Discussion questions for

*Ur/Web: A Simple Model for Programming the Web*

Comp 150PLD

November 12, 2014

1 Warm-ups

1. What is the domain of Ur/Web?
2. What are the design goals of Ur/Web?
3. Describe the architecture and components of typical modern web applications.
4. What are disadvantages of the way typical modern web applications are built?

2 Design Evaluation

1. What programming model does Ur/Web provide?
2. What abstractions and features does Ur/Web provide?
3. Explain the code in Figure 1, both what it does and the Ur/Web features that it uses.
4. Explain the new code in Figure 2 and the additional Ur/Web features it uses.
5. What are sources and how are they used in Ur/Web?
6. Explain the new code in Figure 4 and the additional Ur/Web features it uses.
7. What are channels and how are they used in Ur/Web?
8. Explain the new code in Figure 6 and the additional Ur/Web features it uses.
9. What features of Ur/Web contribute to a simple model of concurrency?
10. What features of Ur/Web contribute to encapsulation?
11. What features of Ur/Web contribute to security?
12. Describe how Ur/Web is implemented.
13. How did the author evaluate the design of Ur/Web? How could the evaluation be improved?
3 Evaluating Ur/Web as a Domain-Specific Language

1. What are the advantages and disadvantages of embedding Ur/Web in Ur?
2. Describe Ur/Web’s runtime system. How does it contribute to the goals of the language?
3. Describe Ur/Web’s type system. How does it contribute to the goals of the language?
4. Does Ur/Web have or could it benefit from Ur/Web-specific libraries? Explain.
5. Does Ur/Web have or could it benefit from Ur/Web-specific tool support? Explain.
6. Discuss to what extent Ur/Web is a DSL.
7. Do you think the language achieves its goals?
8. How might the design be improved?
9. Do you like the language? The paper?

4 More detailed questions.

These might help you answer the questions above or guide your understanding of the paper.

1. Be able to explain the various Ur/Web code fragments in the paper.