



# PHP Piscine

Day 07

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*Summary:*

*This document is the day07's subject for the PHP Piscine.*

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# Chapter 1

## Foreword

"Never forget what you are, the rest of the world will not. Wear it like armor and it can never be used to hurt you."

Tyrion Lannister

"Thanks to Game of Thrones, I have learned about inheritance in PHP and to make love with my sister. Thank you 42!"

Sylvain Dermy

This day will be easier if you have read the 5 volumes of the serie **A Song of Ice and Fire**, but in any case, this day is easy.

# Chapter 2

## General Instructions

- Only this page will serve as reference; do not trust rumors.
- Watch out! This document could potentially change up to an hour before submission.
- Only the work submitted on the repository will be accounted for during peer-2-peer correction.
- As when you did C Piscine, your exercises will be corrected by your peers AND/OR by Moulinette.
- Moulinette is very meticulous and strict in its evaluation of your work. It is entirely automated and there is no way to negotiate with it. So if you want to avoid bad surprises, be as thorough as possible.
- Using a forbidden function is considered cheating. Cheaters get **-42**, and this grade is non-negotiable.
- These exercises are carefully laid out by order of difficulty - from easiest to hardest. We **will not** take into account a successfully completed harder exercise if an easier one is not perfectly functional.
- You cannot leave any additional file in your repository than those specified in the subject.
- Got a question? Ask your peer on the right. Otherwise, try your peer on the left.
- Your reference guide is called **Google / the Internet / <http://www.php.net> / ....**
- Think of discussing on the Forum. The solution to your problem is probably there already. Otherwise you will start the conversation.
- Examine the examples thoroughly. They could very well call for details that are not explicitly mentioned in the subject ...
- By Odin, by Thor ! Use your brain !!!

# Chapter 3

## Exercise 00 : Short and proud

Turn-in directory : `ex00/`

Files to turn in: `Tyrion.class.php`

Allowed functions: Everything learned since the beginning of the Piscine as well as the entire standard PHP library.

---

Houses **Lannister** has always been composed of proud, blond people of reasonable height. That was until the arrival of **Tyrion Lannister**, who remained of the height of a child, even when he reached the age of an adult .

Create the **Tyrion** Class, inheriting from **Lannister** and containing only one method, so that the `test.php` file [attached] will produce the following output:

```
$> php -f test.php
A Lannister is born !
My name is Tyrion
Short
Hear me roar!
$>
```

It must be possible to modify the strings in `test.php`. The modifications must update the output without modifying the **Tyrion** Class.

# Chapter 4

## Exercise 01 : Words of honor

Turn-in directory : `ex01/`

Files to turn in: `Greyjoy.class.php`

Allowed functions: Everything learned since the beginning of the Piscine as well as the entire standard PHP library.

---

Every great House has a motto of its own, and it would be inappropriate for anyone who is not one of them to use it. The consequences could be dramatic.

Write the `Greyjoy` Class so that the `test1.php` [attached] produces the following output:

```
$> php -f test1.php
We do not sow
$>
```

... and that the `test2.php` file [also attached] produces a fatal error.

# Chapter 5

## Exercise 02 : Fireproofing

Turn-in directory : `ex02/`

Files to turn in: `Targaryen.class.php`

Allowed functions: Everything learned since the beginning of the Piscine as well as the entire standard PHP library.

---

Despite what the legend says, the **Targaryens** are not immune to fire. Except, apparently, one ...

Write the **Targaryen** Class so that the `test.php` file [attached] produces the following output:

```
$> php -f test.php
Viserys burns alive
Daenerys emerges naked but unharmed
$>
```

# Chapter 6

## Exercise 03 : Playing house

Turn-in directory : `ex03/`

Files to turn in: `House.class.php`

Allowed functions: Everything learned since the beginning of the Piscine as well as the entire standard PHP library.

---

The great Houses of **Westeros** present themselves in the same way. But they each have a motto [or heraldry] that is unique.

Write the **House** Class so that the `test1.php` [attached] produces the following output:

```
$> php -f test1.php
House Stark of Winterfell : "Winter is coming"
House Martell of Sunspear : "Unbowed, Unbent, Unbroken"
$>
```

... but that the `test2.php` [also attached] produces a fatal error. [The person who wrote that test was clearly on the wrong show!]



# Chapter 7

## Exercise 04 : His sister? Seriously?

Turn-in directory : `ex04/`

Files to turn in: `Lannister.class.php`, `Jaime.class.php`, `Tyrion.class.php`

Allowed functions: Everything learned since the beginning of the Piscine as well as the entire standard PHP library.

---

Contrary to what **Sylvain Dermy** might think, to be in love with one's own sister is not something highly recommended. It's funny because **Jaime Lannister**, also thinks that his sister is hot, unlike his brother **Tyrion**.

Write the **Lannister**, **Jaime** and **Tyrion** Class so that the `test.php` file [attached] produces the following output:

```
$> php -f test.php
Not even if I'm drunk !
Let's do this.
With pleasure, but only in a tower in Winterfell, then.
Not even if I'm drunk !
Let's do this.
Not even if I'm drunk !
$>
```

# Chapter 8

## Exercise 05 : Winter is coming

Turn-in directory : `ex05/`

Files to turn in: `NightsWatch.class.php`, `IFighter.class.php`

Allowed functions: Everything learned since the beginning of the Piscine as well as the entire standard PHP library.

---

The **Night Watch** is the last Wall that protects Westeros from annihilation. Even if no one seems to remember that part...

The situation is what it is. The **Night Watch** is forced to recruit whomever they can attract, whether the rare ones who see it as an honor, or the criminals who are looking for a way out.

However, there would be no logic in using non fighters in battle!

You need to write the **IFighter** interface as well as the **NightsWatch** Class, so that the `test1.php` file [attached] produces the following output:

```
$> php -f test1.php
* loses his wolf on the enemy, and charges with courage *
* flees, finds a girl, grows a spine, and defends her to the bitter end *
$>
```

And naturally, the `test2.php` [also attached] produces a fatal error.

# Chapter 9

## Exercise 06 : The wrong kind of pact

Turn-in directory : `ex06/`

Files to turn in: `UnholyFactory.class.php`, `Fighter.class.php`

Allowed functions: Everything learned since the beginning of the Piscine as well as the entire standard PHP library.

---

After many unsuccessful efforts to build an army, **Stannis Baratheon** is facing the abyss. No army. No throne. And without a throne he is nothing.

Similar circumstances have pushed some men into making deals with powers that they do not completely control and its precisely what he did, otherwise he would have never attacked **King's Landing** with an army that seemed to be never-ending...

You need to write the **Fighter** and **UnholyFactory** Classes, so that the `test1.php` file [attached] produces the following output:

```
$> php -f test1.php
(Factory absorbed a fighter of type foot soldier)
(Factory already absorbed a fighter of type foot soldier)
(Factory absorbed a fighter of type archer)
(Factory absorbed a fighter of type assassin)
(Factory can't absorb this, it's not a fighter)
(Factory fabricates a fighter of type foot soldier)
(Factory hasn't absorbed any fighter of type llama)
(Factory fabricates a fighter of type foot soldier)
(Factory fabricates a fighter of type archer)
(Factory fabricates a fighter of type foot soldier)
(Factory fabricates a fighter of type assassin)
(Factory fabricates a fighter of type foot soldier)
(Factory fabricates a fighter of type archer)
* draws his sword and runs towards the Hound *
* draws his sword and runs towards Tyrion *
* draws his sword and runs towards Podrick *
* draws his sword and runs towards the Hound *
* draws his sword and runs towards Tyrion *
* draws his sword and runs towards Podrick *
* shoots arrows at the Hound *
* shoots arrows at Tyrion *
* shoots arrows at Podrick *
* draws his sword and runs towards the Hound *
* draws his sword and runs towards Tyrion *
* draws his sword and runs towards Podrick *
* creeps behind the Hound and stabs at it *
* creeps behind Tyrion and stabs at it *
* creeps behind Podrick and stabs at it *
* draws his sword and runs towards the Hound *
* draws his sword and runs towards Tyrion *
* draws his sword and runs towards Podrick *
* shoots arrows at the Hound *
* shoots arrows at Tyrion *
* shoots arrows at Podrick *
$>
```

And naturally, the `test2.php` file [also attached] produces a fatal error.