

CLASSES

Objects and Classes are the most important concepts in Object Oriented Programming. They allow us to model the data in our app in a simple and intuitive way. A class is the blueprint of an object, and an object is an instance of a class. The definition is sort of circular, but it shows how the two are directly related.

So far, we've discussed how classes have properties (variables) and methods (functions). We also discussed how initializers (init) are special functions that initialize the values of our newly created objects. At the end of class, we briefly touched on inheritance, superclasses and subclasses. This homework is intended to get you more familiar with classes in general and to challenge you with inheritance!

DUE 10/21 BEFORE CLASS

Create an Animal class. There will be no guidelines other than there should be at least 3 properties and 2 methods. What properties and methods would be common to all animals? What do all animals do or have?

Create some Animal subclasses. Create at least three different subclasses of Animal. If you are a little uncertain about inheritance, read the link below on Inheritance. Override at least one of the methods you created in the Animal superclass. Learn a little bit more about the `override` and the `super` keywords. We'll go over these more in depth in class throughout the next couple of weeks.

Be sure to include a custom initializer for either your Animal class or its subclasses.

Create a Zoo class. Add some Animal subclass objects to this Zoo class. How do we do this based on what we've learned so far (no arrays)? Does this seem like the best way to do it? If you do this before we learn about Arrays on Monday, October 19th this may not seem like the best method. If you do it after, challenge yourself and try adding an Animals array to the Zoo class.

You can do this all in a playground. In your homework folder (MOB-NYC-5-HW folder) create a new folder called Assignment2 (no space). Save the playground in this folder and name it Assignment2 as well. After saving, press Commit (add a commit message) then Sync. You should be able to see your homework on Github!

SOME ADDITIONAL READING

If you'd like to do some additional reading to supplement some of the class material we've covered, you may find the links below useful.

Inheritance:

https://developer.apple.com/library/ios/documentation/UIKit/Reference/UIViewController_Classes/

Course Book (only look at “Defining a Class” and “Inheritance”):

<http://mobbook.generalassemb.ly/week03/terms.html>