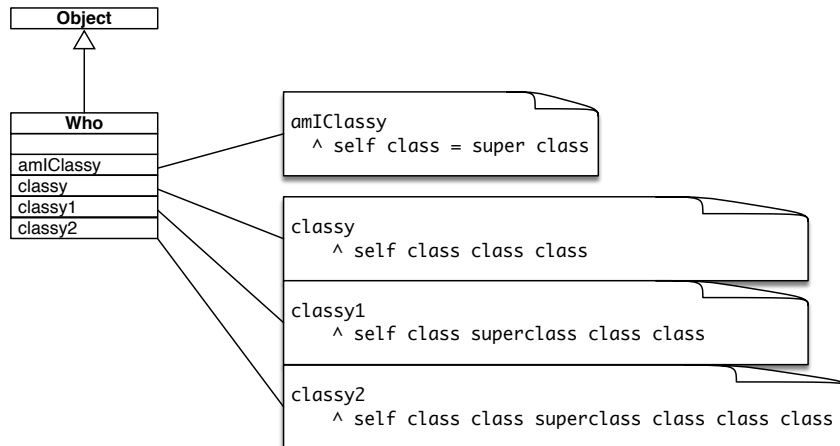


Assignment 03 — 03/10/2018 – v1.0b

Smalltalk: Understanding Classes and Metaclasses

Please submit this exercise by mail to sma@list.inf.unibe.ch before 10 October 2018, 10:15am.

Exercise 1 – Class identity (1.5 Points)



What are the results (either `True` or `False`) of the following expressions? Explain!

Hint: Please refer to the UML diagram above for the three questions below.

- `Who new amIClassy.`
- `Who new classy = Who new classy1.`
- `Who new classy1 = Who new classy2.`

Exercise 2 – Abstract methods (1.5 Points)

Find all abstract methods of the class `Collection`.

Exercise 3 – Class hierarchy (2 Points)

What is the name of Pharo's class hierarchy root class? What is its purpose?

Please continue reading on next page.

Exercise 4 – Sub and super classes (3 Points)

How many super classes does the class `Collection` have? How many direct and indirect subclasses does it have? Please provide your code *and* your results.

Hints: Direct subclasses are classes which extend a base class directly (e.g. relation parents to children), whereas indirect subclasses extend a base class not as first-class citizens (e.g. relation grandparents to grandchildren).

Exercise 5 – Object instantiation (2 Points)

A new class instance is being created by sending the message `new` to the respective class. Where is `new` defined? Describe also Pharo's method resolution strategy for the `new` message.