



PHP Annotations

~~Attributes~~

Purely code or magic?

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WHO am I?



Curious and passionate about innovation, technology and agile teams that seeks to learn everyday how technology can impact people lives.

  /joelmedeiros

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ubiminds

Remote teams, near collaboration.

phpsp.org.br

#COMMUNITYWORKS

First of all,

WHAT

is annotation?

“

Something that **describes** an aspect of the subject through metadata **in runtime**. In other words, the annotation effects on a class, method or object are only when **it is executed**

”



@rdohms

WHAT

is annotation used for?

How is
METADATA
MANIPULATION
used?

Java - Annotations



```
import java.lang.annotation.*;

@Target(ElementType.TYPE)
@Retention(RetentionPolicy.RUNTIME)
@Inherited
public @interface DBTable {
    public String table();
}
```

PYTHON - Decorators



```
def decorator_with_arguments(function):
    def wrapper_accepting_arguments(arg1, arg2):
        print("My arguments are: {0}, {1}".format(arg1,arg2))
        function(arg1, arg2)
    return wrapper_accepting_arguments

@decorator_with_arguments
def cities(city_one, city_two):
    print("Cities I love are {0} and {1}".format(city_one, city_two))

cities("Nairobi", "Accra")

# My arguments are: Nairobi, Accra
# Cities I love are Nairobi and Accra
```

JAVASCRIPT ES6 - Decorators



```
function readonly(target, name, descriptor) {  
  descriptor.writable = false;  
  return descriptor;  
}  
  
class Example {  
  a() {}  
  @readonly  
  b() {}  
}  
  
const e = new Example();  
e.a = 1;  
e.b = 2;  
  
// TypeError: Cannot assign to read only property 'b' of object '#<Example>'
```

RUST - Attributes



```
#[test]
#[should_panic(expected = "values don't match")]
fn mytest() {
    assert_eq!(1, 2, "values don't match");
}

// running 1 test
// test mytest ... ok

// test result: ok. 1 passed; 0 failed; 0 ignored; 0 measured; 0 filtered out
```

WHO

does use annotations?

PHPUNIT

```
use PHPUnit\Framework\TestCase;

/**
 * @backupGlobals disabled
 */
class MyTest extends TestCase
{
    /**
     * @backupGlobals enabled
     */
    public function testThatInteractsWithGlobalVariables()
    {
        // ...
    }
}
```

SYMFONY FRAMEWORK

```
// src/Controller/BlogController.php
namespace App\Controller;

use Symfony\Bundle\FrameworkBundle\Controller\AbstractController;
use Symfony\Component\Routing\Annotation\Route;

class BlogController extends AbstractController
{
    /**
     * @Route("/blog", name="blog_list")
     */
    public function list()
    {
        // ...
    }
}
```

DOCTRINE ORM

```
/** @Entity */  
class Message  
{  
    /** @Column(type="integer") */  
    private $id;  
  
    /** @Column(length=140) */  
    private $text;  
  
    /** @Column(type="datetime", name="posted_at") */  
    private $postedAt;  
}
```


How does that

WORK?

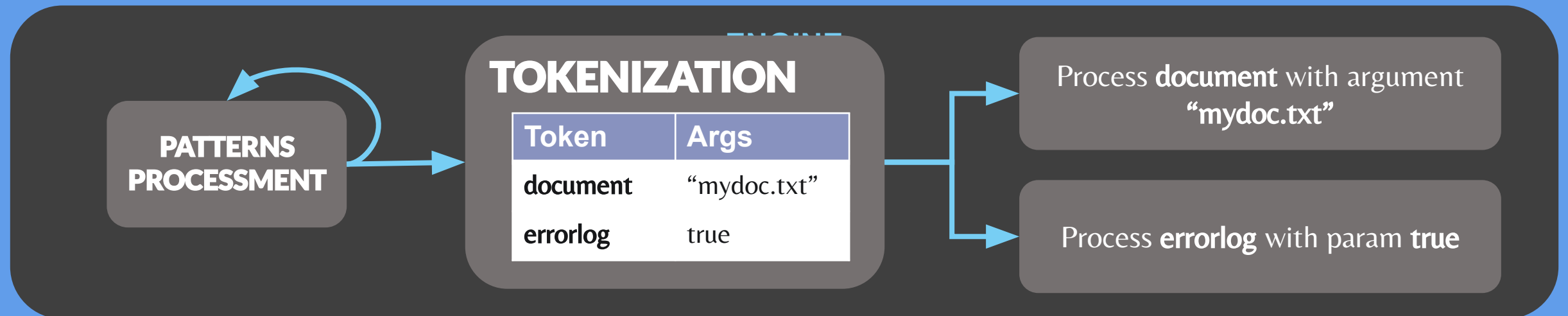
INPUT

```
@document("mydoc.txt")
@errorlog(true)
procedure doSomething(var foo, bar: integer);
begin;
// do something
end;
```

OUTPUT

RESULT

**PROCESS REMAINING
METHOD INSTRUCTIONS**



PHP doesn't have

NATIVE ENGINE

for Annotations

~~... yet~~

PHP RFC: Attributes v2



@beberlei

Why give the name

ATTRIBUTES?

New syntax



```
@@WithoutArgument  
@@SingleArgument(0)  
@@FewArguments('Hello', 'World')  
function foo() {}
```

Reflection API Attribute



```
function ReflectionFunction::getAttributes(string $name = null): ReflectionAttribute[];
function ReflectionClass::getAttributes(string $name = null): ReflectionAttribute[];
function ReflectionProperty::getAttributes(string $name = null): ReflectionAttribute[];
function ReflectionClassConstant::getAttributes(string $name = null): ReflectionAttribute[];

class ReflectionAttribute
{
    public function getName(): string
    public function getArguments(): array
    public function getAsObject(): object
}
```

USE CASE

WHY

use annotations?

PROS

CONS

**THAT'S ALL
FOLKS**

THANK YOU

Keep in touch
find by **joelmedeiros**
in your social network
:)