

Pharo: an immersive object-oriented system

<http://www.pharo.org>

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Pharo?

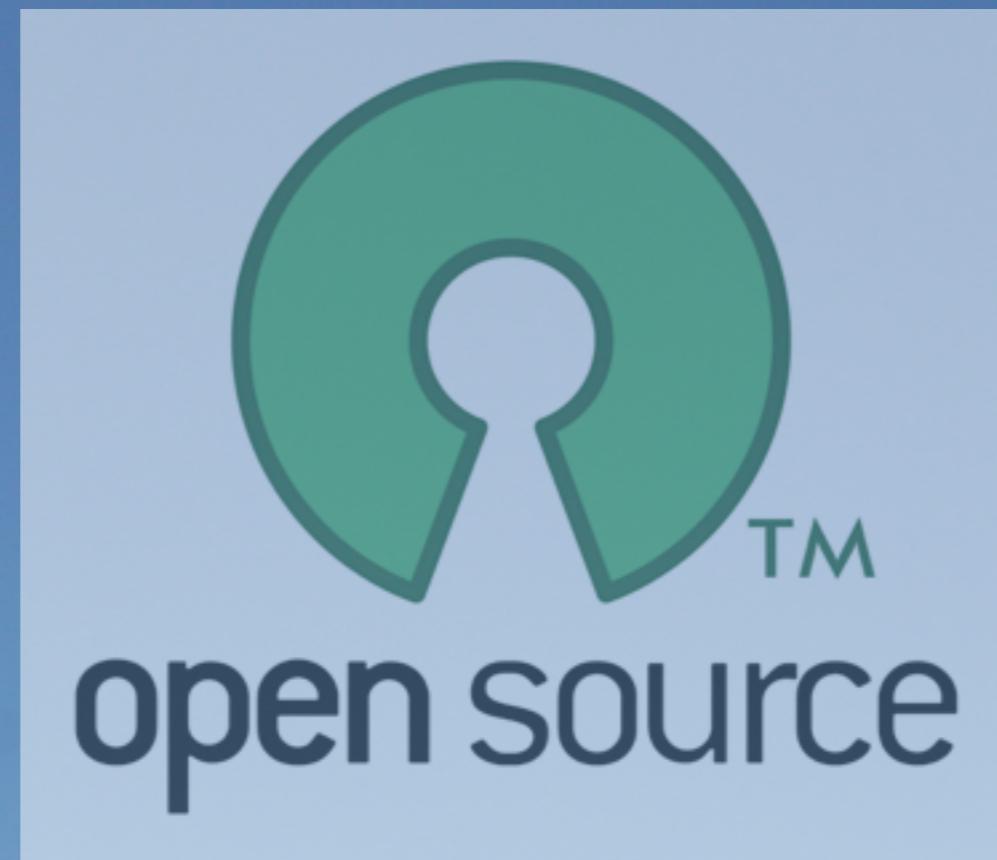


Pharo!

- System: Pure object language + full IDE
- Inspired by Smalltalk
- Powerful, elegant and fun to program
- Great community
- Living system under your fingers



License



Elegant!

- Full syntax on a postcard
- Simple but powerful object model

Complete Syntax on a Postcard

```
exampleWithNumber: x
```

“A method that illustrates every part of Smalltalk method syntax”

```
<menu>
```

```
| y |
```

```
true & false not & (nil isNil) ifFalse: [self halt].
```

```
y := self size + super size.
```

```
#($a #a 'a' 1 1.0)
```

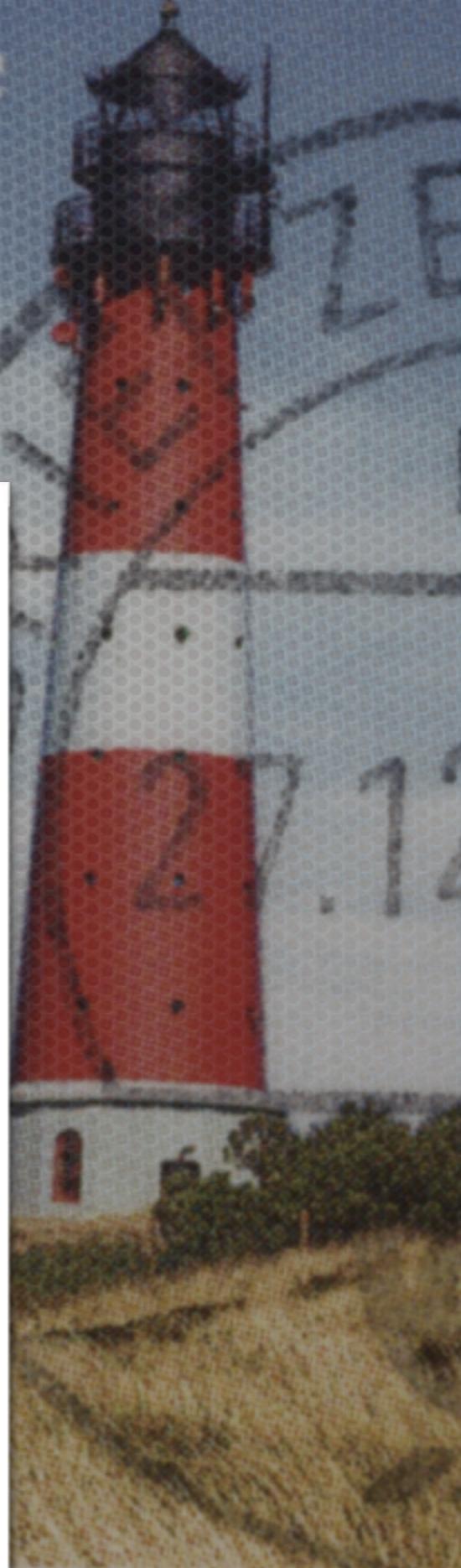
```
do: [ :each | Transcript
```

```
    show: (each class name);
```

```
    show: (each printString);
```

```
    show: ' '].
```

```
^ x < y
```



Object Model

- Dynamically typed
- ****Everything**** is an instance of a class
- All methods are public and virtual
- Attributes are protected
- Single Inheritance

2007

Immersive?



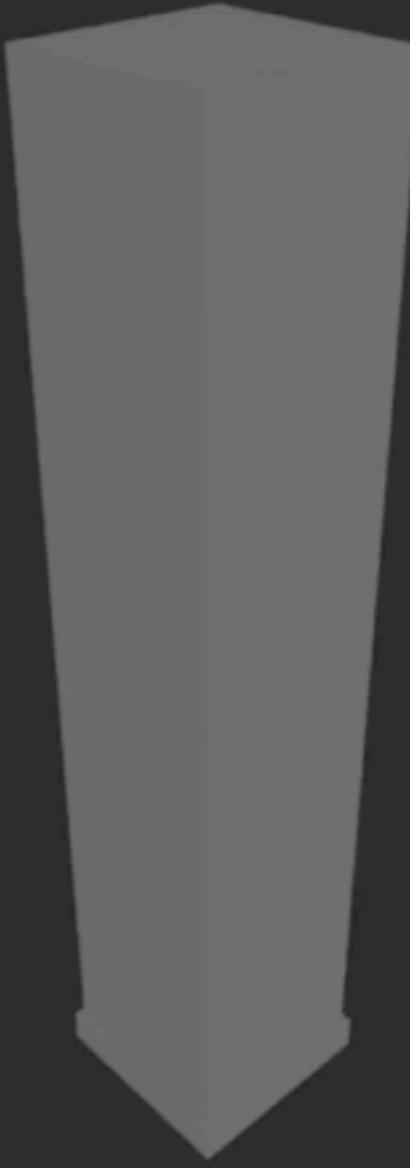
Immersive!

- Deep contact with objects
- Highly interactive programming sessions
- Reflective, inspectable

Workspace

```
| elements lay |  
  
elements := (1 to: 5) collect: [ :ob |  
  (R3CubeShape new) elementOn: ob ].  
  
I  
  
lay := R3WallLayout new.  
lay on: elements.  
  
UberPresenter present: elements
```

Uber Presenter

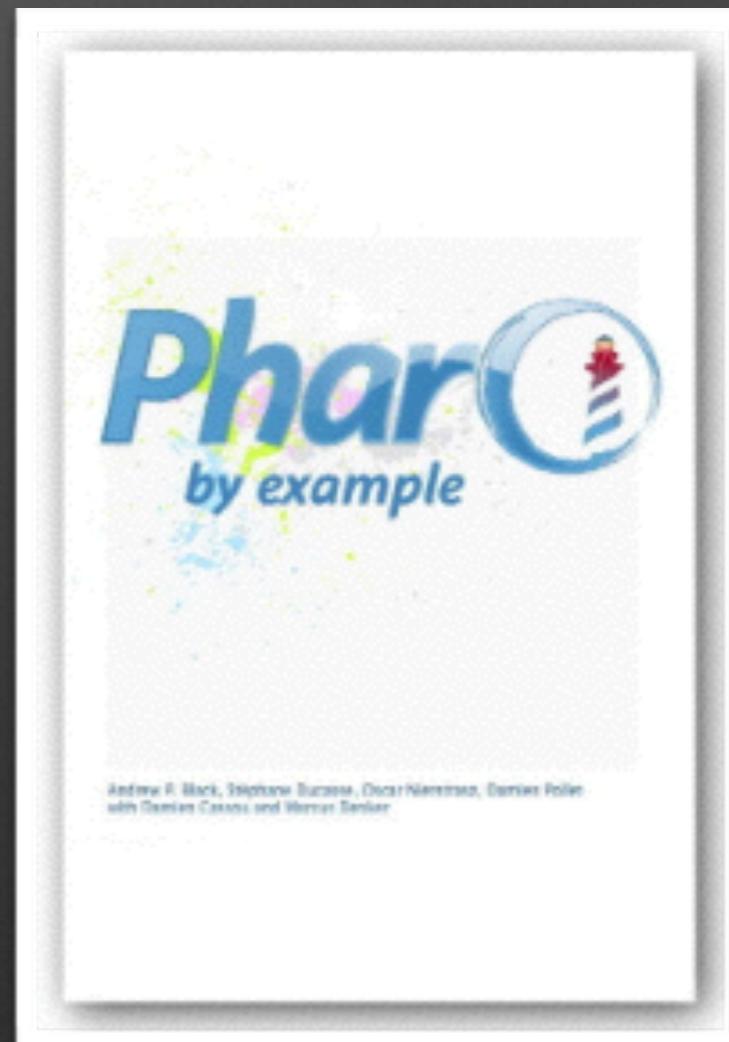


```
Workspace
| elements lay |
elements := (1 to: 5) collect: [ :ob |
(R3CubeShape new) elementOn: ob ].
lay := R3WallLayout new.
lay on: elements.
UberPresenter present: elements
```

Any object can be lively updated
3D
Network connection
Dynamic web applications
Code itself
Any object in fact

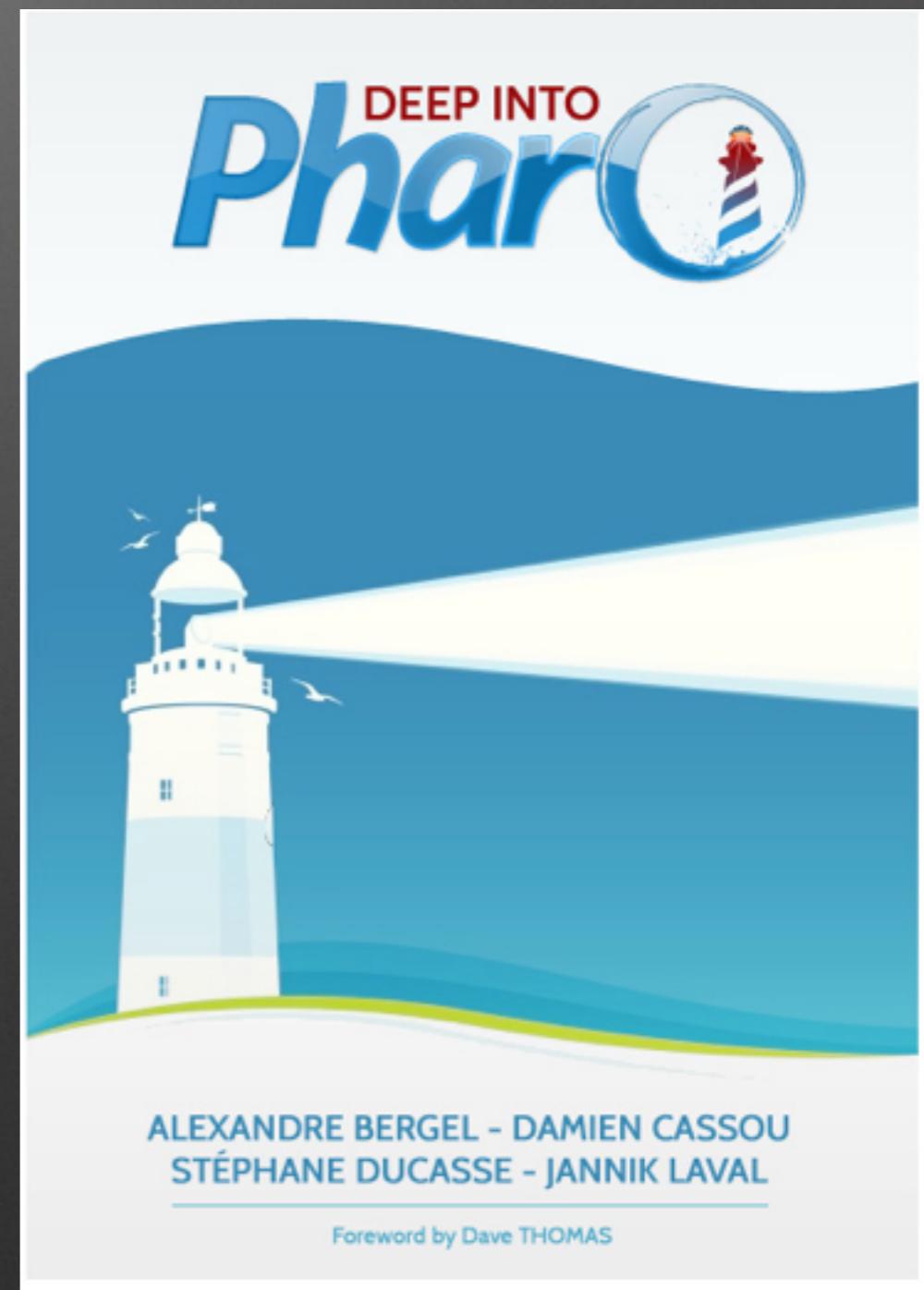
Pharo by Example

- ❖ Pharo by example <http://www.pharobyexample.org>
 - ❖ translated to french, merci!
 - ❖ translated to spanish, gracias!
 - ❖ translated to japanese, ありがとう!
- ❖ Currently updated to Pharo 40



Deep into Pharo

<http://books.pharo.org>



Entrepri\$e Pharo: a Web perspective

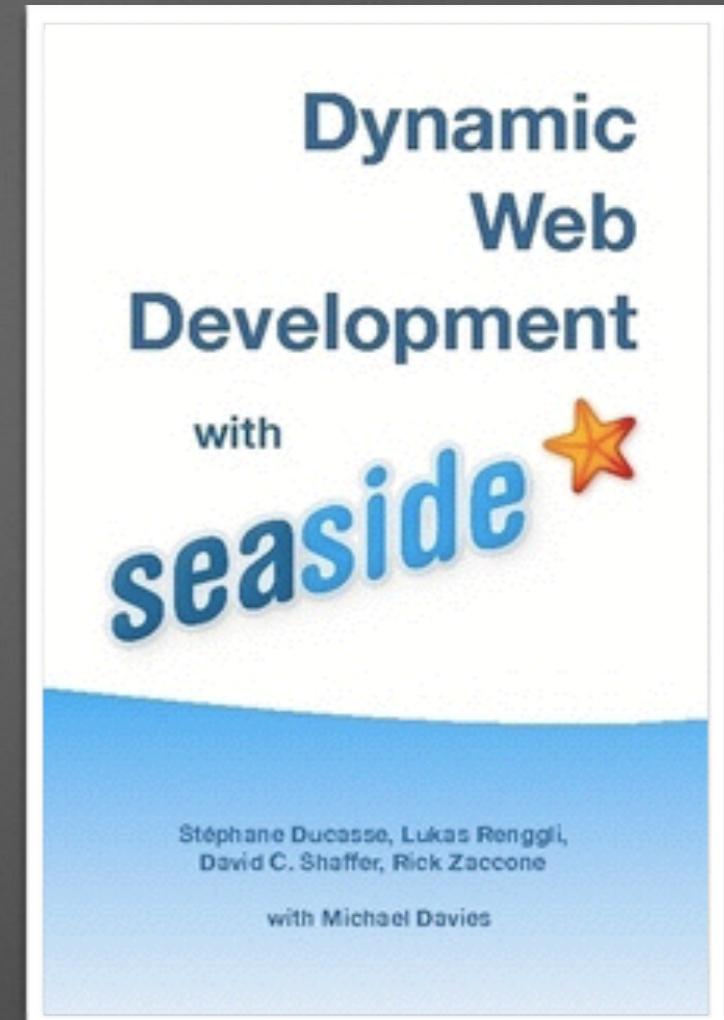
<http://books.pharo.org>

ENTERPRISE PHARO:
A WEB PERSPECTIVE



Other books

- Numerical Methods in Pharo
- Dynamic Web Development with Seaside
 - <http://book.seaside.st>

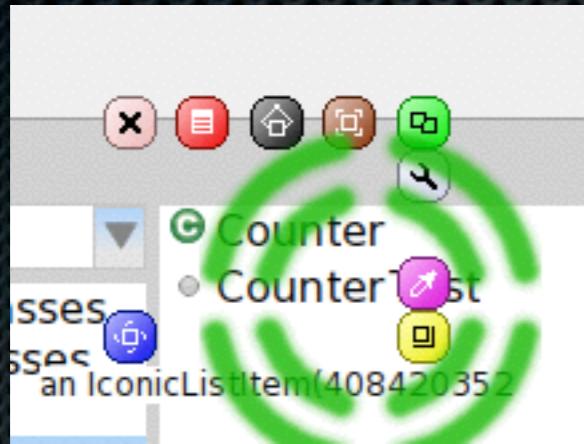


seaside*

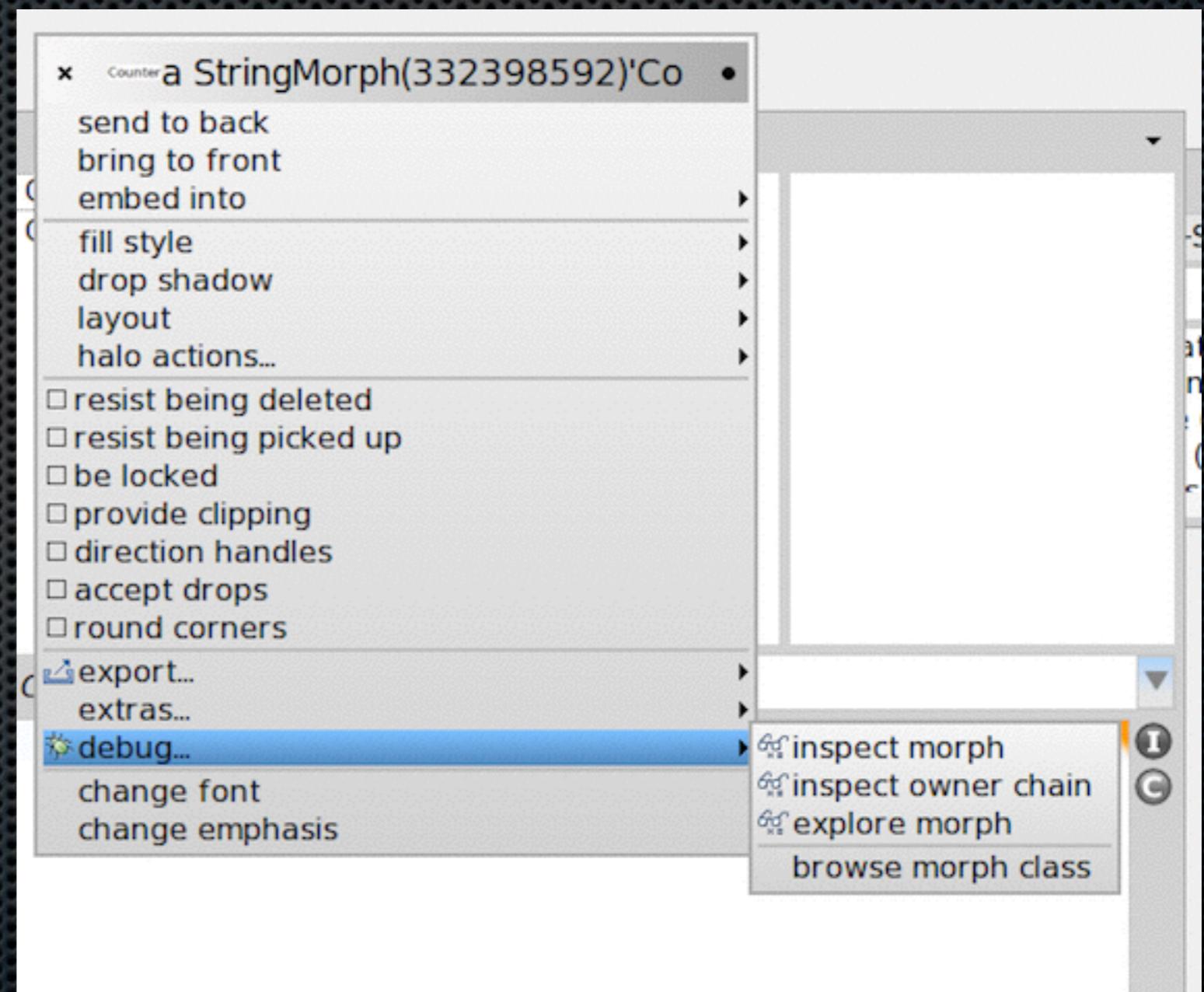
**Learning from the
system...**

Click on it :)

Cmd+shift+option



- Cmd-Shift+option



Finder :)

Finder

match ▾ Search Regexp Selectors ▾ Packages... All Packages

- cachedMatchingPresentations: (GLMPane)
- canAnnounceMatchingPresentationsChanged: (GLMTransmissionContext)
- ▶ canMatch:
- ▶ canMatchMethod:
- canStartMatch:in: (RxMatchOptimizer)
- categoriesMatching: (SystemOrganizer)
- ◀ categoriesMatching:

Browse Senders Implementors Versions Inheritance Hierarchy

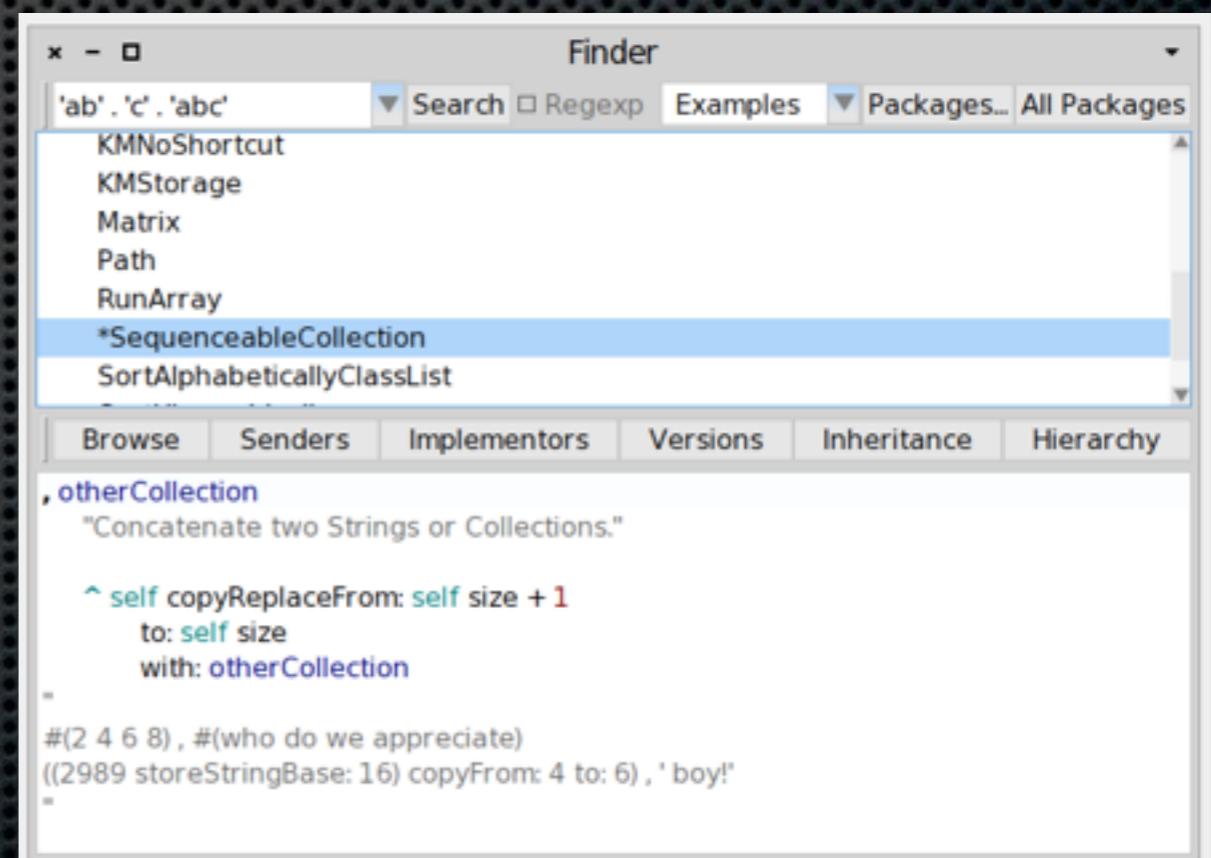
canStartMatch: aCharacter in: aMatcher

"Answer whether a match could commence at the given lookahead character, or in the current state of <aMatcher>. True answered by this method does not mean a match will definitely occur, while false answered by this method *does* guarantee a match will never occur."

aCharacter isNil ifTrue: [^true].
^testBlock == nil or: [testBlock value: aCharacter value: aMatcher]

The screenshot shows the Pharo Smalltalk Finder interface. The search bar at the top contains the word 'match'. Below the search bar is a list of results. The result 'canStartMatch:in:' is currently selected, highlighted with a blue background. The interface includes tabs for Browse, Senders, Implementors, Versions, Inheritance, and Hierarchy. Below the results, there is a detailed description of the 'canStartMatch:' method, its purpose, and its implementation.

give examples and
get the methods that works!



A system to learn advanced
oo design

How to implement not?

- false not -> true
- true not -> false

Try Pharo Now!

<http://pharo.org/download>

The screenshot shows the Pharo.org website's download section. At the top, there is a navigation bar with links: News, Download (which is highlighted in blue), Documentation, Community, Contribute, Stories, and About. Below the navigation bar, the main title "Download Pharo" is displayed in large blue text. A descriptive paragraph below the title reads: "Version 4.0 for OS X, GNU/Linux, and Windows. The zip files contain all necessary files. Just download and run the executable." Three blue buttons are present at the bottom, each labeled with a platform icon and text: "Mac OSX" (with an Apple logo), "Windows" (with a Windows logo), and "GNU/Linux" (with a Linux logo).

Pharo

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Download Pharo

Version 4.0 for OS X, GNU/Linux, and Windows. The zip files contain all necessary files. Just download and run the executable.

Mac OSX Windows GNU/Linux

<http://pharo.org>

Fun, simple
Excellent for teaching
Pure & elegant
Highly productive
Empowering Tools
Full access

