

Advanced Object-Oriented Design

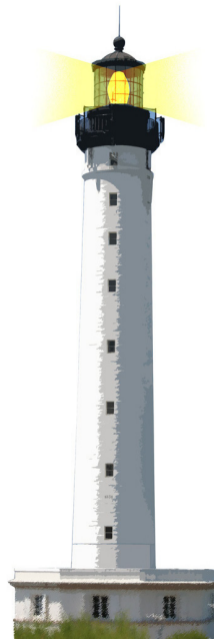
About results

The case of Stone Paper Scissors

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<http://www.pharo.org>



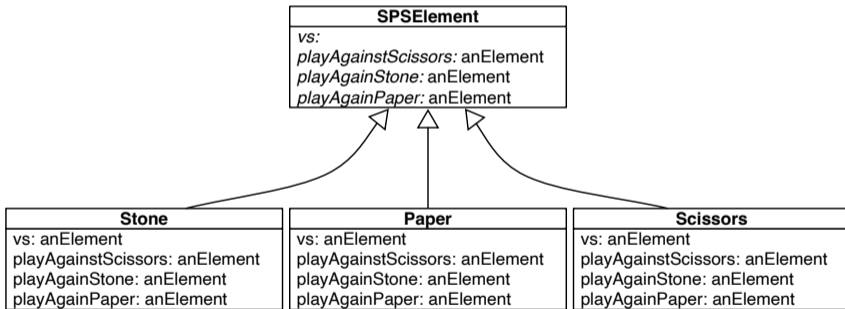
Goals

- Think about results
- What to do with them



Remember

```
>>> (Stone new vs: Paper new)  
#paper
```



Returning numbers

```
StonePaperScissorsTest >> testPaperIsWinning  
self assert: (Stone new vs: Paper new) equals: -1
```

```
StonePaperScissorsTest >> testStoneAgainstStone  
self assert: (Stone new vs: Stone new) equals: 0
```

```
StonePaperScissorsTest >> testStoneIsWinning  
self assert: (Stone new vs: Scissors new) equals: 1
```



Returning number analysis

- We have to know the call to know how to interpret the number.
- Here paper is winning but it got different results!

```
>>> Stone new vs: Paper new
```

```
-1
```

```
>>> Paper new vs: Stone new
```

```
1
```



Returning symbols analysis

```
>>> Stone new vs: Paper new  
#paper
```

```
>>> Paper new vs: Stone new  
#paper
```

- With symbols we know who won.
- We will have to compare to do something

```
(aPlayer vs: anotherPlay) = #draw  
ifTrue: [ ... ]
```



Alternate solution

```
Paper new vs: Paper new  
  onDraw: [ Game incrementDraw ]  
  onReceiverWin: [ ]  
  onReceiverLose: [ ]
```

```
Paper >> playAgainstStone: aStone  
  onDraw: aDrawerBlock  
  onReceiverWin: aWinnerBlock  
  onReceiverLose: aLoserBlock
```

^ aWinnerBlock value

It feels that there are too many parameters.



Simply with objects

Paper new vs: Paper new withResultHandler: ResultDisplayer new

Paper >> playAgainstStone: aStone withResultHandler: aResultHandler
^ aResultHandler paperWon

- It feels like the "Do not not ask tell"
- We can have different result handlers



Stepping back

- Symbols looks better than numbers for returning information
- Creating result handlers can be heavy
- Context and scenarios often give you information to see
 - where to invest
 - what is worth to support reuse

Conclusion

Objects are

- Powerful
- Modular
- Just send a message :)



A course by

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