in the ChineseZodiac directory. Be sure that the proverbs.txt file has read and write permissions for the PHP scripting engine. Use the `fwrite()` function to incrementally append each new proverb that is submitted using the Add Chinese Proverb button on the Web form.

Name the file **UploadProverb.php** and transfer the file to the ChineseZodiac directory on the server. Open UploadProverb.php in the Web browser and use the Web form to post a number of Chinese proverbs to the proverbs.txt file on the Web server.

Reopen **inc\_footer.php** and modify the code to use the `file()` function to read the contents of the proverbs.txt file into an array. Count the number of items in the array using the `count()` function

and store the result in a variable named \$ProverbCount. Use the PHP rand(0, \$ProverbCount-1) function to generate a random array index. Use the echo statement to display the text "A randomly displayed Chinese proverb read from a text file". Below the description, display a Chinese proverb using the random index to select the proverb from the array.

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View the Chinese Zodiac Web site in the Web browser. Refresh the browser to verify that a different proverb appears each time the browser is refreshed.



## Discovery Project 5-6

Create a PHP All-in-One Web form to upload images to the Images subfolder in the ChineseZodiac folder on the server. Remember that you must set the permissions on the directory to give the PHP scripting engine write access to the directory. Name the file **UploadImage.php** and save it in the ChineseZodiac folder, then upload it to the Web server.

Search the Web for at least five small dragon images. Save them in a folder and size them to approximately 100 pixels by 100 pixels. Name the images **Dragon1**, **Dragon2**, and so on with a valid image extension. Use the UploadImage.php Web form to upload the dragon images to the Web server.



In Discovery Project 6-1, you will randomly display one of the dragon images below the randomly displayed Chinese proverb.