

Did You Really Understand Super?

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What you will learn

Revisit

- super
- Message lookup
- Class methods



A little puzzle

Die class >> new

```
| inst |  
inst := super new.  
inst initialize.  
^ inst
```

We execute the following expression: Die new



Questions

Die class >> new

```
| inst |  
inst := super new.  
inst initialize.  
^ inst
```

- What is inst?
- What is super?
- What is super new?



Hint: super is Not...

Die class >> new

```
| inst |  
inst := super new.  
inst initialize.  
^ inst
```

- No, super is not the superclass
- No, inst is not an instance of the superclass



Hint 2: super is the message receiver

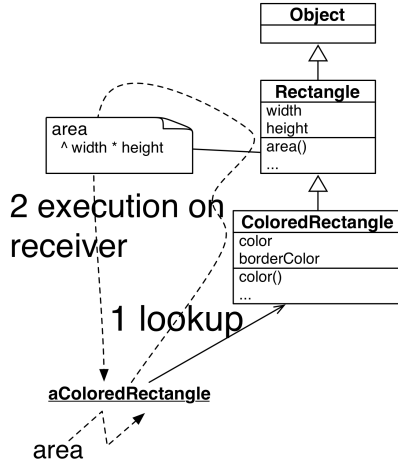
Die class >> new

```
| inst |  
inst := super new.  
inst initialize.  
^ inst
```

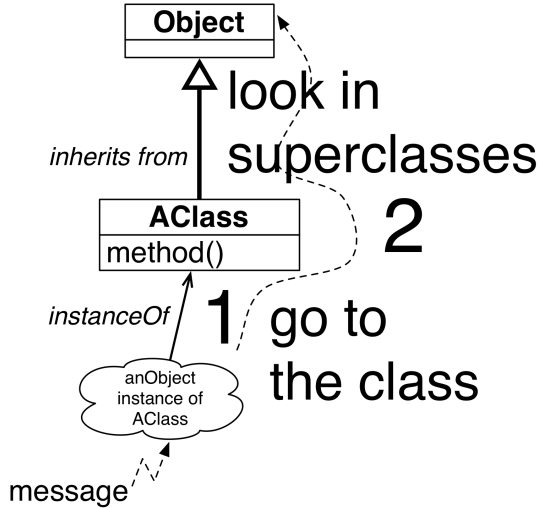
- The message is Die new
- So the receiver is the class Die



Sending a message: Lookup + execute on receiver



Remember: Method lookup



Solution

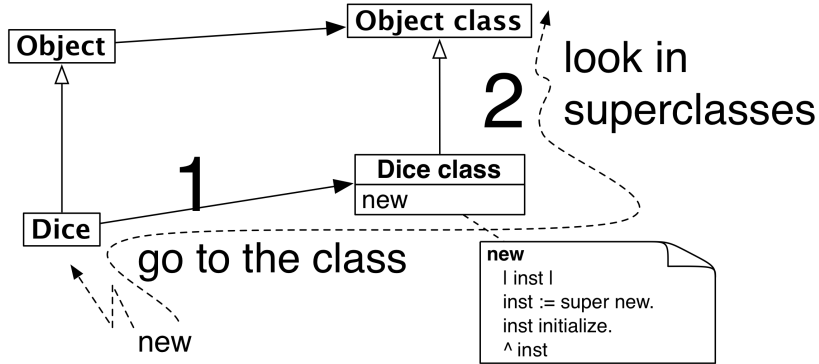
Die class >> new

```
| inst |  
inst := super new.  
inst initialize.  
^ inst
```

- `super` is the receiver: the class `Die`
- Look for `new` in the superclass of the class `Die class` (Pay attention not `Die`)
- Once found we apply to the receiver: `Die`
- We get an instance of the class `Die` and send it `initialize` and return it



Solution



Summary

- Sending a message is looking up the method and applying it on the receiver
- Now you should really understand `super` :)
- `super` is the receiver of the message and the method lookup starts in the superclass of the class containing the expression



Challenge yourself

Imagine we have:

```
A >> foo  
  ^ super class == self class
```

What is the result of A new foo and why?



Produced as part of the course on <http://www.fun-mooc.fr>

Advanced Object-Oriented Design and Development with Pharo

A course by

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