CS367 Lecture 19

Thursday 17 July 2014

Announcements/Reminders:

Last class:

- Heaps (finish)
- Binary Search Trees

Today:

- Binary Search Trees (cont'd)
    - Operations: `print`, `lookup`, `min/max`, `succ/pred`, `insert`, `delete`

Implementing BSTs

```
public class BST<E extends Comparable<E>> {

     private BSTnode<E> root;

     public BST() { root = null; }

     public void insert(E key) throws { ... }

     public void delete(E key) { ... }

     public void boolean lookup(E key) { ... }

     public void print(PrintStream p) { ... }

     ...

}
```

BST `print()` method

Strategy:

Implementation:

BST `lookup(E)` method

Strategy:

Implementation:

Implementing `min/max` on a BST

Finding successors and predecessors

Inserting into a BST

High-level algorithm/pseudocode:

Example

Deleting from a BST

High-level algorithm:

Example