Assignment 8

Exercises on lecture 8/chapter 8

29 October 2024

We will work on the following exercises during the next exercise class. You can choose among the problems of sheet 4 – 9 to work one out and submit it individually for feedback.

Exercise 8.1 — Show that the map upd_x is monotone.

Exercise 8.2 — Prove lemma 8.1, where you can use that the component-wise order and projections defined in the proof of theorem 7.10 provide binary products in **Pos**.

Exercise 8.3 — Complete the proof of lemma 8.3.

Exercise 8.4 — Show that the map upd_x is continuous. (Hint: Use that the domain of upd_x is discrete, see theorem 7.6.)

Exercise 8.5 — Finish the proof of lemma 8.7, that is, prove that ite is monotone and continuous.

Exercise 8.6 — Prove theorem 8.9 by induction on contexts, and using that D is defined in terms of composition and unique mapping properties.