

MOBILE DEVELOPMENT

LESSON 06

MORE CLASSES, STRUCTS, AND TYING INTERFACE BUILDER TO CODE

Arthur Ariel Sabintsev

Lead Mobile Architect, [ID.me](https://id.me)

GETTING STARTED

READY?

SET?

GIT PULL!

GETTING STARTED

LEARNING OBJECTIVES

GETTING STARTED

LEARNING OBJECTIVES

- Object Oriented Principles Review
- Reference vs. Value Types Review
 - Classes and Structs
- In-Class Sample Project
- In-Class Group Assignment

GETTING STARTED

OBJECT ORIENTED PRINCIPLES REVIEW

OBJECT ORIENTED PRINCIPLES

WHAT ARE THE PRINCIPLES?

- 4 Principles
 - Encapsulation
 - Abstraction
 - Inheritance
 - Polymorphism
- Examples in Playgrounds

OBJECT ORIENTED PRINCIPLES

ENCAPSULATION

- The implementation details (e.g., guts) of the function are hidden.

OBJECT ORIENTED PRINCIPLES

ABSTRACTION

- Abstraction in programming enables you, and enforces you to describe what you're building as abstractly as possible.

OBJECT ORIENTED PRINCIPLES

INHERITANCE

- › Inheritance is the idea that stating that something is a type of **Animal** gives it the properties of **Animal**.

OBJECT ORIENTED PRINCIPLES

POLYMORPHISM

- Polymorphism := “One Name, Many Forms”
 - A polymorphic concept in Swift is Function Overloading, which is having a function with the same name, but different parameters and return types.

GETTING STARTED

CLASSES VS STRUCTS

DATA STRUCTURES

CLASSES VS. STRUCTS

- Classes (Reference Type)
 - Mutable
 - Pass by Reference
 - Inheritance
- Structs (Value Type)
 - Immutable
 - Pass by Value
 - Memberwise Initialization

GETTING STARTED

IN-CLASS PROJECT

AIM PROFILE

IN-CLASS ASSIGNMENT



EXERCISE

KEY OBJECTIVE(S)

Extend the AIM Profile to display the data that was entered in different labels. Change the fonts, background, and text colors.

Add some pictures!

TIMING

45 min 1. Code with partner

5 min 2. Debrief

DELIVERABLE

Work in groups (assigned by Arthur). Ask questions if you need help!

GETTING STARTED

HOMEWORK

GETTING STARTED

HOMEWORK

- Read about:
 - Enumerated Types (e.g., `enum`, in the Enumerations chapter)
 - Switch Statements (in the Control Flow chapter)
 - Strings and Characters chapter (quick read)
 - Inheritance Chapter (if you have time)
- Start Week 2 Homework
 - Found in Assessments folder
 - Due Sunday at Midnight

GETTING STARTED

NEXT CLASS

GETTING STARTED

NEXT CLASS

- › Switch Statements (in the Control Flow chapter)
- › Enumerated Types (e.g., `enum`, in the Enumerations chapter)
- › Properties
- › View Controller Lifecycle
- › Gestures