Lesson Number 8

Name:

Code Re-Use / Error Handling

Description:

D.R.Y

Understanding DRY

- DRY means Don't Repeat Yourself
  - refers to refactoring code to remove repetitive blocks
- benefits
  - easier to maintain code
  - code can be broken down into tasks for collaboration
  - libraries can be built and utilized for new projects
  - writing modular code allows for quicker development
  - modular code allows for better testing

How do you write DRY code?

- Includes or Partials
  - PHP contains 4 functions for including PHP code (include, include_once, require, require_once)
    - include() and include_once() will show a warning if an error occurs, but continue to parse the page
    - require() and require_once() will give a fatal error and therefore stop parsing the page
    - include or require _once means the file will be loaded only once, even if requested again during the script execution
  - Includes are best for visual bits of the application. Things like the header or footer of a file. Maybe a template.
  - Partials are a common term given to templated visual elements included in an application
- Functions
  - functions are containers for code statements
  - generally, you can execute functions by calling them by their assigned name
  - functions can be built using parameters, which allow you to dynamically provide values to the code inside them
  - functions can be also be built anonymously
    - anonymous functions are used for inducing scope
    - anonymous functions are also used for callbacks as they allow you to execute a block of code
- Classes & Objects
  - Classes are blueprints for creating objects
    - they can contain properties and methods
      - properties are used to store values
      - properties can be used by the object to store values needed by the object's

methods
        - properties are generally retrieved by using getters and setters
            - methods for setting the value and retreiving the value
            - getters and setters allow for validation of values before being retrieved or assigned
        - methods are used to perform actions
            - evaluating code
            - retrieving data from external or internal sources
            - performing lengthy operations
    - Classes should contain properties and methods that relate to one topic
        - for example, a database class may contain the following:
            - open connection
            - close connection
            - query
            - bind values
        - a validation class may contain the following
            - a property for storing errors
            - a property for storing the validation state
            - a method for checking if a value exists, or is in the correct format
            - sanitization methods for returning sanitized data
- An instantiated class is known as an object
    - an object has access to any public properties or methods of the class
    - more than one object can instantiate the same class, but the properties and values stored, are scoped to each individual object