補充課程

2020.04.03

LOOPS

PHP Loops

- Often when you write code, you want the same block of code to run over and over again a certain number of times. So, instead of adding several almost equal code-lines in a script, we can use loops.
- In PHP, we have the following loop types:
  - while - loops through a block of code as long as the specified condition is true
  - do...while - loops through a block of code once, and then repeats the loop as long as the specified condition is true
  - for - loops through a block of code a specified number of times
  - foreach - loops through a block of code for each element in an array

The PHP while Loop

The PHP while Loop

The `while` loop executes a block of code as long as the specified condition is true.

Syntax

```
while (condition is true) {
    code to be executed;
}
```

```php
<!DOCTYPE html>
<html>
  <body>

    <?php
    $x = 1;

    while($x <= 5) {
      echo "The number is: $x <br>";
      $x++;
    }
    ?>

  </body>
</html>
```

The number is: 1
The number is: 2
The number is: 3
The number is: 4
The number is: 5

The PHP do...while Loop

- The do...while loop will always execute the block of code once, it will then check the condition, and repeat the loop while the specified condition is true.

Syntax

```
do {
    code to be executed;
} while (condition is true);
```

```php
<!DOCTYPE html>
<html>
  <body>
    <?php
    $x = 1;

    do {
        echo "The number is: $x <br>";
        $x++;
    } while ($x <= 5);
    ?>
  </body>
</html>
```

```
The number is: 1
The number is: 2
The number is: 3
The number is: 4
The number is: 5
```

The PHP for Loop

Syntax

```
for (init counter; test counter; increment counter) {
    code to be executed for each iteration;
}
```

```php
<!DOCTYPE html>
<html>
<body>

<?php
for ($x = 0; $x <= 10; $x++) {
  echo "The number is: $x <br>";
}
?>

</body>
</html>
```

The number is: 0
The number is: 1
The number is: 2
The number is: 3
The number is: 4
The number is: 5
The number is: 6
The number is: 7
The number is: 8
The number is: 9
The number is: 10

PHP foreach Loop

- The foreach loop works only on arrays, and is used to loop through each key/value pair in an array.

- The following example will output the values of the given

Syntax

```
foreach ($array as $value) {
  code to be executed;
}
```

```php
<!DOCTYPE html>
<html>
  <body>

    <?php
    $colors = array("red", "green", "blue", "yellow");

    foreach ($colors as $value) {
      echo "$value <br>";
    }
    ?>

  </body>
</html>
```

red
green
blue
yellow

- The following example will output both the keys and the values of the given array ($age):

```
<!DOCTYPE html>
<html>
<body>

<?php
$age = array("Peter"=>"35", "Ben"=>"37", "Joe"=>"43");

foreach($age as $x => $val) {
  echo "$x = $val<br>";
}
?>

</body>
</html>
```
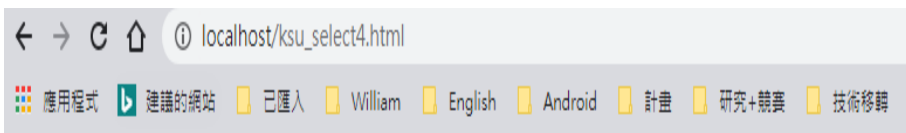
Peter = 35
Ben = 37
Joe = 43

Exercise 1

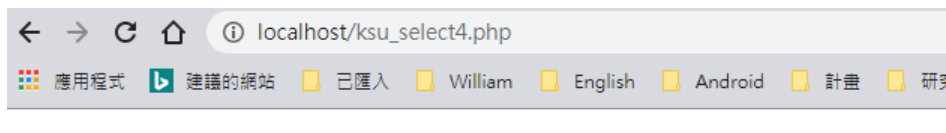# Select statement with count()

ksu_select4.html

ksu_select4.php

ksu_select4.html +ksu_select4.php

ksu_select4.html

```html
<!doctype html>
<html lang="zh_tw">
<head>
   <meta charset="utf-8">
   <title>Hello</title>
</head>
<body>
   <h3> ksu select operation </h3>
   <!--不對字符編碼 -->
   <form enctype="multipart/form-data" method="post"
         action="ksu_select4.php">
     按查詢鍵, 查詢 ksu_std_table 中, 各系的學生人數. <br/>
     <br/>
     <input type="submit" name="sub" value="查詢"/>
   </form>
</body>
</html>
```

ksu_select4.php

```php
<?php
$db_host = "localhost";
$db_name = "ksu_database";
$db_table = "ksu_cstd_table";
$db_user = "root";
$db_password = "";

// 連結檢測
$conn = mysqli_connect($db_host, $db_user, $db_password);
if(empty($conn)){
    print  mysqli_error ($conn);
    die ("無法對資料庫連線！" );
    exit;
}
if(!mysqli_select_db( $conn, $db_name)){
    die("資料庫不存在!");
    exit;
}

//自型設定
mysqli_set_charset($conn,'utf8');
```

```php
echo "ksu_std_table 學生於各系人數顯示如下:". "<br/><br/>";
$result = mysqli_query
            ($conn,
              "SELECT ksu_std_department, count(1)
               FROM ksu_std_table group by ksu_std_department");
echo "<table border='1'>
<tr>
  <th> 系別 </th>  <th>學生人數 </th>
</tr>";

//使用 mysqli_fetch_array() 取回資料庫資料
$row_num=0;
while($row = mysqli_fetch_array($result))
{
   echo "<tr>";
   echo "<td>" . $row['ksu_std_department'] . "</td>";
   echo "<td>" . $row['count(1)'] .   "</td>";
   echo "</tr>";
   $row_num = $row_num+1;
}
echo "</table>";
echo $row_num . "  records found!"."<br/><br/>";
?>
<form enctype="multipart/form-data"  method="post" action="ksu_select4.html">
<input type="submit" name="sub" value="返回"/>
</form>
```

Exercise 2

More columns in an Select statement

ksu select operation

按查詢鍵, 進階查詢 ksu_std_table

[查詢]

ksu_std_table 學生於各系人數顯示如下:

系別	學生姓名	學生成績	備註
CS	John Sieg	55	Failed
CS	John1	100	
CS	John Sieg	100	
CS	Foot Penny	44	Failed
IE	John Sieg	99	
IE	John Sieg	100	
IE	Mike Fire	77	
IM	WuBer Eat	33	Failed
IM	Mary Wee	80	
QQ	John1	100	

10 records found!

[返回]

ksu_select5.html +ksu_select5.php

ksu_select5.html

```html
<!doctype html>
<html lang="zh_tw">
<head>
  <meta charset="utf-8">
  <title>Hello</title>
</head>
<body>
  <h3> ksu select operation </h3>
  <!--不對字符編碼 -->
  <form enctype="multipart/form-data" method="post"
        action="ksu_select5.php">
    按查詢鍵，進階查詢 ksu_std_table  <br/>
    <br/>
    <input type="submit" name="sub" value="查詢"/>
  </form>
</body>
</html>
```

ksu_select5.php

```php
echo "ksu_std_table  學生於各系人數顯示如下:". "<br/><br/>";
$result = mysqli_query
            ($conn,
             "SELECT ksu_std_department, ksu_std_name,
              ksu_std_grade
              FROM ksu_std_table order by ksu_std_department");
echo "<table border='1'>
<tr>
  <th> 系別 </th>  <th>學生姓名 </th> <th>學生成績 </th> <th> 備註 </th>
</tr>";

//使用 mysqli_fetch_array() 取回資料庫資料
$row_num=0;
while($row = mysqli_fetch_array($result))
{
   echo "<tr>";
   echo "<td>" . $row['ksu_std_department'] . "</td>";
   echo "<td>" . $row['ksu_std_name']   .    "</td>";
   echo "<td>" . $row['ksu_std_grade'] .    "</td>";

   if( $row['ksu_std_grade'] < 60 )
   {      echo "<td style=\"background-color:red\"> " . "Failed" .    "</td>";
   }
   else
   {      echo "<td>" . "" .    "</td>";
   }
   echo "</tr>";
   $row_num = $row_num+1;
}
echo "</table>";
echo $row_num . "  records found!"."<br/><br/>";
```
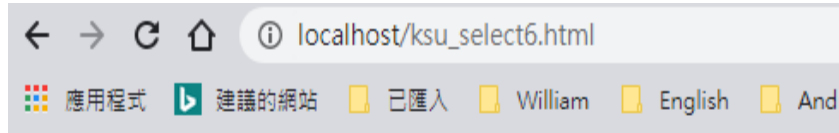
Exercise 3

Input values passed from html

ksu_select6.html

```html
<!doctype html>
<html lang="zh_tw">
<head>
  <meta charset="utf-8">
  <title>Hello</title>
</head>
<body>
  <h3> ksu select operation </h3>
  <!--不對字符編碼 -->
  <form enctype="multipart/form-data" method="post"
        action="ksu_select6.php">
    按查詢鍵, 進階查詢 ksu_std_table  <br/> <br/>

    學生系別:<input type="text" value="CS" name="dept" size="2"/><br/><br/>

    <input type="submit" name="sub" value="查詢"/>
  </form>
</body>
</html>
```

ksu_select6.php

```php
<?php
 $dept=str_replace("'","''",$_REQUEST['dept']);

 $db_host = "localhost";
 $db_name = "ksu_database";
 $db_table = "ksu_cstd_table";
 $db_user = "root";
 $db_password = "";

 // 連結檢測
 $conn = mysqli_connect($db_host, $db_user, $db_password);
 if(empty($conn)){
     print  mysqli_error ($conn);
     die ("無法對資料庫連線！" );
     exit;
 }
 if(!mysqli_select_db( $conn, $db_name)){
     die("資料庫不存在!");
     exit;
 }

 //自型設定
 mysqli_set_charset($conn,'utf8');
```

```php
echo "ksu_std_table  學生於各系人數顯示如下:". "<br/><br/>";
$result = mysqli_query
            ($conn,
             "SELECT ksu_std_name, ksu_std_grade
              FROM  ksu_std_table
              where ksu_std_department = '$dept'
              order by ksu_std_grade");

echo "<table border='1'>
<tr>
   <th>學生姓名 </th> <th>學生成績 </th> <th> 備註 </th>
</tr>";

//使用 mysqli_fetch_array() 取回資料庫資料
$row_num=0;
while($row = mysqli_fetch_array($result))
{
   echo "<tr>";
   echo "<td>" . $row['ksu_std_name']  .   "</td>";
   echo "<td>" . $row['ksu_std_grade'] .   "</td>";

   if( $row['ksu_std_grade'] < 60 )
   {    echo "<td style=\"background-color:yellow\"> " . "補考" .   "</td>";
   }
   else
   {    echo "<td>" . "" .   "</td>";
   }
   echo "</tr>";
   $row_num = $row_num+1;
 }
 echo "</table>";
 echo $row_num . "   records found!"."<br/><br/>";
?>
<form enctype="multipart/form-data"  method="post" action="ksu_select6.html">
<input type="submit" name="sub" value="返回"/>
</form>
```
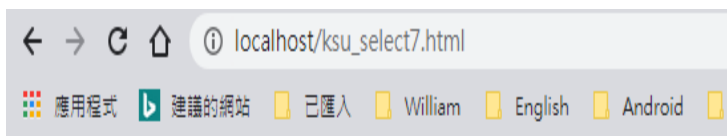
Exercise 4

php built-in 函數strlen()

ksu_select7.html +ksu_select7.php

ksu_select7.php

```php
<tr>
    <th>學生姓名 </th>  <th> 姓名長度 </th>  <th>學生成績 </th> <th> 備註 </th>
</tr>";

//使用 mysqli_fetch_array() 取回資料庫資料
$row_num=0;
while($row = mysqli_fetch_array($result))
{
  echo "<tr>";
  echo "<td>" . $row['ksu_std_name']  .   "</td>";
  echo "<td>" . strlen($row['ksu_std_name'])  .   "</td>";
  echo "<td>" . $row['ksu_std_grade'] .   "</td>";

  if( $row['ksu_std_grade'] < 60 )
  {
      echo "<td style=\"background-color:yellow\"> " . "補考" .   "</td>";
  }
  else
  {
      echo "<td>" . "" .   "</td>";
  }
  echo "</tr>";
  $row_num = $row_num+1;
}
echo "</table>";
echo $row_num . "  records found!"."<br/><br/>";
```

Exercise 1~4

Deadline: 2020.04.25 23:59
繳交: 學習歷程:資源中心區

p.s.每一個Exercise將對應的 .html與.php程式碼
Copy到word, 並轉成對應的程式碼. 所以4個exercises,你需繳交
4個對應的 .pdf檔. 命名方式為:
Ex1.pdf 、 Ex2.pdf 、 Ex3.pdf 、 Ex4.pdf

Homework 1

Deadline: 2020.04.25 23:59
繳交: 網大作業區: Homework 1
p.s.請繳交 .zip 檔 (含4支程式)

1. Field validation (欄位檢測)

- Sample 3中的 ksu_select6.html 若系別為空白,程式中運作是傳到資料庫中,找不到資料, 才顯示0筆資料. 這於效能是來說是錯誤的作法. 請修改 ksu_select6.html, 並於此html中加入JavaScript程式碼, 判別空白欄位.
- 繳交 html+JavaScript+php. 程式可合併

ksu select operation

ksu_std_table 學生於各系人數顯示如下:

按查詢鍵, 進階查詢 ksu_std_table

學生姓名	學生成績	備註

0 records found!

學生系別: ☐

返回

查詢

2. JOIN (連接兩表格)

- Sample 2查詢資料庫後的第一個欄位,為系別代號. 請以 dept_detail表格的 dept_name來取代.請使用兩表格連結 Join來運行.若於dept_name中找不到對應的表格, 該欄位呈現空白且藍色.
- 繳交 html+JavaScript+php. 程式可合併

ksu_std_table 學生於各系人數顯示如下:

系別	學生姓名	學生成績	備註
CS	John Sieg	55	Failed
CS	John1	100	
CS	John Sieg	100	
CS	Foot Penny	44	Failed
IE	John Sieg	99	
IE	John Sieg	100	
IE	Mike Fire	77	
IM	WuBer Eat	33	Failed
IM	Mary Wee	80	
QQ	John1	100	

10 records found!

返回

hw2.html + hw2.php

The End