Meeting 12: Operational Semantics

Today

- Your questions on Lab 3
- Operational semantics
- Evaluation order, short-circuiting and dynamic scoping
Announcements

- Lab 3 out and due Fri 9/30 to Sat 10/1.
- Lab 3 in-class exercise, Tue 10/4
- Moodle Midterm Review exercise, due Mon 10/3 to Tue 10/4 at 6pm
- Midterm, Thu 10/6
  - No interviews or labs out during midterm week.
  - Lab 3 interviews starts Fri 10/7 to the following week of 10/10
  - Allowed: 1 side of letter-sized paper (8.5"x11") handwritten "crib sheet" created by you
- Prof. Chang is traveling next week Tue 10/4 and Thu 10/6. Conduct class by video on Tue 10/4.

Lab 2 Interviews
Reminder: to help you understand what you understand and don't understand for the midterm. If you didn't do well, please come see us.

Lab 3 builds on Lab 2 (and Lab 4 builds on Lab 3), so keep working at it. Even if you miss submission (for your group), keep working at it.

Questions

1. substitute for call function ✓
2. propagate
3. jsy test — TDD with lab3spec
4. dynamic scoping
5. debugging
\[
\begin{align*}
\text{const } x &= 1; \\
\text{const } g &= (y) \Rightarrow x; \\
\text{const } h &= (x) \Rightarrow g(2); \\
\end{align*}
\]

\[h(3)\]

static scoping 1
dynamic scoping 3

\[E_0 \vdash \Box\]

\[\begin{array}{l}
\text{const } x \rightarrow 1, g \rightarrow (y) \Rightarrow x, h \rightarrow (x) \Rightarrow g(2), h \rightarrow (3) \downarrow \Box \end{array} \quad \text{all}
\]