CS150 – Inheritance

Note Title 3/20/2012

Announcements

- HW due Friday
  (do not sort)

- Midterm 2 after Easter break

Inheritance (Ch. 9)

A way to build a new class on top of an already existing one.

The child class can use all of the parent's data.

In fact, in general, the child class will reuse many of the parent's functions, & will only augment or override when necessary.

Goal: Avoid duplicate code. (Be lazy.)

Last time:

3-D point class, built on top of our original point class.

Methods to "steal": setX
setY
getX
getY

Methods to code: setZ
getZ

Methods to augment or override: __str__
__init__
normalize

Another example: SortedSet

Goal: Maintain a set of elements in order

(Note: in a set, no duplicates.)

What Python data structure will be useful?

list

Making choices

Note that we could make a class which uses a list, so

```
self.setlist = []
```

↑ (in constructor)

But: if we inherit from list, we don't need a constructor at all!

List functions for sorted_set

Some are already good:

Examples:
- constructor
- pop
- peek
- index
- in (__contains__)

Some need to be overridden.

Example:
- append
- reverse
- insert

- sort?

Practice Problem 9.1