

INF5150 Exercises 2008-09-29

The sequence diagrams for the exercises are on the next page.

1. Calculate the semantics of each of the sequence diagrams Ex1, Ex2 and Ex3.
2. Answer the following with reference to the definition on foil 31 from 2008-09-19:
 - a. Is Ex2 a refinement of Ex1?
 - b. Is Ex1 a refinement of Ex2?
 - c. Is Ex3 a refinement of Ex1?
 - d. Is Ex1 a refinement of Ex3?
3. Make a specification called MySpec that is a refinement of Ex3.
 - a. Is Ex1 a refinement of MySpec?
 - b. Is MySpec a refinement of Ex1?
4. Is Ex7 a refinement of Ex6?
5. Consider the sequence diagrams Ex1, Ex6 and Ex8. Does the refinement relation hold between any of these specifications?
6. Consider only for the sake of this exercise an alternative refinement relation for interaction obligations defined by the following:
 (p',n') is a refinement of (p,n) if and only if $p \cup n = p' \cup n'$ & $p' \subseteq p$.

What would this correspond to in pre/post-specifications?

- a. Weakening the pre-condition
- b. Strengthening the post-condition
- c. Both weakening the pre-condition and strengthening the post-condition
- d. None of the above

