PHP Control Flow

CSC 242, Web Programming

Control Flow

- The basis of control flow is the boolean type

- Relational operators return boolean values

- Types of relational operators

  - Equality

  - Comparison

  - Logical

The PHP Boolean Type

- A boolean expresses a truth value (true or false)

- The constants TRUE and FALSE are boolean literals

- FALSE is set to the NULL type

- Type values that are false when converted to booleans:
    - the boolean FALSE
    - the integer 0
    - the float 0.0
    - the empty string "" and the string "0"
    - an array with zero elements
    - the NULL type

Equality & Comparison Operators

Operator	Description	Example
==	equal to	$a == 3
===	identical to	$a === 3
!=	not equal to	$a != 3
!==	not identical to	$a !== 3
>	greater than	$a > 3
<	less than	$a < 3
>=	greater than or equal to	$a >= 3
<=	less than or equal to	$a <= 3

Logical Operators

Operator	Description	Example
&&	and	`$a == 3 && $b == 0`
and	low-precedence and	`$a == 3 and $b == 0`
||	or	`$a == 3 || $b == 0`
or	low-precedence or	`$a == 3 or $b == 0`
!	not	`!($a == $b)`
xor	exclusive or	`$a xor $b`

The Equality and Identity Operators

- The equality operator (==) does implicit type coercion before the comparison

- The identity operator (===) prevents implicit type coercion, that is, for two operands to be identical, they must have the same type and value

- Example:

```php
<?php
  $a = "1000" ==  "+1000"; // TRUE
  $b = "1000" === "+1000"; // FALSE
  $a = "1000" !=  "+1000"; // FALSE
  $b = "1000" !== "+1000"; // TRUE
?>
```

Selection

- `if`, `else`, and `elseif`

```php
<?php
  if     ($page == "Home")  {/* code */}
  elseif ($page == "About") {/* code */}
  else                      {/* code */}
?>
```

- `switch`

```php
<?php
  switch ($page) {
    case ("Home"):  {/* code */; break;}
    case ("About"): {/* code */; break;}
    default:        {/* code */; break;}
  }
?>
```

Iteration

- while loops

- do while loops

- for loops

```php
<?php
  for ($count = 1; $count <= 10; ++$count) {
    echo "The count is" . $count . "\n";
  }
?>
```