Intro to Web Design and Development, Class 7

An Intro to Ruby

Schedule

Part 1

1. Ruby: The Language
   a. Why is Ruby different from HTML?
      i. Logic based
      ii. Not used to markup, used to make decisions
   b. Ruby history
      i. Written by Yukihiro "Matz" Matsumoto in the mid 1990s
      ii. Implemented in C
      iii. 'At a Google Tech Talk in 2008 Matsumoto further stated, "I hope to see Ruby help every programmer in the world to be productive, and to enjoy programming, and to be happy. That is the primary purpose of Ruby language."'
2. Programming Basics
   a. What is programming?
      i. Defining commands
      ii. Issuing them
      iii. Ensuring they get executed
   b. Variables
      i. Algebra
         1. 5+9=14
         2. 5+x=14
         3. Solve for x
      ii. Variables are containers for values
         1. x = 5
         2. y = "Jonathan"
         3. q = x + r
      iii. Variables have many types
         1. Float - numbers with decimal points - 10.32, 65.323, .32
         2. Integer - natural numbers - 11, 53, 3
         3. Strings - a line of text - "Jon", "Elephants are awesome"
         4. Boolean - either true or false
         5. Arrays - a collection of values - [5,3,12,"omega"]
         6. Objects - a representation of something in the real world, with properties and methods. A Car object would have brakes, and a method to make the car move.

      c. Conditions
          i.   A condition is a test for something
         ii.   if "this" then "that"
      d. Loops
          i.   Repetitive conditions where one variable in the loop changes
      e. Functions
          i.   A function is a shortcut to a block of code
         ii.   It can take arguments
        iii.   It typically returns a value

Part 2
1. Objects
2. Construct your cheat sheet

Homework

Goals
1. Solidify your understanding of basic programming concepts
2. Understand where the important sources of information on these concepts are through researching for your homework

Assignment
1. Create the following methods:
   a. Adds five to argument given
      This one's for free:
      def addFive(n)
            n + 5
      end
   b. Multiplies argument given by 15
   c. Performs a mathematical operation using four arguments
   d. Prints the argument given four times
   e. Prints an uppercase version of the argument given
2. Create an object with two attributes and one method. Don't copy the object from the slideshow exactly, please.
3. Use comments (denoted with a #) in your file to specify the different methods and what they should do.

Recommended Activity
Install RVM on your home machine:
https://rvm.io/rvm/install/

Complete as much of the "Introduction to Ruby" track on Codecademy as you can.

http://www.codecademy.com/courses/ruby-beginner-en-d1Ylq?curriculum_id=5059f8619189a50
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Try the "Ruby in 20 minutes" primer:
http://www.ruby-lang.org/en/documentation/quickstart/

eHandout

1. Homework
2. Session outline