

## Dart Classes cont.

### Methods cont.

- Constant constructors
  - o Only work with final fields
- Factory constructors
  - o Offers more fine control, normal constructor cannot return anything, but factory constructors can return (must still return instance of same class or extending class of the class it was declared in)
  - o Cannot initialize fields
  - o Singleton pattern- insures only one unique instance of a class can exist in a program
- Getters and Setters
  - o Each field in class has implicit constructor, can create automatic setters for variables
- Static Methods
  - o Interact with static fields (cannot access this field)
- Extends- allows sharing behavior from superclass to subclass
  - o Every class created in dart, by default inherits from object class
  - o a dart class can only extend one class (the last class not extending anything extends object)
- Super keyword
  - o this- used for current class
  - o super- for the class right above the class in the class tree
- Polymorphism- taking a method that has the same name from inside the base class, and override it in other class to perform specific behavior
- Covariant keyword- allows you to tighten a type from superclass to be used with subclass
- Abstraction- used to declare interfaces
  - o Abstract classes- class that can declare abstract methods
  - o Abstract methods- a method without function body
  - o Implements keyword- forces behavior of interfaces to derived class
    - Can implement more than one class (classes can extend a class and implement other classes)
  - o External keyword- denotes that implementation of method will be coded in another class