Objects and Classes

- **immutable** objects and classes: contents of immutable objects cannot be changed.

This means private data, no setter methods, and the class cannot contain other objects that can be modified.

This is our student class with an added private Date instance variable. Is it **immutable** if we removed the setter methods?
Objects and Classes

• another use of this reference: to call a constructor from inside a different constructor

must be first line in constructor

simplifies maintenance, e.g. if add a variable only add to one constructor if the other are calling it
Objects and Classes

Unified Modeling Language (UML): class diagram describing data fields and methods

```
ClassName
dataFieldName: dataFieldType
ClassName(parameterName: parameterType)  # for constructors
methods(params) : returnType
```

- for private instance variables
- + for public instance variables
- underline for static variables and methods