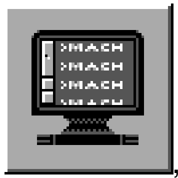
OOP Class Lab
Fruit

Purpose: This lab is an exercise in basic Objective-C, creating a subclass, and writing methods. You will modify an existing program that already has Fruit and Apple objects, adding a new subclass of Fruit called Banana.

1. Start up a Terminal shell , and change to the **OOPClass**/**Labs**/**Fruit** folder (type "**cd OOPClass**/**Labs**/**Fruit**". Type "**pwd**" to check that you are there.).

2. Run the Fruit program in the Solution directory (type "**Solution**/**Fruit**") to see how it works, comparing with the existing code in *fruitMain.m*, *Fruit.m*, and *Apple.m*. You'll note that the code for messaging Fruit and Apple instances is already in *fruitMain.m*, but you'll be adding code to message a Banana instance.

3. Use Edit  to write a new subclass of Fruit called Banana (.h and .m files).
   a. Give it one new instance variable called "length".
   b. Give it new "length" and "setLength:" methods.
   c. Give it a "grow" instance method which grows the diameter by one and the length by two. This method should access the diameter and length instance variables through their corresponding methods rather than directly.
   d. Give it an "init" instance method that initializes the diameter, length, and color.

4. Modify fruitMain.m to create an instance of a Banana and test it.
   a. Create a Banana instance and initialize it. Print out instance variables.

b. Change the banana's diameter, length, and color. Print out instance variables.
c. Grow the banana. Print out instance variables.

5. Modify the Makefile to include Banana.m on the MFILES line.

6. Make (type "**make**") the new program and try it out.

7. If you have a problem, you can sneak a peak at the files in the Solution directory.