

# Pengembangan Aplikasi Web

## Pertemuan Ke-3 (PHP Lanjut 1)

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# Sub Pokok Bahasan

- Array dalam PHP
- Struktur Kontrol
- Fungsi (*Function*)
- Variabel Global Versus Lokal
- *Pass-by-Value* Versus *Pass-by-Reference*
- Tanda *Quote*
- Penggunaan *Include*
- Pemrograman Berbasis Obyek

# Array dalam PHP

```
<?php
    // inisialisasi array:
    $foo = array(36, 19, 27, 9, 10, 10, -89);
    echo $foo[0];           // 36
    echo $foo[2];           // 27
    $foo[3] = 42;           // $foo[3] berubah menjadi 42
    echo $foo[3];
    $i = 4;
    $foo[$i] = 34;          // $foo[4] berubah menjadi 34
    echo $foo[$i];

    // isi array berbeda tipe data:
    $bar = array(42, 3.14, 'Fred', True);
    $bar = array();         // array kosong
?>
```

# Array dalam PHP [2]

<http://www.php.net/manual/en/language.types.array.php>

- Indeks dari array tidak harus berupa integer:

```
<?php
    $person = array('nama' => 'Adi',
        'usia' => 15, 'pelajar' => True);
    echo $person['usia'];
    $person['usia'] = 44;
    $person['hobi'] = 'Bersepeda';
    echo $person['hobi'];           // OK
    echo $person['dob'];           // Runtime error
    if (array_key_exists('dob', $person))
        echo $person['dob'];      // OK
?>
```

# Array dalam PHP [3]

Indeks dari array tidak terurut:

```
<?php
    $foo = array(36, 19, 27, 9, 10, 10, -89);
    $foo[99] = 3;           // OK
    echo $foo[99];          // 3
    echo $foo[7];           // Runtime error
?>
```

Jadi, isi array `$foo` adalah:

```
$foo = array(0 => 36, 1 => 19, 2 => 27,
             3 => 9, 4 => 10, 5 => 10,
             6 => -89, 99 => 3);
```

# Struktur Kontrol

<http://php.net/manual/en/language.control-structures.php>

```
3
4     for ($i = 1; $i <= 10; $i++)
5     {
6         echo "$i => $list[$i]<br/>";
7     }
8
9     $i = 0;
10    while ($list[$i] != 'Last')
11    {
12        echo $list[$i];
13        $i++;
14    }
15
16    if ($i < 50)
17    {
18        echo 'found';
19    }
20    else
21    {
22        echo 'not found';
23    }
24
```

# Struktur Kontrol [2]: *Foreach*

<http://php.net/manual/en/control-structures.foreach.php>

<pre>&lt;?php     \$mylist = array(36,19,27,9,10,10,-89);     foreach (\$mylist as \$v)     {         echo "\$v&lt;br/&gt;";     }</pre>	<pre>36 19 27 9 10 10 -89</pre>
<pre>    \$places = array(5 =&gt; 'Adi', 2 =&gt; 'Budi',                     'akhir' =&gt; 'Citra' );     foreach (\$places as \$key =&gt; \$val)     {         echo "&lt;p&gt;Posisi: \$key, Atlit: \$val&lt;/p&gt;";     } ?&gt;</pre>	<pre>Posisi: 5, Atlit: Adi Posisi: 2, Atlit: Budi Posisi: akhir, Atlit: Citra</pre>

# Struktur Kontrol [3]: *Foreach*

```
<h1>Daftar Buah:</h1>
<ul>
  <li>Apel</li>;
  <li>Jeruk</li>;
  <li>Pisang</li>;
</ul>
```

## **Daftar Buah:**

- Apel
- Jeruk
- Pisang

**Penyelesaian dengan  
menggunakan foreach?**



# Fungsi (*Function*)

<http://php.net/manual/en/language.functions.php>

- Pemanggilan fungsi:
  - ❑ Sebutkan nama fungsi dan pisahkan daftar argumen dengan menggunakan tanda “koma”

❑ Contoh:

```
$name = trim(substr($line, 12, 6)) ;
```

- **NOTE:**
  - Nama fungsi adalah *case-insensitive*
  - Nama variabel adalah *case-sensitive*

# Fungsi (*Function*): Built-in

<http://php.net/manual/en/funcref.php>

- **String** (<http://php.net/manual/en/ref.strings.php>)  
`strlen, substr, trim, strstr`
- **Arrays** (<http://php.net/manual/en/book.array.php>)  
`array, count, sort, asort, ksort,  
array_key_exists, array_push, array_pop`
- **Date/Time** (<http://php.net/manual/en/book.datetime.php>)  
`checkdate, date_add, date_diff, strtotime, date,  
getdate, mktime, time`
- **Math** (<http://php.net/manual/en/book.math.php>)  
`abs, ceil, floor, log, min, max, pow, round, rand,  
sqrt, sin, cos, tan`
- Ekstensi: <http://php.net/manual/en/extensions.membership.php>

# Fungsi (*Function*): User Defined

<http://php.net/manual/en/functions.user-defined.php>

```
2
3  function foo($arg1, $arg2, $arg3)
4  {
5      $my_local_var = $arg1 + $arg2;
6      echo "Total: $my_local_var";
7
8      if ($my_local_var < $arg3)
9          return $arg3;
10     else
11         return $my_local_var;
12 }
13
```

# Variabel Global Versus Lokal

<http://php.net/manual/en/language.variables.scope.php>

```
2
3     $x = 42;
4     $a = 5;
5     $y = foo($a+1, $x);
6
7     echo "$x, $y, $a";
8
9     function foo($x, $y)
10    {
11        while ($x < $y)
12            $x = $x * 2;
13        return $x;
14    }
```

Global variables:

\$x: 42  
\$y: 48  
\$a: 5

Local variables:

\$x: 48  
\$y: 42

- Parameter dan variabel lain yang digunakan di dalam fungsi merupakan variabel local dari fungsi tersebut
  - Bahkan jika namanya sama dengan nama variabel global
- Secara *default*, argumen fungsi diaplikasikan secara “*pass-by-value*”

# Pass-by-Value Versus Pass-by-Reference

<http://php.net/manual/en/language.references.pass.php>

```
2
3     function foo($a)
4     {
5         $a[1] = 0;
6     }
7
8     function bar(&$a)
9     {
10        $a[1] = 0;
11    }
12
13    $x = array(1, 2, 3);
14
15    foo($x);
16    echo $x[1];
17
18    bar($x);
19    echo $x[1];
20
```

Local variables:  
\$a: array(1, 0, 3)

Local variables:  
\$a:

Global variables:  
\$x: array(1, 0, 3)

# Tanda Quote

	<i>Single Quote</i>	<i>Double Quote</i>
<i>Single Quote</i>	<code>echo 'Today is Paul\'s birthday';</code>	<code>echo "This is a very 'special' day.";</code>
<i>Double Quote</i>	<code>echo '&lt;p class="heading"&gt;Hello&lt;/p&gt;';</code>	<code>echo "&lt;p class=\"heading\"&gt;\$body&lt;/p&gt;";</code>

**NOTE:** Karakter string di dalam *Single quote* tidak diproses

```
2
3   $foo = 3;
4   $bar = 7;
5
6   echo '\tHello\nWorld';
7
8   echo 'Time: ($foo * $bar)';
9
10  echo "\tHello\nWorld";
11
12  echo "Time: ($foo * $bar)";
13
```

→ `\tHello\nWorld`

→ `Time: ($foo * $bar)`

---

→ `Hello`  
`World`

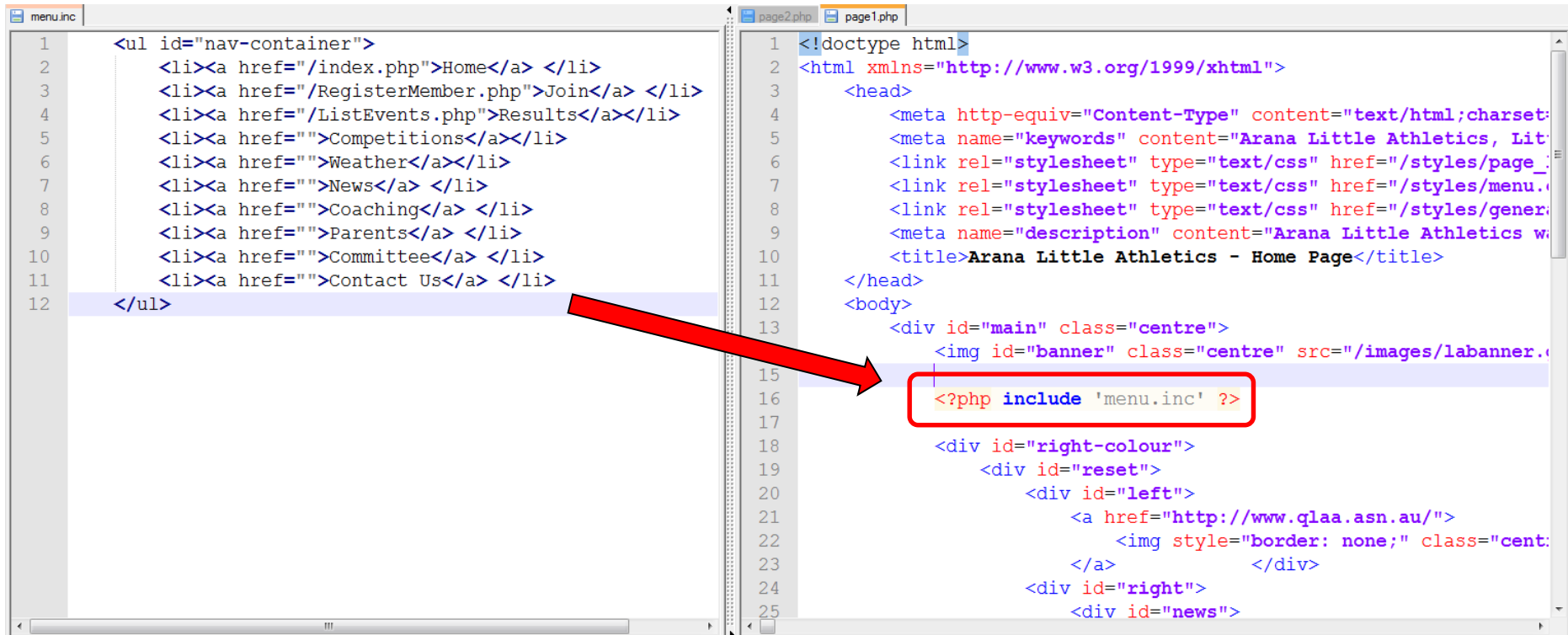
→ `Time: (3 * 7)`

# Penggunaan *Include*

```
page1.php
1 <!doctype html>
2 <html xmlns="http://www.w3.org/1999/xhtml">
3 <head>
4 <meta http-equiv="Content-Type" content="text/html; charset=UTF-8" />
5 <meta name="keywords" content="Arana Little Athletics, Little Athletics" />
6 <link rel="stylesheet" type="text/css" href="/styles/page_layout.css" />
7 <link rel="stylesheet" type="text/css" href="/styles/menu.css" />
8 <link rel="stylesheet" type="text/css" href="/styles/general.css" />
9 <meta name="description" content="Arana Little Athletics was established in 1974" />
10 <title>Arana Little Athletics - Home Page</title>
11 </head>
12 <body>
13 <div id="main" class="centre">
14 
15 <ul id="nav-container">
16 <li><a href="/index.php">Home</a> </li>
17 <li><a href="/RegisterMember.php">Join</a> </li>
18 <li><a href="/ListEvents.php">Results</a> </li>
19 <li><a href="/Competitions">Competitions</a> </li>
20 <li><a href="/Weather">Weather</a> </li>
21 <li><a href="/News">News</a> </li>
22 <li><a href="/Coaching">Coaching</a> </li>
23 <li><a href="/Parents">Parents</a> </li>
24 <li><a href="/Committee">Committee</a> </li>
25 <li><a href="/Contact Us">Contact Us</a> </li>
26 </ul>
27 <div id="right-colour">
28 <div id="reset">
29 <div id="left">
30 <a href="http://www.qlaa.asn.au/">
31 
32 </a>
33 </div>
34 <div id="right">
35 <div id="news">
36 <div id="news-heading">
37 Latest News
38 </div>
39 <div id="news-body">
40 Nominations close for Junior Carnival/Senior Carnival</div>
41 </div>
42 </div>
43 </div>
44 </body>
45 </html>
```

```
page2.php
1 <!doctype html>
2 <html xmlns="http://www.w3.org/1999/xhtml">
3 <head>
4 <meta http-equiv="Content-Type" content="text/html; charset=UTF-8" />
5 <meta name="keywords" content="Arana Little Athletics, Little Athletics" />
6 <link rel="stylesheet" type="text/css" href="/styles/page_layout.css" />
7 <link rel="stylesheet" type="text/css" href="/styles/menu.css" />
8 <link rel="stylesheet" type="text/css" href="/styles/general.css" />
9 <meta name="description" content="Register a new athlete" />
10 <title>Arana Little Athletics - Registration Page</title>
11 <link rel="stylesheet" type="text/css" href="/styles/forms.css" />
12 <script src="/scripts/register.js" type="text/javascript">
13 </script>
14 </head>
15 <body>
16 <div id="main" class="centre">
17 
18 <ul id="nav-container">
19 <li><a href="/index.php">Home</a> </li>
20 <li><a href="/RegisterMember.php">Join</a> </li>
21 <li><a href="/ListEvents.php">Results</a> </li>
22 <li><a href="/Competitions">Competitions</a> </li>
23 <li><a href="/Weather">Weather</a> </li>
24 <li><a href="/News">News</a> </li>
25 <li><a href="/Coaching">Coaching</a> </li>
26 <li><a href="/Parents">Parents</a> </li>
27 <li><a href="/Committee">Committee</a> </li>
28 <li><a href="/Contact Us">Contact Us</a> </li>
29 </ul>
30 <div id="right-colour">
31 <div id="reset">
32 <div id="left">
33 <a href="http://www.qlaa.asn.au/">
34 
35 </a>
36 </div>
37 <div id="right">
38 <h1>Registration Form</h1>?<form action="RegisterMember.php" method="post">
39 <fieldset>
40 <legend>Athlete Information</legend>
41 <div id="athlete-info">
42 <div id="first-name">First Name</div>
43 <div id="last-name">Last Name</div>
44 <div id="age">Age</div>
45 <div id="gender">Gender</div>
46 <div id="email">Email</div>
47 <div id="password">Password</div>
48 <div id="confirm-password">Confirm Password</div>
49 <div id="submit">Register</div>
50 </div>
51 </fieldset>
52 </div>
53 </div>
54 </div>
55 </body>
56 </html>
```

# Penggunaan *Include* [2]



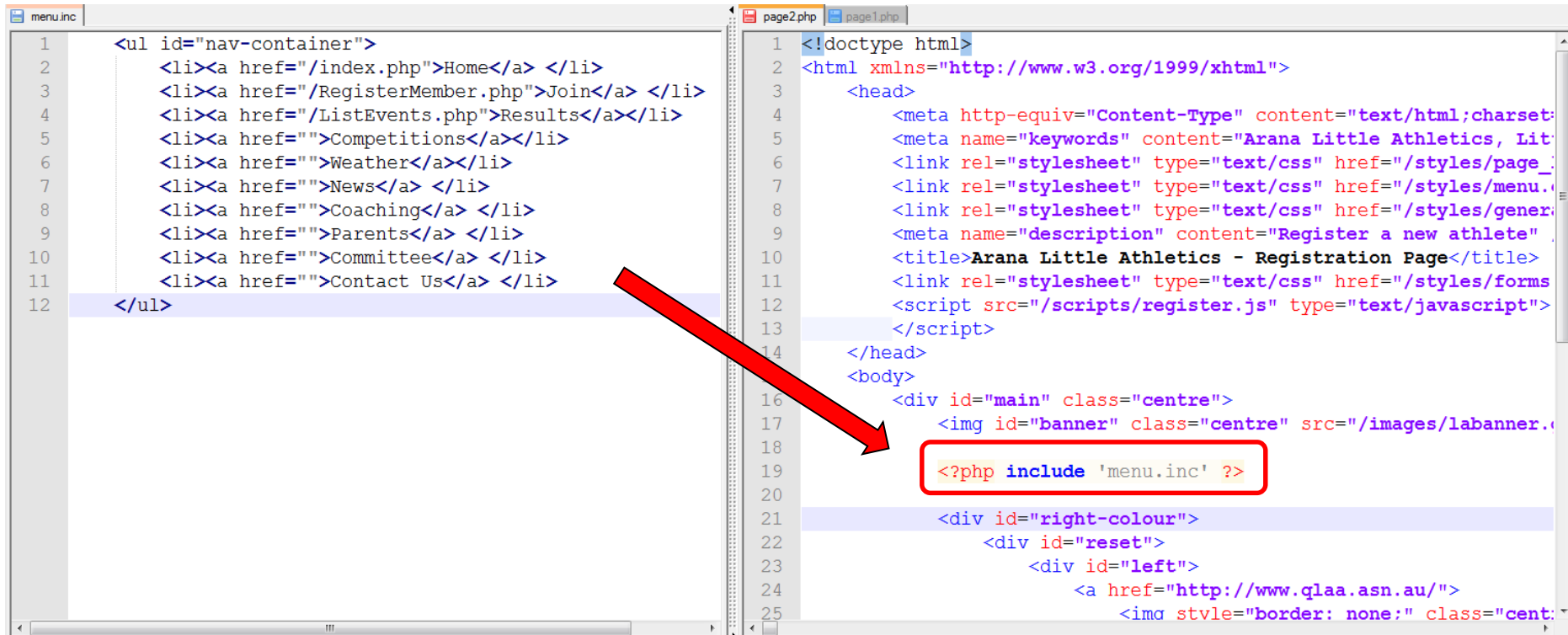
The image shows two code editors side-by-side. The left editor, titled 'menu.inc', contains an HTML list of navigation links. The right editor, titled 'page1.php', contains the main HTML structure of a page. A red arrow points from the closing tag of the list in 'menu.inc' to the include statement in 'page1.php'.

```
menu.inc
1 <ul id="nav-container">
2   <li><a href="/index.php">Home</a> </li>
3   <li><a href="/RegisterMember.php">Join</a> </li>
4   <li><a href="/ListEvents.php">Results</a></li>
5   <li><a href="">Competitions</a></li>
6   <li><a href="">Weather</a></li>
7   <li><a href="">News</a> </li>
8   <li><a href="">Coaching</a> </li>
9   <li><a href="">Parents</a> </li>
10  <li><a href="">Committee</a> </li>
11  <li><a href="">Contact Us</a> </li>
12 </ul>
```

```
page1.php
1 <!doctype html>
2 <html xmlns="http://www.w3.org/1999/xhtml">
3   <head>
4     <meta http-equiv="Content-Type" content="text/html; charset=
5     <meta name="keywords" content="Arana Little Athletics, Lit
6     <link rel="stylesheet" type="text/css" href="/styles/page_
7     <link rel="stylesheet" type="text/css" href="/styles/menu.
8     <link rel="stylesheet" type="text/css" href="/styles/gener
9     <meta name="description" content="Arana Little Athletics w
10    <title>Arana Little Athletics - Home Page</title>
11  </head>
12  <body>
13    <div id="main" class="centre">
14      
16      <div id="reset">
17        <div id="left">
18          <a href="http://www.qlaa.asn.au/">
19            <img style="border: none;" class="cent
20          </a>
21        </div>
22        <div id="right">
23          <div id="news">
```



# Penggunaan *Include* [3]



```
menu.inc
1 <ul id="nav-container">
2   <li><a href="/index.php">Home</a> </li>
3   <li><a href="/RegisterMember.php">Join</a> </li>
4   <li><a href="/ListEvents.php">Results</a></li>
5   <li><a href="">Competitions</a></li>
6   <li><a href="">Weather</a></li>
7   <li><a href="">News</a> </li>
8   <li><a href="">Coaching</a> </li>
9   <li><a href="">Parents</a> </li>
10  <li><a href="">Committee</a> </li>
11  <li><a href="">Contact Us</a> </li>
12 </ul>
```

```
page2.php page1.php
1 <!doctype html>
2 <html xmlns="http://www.w3.org/1999/xhtml">
3   <head>
4     <meta http-equiv="Content-Type" content="text/html; charset=
5     <meta name="keywords" content="Arana Little Athletics, Lit
6     <link rel="stylesheet" type="text/css" href="/styles/page_
7     <link rel="stylesheet" type="text/css" href="/styles/menu.
8     <link rel="stylesheet" type="text/css" href="/styles/genera
9     <meta name="description" content="Register a new athlete"
10    <title>Arana Little Athletics - Registration Page</title>
11    <link rel="stylesheet" type="text/css" href="/styles/forms
12    <script src="/scripts/register.js" type="text/javascript">
13  </script>
14  </head>
15  <body>
16    <div id="main" class="centre">
17      
19      <div id="reset">
20        <div id="left">
21          <a href="http://www.qlaa.asn.au/">
22            <img stvle="border: none;" class="cent
```

# Pemrograman Berbasis Obyek

<http://php.net/manual/en/language.oop5.php>

- Pemrograman berbasis obyek di dalam PHP:
  - Classes
  - Methods
  - Fields
- **NOTE:** Fitur ini tidak dibahas di dalam perkuliahan Pengembangan Aplikasi *Web*

# Workshop

- Cek dokumen praktikum!

