

Lecture 1 - Sep. 7

Syllabus & Review on OOP

***Object Orientation
Classes vs. Objects on Eclipse***

Course Learning Outcomes (CLOs)

CLO1 Implement an Application Programming Interface (API).

CLO2 Test the implementation.

CLO3 Document the implementation.

= Clicker.

CLO4 Implement aggregations and compositions.

CLO5 Implement inheritance.

CLO6 Use recursion.

CLO7 Implement linked lists.

CLO8 (Informally) prove that recursive algorithms are correct and terminate.

CLO9 (Informally) analyse the running time of (recursive) algorithms.

X

- Labo P1

↳ Eclipse (remote labs)

↳ github (private).

↳ documents

↳ how to infer Java code from JUnit tests

↳ programming pattern (C1)

↳ tutorial

↳ videos

↳ submit exported project

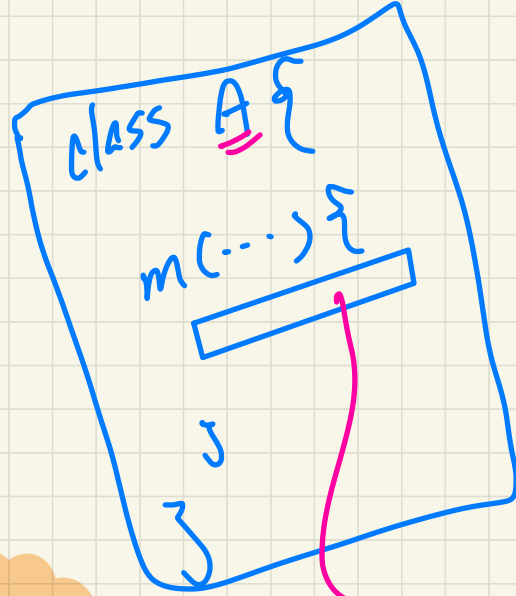
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IDE -
integrated
development
environment

Eclipse

↳ editor

↳ debugger



this.A.c.d.e.

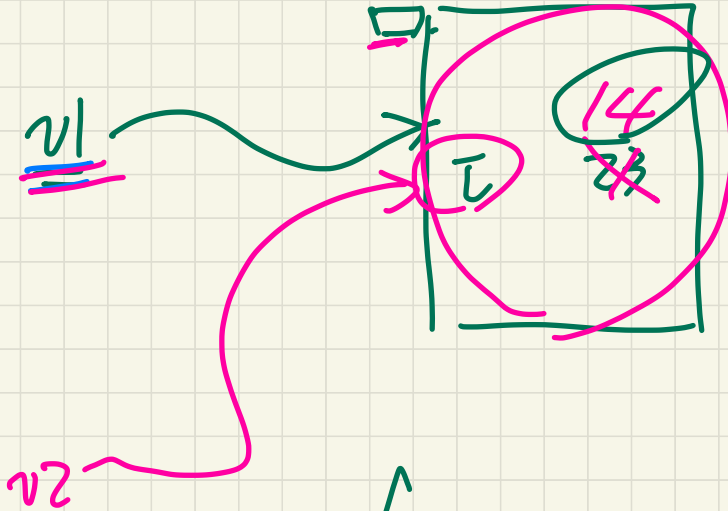
aliasing

java ref. variables
are pseudo-
pointers

v1. i = 14

v2. i (14)

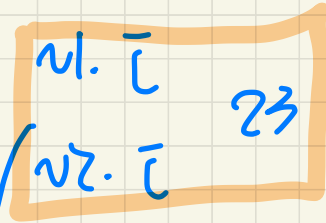
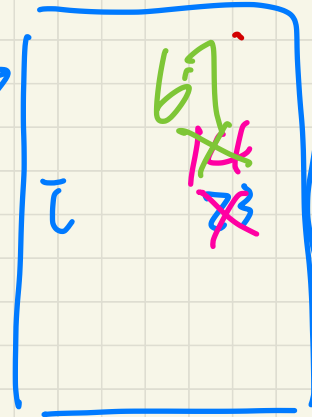
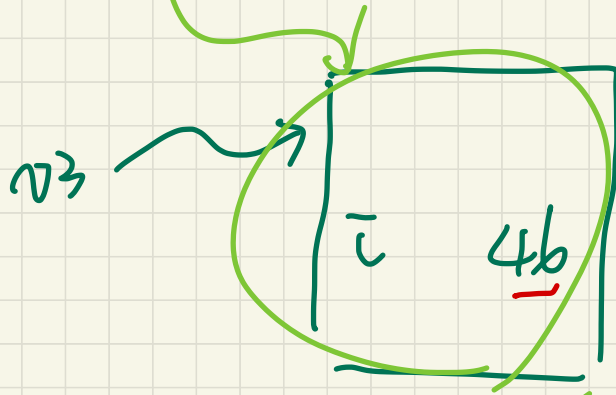
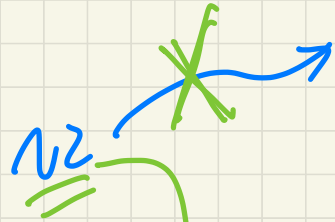
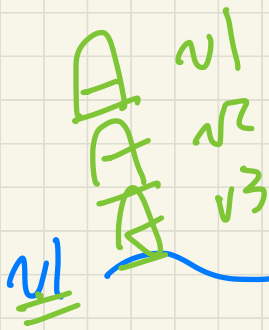
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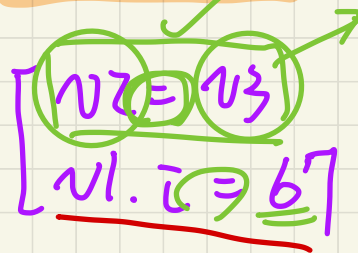
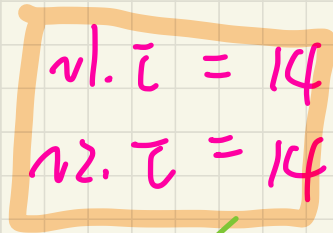
v1

i++ (pointer arithmetic)

$\text{Total } \bar{c} = 23$
 $\text{Total } \bar{j} = 46$
 $\bar{c} = \text{Total } \bar{j}$



$v1.c = 14$



$v1.c \quad 67$
 $\hline v2.c \quad 46$