



環境設定

安裝懶人包

- XAMPP : https://www.apachefriends.org/zh_tw/download.html
- MAMP : <https://www.mamp.info>
- 挑一個習慣的編輯軟體，例如 Visual Studio Code 
- 安裝 PHP Live Preview 幫助降低學習門檻
 - VSCode + Live Server + Live Server Web Extension(Chrome)

開啟錯誤顯示

- 預設錯誤顯示為Off
- 找到目前使用的 php.ini
 - *display_errors=On*

輸出與輸入

基本輸出

```
<?= "Hello, World!" ?>
```

或

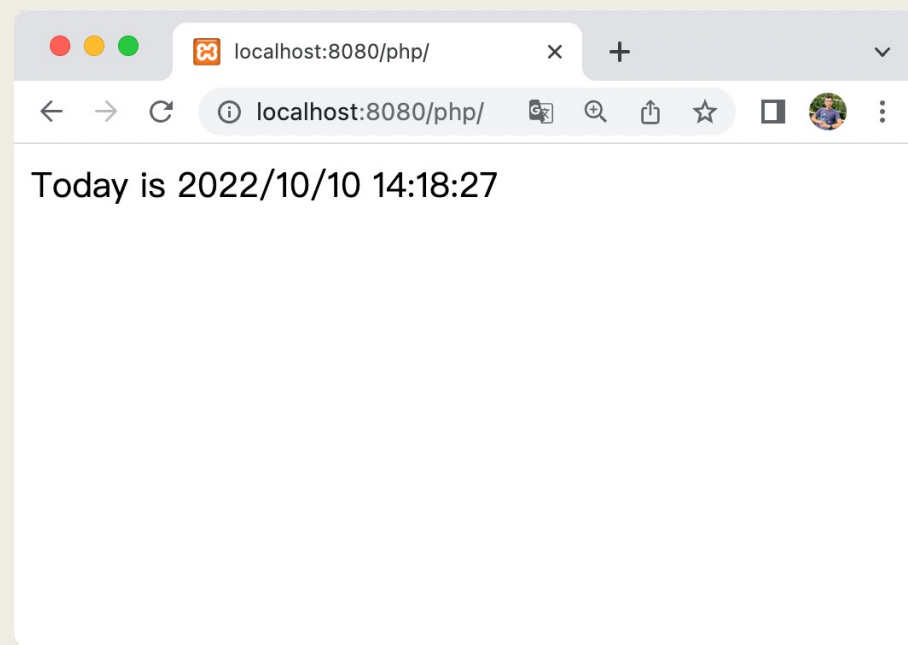
```
<?php echo "Hello, World!"; ?>
```

或

```
<?php print "Hello, World!"; ?>
```

與 HTML 整合

```
<html>
<body>
<?php
$now = date('Y/n/d H:i:s');
echo "Today is " . $now;
?>
</body>
</html>
```



引號與變數

- 單純的字串使用單引號或雙引號均可
- 字串中夾帶變數或跳脫字元時須使用雙引號

```
$a = 10;  
echo "value is $a";    # Prints "value is 10"
```

```
$arr = [10];  
$index = 0;  
echo "value is $arr[$index]"; # Prints "value is 10"
```

```
echo "Hello\nWorld";
```

- 非數值型態索引的陣列 (字典)

```
$arr = ["age"=>20];  
echo "age is ${arr['age']}"; # Prints "age is 20"
```

資料型態

■ 純量型態

- *bool* : *true* / *false*
- *int* : *PHP_INT_MIN* ~ *PHP_INT_MAX*
- *float*
- *string* : 最大 2G

■ 組合型態

- *array*
- *object*

型態轉換

- 數字轉文字
 - `(string)100`
- 文字轉數字
 - `(int)"100"`
 - `(float)"3.14"`
- 數字轉bool
 - `(bool)0`
 - `(bool)1`

```
<?php  
var_dump((string)10);  
var_dump((bool)"0");  
?>
```

條件判斷

```
if ($a > $b ) {  
  
} elseif ($a == $b) {  
  
} else {  
  
}
```

邏輯運算	符號1	符號2
AND	&&	and
OR		or
NOT	!	

Switch Case

```
<?php
$i = 90;
switch ($i) {
    case $i >= 60:
        echo "成績及格";
        break;

    case $i < 60 && $i >= 0:
        echo "成績不及格";
        break;

    default:
        echo "成績錯誤";
}
?>
```

迴圈

■ For

```
for ($i = 1; $i <= 10; $i++) {  
    echo $i;  
}
```

■ While

```
$i = 0;  
while ($i <= 10) {  
    echo $i;  
    $i += 1;  
}
```

Break 與 Continue

- break
 - 結束迴圈
- continue
 - 跳過這一輪

```
for ($i = 1; $i < 10; $i++) {  
    if ($i == 3) {  
        continue;  
    }  
    echo "$i\n";  
}
```



1
2
4
5
6
7
8
9

```
$i = 0;  
$sum = 0;  
while (true) {  
    if ($i > 10) {  
        break;  
    }  
    $sum += $i;  
    $i += 1;  
}  
echo $sum;
```



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比較運算子

- == 與 ===

```
$a = 1;  
$b = 1.0;  
var_dump($a == $b);
```

```
$a = 1;  
$b = 1.0;  
var_dump($a === $b);
```

- > 、< 、>= 、<=

- != 與 <>

- 兩者一樣，都是不等於

- !==

- 完全不等於

表頭資料

- 轉址
 - `header("location: 網址")`
- 中文
 - `header("content-type: text/html; charset=utf-8")`

停止程式

- `exit("訊息")`
- `die("訊息")`

字符串

多行文字輸出

```
<?php
$str = "  
    第一行  
第二行  
        第三行
```

```
";
```

```
echo "<pre>" . $str . "</pre>";  
?>
```

```
<?php
$str = <<<END  
    第一行  
第二行  
        第三行
```

```
END;
```

```
echo "<pre>" . $str . "</pre>";  
?>
```

常用函數

- 字串長度：strlen('hello')、mb_strlen('hello')
- 去空白：trim()、ltrim()、rtrim()
- 字串分割：explode()
 - 範例：explode(",", "a,b,c")
 - 結果為陣列型態
- 特殊字轉換：htmlspecialchars()
 - 「&」 「"」 「'」 「<」 「>」
- 換行轉
：nl2br()
 - 範例：nl2br("a\nb\nc")

- 大寫：strtoupper()
- 小寫：strtolower()
- 子字串：substr(string, start, [*length*])
- 中文子字串：mb_substr(, , , "utf-8")
- 字串比較：strcmp()、strcasecmp()
- 字串搜尋：strstr()、strpos()
- 字串取代：str_replace()

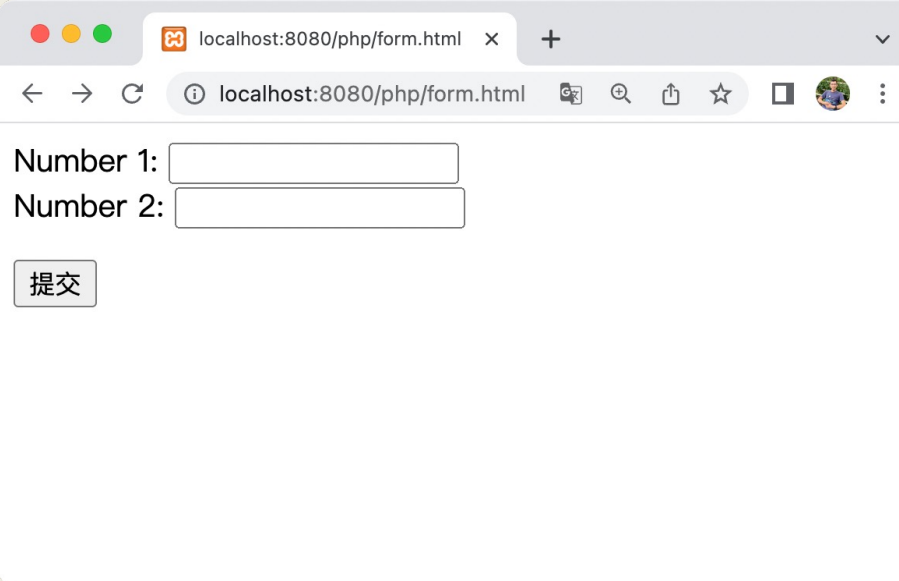
```
<?php
$str = "Hello, World!";
echo str_replace("l", "LL", $str);
?>
```

表單

表單

`$_GET["a"]`
`$_POST["a"]`
`$_REQUEST["a"]`

```
<html>
<body>
<form action="cal.php" method="get">
Number 1: <input type="text" name="a"> <br>
Number 2: <input type="text" name="b"> <p>
<input type="submit">
</form>
</body>
</html>
```



The screenshot shows a web browser window with the address bar displaying 'localhost:8080/php/form.html'. The page content includes two text input fields, one labeled 'Number 1:' and the other 'Number 2:'. Below these fields is a submit button with the text '提交' (Submit).

取得表單資料

- GET 用 `$_GET`，POST 用 `$_POST`

```
$a = $_GET["a"];  
$b = $_GET["b"];  
echo $a + $b;
```

- 判斷是否有輸入參數

```
if (isset($_GET["a"])) {  
  
}
```

將表單換成 POST

```
<html>
<body>
<form action="cal.php" method="post">
Number 1: <input type="text" name="a"> <br>
Number 2: <input type="text" name="b"> <p>
<input type="submit">
</form>
</body>
</html>
```

```
<?php
$a = $_POST["a"];
$b = $_POST["b"];
echo $a + $b;
?>
```


AJAX

- 具有網頁載入後再跟 Web Server 要資料的能力
- 更新畫面內容時不需要重新 reload 頁面
- 在背景跟 Web Server 要資料

```
function loadDoc() {  
    const xhttp = new XMLHttpRequest();  
    xhttp.onload = function() {  
        document.getElementById("demo").innerHTML = this.responseText;  
    }  
    xhttp.open("GET", "cal.php", true);  
    xhttp.send();  
}
```

是否要 async

AJAX + POST

- 使用 POST 方式傳遞資料，若資料為 key-value 格式時，需使用 application/x-www-form-urlencoded

```
function loadDoc() {  
    const xhttp = new XMLHttpRequest();  
    xhttp.onload = function() {  
        document.getElementById("demo").innerHTML = this.responseText;  
    }  
  
    params = "a=10&b=10";  
    xhttp.open("POST", "cal.php", true);  
    xhttp.setRequestHeader("Content-type", "application/x-www-form-urlencoded");  
    xhttp.send(params);  
}
```

Application/text

```
<?php  
$data = file_get_contents('php://input');  
?>
```

- 前端傳送的資料不是 key-value 格式時，無法透過 \$_POST 取得資料，需要從 php 的資料輸入流得到資料

```
function loadDoc() {  
    const xhttp = new XMLHttpRequest();  
    xhttp.onload = function() {  
        document.getElementById("demo").innerHTML = this.responseText;  
    }  
  
    params = "{\"name\": \"David\"}";  
    xhttp.open("POST", "cal.php", true);  
    xhttp.setRequestHeader("Content-type", "application/text");  
    xhttp.send(params);  
}
```

型別檢查

- `is_array()`
- `is_double()`、`is_float()`、`is_real()`
- `is_long`、`is_int()`、`is_integer()`
- `is_string()`
- `is_bool()`
- `is_null()`
- `is_numeric()`

```
<?php
$a = $_GET["a"];
$b = $_GET["b"];

if ( is_numeric($a) && is_numeric($b) ) {
    echo $a + $b;
} else {
    echo "type error";
}
?>
```

自動型別轉換

- 運算子「+」會自動將字串轉數字

```
<?php  
$a = "5";  
$b = "3";  
echo $a + $b  
?>
```

答案為 8

- 運算子「.»會自動將數字轉字串

```
<?php  
$a = 5;  
$b = 3;  
echo $a . $b  
?>
```

答案為 53

- 試試這個看看會得到什麼答案

```
<?php  
$a = "5";  
$b = 3;  
echo $a . $b;  
echo $a + $b;  
?>
```

手動型別轉換

■ 將浮點數轉成整數

```
<?php  
$a = 8;  
$b = 3;  
echo (int)($a / $b);  
?>
```

答案為 2

表單上的複選處理

```
<form action="data.php" method="post">
西瓜<input type="checkbox" name="fruits[]" value="0"><br>
香蕉<input type="checkbox" name="fruits[]" value="1"><br>
芒果<input type="checkbox" name="fruits[]" value="2"><br>
芭樂<input type="checkbox" name="fruits[]" value="3"><br>
<input type="submit">
</form>
```

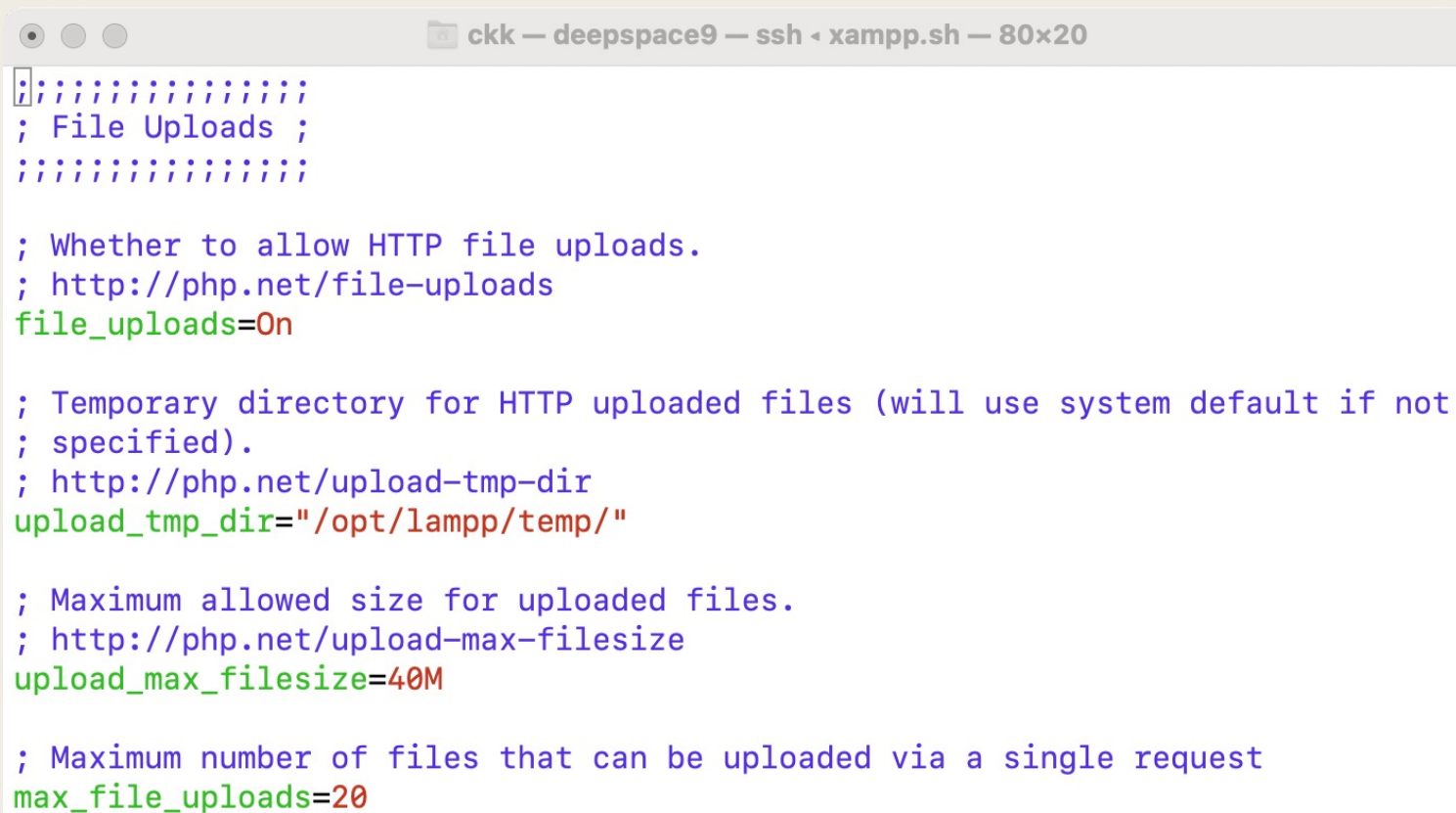


```
<?php
$fruits = $_POST["fruits"];
foreach($fruits as $fruit) {
    echo $fruit . "<br>";
}
?>
```

上傳檔案

php.ini

■ 「File Uploads」 相關設定



A screenshot of a terminal window with a title bar that reads "ckk — deepspace9 — ssh < xampp.sh — 80x20". The terminal displays the configuration for file uploads in a php.ini file. The settings are as follows:

```

;::::::::::::::::::
; File Uploads ;
;::::::::::::::::::

; Whether to allow HTTP file uploads.
; http://php.net/file-uploads
file_uploads=On

; Temporary directory for HTTP uploaded files (will use system default if not
; specified).
; http://php.net/upload-tmp-dir
upload_tmp_dir="/opt/lampp/temp/"

; Maximum allowed size for uploaded files.
; http://php.net/upload-max-filesize
upload_max_filesize=40M

; Maximum number of files that can be uploaded via a single request
max_file_uploads=20
```

上傳檔案的表單設計

```
<form action="upload.php" method="post" enctype="multipart/form-data">
<input type="file" name="file">
<input type="submit">
</form>
```

```
<?php
$src = $_FILES['file']['tmp_name'];
$dst = '/tmp/' . $_FILES['file']['name'];

if (move_uploaded_file($src, $dst) == 1) {
    echo 'done';
} else {
    echo 'error code: ' . $_FILES['file']['error'];
}
?>
```