Meetings 27: Final Review

Announcements

- Final Thu 7:45 pm – 9:45 pm, ECCR 245
- Presentations Next Week Tue 12/6, Thu 12/8
  - Sign-up via web form
  - Extra Credit for the presentations
  - Upload slides on moodle at least 30 min before class
  - 7 minutes long – convey your excitement about the problem!

- Liveness Analysis
- Bound and Unbound Methods
- Closure Conversion

Liveness Analysis

while \( x \) do
  \( y = 1 \)
  \( z = y + a \)
end while
Bound and Unbound Methods

What are they?

unbound method
runtime thingy that captures a method from a class (who receiver object) "self"

bound method
runtime thingy that captures a method and a receiver object

What do they look like at run-time?

unbound (class, closure)

bound (receiver object, closure)

When do they arise (i.e., created)?

unbound class C:
def m(self, x):
  return x
unbound = C.m
l = C.m()

bound o = C()
bound = o.m

C -> R_2, R_2 -> (e_3, e_3, m), 01 -> l_1,
l_1 -> (e, e_3), ...
What is a method?

Methods are closures in class attributes!

Bob

\[ o.m = \text{lambda} \]

Bob2

\[ C.m = \text{lambda} \]

Closure Conversion