

WS04: Smalltalk Examen

Are allowed all the material provided during the lecture as well as books.

1. What are Monticello and SqueakSource for?
2. Give 3 features of Seaside that make this framework superior to HTML to do a web application.
3. Summarize the Smalltalk object-model.
4. Explain the syntax of message in Smalltalk. Provide examples.
5. Explain why in Smalltalk conditionals are done the following way: `(anObject isString) ifTrue: [self beep] ifFalse: [self halt]`.
6. What is the difference between an instance variable and a classVariable?
7. What is a block? Why do we need blocks?
8. Why do I have to put `[` and `]` after `ifTrue:` and `timesRepeat:?`
9. Give an example of iteration in Smalltalk.
10. What is the semantics of *self* and *super*? Give an example showing the difference.
11. What is `new:?` Where is `new:` implemented?
12. What do you think about the following sentence: “to understand the expression `Array new: 6` I look in the superclass of `Array`.” Explain why?
13. What is `thisContext`?
14. What is a metaclass? Why does `Metaclass` inherit ultimately from `Object`?
15. Is there a difference between a *class variable* and an *metaclass's instance variable*?
16. In Squeak, it is possible to check if a given object is a class or not by sending the message `isBehavior` to it. How would you implement such a feature?
17. **Optional bonus question:** Describe verbosely how you would implement a continuation mechanism in Squeak?
18. **Optional bonus question:** What is the difference between `become:` and `primitiveChangeClassTo:?`
19. **Optional bonus question:** What is the value of the expression `self class == super class` contained in a method `foo` in a class `A` which has `Object` as superclass?
20. **Optional bonus question:** What is double dispatch?