

The Use of PHP in Cloud Scientific Websites

单中林 (Chung-Lin Shan)

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Additional material to
“Script Handbook for Interactive Scientific Website Building”

□ PHP 的作用

- 逻辑判断
- 变数传递
- 文档处理、下 shell command、科学程序启动

□ 逻辑判断

- if、elseif 和 else (B.5.5)
- switch (B.5.6)
- for (B.5.7)
- (do) while (B.5.8)

□ 变数类型

- 功能选项
- 科学程序参数

逻辑判断

- if、elseif 和 else (B.5.5; cf. B.5.6 – B.5.8)

```

<?php
  if (($xxx == $yyy &&
      $xxx_xxx != $yyy_yyy ) ||
      (condition) ||
      (!(condition)) ) {
    {
      ...
    }

  elseif (conditions)
  {
    ...
  }

  else
  {
    ...
  }
?>

```

PHP 的基本使用

□ 内含型 (Template 98)

```
<input type="text"
       class="table"
       name="integer_1"
       value="<?php echo $integer_1; ?>" />
```

□ 外包型 (Template 99)

```
<?php
echo ' <input type="text" ' . "\r\n";
echo '       class="table" ' . "\r\n";
echo '       name="integer_1" ' . "\r\n";
echo '       value="' . $integer_1 . "' />';
?>
```

PHP 的基本使用 + 逻辑判断

□ 内含型 (Template 100)

```
<input type="text"
       class="table"
       name="integer_1"
       value="<?php
           if (.....)
           {
               echo $integer_1_1;
           }

           elseif (.....)
           {
               echo $integer_1_2;
           }

           else
           {
               echo $integer_1_3;
           }
       ?>" />
```

PHP 的基本使用 + 逻辑判断

□ 外包型 (Template 101)

```
<?php
echo ' <input type="text" ' . "\r\n";
echo '         class="table" ' . "\r\n";
echo '         name="integer_1" ' . "\r\n";

if (.....)
{
    echo '         value="" . $integer_1_1 . ' />';
}

elseif (.....)
{
    echo '         value="" . $integer_1_2 . ' />';
}

else
{
    echo '         value="" . $integer_1_3 . ' />';
}
?>
```

PHP 的基本使用 + 逻辑判断

□ 外包型 2 (Template 102)

```

<?php
echo ' <input type="text"' . "\r\n";
echo '         class="table"' . "\r\n";

if (.....)
{
    echo '         name="integer_1_1"' . "\r\n";
    echo '         value="' . $integer_1_1 . '" />';
}

elseif (.....)
{
    echo '         name="integer_1_2"' . "\r\n";
    echo '         value="' . $integer_1_2 . '" />';
}

else
{
    echo '         name="integer_1_3"' . "\r\n";
    echo '         value="' . $integer_1_3 . '" />';
}
?>

```

PHP 的基本使用 + 逻辑判断

□ 外包型 3 (Template 103)

```

<?php
  if (.....)
  {
    echo ' <input type="text"' . "\r\n";
    echo '      class="table"' . "\r\n";
    echo '      name="integer_1"' . "\r\n";
    echo '      value="' . $integer_1 . "' />';
  }

  else
  {
    echo ' <select name="integer_2">' . "\r\n";

    echo '      <option value="integer_2_1">' . "\r\n";
    echo '          $integer_2_1 . "\r\n";
    echo '      </option>' . "\r\n";

    ...

    echo ' </select>' . "\r\n";
  }
?>

```


变数传递

□ form (Template 2; cf. B.5.9)

```

<form action="main.php" method="post" enctype="multipart/form-data">

<!-- Choose one of the main functions ***** -->

<h3> List of the main functions </h3>

<h4> Choose one of the main functions </h4>

<?php
    ...
?>

<h5> <a href="#main">Top</a> </h5>
<hr />

<!-- ***** -->

<input type="submit" class="submit" value="Submit" />
<br />

</form>

```

变数传递

❑ 功能选项 (Template 3)

```
<?php
include("default_choices/default_choosing.php");

if ($main_function_choosing == NULL)
{
    $main_function_choosing = $_POST["main_function_choosing"];
}

include("forms/form-main_functions.php");

if ($main_function_choosing == NULL)
{
    include("default_choices/default-main_function_choosing.php");
}

else
{
    echo '<br />';
    echo 'main_function_choosing = ' . $main_function_choosing . '<br />';
    echo 'main_function          = ' . $main_function          . '<br />';
}
?>
```

变数传递

□ 科学程序参数 (cf. Template 11)

```
<?php
  if ($integer_1 == NULL)
  {
    $integer_1 = $_POST["integer_1"];
  }

  include("forms/setup-integer_1.php");

  if ($integer_1 == NULL)
  {
    include("default_choices/default-integer_1.php");
  }

  else
  {
    echo '<br />';
    echo 'integer_1 = ' . $integer_1 . '<br />';

    $setup-integer_1 = "yes";
  }
?>
```

文档处理

- 信息传递 (B.5.10; cf. B.5.11, B.5.12 and Templates 56, 57)

```
<?php
    $data_input = fopen("data.txt", "r");

    do
    {
        ...
    }
    while (!feof($data_input));

    fclose($data_input);

    .
    .
    .

    $result_output = fopen("result.txt", "w/a");

    ...

    fclose($result_output);
?>
```

文档处理

❑ 文档上传 (B.5.11 and 2.2)

❑ 文档并入 (B.5.13)

```
<?php
    include("folder_name/full_file_name_with_the_extension");
?>
```

❑ 下 shell commands (cf. B.5.13 and Template 53)

```
<?php
    $cp_cmd
    = "cp " . $file_folder          . "/" . $function_file_copy . " "
      . $file_folder_copy . "/" . "function_user.c";

    shell_exec("$cp_cmd");

    shell_exec("gcc -g -o main-user $main_folder/main.c -lm");

    shell_exec("./main-user");
?>
```