Contributing to Pharo: Easy, simple, fun and empowering

stephane.ducasse@inria.fr https://github.com/pharo-project/pharo

Remember ...

Learning by contributing to Open-Source Software

stephane.ducasse@inria.fr https://github.com/pharo-project/pharo

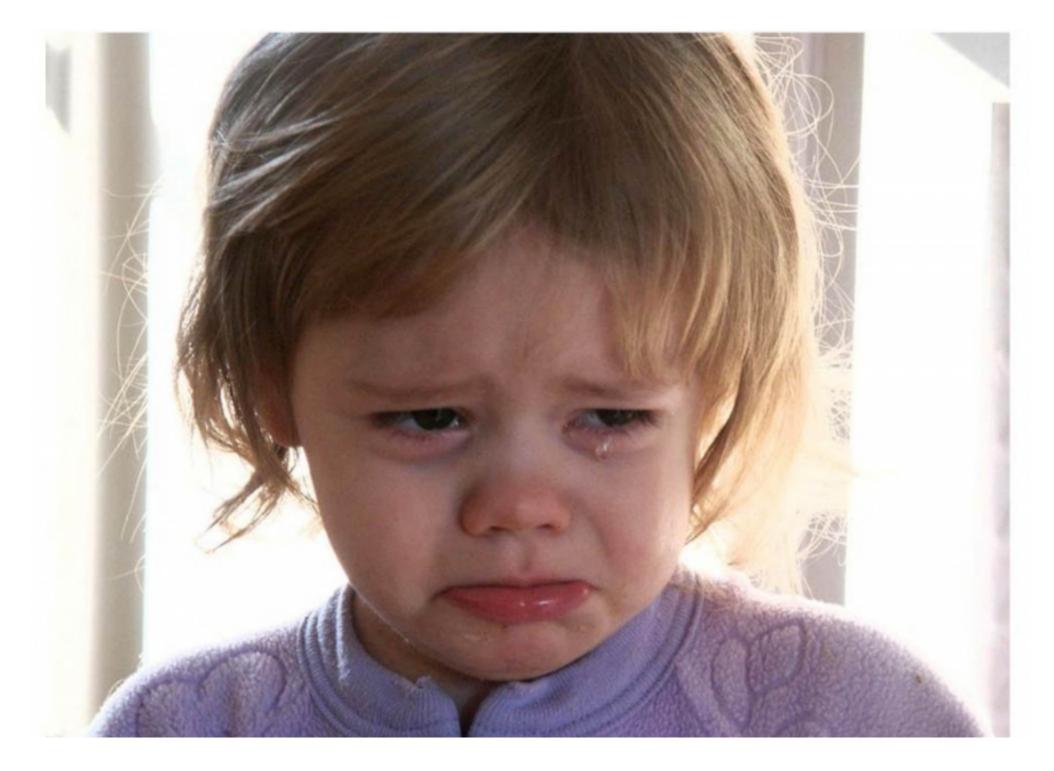
https://rmod-files.lille.inria.fr/Team/Presentations/2019-ESUG-LearningByDoing-Ducasse.pdf

How to practice software skills?

How to practice software skills?

- Program (but how to get feedback) code reviews are precious but difficult to get
- Code katas (always fun)
- Participate to sprints pair program
- Participate to open-source

But I'm a noob



And the world is complex

Wait wait wait...

We are all noobs!



The solution is just some clicks away...

Take any opportunity to read code

Take any opportunity to contribute

A PIECE OF CAKE

Contributing is easy & simple

Possible contributions

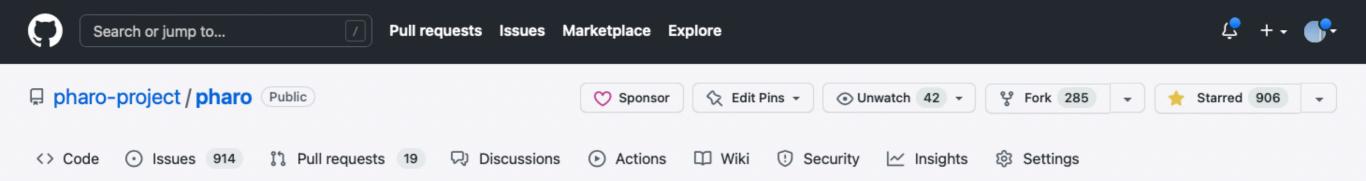
- Read/answer newbie questions
- Participate to the wiki
- Review bug entry description
- Review bug fixes
- Write tests for bug entries
- Improve test coverage
- Improve comments

Take any opportunity to contribute

Contribute to Code

- Set up your own Pharo fork/Image
- Create a branch
- Improve Pharo
- Commit
- PR

Step: Fork the pharo repo



Create a new fork

A *fork* is a copy of a repository. Forking a repository allows you to freely experiment with changes without affecting the original project. View existing forks.



By default, forks are named the same as their parent repository. You can customize the name to distinguish it further.

Description (optional)

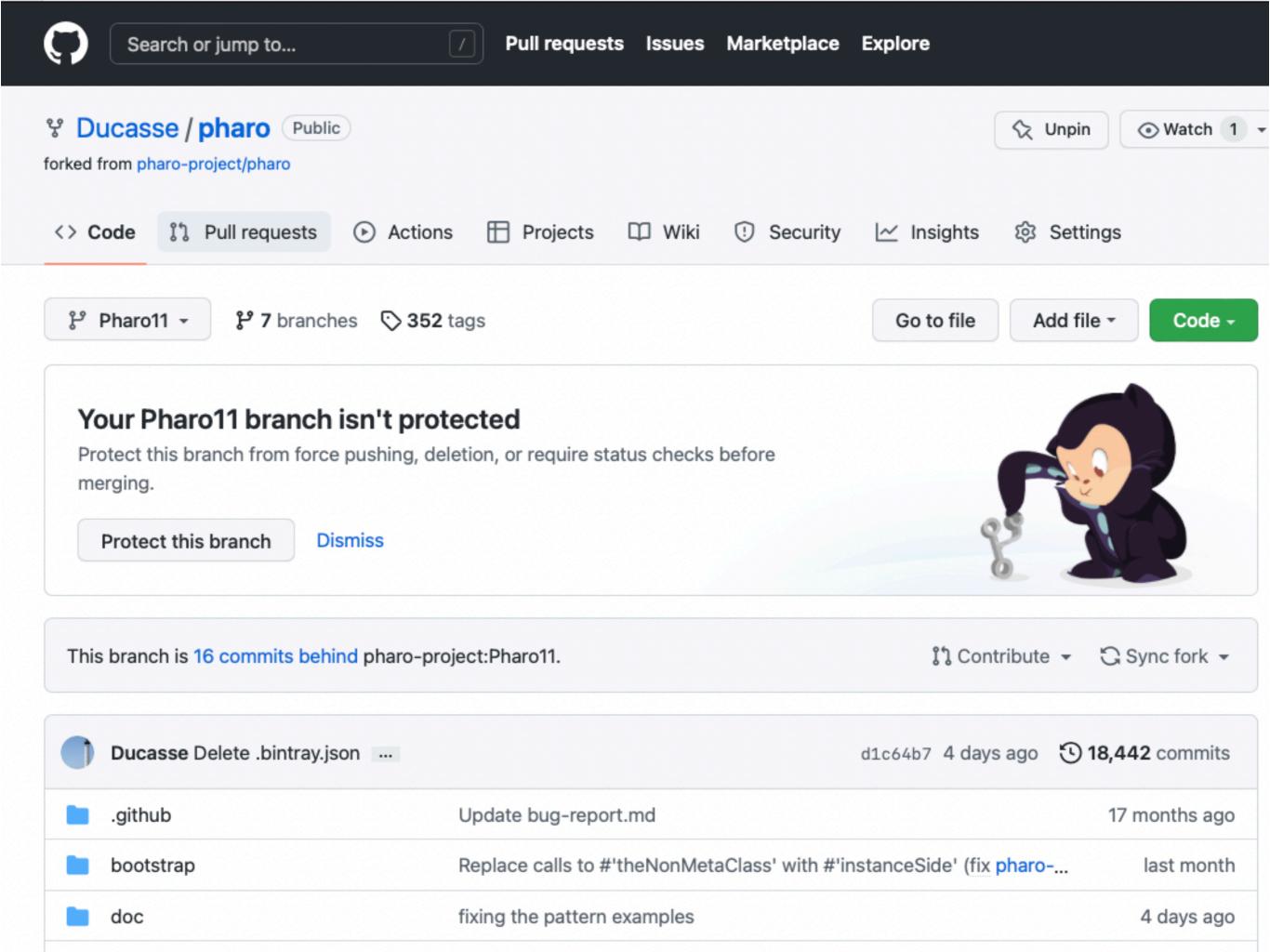
Pharo is a dynamic reflective pure object-oriented language supporting live programming inspired by Smallt

Copy the Pharo11 branch only

Contribute back to pharo-project/pharo by adding your own branch. Learn more.

(i) You are creating a fork in the pharo-project organization.

Create fork



Step: Grab latest image

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¢ Name	Architecture	Pharo Version	Last modified				
P11-HappyContributing	64	110	just now				

No image selected image, last edited N/A

 Description
 <no description given>

 Origin template
 (noname)

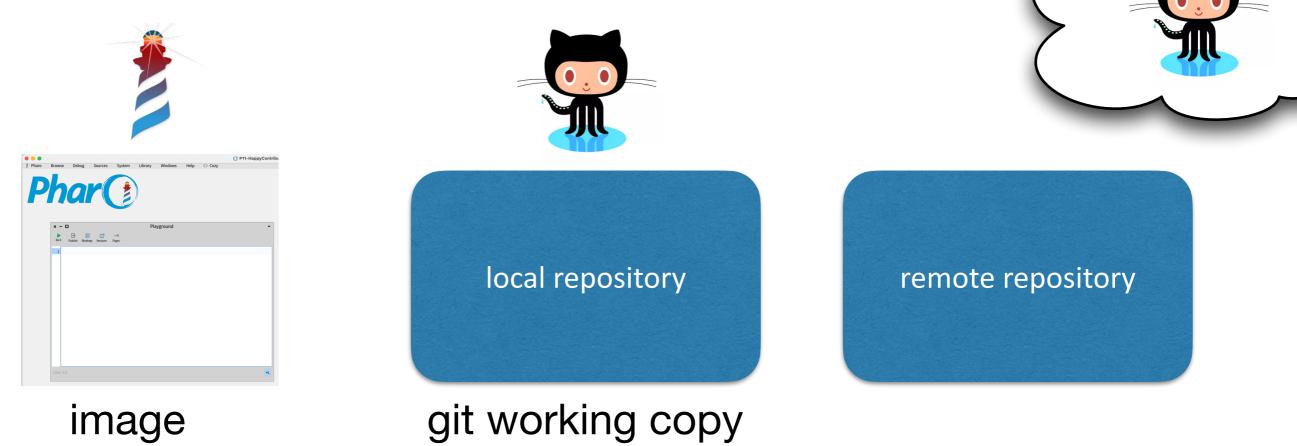
 Initialization script
 <none>

 Location

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Situation

- The image has code too
- The local and remote repo can be desynchronized
- The image and local repo can be desynchronized



Step: Repair

Repair repository	
Iceberg does not find a git repository. Please clone the repository or change the repository location to an existing Git repository	
Locate this repository in your file system	
+ Clone again this repository in a new location	
Ok Cancel	

Step: Repair

Now your Pharo image knows where is the code repo

if fetch required, fetch

Repair repository

ICD03IL011

This image has a loaded version of the code from commit 55d062a, but Iceberg does not find the commit in your local Git repository. You may fetch the correct commit from a remote repository or discard the code of your image and load the version that is in the repository.

CFetch remote commits including the commits of the image version

Checkout an existing branch discarding image changes

Discard image changes and load repository version

You can fetch commits from a remote to find your image commit in your repository.

This will not lose any change in the image or the repository.

It will only fetch all the commits from the remotes, without changing the current commit (HEAD) nor branch.

This situation happens because the code loaded in your image is not in the branch currently selected on your repository.

After doing the fetch, it is required to create a new branch to commit into the repository. A second repair action will help you.

Cancel

Remember

Iceberg actions are sorted from more likelihood to less likeli hood

Now

Now your local get the latest changes (according to the image) from Pharo

Detached Working Copy

× - 🗆	Repositories	-
C Fetch all		Settings Add
Repositories	Status	Branch
*pharo	Detached Working Copy	11526-Refactoring2-core-should-be-merge
Spec2	Local repository missing	Unknown
NewTools	Local repository missing	Unknown
Roassal3	Local repository missing	Unknown
Microdown	Local repository missing	Unknown
BeautifulComments	Local repository missing	Unknown
iceberg	Local repository missing	Unknown
libgit2-pharo-bindings	Local repository missing	Unknown
tonel	Local repository missing	Unknown

Repair

Now it will create a branch pointing to the state of your image

Create a "bottom" branch

Repair repository

The loaded code in the image starts from commit 55d062a. This commit does not correspond with the commit in the head of the current branch of the repository (Commit e54a9ce). You need to synchronize them to continue. You need to discard your image changes or change the HEAD of the repository to point to the commit.

- Create a new branch pointing to your image commit
- Checkout an existing branch and merge the changes into the image (without discarding image changes)
- Checkout an existing branch discarding image changes
- Discard image changes and load repository version
- It creates a new branch from the commit your image is pointing to.
- This will not lose any change in the image.

This situation happens because the code loaded in your image does not correspond with the status of your repository.

This operation will modify the state of your working copy on disk. All non-commited changes in your disk working copy that are not in the image will be lost (this can happen if you edited the repository from outside). If you want to keep them, perform a commit from outside before.

Cancel

~

v

This way you can always come back "here"

× – D C Fetch all	Repositories		Settings	+ Add
Repositories *pharo Spec2 NewTools Roassal3 Microdown BeautifulComments iceberg libgit2-pharo-bindings tonel	Status Uncommited changes Local repository missing Local repository missing Local repository missing Local repository missing Local repository missing Local repository missing Local repository missing	Branch 2022-08-18-Bottom Unknown Unknown Unknown Unknown Unknown Unknown Unknown		

Step: Create a Branch for your fix

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tonel Local repository missing Unknown	ibgit2-pharo-bindings	Local repository missing	Unknown		
	tonel	Local repository missing	Unknown		

Step: Do your fix

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Step: commit to your fork

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e ▼ ♥ Symbol	<pre>"testing" isUnary "Answer whether the receiver is</pre>	<pre>"testing" isUnary "Answer whether the receive "#new isUnary >>> true" "#>> isUnary >>> false" "#between:and: isUnary >>> ^ self precedence = 1</pre>
Cannot push new branch automa	tically. Use the `Push` option 🗹 Save the image when	commiting 🗹 Run Critiques when commiting
Enhance isUnary method comment		

Step: Push to your fork

< - D		Push phato/Ennis	sUnaryComment to origin/EnhisUnaryComment	
ush to remote:	origin <git@< th=""><th>github.com:Ducasse/p</th><th>haro.git></th><th>* -</th></git@<>	github.com:Ducasse/p	haro.git>	* -
imestamp	Commit	Author	Description	
022-08-18 09:31	476d6df	StéphaneDucasse	Enhance isUnary method comment	
022-08-17 13:57	55d062a	Marcus Denker	Merge pull request #11535 from MarcusDenker/11533-Ring-RGMethodDefini	itionisD
022-08-17 10:32	ae3adaa	Marcus Denker	add #isDoIt so that RB methods can be used where compiled methods are us	sed. fix
022-08-17 09:30	0afc8d5	Marcus Denker	Merge pull request #11510 from aboubacardiawara/DrTests-reruningfailure	Clean
022-08-17 09:20	44499f8	Marcus Denker	Merge pull request #11531 from lydiathiel/printstring Fix spurious creation	of strea
022-08-16 10:51	4db3675	Pablo Tesone	Merge pull request #11516 from nrainhart/simd-bytecode-support SIMD by	tecode
022-08-16 01:18	bb92fb0	Lydia Thiel	Merge remote-tracking branch 'upstream/Pharo11' into printstring	
022-08-16 01:17	8a0af42	Lydia Thiel	Fix for #11336	
022-08-14 18:28	ca477f0	StéphaneDucasse	Merge pull request #11521 from Ducasse/11514-Harvesting-RB-Help Fixes: #	#11514
022-08-14 14:56	1df5729	StéphaneDucasse	Merge pull request #11490 from guillep/fix/11404 Fix senders/implementor	s of cla
022-08-14 14:55	26dbbe1	StéphaneDucasse	Merge pull request #11522 from Ducasse/Pharo11 Delete .bintray.json	
022-08-14 14:53	ac07476	StéphaneDucasse	Fixing testCopyPackageAndChangesCopyReferences for now	
? Info 🛃 H	EAD to 476d6	df 🛛 🛃 476d6df to 5	5d062a	
Commit:	[476d6df] 47	6d6df3ab40481378f81f	f2b51b0ea6726cfa84	
Parents:	55d062a			
Author:	StéphaneDu	casse		
Date:	2022-08-18 0	9:31		
Tags:				
Comment:	Enhance isU	nary method comment		

Step: Do a PR

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Github	Create new bra	anch for issue		
Browse this version in Calypso	₩B Remotes	▶ origin pharo-p	roject 🕨	View Pull Requests Create Pull Request Open on github Remove Branches

Step: Do a PR

Search or jump to	Pull requests Issues	Marketplace	Explore	
Y Ducasse / pharo Public forked from pharo-project/pharo				
<> Code 11 Pull requests () Actions	🗄 Projects 🖾 Wiki	() Security	🗠 Insights	ô Settings
P EnhisUnaryComment had recent pushes	less than a minute ago			Compare & pull request
្រំ Pharo11 - ំំំំំ 7 branches ा> 352 ta	ags		Go to file	Add file - Code -
Your Pharo11 branch isn't prote Protect this branch from force pushing, dele merging. Protect this branch Dismiss		s before		

Step: Check out your "bottom" branch

• And now you can fix another one :)

× - 🗆	Repositories			•
C Fetch all			Settings	+ Add
Repositories *pharo Spec2 NewTools Roassal3 Microdown BeautifulComments iceberg	StatusUncommited changesLocal repository missingLocal repository missing	Branch 2022-08-18-Bottom Unknown Unknown Unknown Unknown Unknown Unknown		
libgit2-pharo-bindings tonel	Local repository missing Local repository missing	Unknown Unknown		

No need to refork or sync your repo

- Do not care if your fork is not up to dat
- When you will do the fetch, your local will be updated (from latest Pharo)
- When you will push to your remote, your local will send the latest Pharo change there

Contributing to Pharo is easy

- You will improve Pharo
- You will learn a lot
- You will meet friends
- You will build network

[Free side effect]



When you contribute to open-source you improve your visibility

[Remember]

Every thing you do today has an impact on your tomorrow!

[how did we meet with Marcus D.?]

[we reviewed squeak bug issues]

[then we created Pharo :)]