Section 8:
Operational Semantics*

CS 164 @ UC Berkeley, Spring 2024

*for ChocoPy, and only the basics

Reminders

WA 5 is due on Thursday, April 11 at 11:59 PM PST.

PA3 is released!

- Checkpoint is on April 8th
- Final due date is April 15th

Reminder to take care of yourselves, and to prioritize your health! WAs are worth 5% of your grade so don't stress too much about them!

Operational Semantics

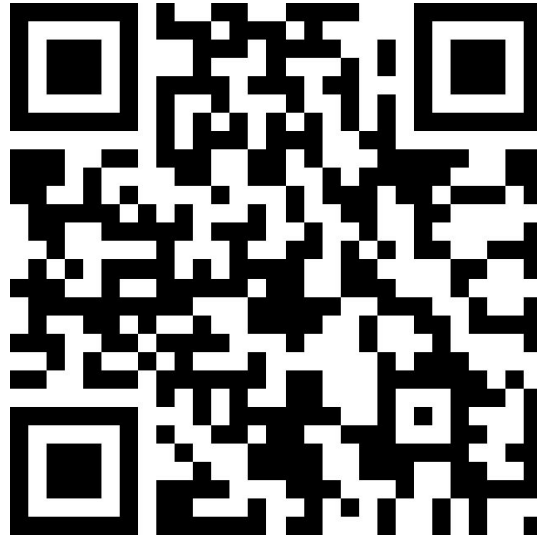Rules which use <u>contexts</u> to evaluate <u>expressions</u> and <u>statements</u>

Syntax:

Hypotheses over a conclusion

$$\frac{\begin{array}{c} E(id) = l_{id} \\ S(l_{id}) = v \end{array}}{G, E, S \vdash id : v, S, \_} \qquad [\text{VAR-READ}]$$

Contexts

E   The runtime environment: Maps id's to locations

S   The runtime storage/memory: Maps locations to values

G   The global environment: Maps globally defined id's to locations

$$\frac{\begin{array}{c} E(id) = l_{id} \\ S(l_{id}) = v \end{array}}{G, E, S \vdash id : v, S, {}_-} \quad [\text{VAR-READ}]$$

Anonymous feedback form:
http://tinyurl.com/SoraDisFeedback