# Inheritance and Subtyping

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# **Opening Discussion**

What did we talk about last class?

#### **Traits**

- A trait in like an abstract class that can't take arguments.
- You can inherit from multiple traits.
  - class B extends A with T1 with T2 ... { ... }
- If methods are duplicated, it searches for the one to use starting at the end of the list and working backward (plus some other details).

#### final

- Sometimes you have methods that shouldn't be overridden or classes that shouldn't be inherited from. In that case you make them final.
- For example, immutable classes need to be final so that people can't make mutable subtypes.

### Inheriting from Function Types

- As you know, functions are used in many places in Scala.
- If you provide an apply method, you can have your class inherit from a function type.
- This would let you pass instances of your function into methods that want functions.

## Drawing Project

 Now we will add some code to our project that will utilize inheritance.

## **Minute Essay**

- What questions do you have?
- Show some code next class.