Date
11/02/2017

bool ctype_alnum()

It checks for alphanumeric character(s). Return TRUE if every character in provided string/text is either a letter or a digit, FALSE otherwise.

Example:

```
ctype_alnum('AbCd1zyZ9');   // TRUE
ctype_alnum('foo!#$bar');   // FALSE
```

bool ctype_alpha()

It checks for alphabetic character(s). It means only letters allowed.

Example:

```
ctype_alpha('KjgWZC');   // TRUE
ctype_alpha('arf12');    // FALSE
```

bool ctype_digit()

It checks for numeric character(s). It means only digits allowed.

Example:

```
ctype_digit('1020.20');   // FALSE
ctype_digit('10802');     // TRUE
ctype_digit('wsl!12');    // FALSE
```

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bool empty()

It returns FALSE if var exists and has a non-empty, non-zero value, otherwise returns TRUE.

Example:

```
$a = 11;
$b = 0
$c = NULL;
$d = 23; $f;
empty($a);    //TRUE
empty($b);    //TRUE
empty($c);    //TRUE
empty($d);    //FALSE
empty($e);    //TRUE
empty($f);    //TRUE
```

Remember, if a variable declared only just as $f in above example, it means it has NULL value by default.

Boolean values:

TRUE/True/true/TRue/TrUe/TruE are all same.

FALSE/False/false/FAlse/FaLse are all same.

NULL/null/Null/NULL/NuLl are all same.

```
$a = TRUE;
$b = FALSE;
echo $a;    //1
echo $b;    //  <- Nothing means blank
```

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Continuous Integration (CI)

Continuous integration (CI) is a software engineering practice in which isolated changes are immediately tested and reported on when they are added to a larger code base. The goal of CI is to provide rapid feedback so that if a defect is introduced into the code base, it can be identified and corrected as soon as possible. Continuous integration software tools can be used to automate the testing and build a document trail.

Famous CI tool in market are PHPCI (specifically designed for PHP), Jenkins, Travis CI, etc.

Continuous integration reduces bugs, increases productivity & improves software quality.

Continuous Delivery (CD)

Continuous delivery (CD) is an extension of the concept of continuous integration (CI). Whereas CI deals with the build/test part of the development cycle for each version, CD focuses on what happens with a committed change after that point. With continuous delivery, any commit that passes the automated tests can be considered a valid candidate for release.

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An important goal of continuous delivery is to make feedback loops as short as possible. Because code is delivered in a steady stream to user acceptance testing (UAT) or the staging environment, cause and effect can be observed early & code can be tested for all aspects of functionality, including business rule logic.

PHPCI

PHPCI is a continuous integration tool, written in PHP & specifically designed for PHP.

https://www.phptesting.org

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Difference between 'abstract' & 'final'

abstract class & final class are exactly opposite to each other.

abstract class: We can not create object of an abstract class but ~~we can create~~ a class can extend an abstract class.

final class: We can create an object of a final class but any class can not extend a final class.

Important fact in OOP programming

A protected variable and functions can be accessed in child class as well as in grand child class, grand grand child class, etc.

In above point, a protected function can be accessed through parent:: as well as $this-> too where the function is non-static in a child, grand child or grand grand child class etc.; but a non-static protected variable can be accessed only through $this-> in child or grand child or grand grand child class, etc.

Example:

```
abstract class A
{
    protected $aaa = 25;
    protected function setUp()
    {
        echo '<br> I am inside setUp function'.__CLASS__.'!';
    }
}
```


get_class($this);