CS150 - Inheritance

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, but 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: *Sorted Set*

**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
Practice Problem 9.1