Final exam: Wed Mar 16
8-11 am
We will post review.

TA evals
Instructor evals online now

12B: still looking for more space.

12B also offered in Summer.
CS 16 also.
CS 101 also.

Pa6 extension (one day only).
Ex. Student

Why use a subclass?

- Code re-use.
  Student uses existing tested code from Person.
- Class hierarchy reflects actual relationship in problem domain.
  A student "really is" a person.

Ex. Employer
Dynamic method dispatch on polymorphism

Each object carries type information, i.e. it "knows" what it is. This allows the JRE to distinguish subtypes at runtime.

Access levels again

we have 4 access modifiers

1.) Public
   accessible to all Java classes (all packages)
2.) Protected
accessible to subclasses of this class (even if in another package.)

3.) Package (default)
(also called Package-private)
accessible to classes in this package.

4.) Private
accessible only within this class
Abstract classes

An abstract method is used to defer the definition of a method to a subclass. Use keyword abstract, and don't provide a definition.

A class that contains one or more abstract methods is an abstract class.
General form:

```java
abstract class MyClass {
  // fields + methods
  // at least one abstract method
  abstract type methodName(...params...);
}
```

In C we call this a prototype.

Remarks:
- abstract classes cannot be instantiated, i.e., no constructor
- any subclass of an abstract (that is not itself abstract) must define the inherited abstract methods.