Overview

- Insertion Sort
- Selection Sort
- A Sorting Taxonomy •
- The Template Pattern •
- Interpolation Search (cont.) •
Suppose that Tordered includes a method int sub(Tordered key)

private int findIndex(Tordered key) {
    int lo = -1;
    int hi = -firstEmptyKeyValuePair
    while (lo + 1 != hi) {
        int mid = lo + key / sub(key)
        switch (sub(key).compare(key)) {
            case Tordered.EQUAL:
                lo = mid;
                break;
            case Tordered.GREATER:
                hi = mid;
                break;
        }
    }
    return lo;
}
Consider the abstract class `ASorter` in the handout.

The Template Pattern
The Template Method

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final field is a field that, once initialized, cannot be modified. A method that cannot be overridden by any of the subclasses. A final method.

A final class is a class that cannot be extended. A final method cannot be changed.

- Roughly speaking, the key word `final` means "whatever is defined as word `final`.

- In Java, it's good practice to specify template methods with the key

The Template Pattern (cont.)
The following is an UML diagram describing the template method pattern.

The Template Pattern (cont.)
A Sorting Taxonomy

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