

# Inheritance and Lookup

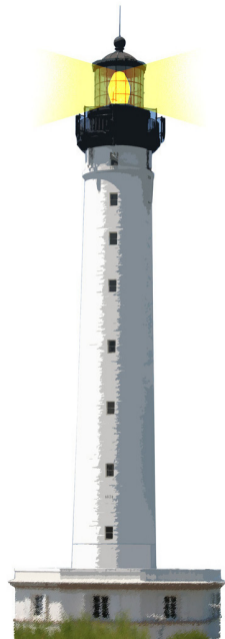
## 4: doesNotUnderstand: aMessage

Damien Cassou, Stéphane Ducasse and Luc Fabresse

W4S04



<http://www.pharo.org>



# Goal

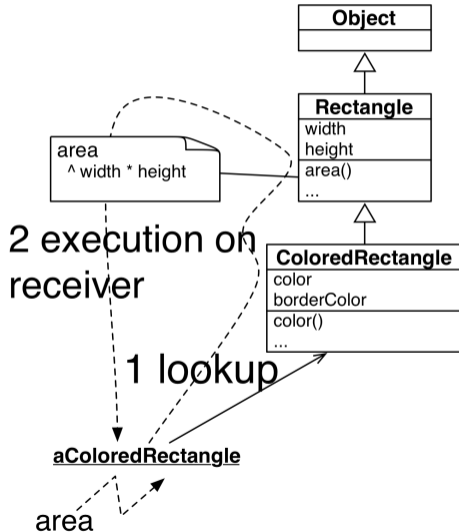
- A hook message is sent when the lookup fails
- Classes can customize the reaction to this failure



# Message Sending

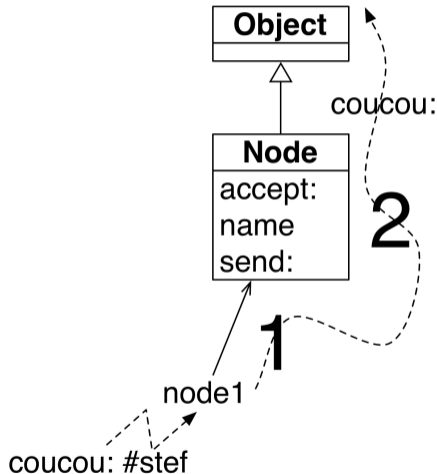
Sending a message is a two-step process:

1. look up the **method** matching the message
2. execute this method on the **receiver**

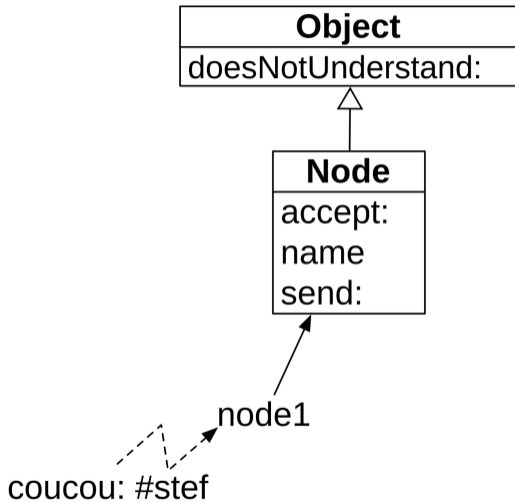


# When No Method is Found

- if no method is found in the hierarchy, `doesNotUnderstand:` is sent to the receiver
- the initial message is passed as parameter



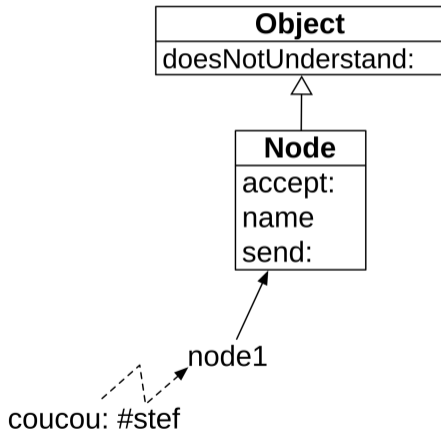
# When No Method is Found



# Step by Step...

node1 coucou: #stef

1. coucou: **looked up** in Node
2. **not defined** in Node -> **continues** in Object
3. **not defined** in Object -> **send** doesNotUnderstand: **to** node1
4. doesNotUnderstand: **looked up** in Node
5. **not defined** in Node -> **continues** in Object
6. doesNotUnderstand: **is found** and **executed**



# doesNotUnderstand: is a Message

- doesNotUnderstand: is a message
- any class can implement the corresponding method
- used for automatic delegation, proxy, distribution



# doesNotUnderstand: and the Debugger

When no class redefines doesNotUnderstand:

- ○ doesNotUnderstand: **in Object is executed**
- **this method raises a MessageNotUnderstood exception**
- **when not handled, this exception opens a debugger**



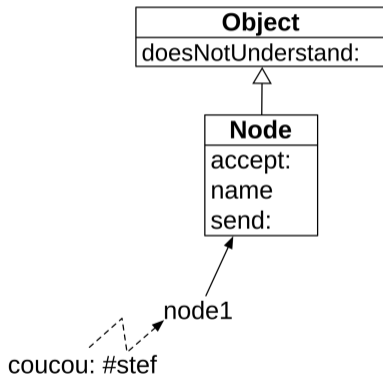


# Catching MessageNotUnderstood Error

MessageNotUnderstood is just an exception, code can handle it:

```
Node >> sayHello
self coucou: #stef

Node >> welcome
[ self sayHello ]
on: MessageNotUnderstood
do: [ Transcript show: 'Something
went wrong with a message' ]
```



# What You Should Know

- The lookup sends `doesNotUnderstand:` when it can not find a method
- Each class can implement this method
- The default implementation of `doesNotUnderstand:` raises an exception that can be handled



A course by



and



in collaboration with



Inria 2016

Except where otherwise noted, this work is licensed under CC BY-NC-ND 3.0 France

<https://creativecommons.org/licenses/by-nc-nd/3.0/fr/>