Day 1 : Introduction to PHP

Roadmap to questions:

* Google, ask a friend, ask me

Goal:

* By the end of this session members will know :
  + Client side vs. server side processing
  + Uses of PHP
  + Software necessary to run PHP
  + Variables and assigning values to them
  + Naming convention
  + Commenting on PHP
  + Printing to the browser

1. Introduce Class
2. Fun Challenge :  
   - You have two buckets. One holds exactly five gallons and the other three gallons. How can you measure exactly four gallons of water into the five gallon bucket?
3. Overview of PHP
   1. Primary uses
   2. Client to server flow diagram
   3. Small example of PHP server side processing
      1. Show no PHP tags in browser inspector
   4. PHP file type and its location in root directory
      1. htdocs, www, wwwroot,public\_html, or other for security
   5. Viewing site through browser not double-clicking
      1. Prompts download
      2. Shows source code instead
4. Introduce the software
   1. XAMPP
      1. Explanation
         1. Makes it easy to run php and mysql database
   2. Atom
      1. open-source editor
   3. Slack
      1. Invite everyone
      2. Creating a channel
      3. Private message
      4. Channel details
         1. Shared files
      5. Adding files
         1. Coding snippets
      6. IMPORTANT! - giphy
   4. Class tests local server
5. Programming
   1. Who has programmed before?
   2. Giving the computer directions
      1. Writing a very detailed [peanut butter recipe](http://www.math.grin.edu/~rebelsky/Courses/CS105/2000S/Questions/question.07.html)
      2. Order matters!
         1. What can go wrong?
6. PHP Syntax
   1. Setting up a PHP file
      1. Beginning and ending tags (repeated)
         1. <?php ?>
   2. Variables
      1. Example :
         1. Store total value changes but “total” name stays same
      2. Syntax :
         1. Starts with $
         2. No spaces or hyphens
         3. No number immediately after $
         4. Names are case-sensitive
            1. Explain case sensitive
      3. Naming convention
         1. Be thorough
         2. Understand what it does
         3. Forgetting is easy in 1 month
         4. camelcase or underscore
         5. Don’t use special names :
            1. $this
   3. Printing to screen
      1. Assign string to variable
         1. Naming convention
         2. End with semicolon
      2. Display using :
         1. [echo](http://php.net/manual/en/function.echo.php)
            1. Can print multiple values separated by comma
         2. [print](http://php.net/manual/en/function.print.php) 
            1. Can only print one variable
         3. Difference between single and double quotes
            1. Come in pairs
            2. Escape key \
      3. Commenting code
         1. Why :
            1. Helping you remember
            2. Keep track of what is happening in code
            3. Keeping notes
            4. Disabling a line of code
         2. Single line and multiple
            1. Single // or #
            2. Multiple /\* \*/
   4. Exercise:
      1. Hello World! my name is $firstName
   5. Joining Strings
      1. Concatenation
         1. $title . ‘ by ‘ . $author;
      2. Double quoted string
         1. $book “$title by $author”;