Section AA

July 8

Class diagrams

- Arrows point toward super class
- Don't include "uses" relationships
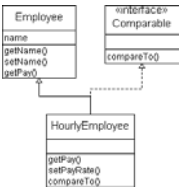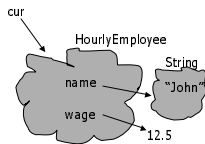- Try to place superclasses above subclasses
- Include method names
  - Generally don't include parameters or return types, even if overloaded

Object Diagrams

- Shows the state of the system at an instant in time
- Each "bubble" represents a runtime object
  - Has a type outside of bubble
  - Has names of all instance variables inside bubble
  - Lines from instance variables bubbles to values or objects referenced
- Names(local variables) point to "bubbles"

Example

Performer p
Musician m
Actor a

m = new Guitarist("John",24);
a = new Actor("Kevin",28);
p = a;
p = m;

.equals()

- How do we see if two objects are the same?
  - What does "same" mean
    - Referential equality: the references are to the same object in memory
    - Equivalence:
  - == tests for referential equality
  - .equals() from Object tests for referential equality, but should almost always override this
- Note: don't worry TOO much about it now, but when you override .equals() you are also supposed to override .hashCode()

Example

```
class HourlyEmployee {
    private String name;
    public boolean equals(Object obj) {
        if (obj instanceof HourlyEmployee) {
            HourlyEmployee hEmp = (HourlyEmployee)obj;
            if (null == name) {
                return (null == hEmp.name)
            } else {
                return name.equals(hEmp.name);
            }
        }
        return false;
    }
}
```