Lecture 17

CPSC 110

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Clicker questions

- See the Module 6b notes for a review on all the template rule names, what the relationships in templates are called, and what happens in the functions because of those templates
  - Type comments
    * Reference
    * Self-reference
    * Mutual reference
  - Function template
    * Natural helper
    * Natural recursion
    * Natural mutual recursion

Questions

- To **`else`** or not to **`else`** in a template?
  - We can use **`else`** in a list because it is a standard template. It's always going to look the same.
  - We should NOT use **`else`** in a generic definition with `one-of`, because we might extend it later on.
    * So, if a definition has multiple compound cases, use a predicate for EVERY case! Do NOT use **`else`**!
- Note about `dd-template` rules: there is no tag for mutual reference, so just use `ref` in both templates if you are still writing the rules.

Arbitrary-Arity Trees

- List: arbitrary number of elements
  - Binary tree: arbitrary depth tree where each node has 0 to 2 sub-nodes
  - Ternary tree: arbitrary depth tree where each node has 0 to 3 sub-nodes
- How do we know when to stop?
  - We should be able to have as many sub-nodes as we want
- Mutual reference: two types reference each other
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