CIS 110: Introduction to Computer Programming

Lecture 7
Actual Graphics, Wow!
(§ 2.3-2.4)

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Outline

- Introduction to using objects
- Our first object: the DrawingPanel
- Drawing with the Graphics class
- Applying what we know to 2D graphics

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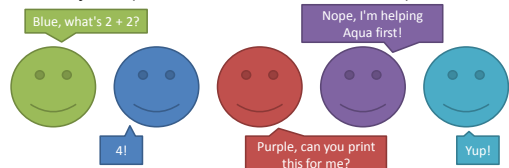## Using Objects

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What Is An Object?

- *A user-defined programming entity that contains state (data) and behavior (methods).*
  - Classes are *blueprints* for objects.
  - A Java program is to be a "collection of interacting objects" (similar to our static method calls).

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Our Focus: Using Objects

- *Creating* classes/objects influences how we organize our code.
  - Unimportant in terms of fundamentals.
- However, *using* objects is fundamental to programming in Java.
  - Our focus for this lecture (and the next).

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Primitive Data versus Objects

Primitive Types　　　　　　　Class Types (objects)

```
int, char,
double,
float,
boolean, …
```

```
(String),
DrawingPanel,
Graphics,
…
```

- Java has different rules with how we handle data of primitive type versus class type.
  - *Worthwhile fact to keep in the back of your mind.*

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The DrawingPanel

Demo (see Drawings.java)